



Ballarat Central Business Area (CBA) Car Parking Strategy

City of Ballarat

25 October 2007

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Prepared for
City of Ballarat

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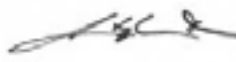
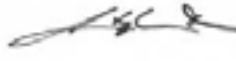
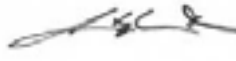
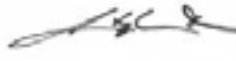
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Executive Summary

The development of the *Ballarat Central Business Area (CBA) Parking Strategy* aims to provide City of Ballarat with an overall vision for the management of parking throughout the Ballarat CBA.

Parking Precinct Plan 1 and *Parking Precinct Plan 2* have been prepared as independent documents incorporating the findings of the Parking Strategy Report. These parking precinct plans are formal documents which are intended to initiate a revision of the existing generic parking rates outlined in Clause 52.06 of the Victorian Planning Scheme. A *VPP Practice Notes* document which provides guidance on the preparation of Parking Precinct Plans has been provided in Appendix A.

The *CBA Parking Strategy* has been developed with input from a cross-section of Council's departments and contributions from representatives of the local community, stakeholders and interested professionals. It has been supported by new research focusing on major issues where new information was needed. A summary of the key issues and comments raised during the public consultation phase, which included both traffic and parking issues, are presented in Appendix C. A summary *Issues and Opportunities* report prepared by Maunsell following the stakeholder workshop and the presentation which was given to key stakeholders are presented in Appendix E. Similarly, this presentation included parking and traffic issues. An essential part of the experience of this project has been learning to work together to appreciate and respect the experience and aspirations of the many sectors who make up the Ballarat community.

Blueprint Ballarat and the Central Business Area Urban Design Framework (UDF) are two current key documents that provide policy and guidance to the future direction of and development of Ballarat as a regional city. The key transport visions and objectives of these two documents have been the primary drivers in identifying key transport issues and developing improvement options for the Ballarat CBA since 2004. A selection of key transport and infrastructure related visions, goals and objectives developed as part of Blueprint Ballarat and the CBA UDF include:

- A need to **improve future road conditions** in Ballarat;
- Recognition of **excessive car dependency** in Ballarat;
- An assessment of the need for, and feasibility of, **additional bypasses to divert through traffic** away from the city;
- **Vehicles** be encouraged to **bypass the key business centre** (and thus pedestrian centre) of the city **by using Mair Street**, in preference to Sturt Street;
- A vision to have in place **infrastructure planning processes** in 2030 that will enable Ballarat to **fund, build and maintain required infrastructure projects**; and
- Recognition that good **public transport**, combined with well **integrated walking and cycling paths** are essential elements in the creation of better urban spaces.

A detailed review of other previous reports and studies was also undertaken to inform the preparation of this *CBA Parking Strategy*. A summary of the key points extracted from each of the documents reviewed is provided in Appendix D, which summarises both traffic and parking issues.

Blueprint Ballarat recognises that there is an "excessive car dependency" in Ballarat. A primary driver behind the use of the car has been the ability for motorists to park very close to their destination, in many parts of the CBA. However, in recent years, increases in local population, retail and commercial floor areas and the expansion of tertiary institutions has placed greater demand on the existing parking facilities, both on-street and off-street in and adjacent to the CBA. The increased development has created a situation where, at times, motorists cannot park directly outside their destination. This has led to a perception from some motorists that there is an undersupply of parking within Ballarat, particularly within the central retail shopping areas and in streets surrounding the Hospital district.

This parking strategy assesses parking on a precinct wide basis and concludes that despite localised areas of high parking demand there is currently adequate parking supply within the overall Ballarat CBA. In this context it is relevant to consider that in a vibrant retail and commercial environment, motorists should not always expect to find parking directly outside their destination. Ideally, initiatives should be put in place now to plan for future car parking needs and works implemented that result in improved pedestrian links and promote pedestrian movement and flow throughout Ballarat to help ensure walking is a pleasant and safe experience and thereby lessen the desire by motorists to obtain parking directly outside their destination.

Additionally, other forms of sustainable and public transport should be promoted in an effort to reduce overall car dependency and parking demand throughout the Ballarat CBA. It should be noted that measures to encourage public transport have already been announced. The Victorian Government is introducing an extensive range of improvements to regional road, rail and bus services as part of the *Meeting our Transport Challenges* statement and *Moving Forward in Provincial Victoria* program. Regional Victoria will also benefit from a number of statewide programs including: Disability Discrimination Act Access Program, Flexible Transport Solutions and the Railway Crossing Program.

Specific transport-related projects that have been delivered in Ballarat over the past year include:

Regional Bus Service Improvements

- Mount Egerton to Ballarat via Gordon - started 29 May 2006 - new service to connect with Melbourne and Ballarat rail services;
- Ballarat - started 29 May 2006 - Creswick timetable increased, Creswick route extended;
- Ballarat - started 2 June 2006 - every city bus route in Ballarat to have an additional Friday evening service added to its schedule;
- Ballarat - started 3 September 2006 - introduction of route variations to provide more direct services to meet counterpeak train services Ballarat Railway Station;
- Ballarat to Sovereign Hill - started 23 October 2006 - new coach service to and from Ballarat Railway Station that connects with the Goldrush Special train service; and
- Ballarat Transit (Miners Rest to Wendouree and Webbconna loop) - started 22 January 2007 - new Monday to Saturday hourly service to Stockland Village.

Other Transport-related projects

- V-Line fares cut by up to 20% - introduced 4 March 2007;
- A new V/Line timetable was introduced providing extra services along the Ballarat line - 3 September 2006; and
- A sustainable transport (TravelSmart) map for Ballarat will be released in the near future.

Recently announced in the 2007-08 State Budget, Victorian commuters will benefit from an \$872 million injection into the public transport system with more trains and buses, new and upgraded stations and extra rail lines funded. This includes \$30 million for a regional bus boost providing new and extended routes and more frequent services in towns including Ballarat.

Whilst the *CBA Parking Strategy* supports the promotion of public and sustainable transportation in an aim to reduce car dependency within Ballarat, this Parking Strategy has been prepared with a realistic consideration of future parking demand considering the forecast future growth of population and business development. In this regard, revised parking rates in conjunction with a Payment in Lieu scheme have been recommended which will require all future developments to contribute consistently to managing the forecast impacts of future parking demands.

In this regard, the parking strategy report and parking precinct plans have been based on comprehensive analysis of parking supply and demand data, which assisted the development of revised parking rates for various land use types. Once adopted by Council, these revised parking rates will be recommended for replacement of the existing parking rates in the Ballarat Planning Scheme.

Future developments would be required to either provide the revised level of parking, or contribute monies to a payment in lieu scheme. The collected funds may be used to help Council to investigate, design and provide additional car parking, or to improve the operation and efficiency of existing car parking facilities. Alternatively, the collected funds may be used to implement public and sustainable transport initiatives including supporting infrastructure aimed at reducing car parking demand.

During the preparation of this Car Parking Strategy, the Department of Planning and Community Development (DPCD) facilitated a separate statewide review of planning scheme parking rates. This process culminated in the release of a report by an Advisory Committee (appointed by the Minister for Planning) titled *Review of Parking Provisions in the Victoria Planning Provisions, August 2007*. This report aims to provide advice on car parking issues and to prepare a new Clause 52.06 suitable for inclusion in the Victoria Planning Provisions (VPP) and planning schemes.

The Advisory Committee report has been prepared following extensive research across Victoria and contribution from numerous stakeholders and experts. If adopted, the report's recommendations will alter the existing parking rates provided in Clause 52.06 of the VPP.

In general the parking rates proposed in the Advisory Committee report are lower or equal to the existing parking rates in Clause 52.06. In this regard, the report aims to promote reduced car dependency and therefore encourage the use of more sustainable forms of transport.

However, it is relevant to note that the adoption of this report is, in all likelihood, some months away and there is not necessarily a guarantee that the report's recommendations will be adopted in any form. Comments are currently being sought on the Advisory Committee report.

Notwithstanding the uncertainty in respect of the possible adoption of the revised parking rates proposed in the Advisory Committee report, the parking rates recommended in this Car Parking Strategy Report are consistent with the Advisory Committee report. The Car Parking Strategy Report also provides a realistic representation of parking demand within the Ballarat CBA thanks to the extensive surveys and research undertaken. In all cases the revised parking rates are either lower or equal to proposed parking rates of the Advisory Committee report and, importantly, are considered an accurate reflection of the existing parking demands which various land use types generate in central Ballarat.

It is noted that regardless of the outcome of the Advisory Committee review of parking rates, it would be unreasonable for any other study (such as the parking strategy and parking precinct plans being prepared by the City of Ballarat) to recommend parking rates which are higher than proposed in the Advisory Committee report. Any study concluding that parking rates should be higher than identified in the Advisory Committee report is unlikely to be viewed favourably given the extensive research that has contributed to the Advisory Committee report and the multiple Federal, State and Local Government strategies which aim to promote more sustainable forms of transport (and hence reduced reliance on car parking).

Therefore, the revised parking rates in this Car Parking Strategy Report aim to realistically support future retail and business development and economic growth within the Ballarat CBA, whilst at the same time encouraging alternative and sustainable forms of transport by attempting to reduce private vehicle usage.

The existing parking rates of Clause 52.06, the proposed parking rates in the Advisory Committee report and the recommended amendments to the car parking rates for both Precinct 1 and Precinct 2 (arising from this Car Parking Strategy Report) are provided in Table: ES 1.

Table: ES 1: Recommended Amendments to the Planning Scheme Parking Rates

Land Use	Existing Planning Scheme Rate	Advisory Committee Report Proposed Parking Rates		Recommended Parking Rate	
		Standard	Activity Centre	Precinct 1	Precinct 2
Retail	8.0 spaces per 100m ² of leasable floor area	4.0 spaces	3.5 spaces	4.0 spaces	3.5 spaces
Commercial	3.5 spaces per 100m ² of leasable floor area	3.5 spaces	3.0 spaces	3.5 spaces	1.5 spaces
University	0.6 spaces per student	0.4 spaces	0.3 spaces	0.30 spaces	0.30 spaces
Hospital	1.3 spaces per bed	Not Included	Not Included	1.3 spaces per bed	No Change
Medical Practices	5.0 spaces per practitioner	5.0 spaces per practitioner	3.5 spaces per 100m ² leasable floor area	3.0 spaces per practitioner	No Change

For the purposes of this study, Precinct 2 has been viewed as a typical activity centre given the diversity and dense concentration of land uses which are located within Bridge Mall and the central CBA. This allows shoppers and visitors (and to some extent workers) to visit/use a number of different land uses as part of a single trip to the central CBA. As such, the recommended parking rates for Precinct 2 are generally lower than for Precinct 1, which is consistent with the recommendations of the Advisory Committee report (which identifies Activity Centre parking rates as generally lower than in other areas).

In conjunction with recommending revised parking rates and a payment in lieu scheme, this Car Parking Strategy also proposes operational parking changes designed to utilise most efficiently public on-street and off-street parking stocks.

The strategy also considers a need to protect local amenity from excessive intrusion of parking demand into residential streets, but also acknowledges the contribution made by on-street parking in supporting the vibrancy of retail and commercial activities.

1.0 Introduction

Maunsell was commissioned by the City of Ballarat to develop a Parking Strategy for the Ballarat CBA.

This report provides a detailed investigation into on-street and off-street car parking in the Ballarat CBA and the outcomes of this form the basis for the development of two separate Parking Precinct Plans: Parking Precinct Plan 1 and Parking Precinct Plan 2.

1.1 Study Objectives

The purpose of this Parking Strategy for the Ballarat CBA is to provide Ballarat with an overall vision and framework for the management of parking in the CBA. The objectives of this study are to:

The objectives of this car parking strategy are to:

- Identify existing parking issues and develop recommendations to resolve these;
- Promote a regime of parking restrictions that discourages the use of the private motor vehicle for commuter purposes (i.e. home to work) and encourages the use of alternate travel modes (PT, cycling, walking etc); and
- Establish parking rates that more realistically reflect local conditions and develop parking precinct plans to manage parking in a precinct, rather than on a site by site basis. The revised parking rates should aim to support business development within the Ballarat CBA and encourage sustainable forms of transportation.

Previous parking studies and strategies have been reviewed throughout the development of this document and abstracts of these are located in Appendix D. A stakeholder workshop and two separate public consultations were held in mid 2006 to obtain the views of key stakeholders and the community. The key outcomes arising from these sessions are provided in Appendix C and E.

1.2 Parking Precinct Plans

A Parking Precinct Plan (PPP) is a locally prepared strategic plan that contains parking provisions for an area or "precinct". It allows all parking issues influencing a precinct to be considered and a strategy to be implemented to address them. It can replace the parking standards in *Clause 52.06 – Car parking* in the Planning Scheme and reduce the need for potentially complex parking investigations to support individual permit applications. Once adopted by Council, a PPP is incorporated into the Planning Scheme which can then only be changed by a planning scheme amendment.

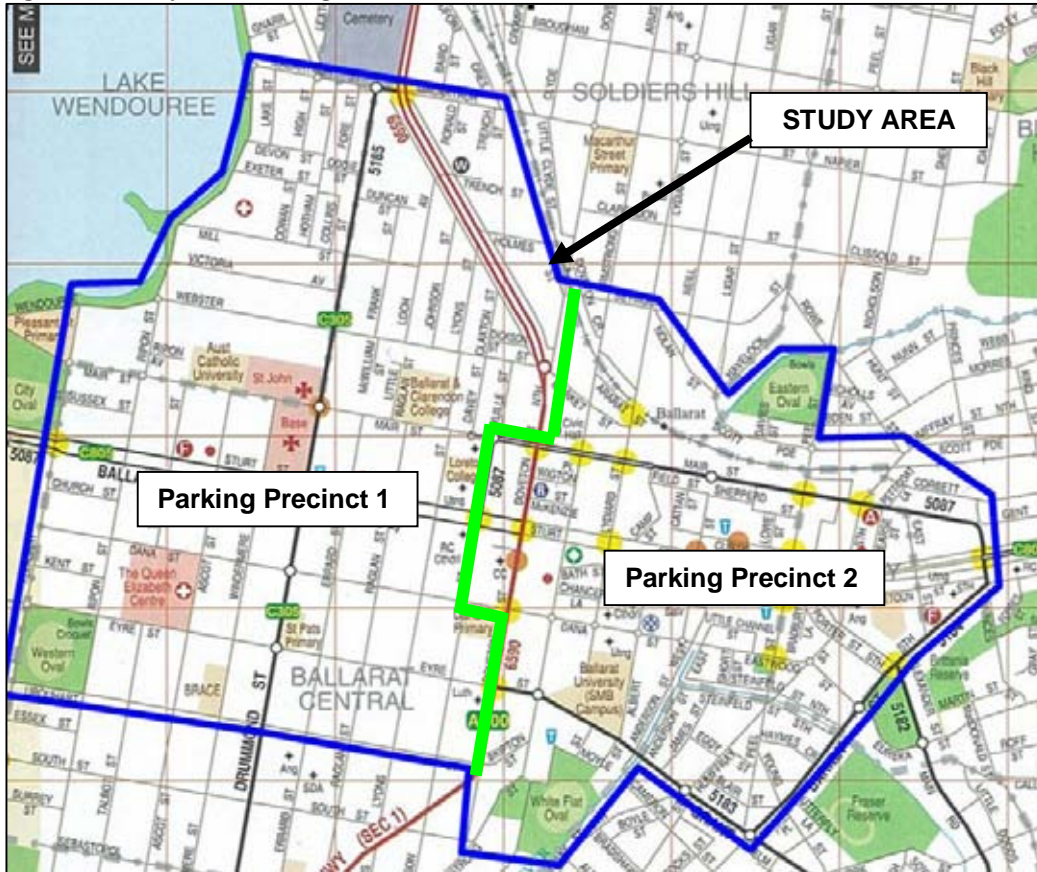
The Department of Infrastructure (DoI) has prepared VPP Practice Notes, which provide guidance on what to consider when developing a PPP. A copy of the practice notes are presented in Appendix A.

This car parking strategy provides an objective basis for the development of PPPs in the Ballarat CBA. Two separate PPPs have been developed as a result of this study due the diversity of land-uses within the study area. Parking Precinct Plan 1 and 2 are provided as separate documents to this report, and may be incorporated into the Ballarat Planning Scheme as formal documents.

1.3 Study Area

The study area has been separated into two clearly defined precincts for the purpose of car parking analysis and PPP development as shown in Figure 1.1.

Figure 1.1: Study Area - Parking Precinct 1 and 2



Precinct 1 comprises a mix of residential, retail, commercial and hospital facilities including:

- St John of God Hospital, Base Hospital and The Queen Elizabeth Centre
- Australian Catholic University
- Sturt Street Retail Outlets
- Commercial Offices

Precinct 2 comprises a mix of residential, retail, commercial and community facilities including the Ballarat CBA core which is defined as the area bounded by Dawson Street, Mair Street, Grenville Street and Dana Street. The specific attractions in Precinct 2 include:

- Sturt Street Retail Outlets
- Bridge Mall and Bakery Hill
- Supermarkets
- Central Square Shopping Centre
- Commercial Offices
- Ballarat University – SMB Campus
- Ballarat University – Camp Street Campus
- Ballarat Railway Station
- Recreational & Sporting Facilities

2.0 Parking Supply and Demand in Precinct 1

In late 2005 and early 2006 the City of Ballarat undertook a detailed inventory on the number of car parking spaces and the existing parking restrictions within Precinct 1. This was compiled into a GIS¹ system to enable the analysis of the parking supply within the precinct.

Following on from this, comprehensive parking occupancy surveys were undertaken on key on-street and off-street parking areas within Precinct 1. Both on-street and off-street parking occupancy surveys were conducted by Maunsell between March and June 2006, and additional on-street parking areas were surveyed in February 2007. The City of Ballarat conducted off-street parking occupancy surveys in December 2005 (i.e. peak demand conditions).

2.1 On-Street Parking Supply and Demand

The inventory of parking spaces identifies there are 7,619 (as of 2005/2006) total on-street car parking spaces within Precinct 1.

The total number of car parking spaces includes:

- 161 Paid Parking Spaces
- 1,914 Free Time Restricted Parking Spaces
- 5,451 Unrestricted Parking Spaces.

The total number of parking spaces within the precinct was calculated using the GIS system which provided information on the number and restriction of parking spaces in each street section. Maunsell amended the GIS system to estimate the number of unrestricted parking spaces in streets which were unlined and unsigned.

A summary of the parking restrictions provided in Precinct 1 is shown in Figure 2.1.

¹ Geographic Information System – a computer system capable of integrating, storing, editing, analysing, sharing, and displaying geographically referenced information.

Figure 2.1: Summary of Precinct 1 Parking Restrictions



2.1.1 Hospital Precinct

2.1.1.1 St. John of God Hospital and Base Hospital

The largest generators of on-street parking demand within Precinct 1 are the Base Hospital and St. John of God Hospital sites located on Drummond Street. Each site has on-site car parking, however these car parks are highly utilised which results in demand spilling over into the adjacent local streets. The on-site car parks also attract a fee whilst free unrestricted all day parking is available in adjacent streets.

Two-hour metered parking restrictions generally apply to Drummond Street between Sturt Street and Webster Street to discourage long-term parking at this location. Mair Street between Drummond Street and Ripon Street generally has 2 hour time restricted on-street parking to discourage long-term parking on Mair Street. Parking demand at the west end of this section is also influenced by staff and students attending the Australian Catholic University. Despite these restrictions and the fees, parking occupancies were high on both of these sections.

There are several local streets in the vicinity of the hospitals that have all day free parking that are used by hospital staff. These include:

- Victoria Avenue;
- Frank Street;
- Ascot Street (east side);
- Talbot Street (sections at the north and south ends); and
- Webster Street (short section west of Drummond Street).

Telephone and email correspondence was undertaken with management of St. John of God Hospital and Base Hospital in 2006.

St John of God Hospital has two primary on-site staff car parking areas, and a total on-site parking capacity of 526 spaces. One parking area is accessed from Mair Street and the other is accessed via Webster Street. Electronic card readers allow only authorised staff into these car parks and there is a small waiting list. Staff pay the equivalent of approximately \$2 per day when they use these car parks.

At St. John of God Hospital the morning shift attracts approximately 220 staff over a period of two hours from 7:00am (includes nurses and 9 to 5 staff), the afternoon shift approximately 110 staff and the evening shift about 40 staff. The afternoon shift changeover between 2:00pm and 3:00pm is the busiest time in terms of parking, due to the overlap of nurses completing their shift and those starting their shift. The hospital does manage its off-street car park by reserving approximately 25 spaces for the afternoon nursing shift however there is still a shortfall of approximately 20 spaces. Those nurses that do not park on-site must instead park on-street and due to the high occupancy of the on-street areas adjacent to the hospital staff often park several streets away from the hospital, extending the parking influence of the hospital into local streets.

St John of God is currently undergoing redevelopment. It is understood that the redeveloped site will have 24 fewer beds and 71 fewer on-site parking spaces (172 beds and 456 spaces).

Base Hospital has a total of approximately 370 parking spaces within their property boundary, and a maximum number of staff on site at one time of 480. The main car park is located at the rear of the hospital and is accessed via Mair Street. A smaller car park is accessed via Drummond Street. Both car parks are available to staff or visitors on a 'first come first served' basis. Staff and visitors are required to pay \$2 to enter the car park. This fee allows them to park all day. Despite attempts to establish the number of staff impacted by shift cross-over times it was difficult to establish the precise numbers involved.

It is understood many staff attempt to obtain free unrestricted parking in on-street areas, to avoid paying the \$2 fee. Notwithstanding this, the demand for the Base Hospital car park is significant and the car park is generally full during the peak periods each day.

Further restrictions to protect resident parking amenity may be warranted given the parking demands associated with these hospitals. A framework for introducing further restrictions within a variety of streets throughout the precinct is provided in Section 4.4.1.

2.1.1.2 Medical Practitioners

A survey of medical practitioners in streets within the Hospital precinct was performed in late 2006 and early 2007. The number of practitioners, number of consulting rooms, number of off-street car spaces and occupancy rates were compiled during the surveys to determine the influence that these practices have on the on-street parking demand. The survey covered the following streets:

- Sturt Street between Ascot Street and Lyons Street
- Drummond Street between Sturt Street and Webster Street
- Mair Street between Ascot Street and Davey Street
- Errard Street between Sturt Street and Mair Street
- Raglan Street between Sturt Street and Mair Street
- Lyons Street between Sturt Street and Mair Street

A total of 46 medical practices were counted within this area and overall they provided 254 off-street private car parking spaces.

It was observed that the majority of medical practices did not contain any signs to inform visitors that private off-street car parking was provided within the medical practice. In many instances, the private off-street parking was provided at the rear of buildings, accessed from narrow driveways. Therefore, without signage to inform and direct visitors to the car parking, it is considered likely that many visitors may not know that private car parking exists and instead choose to park on-street.

Additionally, the framework for introducing further restrictions to help protect resident amenity from hospital parking demands will also include streets abutting medical practitioners. The framework is provided in Section 4.4.1.

This report also acknowledges the recently prepared proposed C92 Planning Scheme Amendment, which has arisen following the Ballarat Health Precinct Study. C92 is a seriously entertained document by Council and it is understood that the Amendment is currently sitting with the Minister for approval.

In brief the Amendment seeks to:

Amend Clause 22.09 – Medical Centres in the Mair Street Medical Precinct.

- Car parking and access requirements be consistent with the requirements of the planning scheme or an approved parking precinct plan.
- A reduction in parking requirements will only be supported where on street parking is under utilised or justified by a parking precinct plan.

Include a new Local Planning Policy at Clause 22.23 – Non Residential Uses in Residential Areas

- It is Councils expectation that most non-residential uses should locate in either the Ballarat CBA or other neighbourhood centres as they will complement surrounding uses, are able to share parking and other facilities and can trade later into the evening. Uses such as medical centres have traditionally located within areas surrounding the Ballarat Base and St. John of God hospitals. Council has now completed an economic analysis of the importance of the health sector and sought to encourage these uses within the core of this precinct and, through this policy, discourage other non-residential uses broadly from locating in residential areas.

Apply the Mixed Use Zone to certain land within the precinct

To balance the competing issues of residential uses and medical uses (which was seen as partly responsible for the increased parking issues) Council completed the Ballarat Health Precinct Study 2006. This study recommended the rezoning of the core areas surrounding the two hospitals to a Mixed Use Zone (MUZ) and the use of policy to encourage appropriate forms of medical centre uses in this zone and to also discourage non residential uses in areas zoned for residential purposes.

As part of C92 Council proposes to rezone a particular area to allow for minimal new medical centre growth within the precinct, it also proposes to rezone much of the existing areas, to convert clinics in the R1 zone to MUZ.

2.1.1.3 Queen Elizabeth Centre

The Queen Elizabeth Centre (QEC) is located in the block bounded by Dana Street, Ascot Street and Eyre Street south of Sturt Street. This facility contains residential services, psycho geriatric and adult aged psychiatric facilities and as such provides differing demands to the Base and St. John of God Hospital sites. The site has off-street parking and the adjacent local streets have a mixture of 2 hour time restricted and unrestricted parking. Information obtained from the QEC indicated that the maximum staff on-site at any one time would be approximately 150 and that this should in all likelihood be catered for by the off-street car park which has capacity for about 140 vehicles. However, site observations have noted that there is considerable spill-over into the unrestricted parking spaces provided on-street, particularly in Dana Street. Given that there are currently a high number of available on-street unrestricted parking spaces in the immediate vicinity of the site, the impact on residential amenity is currently considered acceptable. However, the extent of the spill-over of parking demands associated with the hospital should be regularly monitored. Further restrictions to protect resident parking amenity may be warranted if the parking demands associated with the Queen Elizabeth Centre intensify. A framework for introducing further restrictions within a variety of streets throughout the precinct is provided in Section 4.4.1, however at this stage the streets directly abutting the Queen Elizabeth Centre are not recommended to be included in the proposed scheme.

A summary of the peak number of staff, on-site parking spaces and number of beds at each of the three hospitals is provided in Table 2.1.

Table 2.1: Hospital Summary Details

	Maximum Number of Staff at One Time	Parking Spaces On-Site	Number of Beds
Base Hospital	480	370	266
St John of God Hospital	220	526	196
Queen Elizabeth Centre	150	140	160

Note: The details provided in Table 3.1 are reflective of each hospitals facilities during the period when the on-street and off-street parking surveys were undertaken in 2005/2006. As such, the summary details do not account for the recent and on-going re-development of the St John of God Hospital.

Despite attempts to establish the relative percentages of staff and public occupying the on-site parking spaces at each hospital, it was difficult to establish (or even estimate) the precise proportions.

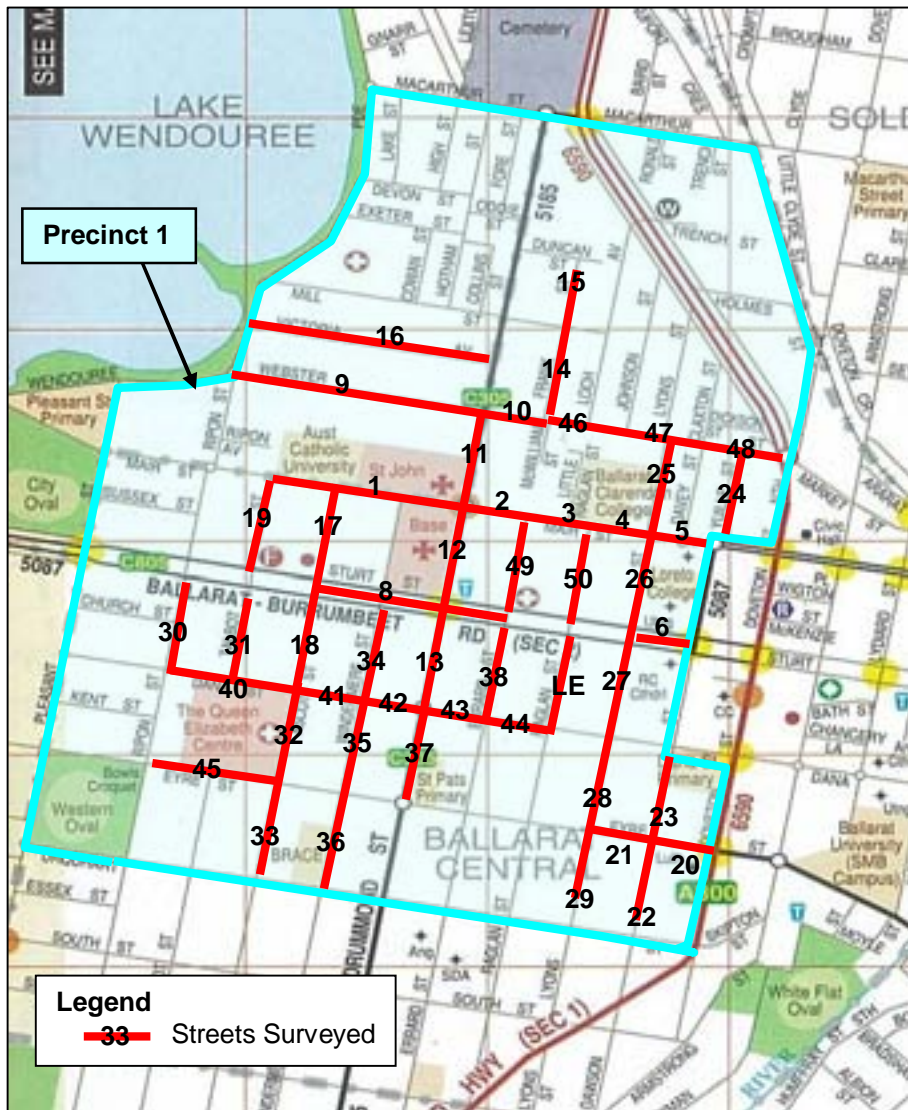
2.1.2 Sturt Street

Sturt Street between Dawson Street and Pleasant Street contains a mixture of retail and commercial properties which generates parking demands on Sturt Street and the adjacent local streets to the north and south of Sturt Street. Parking restrictions over this length of Sturt Street are time restricted however some blocks have parking meters whilst others do not. The time that vehicles are permitted to stay also varies between 1/4P and 4P to discourage long-term parking on Sturt Street.

Many local streets adjacent to Sturt Street have unrestricted parking areas and these are commonly used by staff working in retail or commercial premises on Sturt Street. Some examples include Lyons Street, Raglan Street and Errard Street which each contain a significant number of highly occupied unrestricted parking in the sections between Mair and Dana Streets (within one block of Sturt Street). The unrestricted parking in Windermere Street, between Sturt and Dana Streets is also very highly occupied. However, Council has already attempted to address this issue by limiting the number of unrestricted spaces to a minimal level and mainly installing 1 and 2 hour limit parking. Talbot Street contains only unrestricted parking between Sturt and Dana Street, but surveys suggest that the occupancy is relatively low.

Key on-street parking areas in Precinct 1 were surveyed and these are shown in Figure 2.2. Each street section has been numbered and the parking capacity and peak occupancy rates of each street section are shown in Table 2.2.

Figure 2.2: Location of On-Street Parking Surveys



In total 3,142 on-street car parking spaces were surveyed during 2005/2006. This represents a significant proportion (approximately 41%) of the total number of spaces within Precinct 1. It is worth noting that the parking spaces surveyed were located in key high parking demand areas of the Hospital precinct, and those streets influenced by the Sturt Street retail and commercial areas. The majority of streets which were not surveyed only attract residential parking demands.

As a conservative approach, the maximum occupancy rate for each individual street block obtained during any of the on-street parking surveys has been defined as the “peak occupancy rate”. On site observations, public consultation and parking surveys indicated that the peak demand for parking in Precinct 1 generally occurred during the early afternoon period (1.00pm – 3.00pm). This time is considered the busiest in terms of staff numbers at the hospitals and shoppers in the retail areas. All commercial offices would be occupied (in terms of staff vehicles) at this time as well. Naturally, the individual peak for each street section would not always coincide with the overall precinct peak (1pm to 3pm), however as the surveys were not exhaustive (and did not necessarily represent the peak month of the year, but merely a “typical” day), a conservative approach has been taken, and the individual peak by street has been reported. The on-street peak occupancy by block was determined for all streets which were surveyed within Precinct 1, and this has been shown in Table 2.2.

Table 2.2: On-Street Parking Supply and Occupancy

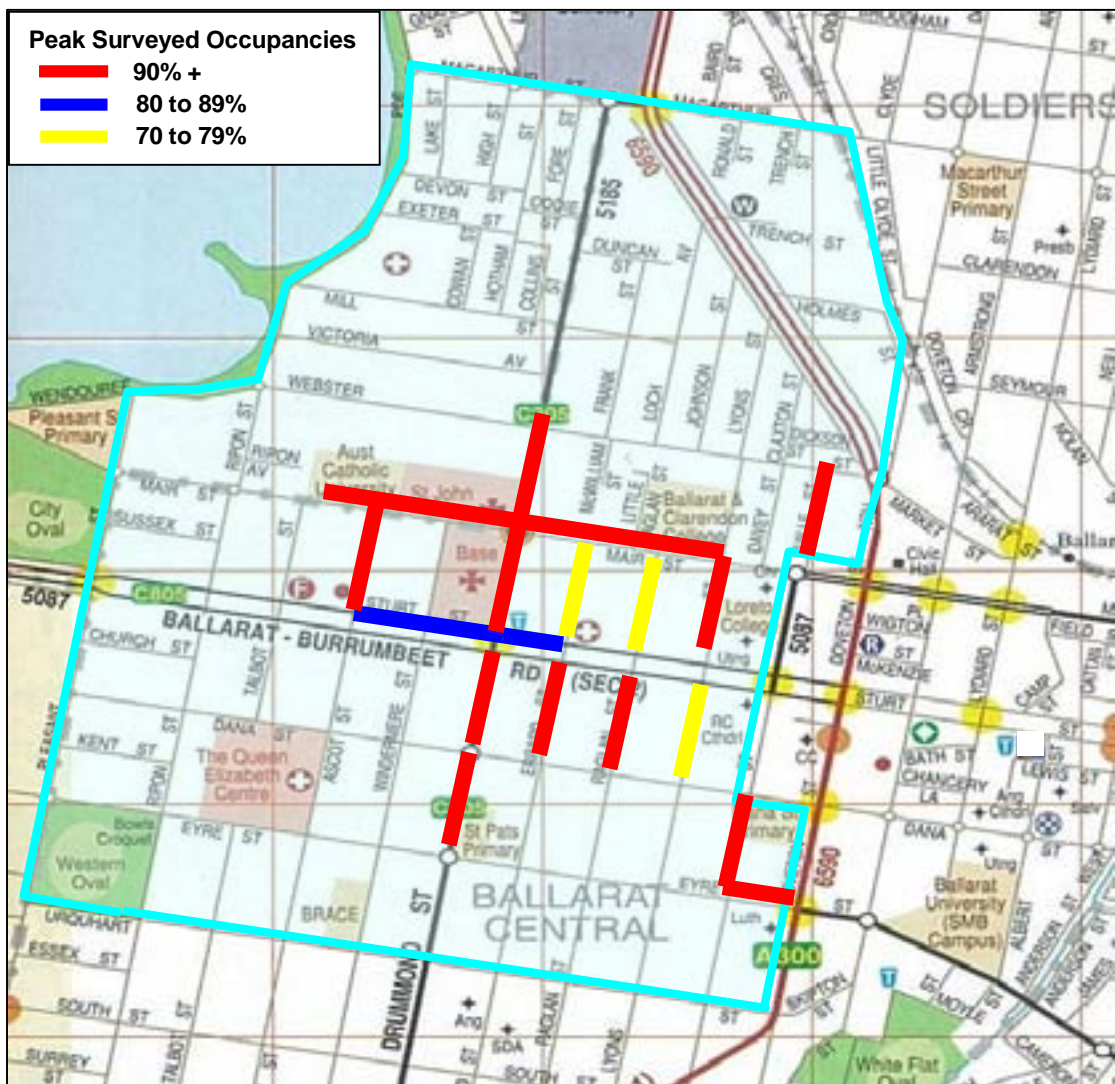
Street Name	Map Ref	Street Section	Total Parking Spaces	Peak Occupancy Rate (%)
Mair Street	1	Talbot to Drummond	102	100%
	2	Drummond to Errard	42	93%
	3	Errard to Raglan	38	95%
	4	Raglan to Lyons	30	90%
	5	Lyons to Dawson	40	70%
Sturt Street	6	Dawson to Lyon	25	68%
	7	Errard to Drummond	17	88%
	8	Drummond to Ascot	72	86%
Webster Street	9	Ripon to Drummond	93	44%
	10	Drummond to Frank	38	42%
Drummond Street	11	Webster to Mair	50	96%
	12	Mair to Sturt	52	100%
	13*	Sturt to Dana	46	91%
Frank Street	14	Webster to Mill	40	53%
	15	North of Mill	30	13%
Victoria Avenue	16	Drummond to Wend Pde	35	20%
Ascot Street	17	Sturt to Mair	101	94%
	18	Sturt to Dana	94	60%
Talbot Street	19	Sturt to Mair	83	52%
Eyre Street	20	Doveton to Dawson	29	100%
	21	Dawson to Lyons	29	41%
Dawson Street	22	South of Eyre	60	42%
	23	Eyre to Dana	76	93%
Yuille Street	24	Webster to Mair	20	95%
Lyons Street	25	Webster to Mair	19	58%
	26	Mair to Sturt	79	91%
	27	Sturt to Dana	77	79%
	28	Dana to Eyre	78	60%
	29	South of Eyre	76	39%
	30*	Sturt to Dana	107	36%
Talbot Street	31*	Sturt to Dana	115	50%
Ascot Street	32*	Dana to Eyre	91	34%
	33*	Eyre to Urquhart	86	47%
Windermere Street	34*	Sturt to Dana	95	63%
	35*	Dana to Eyre	108	38%
	36*	Eyre to Urquhart	96	29%
Drummond Street	37*	Dana to Eyre	25	96%
Errard Street	38*	Sturt to Dana	79	95%
Raglan Street	39*	Sturt to Dana	95	96%
Dana Street	40*	Ripon to Ascot	100	47%
	41*	Ascot to Windermere	46	24%
	42*	Windermere to Drummond	34	15%
	43*	Drummond to Errard	34	50%
	44*	Errard to Raglan	36	42%
Eyre Street	45*	Ripon to Ascot	94	39%
Webster Street	46*	Frank/McWilliam to Loch	63	43%
	47*	Loch/Lt Raglan to Claxton	49	55%
	48*	Claxton/Davey to Midland	58	59%
Errard Street	49*	Mair to Sturt	82	73%
Raglan Street	50*	Mair to Sturt	78	79%
TOTAL		ALL STREETS	3142	62% (Weighted Avg)

- Map Reference codes which are listed with an asterisk (*), indicate that the street section was surveyed in February 2007.
- Map Reference codes which are **not** listed with an asterisk, indicate that the street was surveyed in March and June 2006.
- The 62% Weighted Average represents a peak demand of 1955 cars within the survey area, assuming all peak occupancies occurred at the same time. However, as the represented peak occupancies did not all coincide during the afternoon peak (1pm to 3pm) this is a conservatively high weighted average, which may account for localised higher parking demands during different days or months of the year.

Individual street blocks which experienced peak parking occupancies of 70% or greater during the parking surveys (from Table 2.2) have been shown in Figure 2.3. It shows that the parking demand was greatest on the streets adjacent to the Base and St. John of God Hospitals. The side street sections which directly abut Sturt Street and are located within reasonable proximity to the Central CBA, such as Drummond, Errard, Raglan and Dawson Streets, also contain high parking occupancy rates.

Figure 2.3 also shows that Sturt Street has occupancies over 80% between Errard Street and Ascot Street whilst Drummond Street experienced peak parking occupancies of over 90% between Sturt Street and Eyre Streets. Yuille Street also had a high peak parking occupancy which was generated by the commercial premises on and adjacent to Webster Street.

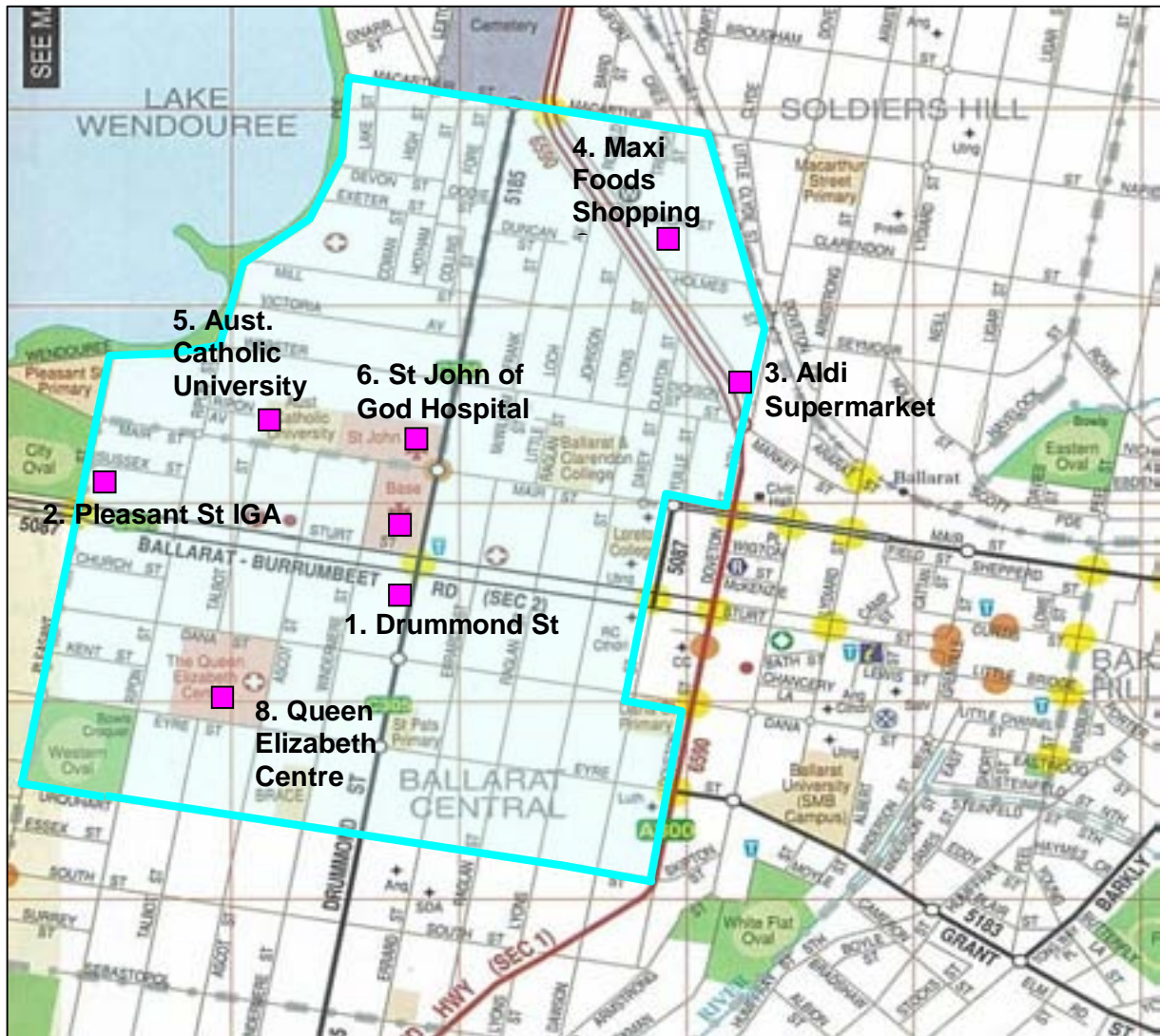
Figure 2.3: Streets with Peak Occupancy Greater than 70%



2.2 Main Off-Street Parking Supply and Demand

On-site surveys performed by the City of Ballarat and Maunsell have provided information pertaining to the location, capacity and occupancy of several of the main off-street car parks located throughout Precinct 1. Figure 2.4 shows the locations of the sites that have been surveyed and Table 2.3 provides a summary of the results.

Figure 2.4: Main Off-Street Car Park Survey Sites



The maximum occupancy rate for each individual car park has been used to illustrate the worst case scenario in terms of parking demand. Again the on site observations, public consultation and parking surveys all suggest that the peak demand for parking in Precinct 1 occurred over the early afternoon period. This was the busiest time in terms of staff numbers at the hospitals and shoppers in the retail areas. Table 2.3 provides a summary of the results.

Table 2.3: Main Off-street Car Park Capacity and Occupancy Rates

Car park	Map Ref.	Paid / Free	Capacity	Peak Occupancy Rate (%)
Drummond Street	1	Free	13	100
Pleasant Street IGA	2	Free	29	90
*Aldi Supermarket	3	Free	90	50
**Maxi Foods Shop. Centre	4	Free	433	10
Australian Catholic Uni.	5	Free	95	100
St John of God Hospital	6	Paid	526	96
Base Hospital	7	Paid	370	98
Queen Elizabeth Centre	8	Paid	141	95

Table 2.3 shows that the main off-street car parks in Precinct 1 experience very high occupancies and are considered to have saturated parking demands. These peaks generally occur during the afternoon period. In particular the Hospital car parks, although subject to fees, still attract high parking demands.

It is noted that the Aldi Supermarket (*) had only recently opened when the survey was undertaken. Therefore, the existing occupancy may be higher than noted in the table.

In contrast, the Maxi Foods Shopping Centre car park (**) has an extremely low occupancy rate. This car park is located a considerable distance from the centre of the CBA and services an isolated shopping complex. Despite the ample capacity for parking, this car park only services local shoppers and is too remote to be utilised by motorists bound for other attractions in the CBA. For this reason, the car park will not be considered in the following parking rate analysis.

The analysis demonstrates that the demands for off-street and on-street car parking within Precinct 1 created by a variety of land uses are currently saturated for a significant proportion of the precinct. As such, this report and *Parking Precinct Plan 1* report resolves to investigate the establishment of a multi-storey car park in the future. Council in collaboration with the two major hospitals could investigate to resolve the existing parking demand issues and should liaise with other relevant government agencies and other key stakeholders in establishing the optimum location, size and operation of a possible future multi-storey facility. The Council may elect to use a proportion of monies collected from the parking precinct plans to help fund the proposed car park. Although, it is expected funding will be required from multiple project partners. The framework for the collection of monies is outlined in Section 4.3 of this report and is re-iterated in the *Parking Precinct Plan 1* report.

2.3 Smaller Off Street Car Parking Supply and Demand

There are also numerous smaller off-street car parks located in Precinct 1 servicing individual properties. Several “drive-by” surveys were performed to provide some base data on the capacity and demand for these smaller sites. It was estimated that, in total, there were approximately 28 retail and 84 commercial car spaces available in smaller car parks in Precinct 1 and that the occupancy was approximately 50% in the peak period. Private medical practice car parks were surveyed separately and it was estimated that of the 254 private spaces, the peak demand was approximately 135, or 53%.

3.0 Assessment of Parking Rates in Precinct 1

Clause 52.06-5 of the City of Ballarat Planning Scheme outlines the Statutory Rates required for the provision of car parking for developments in the City of Ballarat. Table 3.1 provides an extract of these rates for five key land-use categories found in Precinct 1.

Table 3.1: Planning Scheme Parking Requirements

Land Use	Planning Scheme Rate
Retail	8 spaces / 100m ²
Commercial	3.5 spaces / 100m ²
University	0.6 spaces / student
Hospital	1.3 spaces / bed
Medical Practices	5.0 spaces / practitioner

Reference: Clause 52.06-5. Car Parking Table. City of Ballarat Planning Scheme.

These five land-uses are the major influences on parking demands within Precinct 1. Whilst, the required parking demand for residential development is not the objective or focus of this report, it is recommended that parking dispensation be afforded to developments of above ground level traditional residential dwellings which are located within a Heritage Overlay on account of their historic value.

The proposed reuse and development of upper storey traditional residential dwellings is in accordance with state policy and the relevant Overlay provisions that encourage the reuse and retention of heritage fabric. It is considered that the site constraints which are inherently associated with traditional small lots limit the opportunity to provide parking. The limited land available means that it is not feasible to meet the applicable parking rates set out in Clause 52.06 while simultaneously retaining the intact heritage fabric of the site.

Additionally it is noted that the central location of many heritage overlay sites in conjunction with the provision of sustainable transport options will ensure that the requirement to use a private vehicle will be minimized.

Consequently it is proposed that this parking strategy consider exempting above ground level traditional residential development from any requirement to provide parking, if the building is within a heritage overlay. This proposal aims to ensure that the value of the site in terms of housing supply and heritage character is fully utilized. Appendix F provides a map of the heritage overlay zones.

The five categories in Table 3.1 were assessed against the existing supply and the existing demand for both on-street and off-street parking. The assessment has been used to determine whether these rates are adequate or whether they require modification to more accurately reflect the requirements of the precinct.

3.1 Parking Rates – Determined by Parking Supply

3.1.1 Existing Parking Supply

This section determines the existing supply of on-street and off-street car parking spaces that exist for retail, commercial, university, hospital and medical land-uses within Precinct 1.

Council officer feedback, on-site observations, parking restrictions and parking surveys were used to assign the number of car spaces for on-street and off-street car parking, to specific land-uses so that the parking supply for each land-use could be established. Table 3.2 provides a summary of the results.

Table 3.2: Existing Parking Supply for each Land-Use

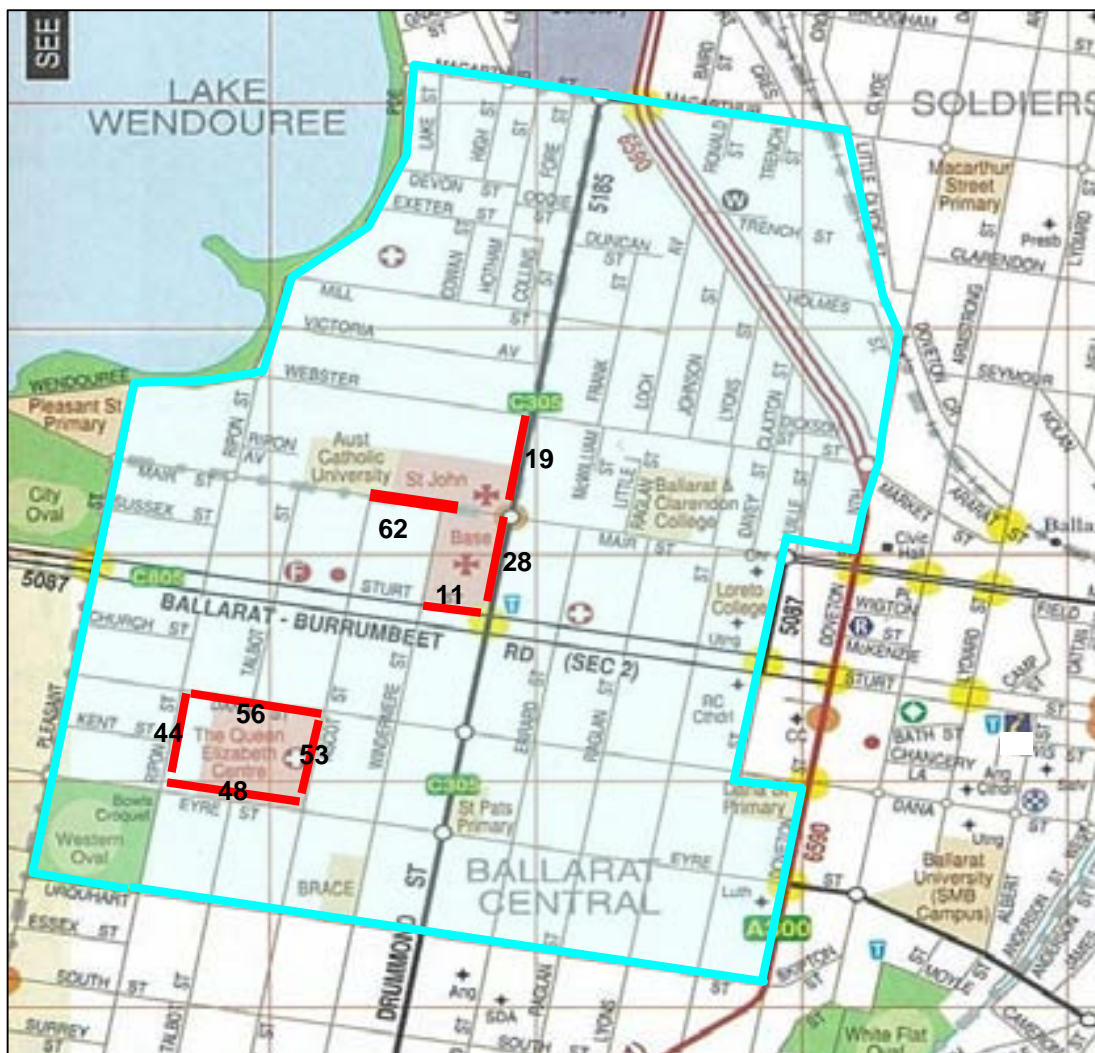
Land-Use	On-street spaces (See Section 2.1)	Main Off-Street Car Park spaces (See Section 2.2)	Smaller Off-Street Car Park spaces (See Section 2.3)	Total Existing Parking Supply
Retail	824	119	28	971
Commercial	668	13	84	765
University	79	95	0	174
Hospital	321	1037	0	1358
Medical Practices	137	0	254	391
Total	2029	1264	366	3659

Table 3.2 shows that hospital use has the highest available parking supply, followed by retail use, Commercial use, Medical Practice use, whilst the university has the lowest supply with 174 spaces available.

It was assumed that the stock of on-street parking supply actually available for hospital land use be limited to the parking which abuts any boundary of one of the three hospitals located in Precinct 1. Figure 3.1 shows the stock of on-street parking considered available for hospital use (321 spaces).

It is noted that 201 of these spaces abut the Queen Elizabeth Centre, leaving a minimal number of 120 spaces abutting Base and St John of God Hospitals, which generate the most significant parking demands in the precinct.

Figure 3.1: Hospital On-Street Parking Supply



3.1.2 Existing Land-Use

The car space measures are used in the Planning Scheme to determine the parking requirements for proposed developments. Table 3.3 provides a summary of the existing car space measures, for the five land-uses, obtained during the preparation of this parking strategy.

Table 3.3: Land-use, Car Space Measure and Source

Land-Use	Car Space Measure	Source
* Retail	9,286m ² of lettable floor space	"City of Ballarat Retail Development Strategy", Essential Economics, 2003
Commercial	19,892m ² of lettable floor space	Commercial Valuations Spreadsheet, City of Ballarat, May 2006
University	650 students	Direct consultation with the Australian Catholic University, May 2006
Hospital	622 hospital beds	Direct consultation with Base, St John of God, Queen Elizabeth Centre, May 2006
Medical Practices	98 Medical Practitioners	Information provided by City of Ballarat, "Ballarat Health Precinct Study", Regional Innovation Pty Ltd and Urbanomics Pty Ltd, 2006. On-site observations undertaken.

(* Note: The retail floor area for Maxi Foods has been removed from the calculation, as the supermarket has been removed from the car parking considerations.

This report has attempted to estimate the maximum number of medical practitioners who would be working at the one time for each medical practice. Car parking demand will not be driven by the total number of practitioners who are on the pay-roll of a medical practice as many work very limited hours at each practice, but instead will be based on the maximum number which are actually working there at the same time.

3.1.3 Total Parking Spaces Required by Planning Scheme

Table 3.4 shows the total number of parking spaces that would be required if the existing planning scheme rates were applied to the level of existing development as determined in Section 3.1.2. The number of existing parking spaces as determined in Section 3.1.1 has also been included in the table to enable a comparison between the planning scheme requirement and the actual number of car spaces available within Precinct 1 for the five land-uses.

Table 3.4: Number of Car Spaces – Existing Planning Scheme and Existing Supply

Land Use	Number of Car Spaces		
	Existing Planning Scheme	Existing Supply	Variance
Retail	743	971	(+ve 228)
Commercial	696	765	(+ve 69)
University	390	174	(-ve 216)
Hospital	809	1358	(+ve 549)
Medical Practices	490	391	(-ve 99)
Total	3128	3659	(+ 531)

Table 3.4 shows that taking into consideration on-street and off-street parking areas the existing parking supply for retail, commercial and hospital use is greater than the planning scheme requirement. The university and medical practices have a significantly lower number of spaces available when compared to the planning scheme requirement.

3.1.4 Supply Based Empirical Parking Rate

An empirical parking rate based on existing parking supply has been determined for each land-use in Precinct 1. This has been calculated by dividing the existing parking supply (Table 3.2) by the measure of each land-use (Table 3.3). This supply based empirical parking rate is based on a theoretical 100% occupancy of all the parking spaces associated with a given land use.

Table 3.5 provides a summary of the results which compares the existing Planning Scheme parking rates, the proposed DPCD report parking rates and the Supply Based Empirical parking rates. It is noted that for the purposes of this study Precinct 1 has been considered reflective of a standard precinct, rather than an activity centre. Therefore the "Standard" parking rates proposed by the DPCD report have been included.

Table 3.5: Planning Scheme Rate and Supply Based Empirical Parking Rate

Land Use	Planning Scheme Rates	DPCD Report Proposed Rates	Supply Based Empirical Parking Rate
Retail	8 spaces / 100m ²	4 spaces	10.5 spaces
Commercial	3.5 spaces / 100m ²	3.5 spaces	3.8 spaces
University	0.6 spaces / student	0.4 spaces	0.27 spaces
Hospital	1.3 spaces / bed	Not Provided	2.18 spaces
Medical Practices	5.0 spaces / practitioner	5.0 spaces	3.99 spaces

3.2 Parking Rates – Determined by Parking Demand

The peak occupancy rates for on-street, main off-street and other smaller off-street car parks in Precinct 1 were outlined earlier in Section 2. This enables a "demand based" empirical parking rate to be calculated that reflects the current level of demand for parking. The assumptions of peak average parking occupancy are outlined below.

3.2.1 On-street Car Parking Demand

The average occupancy rate for on-street car parking was determined from occupancy surveys undertaken by Maunsell and the City of Ballarat. Overall, (using a conservatively high methodology) the results yielded a peak parking occupancy rate of 62% during the peak demand period (early afternoon).

It should be noted that the calculations for car parking demand for hospital land uses represents the total area influenced by parking demand (shown in Figure 3.2 as 833 spaces). This approach acknowledges that excessive car parking demand is generated by the hospitals. The average occupancy of this area has been assumed as 70%, to reflect that on average the streets surrounding the hospital have a higher parking occupancy rate than for the generic average rate calculate for all the streets which were surveyed in Precinct 1.

The average demand for those spaces assigned for medical practitioner use has been estimated at 90%. This assumption is based upon evidence that the majority of streets in which the medical practitioners are located exhibit extremely high peak occupancy rates.

3.2.2 Main Off-street Car Parking Demand

The peak occupancy of the main off-street car parks in Precinct 1 was determined using survey data from Maunsell and the City of Ballarat. The land-use split was determined using previous studies, aerial photographs, information from Council and feedback from consultation. Table 3.6 provides a summary of the actual peak occupancy for each car park by land use, rather than the peak occupancy rate as a percentage.

Table 3.6: Main Off-street Car Parking Capacity and Occupancy

Car Park	Parking Capacity	Peak Parking Occupancy			
		Retail	Commercial	University	Hospital
Drummond Street	13	-	13	-	-
Aust. Catholic Uni	95	-	-	95	-
St John of God Hospital	527	-	-	-	506
Base Hospital	370	-	-	-	363
Queen Elizabeth Centre	141	-	-	-	134
Aldi Supermarket	90	45	-	-	-
Pleasant Street IGA	29	26	-	-	-
TOTAL	1265	71	13	95	1003

3.2.3 Smaller Off-street Car Parking Demand

On-site drive-by surveys were conducted along several key streets in Precinct 1 to obtain an understanding of the capacity and occupancy of the smaller private off-street car parks. Following analysis of the data it was determined that the average occupancy of the retail and commercial related car parks was approximately 50%, whilst the occupancy of the medical practitioner car parks was 53% during the peak period.

3.2.4 Summary of Parking Demand

Table 3.7 provides a summary of the total demand for car parking spaces within Precinct 1. These figures were obtained by applying the peak car parking occupancy rates (from Section 2.1, 2.2 and Table 3.6) to the car parking supply figures which were outlined in Table 3.2.

Table 3.7: Existing Car Parking Demand

Land-Use	On-street Demand 62% (see Table 2.2)	Main Off-street Car Park Demand (see Table 3.6)	Smaller Off-street Car Park Demand 50%-53% (see Section 2.2)	Total Existing Parking Demand
Retail	511	71	14	596
Commercial	414	13	42	469
University	49	95	0	144
Hospital	583	1002	0	1585
Medical Practices	123	0	135	258
Total	1680	1181	191	3052

Table 3.8 provides a comparison for each land-use between the planning scheme requirement, the existing capacity and the existing parking demand.

Table 3.8: Planning Scheme Requirement, Existing Parking Supply and Existing Parking Demand

Land Use	Planning Scheme Requirement	Total Existing Parking Supply	Total Existing Parking Demand
Retail	743	971	596
Commercial	696	765	469
University	390	174	144
Hospital	809	1358	1585
Medical Practices	490	391	258
Total	3128	3659	3052

Table 3.8 shows that in most land-use categories, the existing capacity, which includes on-street car spaces, exceeds the actual demand. In the case of retail and commercial, the demand is 61% of the total capacity.

The exception to this rule applies to the demand for hospital land use, which currently exceeds the overall combined supply of available off-street and on-street parking. As noted earlier, the insufficient parking supply for the hospitals creates significant parking demands which extend into surrounding residential streets. The analysis highlights the business case for a future multi-storey car park (discussed earlier) to in all likelihood be located in the vicinity of the hospitals. The multi storey facility would help to resolve the excessively saturated car parking demands created by not only the hospitals, but also the surrounding mix of retail, commercial, university and medical land uses. It is also worth noting that the current demand for hospital parking far exceeds the planning scheme requirements.

It is also noted that under the existing Planning Scheme Rates the hospitals are required to provide 809 car spaces, but the three sites actually provide 1037 off-street car spaces. However, the hospitals are creating more demand than what would be expected under the existing Planning Scheme rates, as in addition to car parking generated by the bed rate, these hospitals also generate many day-patients, consultations and other activities which lead to higher daytime demands. As a result there is an influence on the adjacent local road network with approximately 583 vehicles parking on-street as “over-spill” from the off-street car parks servicing the hospitals, a scenario which supports the investigation of a future multi-level car park to accommodate the excessive demand created in the precinct.

3.2.5 Summary of Empirical Parking Rates

Table 3.9 shows the comparison between the Planning Scheme Rates, the supply based empirical parking rate and the demand based parking rates for each land-use in Precinct 1.

Table 3.9: Planning Scheme, Supply Based Empirical and Demand Based Empirical Parking Rates

Land Use	Planning Scheme Rate	DPCD Report Proposed Rates	Supply Based Empirical Parking Rate	Demand Based Empirical Parking Rate
Retail	8 spaces / 100m ²	4 spaces	10.5 spaces	6.4 spaces
Commercial	3.5 spaces / 100m ²	3.5 spaces	3.8 spaces	2.4 spaces
University	0.6 spaces / student	0.4 spaces	0.27 spaces	0.22 spaces
Hospital	1.3 spaces / bed	Not Provided	2.18 spaces	2.55 spaces
Medical Practices	5.0 spaces / practitioner	5.0 spaces	3.99 spaces	2.64 spaces

Table 3.9 shows that the demand based empirical parking rates for all land-uses, excluding the hospital, are less than the planning scheme rates suggesting that the planning scheme rates are higher than required for Precinct 1. It is also worth noting that the demand based empirical rate for commercial, university and medical land uses are also lower than (or equal to) the revised parking rates proposed in the DPCD report.

However, the retail demand based parking rate is considerably higher than the DPCD proposed parking rates. As such, this report will recommend a parking rate of 4.0 spaces per 100 square metres of leasable floor area which is lower than the demand based empirical rate (6.4). This recommendation is in line with the strategies of encouraging sustainable forms of transport. Additionally, the total existing retail floor area in Precinct 1 is significantly lower than when compared to Precinct 2, and therefore less reliable. Table 6.9, which is provided later in this report, summarises that the demand based empirical rate for retail land use in Precinct 2 is 3.7 spaces per 100 square metres. This result further supports a reduced rate for Precinct 1.

In the case of the hospitals the demand based rate is higher than the existing planning scheme rate because the on-street parking influence of the hospitals has been considered in this analysis (as has the on-street influence of all land use categories). This suggests that the existing rate of 1.3 spaces per bed is not fully meeting the existing demand in peak periods. However, in order to meet strategic objectives of reducing car dependency and encouraging sustainable forms of transport it is recommended that this existing parking rate be maintained.

3.3 Future Increased Land Use

In order to assess the impact of potential changes to the Planning Scheme parking rates, it is necessary to gain an understanding of the likely future increases for each land-use category.

An investigation was undertaken to identify the potential for future retail, commercial, university, hospital and medical practice development within Precinct 1 that is projected by 2016. Several sources were used and where data was not available, the assumptions used have been stated.

3.3.1 Future Retail Development

There is expected to be an 11% increase² in existing retail floor space which equates to approximately 1,563 square metres growth in Precinct 1. "*City of Ballarat Retail Development Strategy, 2003. Page 87.*" It is noted that this equation includes the existing Maxi Foods retail floor space.

3.3.2 Future Commercial Development

No data was available for future commercial growth within Precinct 1 so it was assumed that this growth would occur in line with the projected retail growth. As such an 11% growth was applied to the current commercial floor space, resulting in an increase of 1,273 square metres in Precinct 1 by 2016.

3.3.3 Future University Development

It has been forecast that 50 new students will be enrolled to the Australian Catholic University by 2016 based on the pattern of growth revealed by previous enrolments over the last 10 years.

3.3.4 Future Hospital Development

There are no plans by any of the three hospitals to increase the number of beds by 2016. There is redevelopment planned at St. John of God Hospital, however it is understood that the ultimate number of beds available is likely to decrease by approximately 24 beds. It is also understood that the ultimate number of on-site parking spaces is proposed to reduce by 71 spaces. This represents a greater reduction than would be requested by the existing planning scheme and as such may intensify the parking demand issues in the hospital area.

3.3.5 Future Medical Practice Development

Whilst the "*Ballarat Health Precinct Study, 2006*" generally predicts an increase in the number of Medical Practices within the Hospital Precinct, it does not provide an estimate of the predicted increase.

Therefore, this report will assume a 10% growth to the current number of medical practitioners working each day within Precinct 1 by 2016. This would result in an increase of approximately 10 medical practitioners who are working each day.

² Floor area growth rate applies to total growth for both Precincts 1 and 2, and a suitable distribution between these precincts for retail and commercial growth was assumed

3.3.6 Other Development

Future residential growth is not expected to be a key consideration in this parking precinct plan. However, it is proposed that the development of traditional residential dwellings, above the ground floor, in buildings located within the historic heritage overlay, should be considered for exemption from parking provisions as detailed towards the beginning of Section 3.0.

For the purposes of parking demand forecasts it has been assumed that all other new residential development will comply with the relevant Planning Scheme rates and hence address parking demand through appropriate provision of off-street parking.

4.0 Parking Outcomes Precinct 1

The parking surveys, observations and analysis undertaken to prepare this parking strategy and parking precinct plan have revealed that:

- The peak time for overall car parking demand in Precinct 1 occurs early in the afternoon (weekdays) when the shift changeover occurs at the hospitals and the majority of commercial areas are busy. At this time several streets in proximity to the hospitals and the CBA core experience occupancy rates of greater than 90%.
- There is a very high demand for the University and Hospital off-street car parks, and the existing parking demand for these car parks is considered saturated during the peaks.
- The high parking demand associated with the St. John of God and Base Hospital sites results in parking over-spill to adjacent local streets, many of which also experience parking demands from other land uses.
- The St. John of God and Base Hospitals generate an overall parking demand which is significantly greater than the existing Planning Scheme rates.
- There is an under utilisation of the Maxi Foods shopping centre car parks (during 2005/2006). Despite the ample capacity for parking, this car park only services local shoppers and is too remote to be utilised by motorists bound for other attractions in the CBA. For this reason, the car park is not considered adequate as a parking option. It should be noted that at the time of preparing this report a Bunning's Warehouse development was being considered for this site with car parking provisions proposed to meet the expected needs of this development on site.
- The Aldi shopping centre had only recently opened when the survey was undertaken and was observed at 50% occupancy. It is understood that the car park currently exhibits higher peak utilisation from observations mid 2007.
- The demand based empirical parking rates for retail, commercial, university and medical land-uses are significantly lower than the Planning Scheme rates. However, the retail demand based empirical parking rate is slightly higher than the rate proposes in the DPCD report.
- The need for a future multi level car park facility within the hospital district should be evaluated as the highest priority. Council should work in collaboration with the hospitals and other key stakeholders regarding the development of a proposal. The proposed facility could be partly paid for by Council using funds collected under a framework which will be discussed in Section 4.3.

In response to these findings it is proposed to:

- Amend Clause 52.06-5 - Statutory Planning Scheme parking rates; and
- Initiate Payment in Lieu Scheme to collect monies from those future developments unable to provide off-street parking spaces in accordance with the amended rates to fund;
 - Improvements to existing car parks
 - Construction of new car parks
 - Improvement in pedestrian links between car parks and attractions
 - Public transport initiatives
 - Sustainable transport initiatives.

4.1 Amend Planning Scheme Parking Rates

The recommended amendments to the car parking rates for Precinct 1 are provided in Table 4.1.

Table 4.1: Statutory Planning Scheme and Recommended Car Parking Rates

Land Use	Planning Scheme Rate	Recommended Rate
Retail	8 spaces / 100m ²	4.0 spaces / 100m ²
Commercial	3.5 spaces / 100m ²	no change
University	0.6 spaces / student	0.3 spaces / student
Hospital	1.3 spaces per bed	no change
Medical Practices	5.0 spaces / practitioner	3.0 spaces / practitioner

The rationale for selecting the recommended car parking rates in Table 4.1 is discussed below:

Retail

The retail supply based empirical parking rate (10.5 spaces / 100m²) and demand based empirical parking rate (6.4 spaces / 100m²) reflects abundant supply (it is noted that these figures exclude the under utilised Maxi Foods car park) However, the proposed rate of 4.0 spaces / 100m² has been recommended for consistency with the DPCD report and to encourage more sustainable forms of transport. It is noted that there is no guarantee that the parking rates proposed in the DPCD report will be approved. Notwithstanding this, it is noted that regardless of this process, it has been considered that any mechanism such as a parking precinct plan, which recommends parking rates which are higher than proposed in the DPCD report will not be looked on favourably given the extensive research that has contributed to the DPCD report and the many Victorian State Government's strategies which aim to promote more sustainable forms of transport,

It is also noted that Precinct 2 consists of a much greater amount of existing retail land use and therefore whilst in a differently defined precinct, does represents a more reliable demand based empirical parking rate calculation of 3.7 spaces / 100m²

As such, the recommended revised parking rate of 4.0 spaces / 100m² is considered reasonable and appropriate for Precinct 1.

Commercial

Many commercial premises in Precinct 1 are in proximity to residential properties and as such it is desirable to protect the amenity of the local streets by minimising adverse parking impacts. The supply based empirical parking rate for commercial land-use in Precinct 1 was determined as 3.8 spaces / 100m² whilst the demand based parking rate was 2.4 spaces / 100m². Given that the maximum empirical rate is close to the Planning Scheme rate it is considered appropriate to maintain the existing Planning Scheme rate of 3.5 spaces / 100m². This conservative approach will help to minimise the impact that proposed commercial developments may have on adjacent residential streets given that the actual demand appears lower than the existing planning scheme rate.

University

The Australian Catholic University (ACU) does not meet the current Planning Scheme requirements for provision of parking given the existing number of students enrolled at the campus. The existing supply has been determined as 174 car spaces (95 off-street and 79 on-street) with peak occupancy of 84% or 151 car spaces. Given the limited opportunities for provision of additional parking on and around the ACU campus, the demand based rate (0.22 spaces per student) was used as a basis to revise the Planning Scheme rate. Therefore, 0.30 spaces / student has been selected as a realistic and conservative requirement for future development at the ACU.

Hospital

The three hospitals currently provide a total of 1037 off-street car spaces between them, whilst the planning scheme requires only 809 car spaces based on the bed numbers. The hospitals therefore provide more car spaces than necessary based on the existing planning scheme requirements. However, surveys and observations showed that there was a stronger demand for parking associated with the hospitals (particularly Base and St John of God Hospitals) which extends into the local street network. Using data from these surveys, the demand based empirical parking rate was established at 2.55 spaces / bed which is higher than the existing planning scheme rate (1.3 spaces / bed) and higher than the supply based rate (2.18 spaces per bed). However, the information obtained from the hospitals indicates that no future increase in bed numbers is envisaged at any of the hospitals. As such, there is no significant evidence to suggest that parking demands will increase in the future as a result of the hospitals.

The Ballarat Health Precinct study recommends the rezoning of existing land adjacent to the Base and St. John of God hospitals with a view to ultimately restrict the number of medical practices operating in the hospital precinct and retain the residential amenity of the area. These planning controls may actually act to reduce the future parking demand in the hospital precinct.

Considering the above and the strategic objective of reducing car dependency and encouraging sustainable forms of transportation, this report recommends maintaining the existing planning scheme rate for hospitals in Precinct 1.

It should be noted that the DPCD report does not provide recommendation for proposed parking rates for hospital use. As such, the existing planning scheme rate is considered the most appropriate rate to be maintained.

4.1.1.1 Medical Practitioners

The supply based empirical rate of 3.99 spaces per medical practitioner is below the planning scheme rate of 5.0 spaces per practitioner. However, whilst there may be a perceived shortage of parking in the medical precinct the analysis estimates a demand based empirical rate of 2.64 spaces per practitioner, based on the maximum number of practitioners operating at any one time.

Therefore, it is recommended to reduce the planning scheme rate to 3.0 spaces per practitioner. This will attempt to more accurately reflect the impact that each medical practice creates on parking.

However, it is also noted that the private off-street parking provided by many medical practices is often poorly advertised and hence poorly utilised. The surveys indicated an occupancy rate of 53%. Site investigations revealed that many medical practices do not provide any signage directing visitors to the private car parking which is generally located at the rear of the property and is not obviously available from the street frontage.

An improved utilisation of private rear parking will help to reduce the perceived high on-street parking occupancy rates in the area.

There are no changes proposed to any of the other Planning Scheme rates for other land-uses not specified in Table 4.1, with the exception of the proposed exemption for development of residential dwellings above the ground floor in heritage overlay buildings which was discussed towards the beginning of Section 3.0.

4.2 Future Car Parking Provisions

In order to meet the future (2016) parking demands generated by the expected future increases in floor area in Precinct 1, the following increases in parking supply are recommended based on the amended parking rates in Table 4.1. However, the exact extent of any parking requirement should be reviewed and is dependant on the success of the recommended sustainable and public transport initiatives.

- For 1,563 m² retail floor space, approximately 63 spaces would be required
- For 1,273 m² commercial floor space, approximately 45 spaces would be required
- For 50 new university students, approximately 15 spaces would be required
- For 10 new medical practitioners, approximately 30 spaces would be required.

The **increased parking demand** would be approximately **153 spaces**. Given that there is generous space available for development in Precinct 1, it is estimated that 60% or 92 car spaces will be able to be provided privately off-street by developers. This leaves a **potential shortfall** of approximately **61 car spaces** where developers will elect to contribute monies rather than supply the parking themselves. This shortfall may be met by the existing spare parking capacity of on-street and off-street parking in the precinct, or by the construction of a car parking facility funded by the monies collected by a Payment-in-lieu scheme, which is discussed below.

4.3 Payment in Lieu Scheme

Future developments unable to satisfy their off-street car parking requirements will be required to make a financial contribution to the City of Ballarat to assist in funding initiatives to manage the impact of parking shortfalls. The contribution will be required by owners of new developments, extensions of to existing buildings and when a change of use occurs to an existing building. When the land use remains the same, developers will not be required to make any contribution.

The introduction of a Payment in Lieu scheme in conjunction with the amended statutory parking rates is designed to provide clarity and equity with respect to parking requirements. Where applicants are unable to provide on-site parking due to constraints, Council will be able to collect funds in lieu of parking and use these to address the impacts of the parking shortfall. This system also removes the need for Council to provide dispensation to developers who are unable to provide the statutory parking rates on-site.

In this instance, a payment in lieu scheme is considered a more appropriate system for addressing future parking matters, compared to a “special rates” scheme. It is noted that a “special rates” scheme would require all properties to contribute funds regardless of the extent to which they may have already satisfied statutory parking requirements. The comprehensive parking surveys undertaken indicated that whilst some localised areas in the Ballarat CBA are subject to high levels of parking demand, the overall existing level of parking supply in the CBA is able to cope with the parking demand and some spare parking capacity exists. In this context it is considered that currently, over the entire CBA, there is not a significant parking problem that can be collectively attributed to existing developments. It would therefore be unreasonable to seek a financial contribution from all existing developments (as possible through a “special rates” scheme) for the purposes of addressing parking issues.

However, having established more realistic parking rates for key land use categories, it is reasonable for all future developments to achieve those parking supply levels. Where developments are unable to provide the requisite parking, a financial contribution in lieu of parking should take place. Council will use the collected funds to address the impacts arising from the parking shortfalls.

Leader Property Practice prepared a report for the City of Ballarat dated 17 October 2005 and titled “The cost of a car space in the Ballarat Central Business Area”. This report is provided in Appendix B. One of the objectives of the report was to estimate an appropriate payment in lieu rate for businesses unable to provide the required level of car parking. The report determined that the likely current cost (at that time) of providing a ground level car park would be in the order of \$17,000 per space (including GST), whilst the cost of providing a multi-storey space was estimated at \$32,000 (including GST). When estimating the applicable land cost the report acknowledged the heritage values of buildings in the city, and made the reasonable assumption that a future car parking site would most likely be developed on the fringe of the CBA. Construction costs were derived from the “Rawlinsons Cost Guide” publication.

Therefore, it is recommended that a cash contribution in the amount of **\$24,500 (plus GST)** in respect of each car parking space or part thereof which is required under this Scheme and which is not provided on the land (but the net of car parking credits) must be paid to the responsible authority. The amount of \$24,500 (plus GST) represents the average forecast cost between providing a ground level car park and a multi level car park. Land costs are included in the calculated rates. The amount of \$24,500 (plus GST) is to be adjusted annually from 1 July 2006, which is the approximate period when the car parking cost was derived, using CPI (all groups) as the index. This cash contribution amount will be updated to reflect the adjusted cost rate prior to incorporation in the planning scheme following public exhibition.

In order to meet the future (2016) parking demands generated by the expected future increases in floor area in Precinct 1, it has been estimated that approximately 192 new parking spaces will be required based on the amended parking rates in Table 4.1.

It is estimated that 60% or 114 car spaces will be able to be provided off-street by developers, thereby leaving a potential shortfall of 77 car spaces subject to the payment in lieu scheme. As such it is predicted that Council would collect approximately **\$1.9 million in funds** as part of the payment in lieu scheme (based on the cost of \$24,500 each space) to service precinct 1.

The money raised through payment in lieu contributions must be used by Council to develop schemes that address **parking issues** within Precinct 1. With the priority projects to be determined at the discretion of council these schemes should aim to:

- Increase the stock of available and attractive car parking spaces through.
 - Improvements to existing car parks
 - The construction of new car parks
- Reduce car usage dependency in Ballarat, through;
 - Public transport initiatives
 - Improvement in pedestrian links between car parks and attractions
 - Improvement in bicycle links
 - Other sustainable transport initiatives.

4.3.1 Improve/Extend Existing Off-street Car park Site(s)

To assist in reducing the on-street demand in the Hospital precinct, consideration should be given to providing additional off-street car parking facilities near the Base and/or St. John of God Hospital sites. Although the hospitals may not directly contribute to any new parking initiative (by not increasing the number of beds and hence not being subject to potential cash-in-lieu contributions) reducing the traffic congestion and parking demands on Drummond Street, Mair Street and adjacent local streets will benefit the overall area. The feasibility of such a proposal requires detailed surveys and further study.

4.3.2 Proposed New Parking Site(s)

The future parking demands calculated for Precinct 1 (estimated earlier in the report as 77 spaces not catered for by off-street spaces provided directly by developers) in conjunction with the existing saturated parking demands in the vicinity of the hospitals, which are the result of a variety of land uses, may warrant the provision of a future multi level parking facility. Furthermore, the redevelopment of St John of God Hospital proposes to reduce the number of existing on-site parking spaces by a total of 71 spaces, which will further intensify the parking demand problems in the precinct. Therefore, there may be a potential future shortfall of approximately 147 spaces in comparison to existing conditions which already exhibits saturated parking demand in some areas.

As such, Council and the Hospitals should work in collaboration to investigate the feasibility, location, size and operation of a new multi level parking facility. While funding is expected to be required from a number of sources it is recommended that the collected funds from the payment in lieu scheme could be used to partially fund the proposed car parking facility.

Additionally, the funds collected should be used to develop pedestrian, bicycle, public transport and sustainable transport solutions to reduce car dependency and excessive levels of parking demand. Proposed public and sustainable transport initiatives are discussed in the following sections. It is further noted that the extent of any parking requirement should be reviewed and is dependant on the success of the recommended sustainable and public transport initiatives.

4.3.3 Public Transport Initiatives

4.3.3.1 Route Bus Services

Funds obtained from the proposed Payment in Lieu scheme may be used to contribute to infrastructure improvements for the existing route bus services in Precinct 1. This should include improved seating, shelter and dynamic timetable and service information. The focus should be on Bus Routes 1, 15 and 16 in this precinct. In addition to the above, the existing bus stops should all be upgraded to reasonably satisfy DDA compliance.

4.3.3.2 Central Area Transit (CAT) System

A Central Area Transit (CAT) system is a high frequency bus service that operates around a city centre, providing a regular and reliable link between the main attractions. Funds obtained from a Payment in Lieu scheme may contribute to infrastructure for such a system and other Central Business Area bus system improvements.

4.3.4 Improve Pedestrian Links

Payment in lieu contributions may be directed towards general improvements to the pedestrian network, particularly between Sturt Street and the Hospital precinct. Improved links may be in the form of widened footpaths, improved surfaces and directional signage for pedestrians.

4.3.5 Sustainable Transport Initiatives

Payment in Lieu contributions can be directed towards improving sustainable transport modes within and leading to/from Precinct 1. Bicycle routes, walking routes and other alternate travel modes rather than car dependency should be encouraged to all commuters to attempt to reduce overall car parking demand. The City of Ballarat has a number of related strategies and associated master plans for improved public transport, pedestrian, mobility routes and cycling that will be used to inform high priority works in the precinct.

Two identified initiatives which are recommended for investigation are the Department of Infrastructure's (DoI) Travel Smart Program and Local Area Access Program (LAAP).

Travel Smart Program

The DoI has developed a Travel Smart program which has been set up to provide communities with information on alternative modes of travel available to them locally as opposed to the private car.

Until now, the Travel Smart program has been primarily targeted towards assisting local governments within metropolitan Melbourne. However, consultation with DoI has suggested a desire for future expansion of the program into rural Victorian communities.

DoI has stated they will request rural local governments identify what they believe are the major issues preventing the use of alternative travel modes specific to their community.

DoI will then consider grant applications by local governments for funding of the Travel Smart program. However, it is expected that this initiative will be based on a shared funding partnership.

The Travel Smart initiative has developed four separate program streams. Each program stream aims to target a separate section of the community. The four streams are:

- Community Program
- Schools Program
- Universities Program
- Workplace Program.

It is recommended that Council investigate initiating the Travel Smart Program throughout Ballarat. A portion of the parking funds collected should be used as part of a shared fund partnership with DoI to the establishment of Travel Smart.

This may involve Council appointing a full-time Sustainable Transport Officer, who would be responsible for providing guidance and advice in regards to developing and implementing school and workplace travel plans. The Sustainable Transport Officer would also be responsible for the implementation and monitoring of public and sustainable transportation initiatives within Ballarat.

Initiatives that can be investigated include car pooling for retail, commercial and hospital staff. In the case of hospital employees there may be an incentive to car pool via reduced parking fees in the off-street car parks which could have an allocated area specifically for car pooling. Alternatively, a permit scheme could be developed, offering discounted parking fees for car pooling.

It is also recommended that the Sustainable Transport Officer firstly implement a Green Travel Plan within the Council's officers. This plan could be used as a 'blue print' for other schools and businesses within Ballarat and will show the community that Council themselves are becoming pro-active and attempting to lead from the front on this matter. It is recommended that the implementation and success of the Council Green Travel Plan be marketed and advertised to the community.

Additionally, a portion of the funds collected is recommended to be allocated to the provision and formalisation of bicycle lanes throughout the study area. Further information will be provided in the City of Ballarat's Bicycle Strategy.

Local Area Access Plan (LAAP)

The Local Area Access Program is part of an Accessible and Sustainable Travel Grants Package. Therefore, municipalities can receive grants from the State Government to allow the Council to specifically focus on improving sustainable transport initiatives, particularly for walking, cycling and public transport.

The DoI website (at the time of preparing this report) states that funded projects will typically focus on:

- provision or improvement of walk and cycle links (e.g. paths) to activity centres, other major destinations and the public transport network.
- infrastructure works to overcome local obstacles or discontinuities (either physical or perceived) that impede cycling, walking or access to public transport.
- other improvements to walking and cycling networks that encourage their use.
- improving the understanding of local access needs.

It is recommended that Council continue to pursue grants under the LAAP program to assist in the improvement of walking, cycling and public transport initiatives.

4.3.6 Implementation of Operational Changes

Specific recommendations for operational parking changes have been discussed in the following section. However, collected monies could also be used to install the following to improve parking operation and access:

- On street parking signage
- Directional signage to parking facilities

- Line marking
- Sealing to create / improve hard standing areas
- DDA works

4.4 Operational Parking Changes

In addition to the revised Parking Rates developed in this Parking Precinct Plan, there are opportunities to explore other parking management options and/or techniques within the precinct.

4.4.1 Rationalise Parking Restrictions

Hospital Precinct

The parking restrictions in the streets surrounding the Base and St. John of God Hospital sites contain inconsistencies in terms of time limits, parking fees and resident permit exemptions.

Drummond Street generally contains 2 hour metered car parking and there are also on-street disabled parking bays and reserved doctor parking spaces. The on-street facilities should be simplified to 2 hour metered restrictions only and the disabled and reserved doctor parking bays should be relocated to appropriate locations within the hospital site. This would simplify the parking arrangements on Drummond Street as disabled patients would have easier access to the hospital facilities and doctors (who would generally be long-term parkers) would not occupy key spaces on Drummond Street.

It is recommended that Council implement the policy of providing a relatively consistent balance of unrestricted and time restricted parking in streets within close proximity of the hospital and in other residential streets which may have high parking demand created by other land use types.

The policy recommends a rationalisation of parking to provide a mix of unrestricted and 2 hour time limit parking with resident exception. This can be achieved by providing 'pockets' of 2 hour time limit parking including resident exemptions.

This parking strategy aims to provide protection for residents from the demand for on-street parking created by the over-spill of parking from the Hospital precinct, however still recognising the important role which on-street parking can play in servicing parking demand. Therefore, this policy aims to efficiently utilise on-street parking spaces whilst still providing sufficient protection for residents. The decision to install the 2 hour limit resident excepted parking in 'pockets' throughout each street aims to provide sufficient stocks of protected parking to residents in close and convenient proximity to their homes. However, the introduction of resident priority parking does not guarantee residents a parking space and may not necessarily mean that residents will be able to park directly in front of their house.

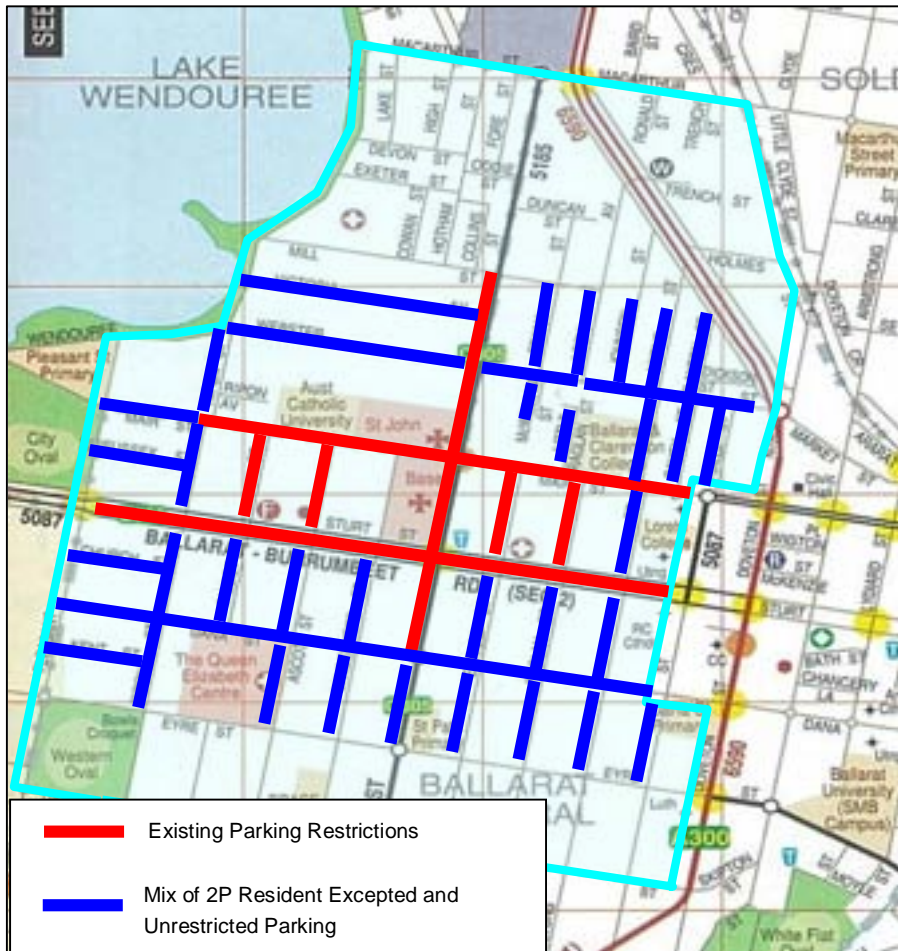
Feedback from Council and during the consultation process suggested that the hospital staff park as far away as Victoria Avenue and Frank Street. The proposed introduction of 2P and unrestricted parking restrictions should include these streets, as well as residential streets further away from the hospitals. These streets suffer from saturated parking demands created by the combined influence of the hospitals and other commercial, retail, university and medical land use types.

The streets nominated for the installation of 2 hour limit parking with resident exception have been shown in Figure 4.1. It should be noted that some of these streets already contain a mixture of unrestricted and 2 hour limit parking restrictions, but have been included in the figure to demonstrate the range of streets which are recommended to contain the mixed parking restrictions. The existing parking restrictions should be retained in the sections of some street sections within the area as indicated in Figure 4.1.

It is recommended that the extent of 2 hour limit parking provided be determined individually for each street on a case by case basis. Generally, it is recommended that most residential streets have between 50 to 70% unrestricted and 50-30% 2 hour limit resident excepted mix of parking restrictions.

However, this recommended proportion is indicative only and subject to change depending on specific site demands, constrictions and opportunities.

Figure 4.1: Hospital Precinct - Proposed Rationalisation of On-Street Parking



The streets proposed to be included for the proposed rationalisation are also outlined in Table 4.2, which also provides the existing mix of parking restrictions in each street section.

It is noted that it is recommended that a selection of streets have the mix of parking restrictions installed as a trial within the short term future (2007/2008). The success of the proposal and the optimal mix of 2 hour limit and unrestricted parking should be monitored. A re-assessment of the optimal solution should then be made before the remaining streets have the mixed parking restrictions installed. Council should determine which streets are included for the trial.

Table 4.2: Staging of Installation of Mixed Parking Restrictions

Street	Section	Existing Parking
Errard Street	Sturt to Dana	73% Unrestricted 23% 1 hour limit 4% disabled
	Dana to Eyre	Unrestricted
Raglan Street	Sturt to Dana	81% Unrestricted 12% 1 hour limit 4% disabled 2% 2 hour limit 1% ¼ hour limit

Street	Section	Existing Parking
	Dana to Eyre	Unrestricted
Drummond Street	Dana to Eyre	Unrestricted
Windermere Street	Sturt to Dana	67% 2 hour limit 18% unrestricted 14% 1 hour limit 1% disabled
	Dana to Eyre	Unrestricted
Ascot Street	Dana to Eyre	72% 2 hour limit 20% unrestricted 4% disabled 3% ¼ hour limit 1% permit zone
	Dana to Sturt	82% 2 hour limit 14% unrestricted 4% 1 hour limit
Talbot Street	Sturt to Dana	Unrestricted
Ripon Street	Webster to Sturt	20% unrestricted 80% time limit
	Sturt to Eyre	97% Unrestricted 3% ¼ hour limit
Kent Street	Pleasant to Ripon	Unrestricted
Dana Street	Pleasant to Ripon	Unrestricted
	Ripon to Drummond	25% Unrestricted 75% 2 hour limit
	Drummond to Dawson	94% Unrestricted 6% 2 hour limit
Church Street	Pleasant to Ripon	Unrestricted
Sussex Street	Pleasant to Ripon	95% Unrestricted 5% 2 hour limit
Mair Street	Pleasant to Ripon	Unrestricted
Frank Street	Webster to Mill	Unrestricted
McWilliam Street	Webster to end	Unrestricted
Loch Street	Webster to Mill	Unrestricted
Johnson Street	Webster to mid-block	Unrestricted
Claxton Street	Webster to mid-block	Unrestricted
Davey Street	Webster to Mair	Unrestricted
Yuille Street	Webster to Mair	91% Unrestricted 9% 1 hour limit
Lyons Street	Webster to mid-block	Unrestricted
	Webster to Mair	Unrestricted
	Mair to Sturt	75% Unrestricted 16% 1 hour limit 8% 2 hour limit 1% loading zone

Street	Section	Existing Parking
	Sturt to Dana	69% Unrestricted 25% 1 hour limit 5% disabled 1% permit zone
	Dana to Eyre	Unrestricted
Little Raglan Street	Mair to end of street	Unrestricted
Victoria Avenue	Wendouree Pde to Drummond	80% Unrestricted 20% 2 hour limit
Dawson Street	Dana to Eyre	92% Unrestricted 8% ½ hour limit
Webster Street	Ripon to Drummond	7% Unrestricted 93% 2 hour limit
	Drummond to Loch	75% 2 hour limit 25% Unrestricted
	Loch to Doveton	Unrestricted with pockets of 2 hour limit

Note: The Proposed Parking restrictions should consist of a mixture of Unrestricted and 2 hour limit – with resident exception parking restrictions using ‘pockets’ to evenly distribute the mixed parking restrictions throughout each street section.

In order to cater for the high staff demand at the Base and St. John of God Hospitals, appropriate management of the car parks is required by the hospitals. This will assist in maximising the available car spaces in the existing off-street car parks. Possible schemes could include staff car pooling with appropriate incentives (i.e. reduced car park fees), or discounted public transport tickets.

5.0 Parking Supply and Demand in Precinct 2

In late 2005 and early 2006 the City of Ballarat undertook a detailed inventory on the number of car parking spaces and the existing parking restrictions within Precinct 2. This was compiled into a GIS system to enable the analysis of the parking supply within the precinct.

Following on from this, comprehensive parking occupancy surveys were undertaken on key on-street and off-street parking areas within Precinct 2. Both on-street and off-street parking occupancy surveys were conducted by Maunsell between March and June 2006 whilst the City of Ballarat originally conducted off-street parking occupancy surveys in December 2005 and has reviewed the occupancy of some of the car parks since that time.

5.1 On-Street Parking Supply and Demand

The inventory of parking spaces revealed that there are 4,533 (as of 2005/2006) total on-street car parking spaces within Precinct 2.

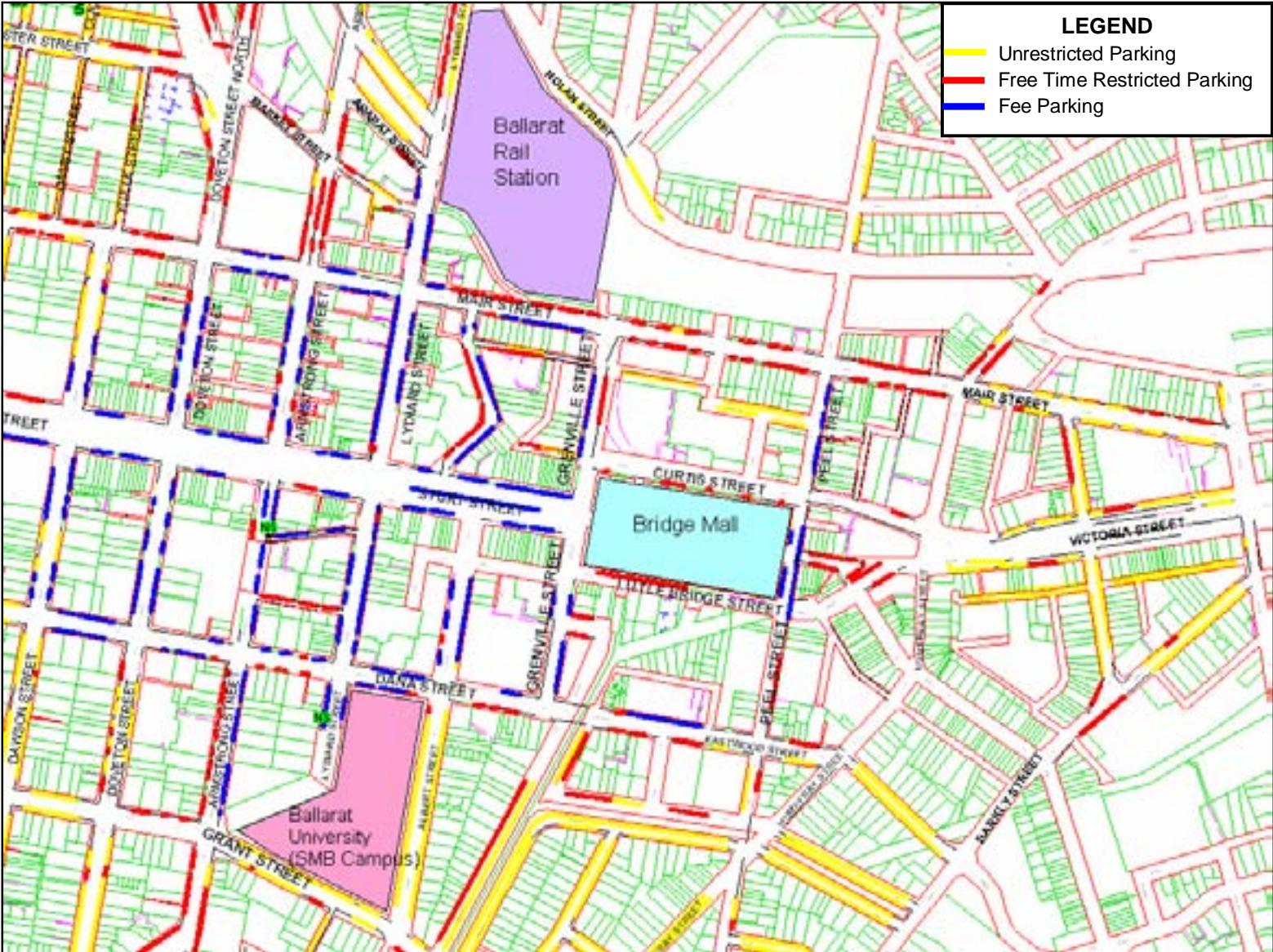
This total number of car parking spaces includes:

- 1,048 Paid Parking Spaces;
- 982 Free Time Restricted Parking Spaces;
- 2,206 Unrestricted Parking Spaces; and
- 297 other parking spaces (eg Loading Zone, Taxi Zone, Disabled)

The total number of parking spaces within the precinct was calculated using the GIS system which provided information on the number and restriction of parking spaces in each street section. Maunsell amended the GIS system to estimate the number of unrestricted parking spaces in streets which were unlined and unsigned.

A summary of the parking restrictions provided in Precinct 2 is provided in Figure 5.1.

Figure 5.1: Summary of Precinct 2 Parking Restrictions



5.1.1.1 CBA Core

The CBA core has been defined as the area bounded by Dawson Street, Mair Street, Grenville Street and Dana Street. Note that Bridge Mall is discussed separately below. The CBA core area contains a high density of retail and some commercial land use and includes the Central Square Shopping Mall, the Sturt Street retail strip and University of Ballarat – Camp Street campus. Consequently, the majority of streets within this area experience high parking demand.

The on-street parking restrictions within the CBA core comprise primarily 1 hour metered restrictions (Monday to Saturday) and 2 hour free restrictions on Sunday. However, Mair Street and Dana Street which are on the edge of the CBA core each contain a variety of parking restrictions, including:

- ½, 1 and 2 hour free parking
- ½, 1, 2 and 4 hour paid parking
- All day paid parking

5.1.1.2 Bridge Mall

Bridge Mall contains 126 retail outlets. Whilst the majority of retail workers and shoppers park in off-street locations such as the Coles and Safeway car park and the Big W car park, this Mall does create on-street parking demand in the adjacent streets.

5.1.1.3 Ballarat University School of Mines (SMB) Campus

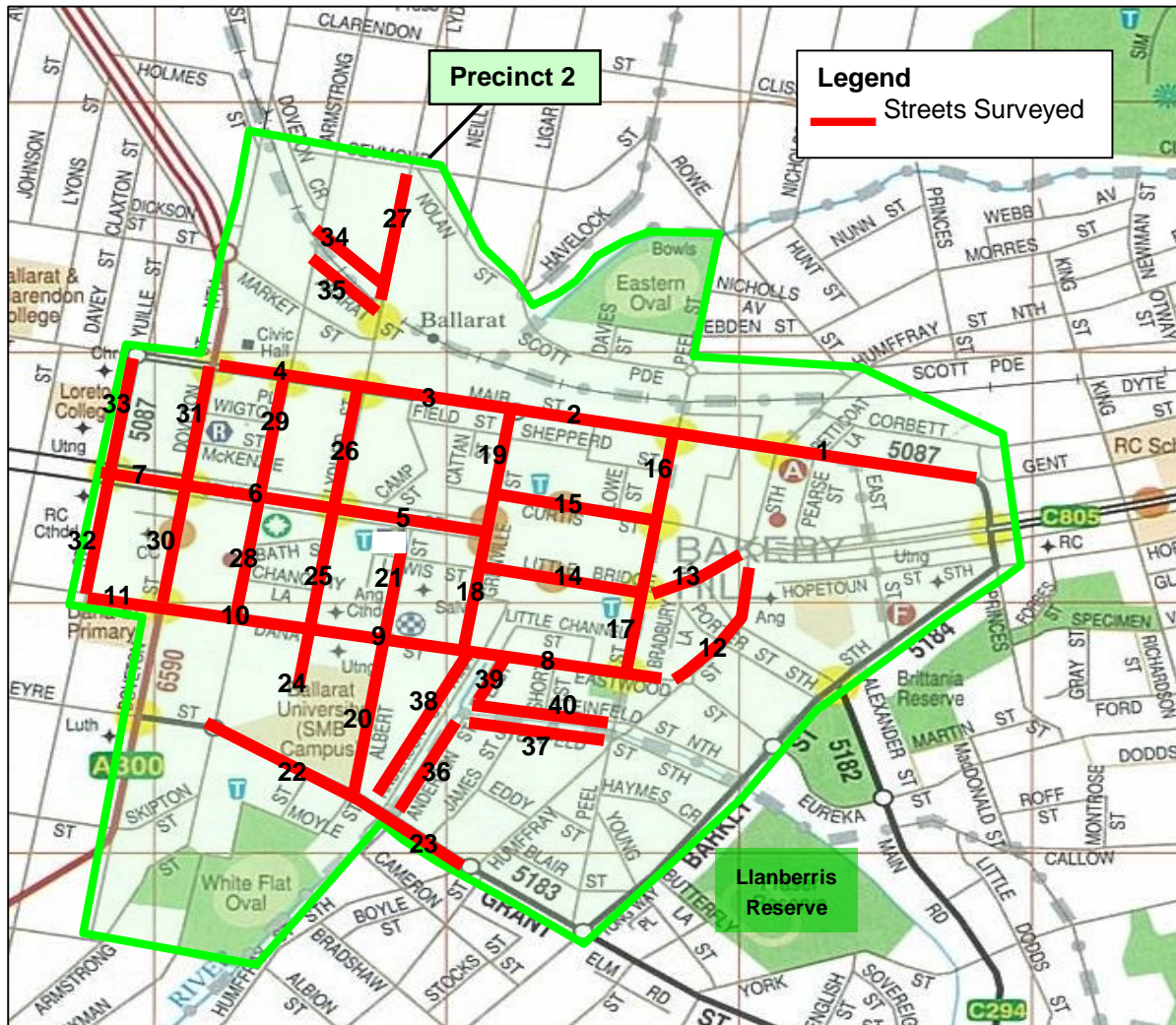
Ballarat University has approximately 3,500 students attending its SMB Campus on a busy day. The off-street car park has capacity for 240 vehicles and fills early in the morning, which creates a high demand for on-street parking surrounding this campus. In particular students attempt to take advantage of all day free parking in streets including Albert Street, Anderson Street, Grant Street and parking areas around White Flat Oval. Consultation with Council has indicated that the number of vehicles parking at White Flat Oval has increased since the new trade school on Grant Street has become operational.

5.1.1.4 Ballarat Railway Station

The railway station contains an off-street commuter car park with capacity for approximately 180 vehicles. This car park is full by early morning so the demand for parking extends into the neighbouring streets. Lydiard Street, Ararat Street, Doveton Cres and Seymour Street which contain all day free parking experience very high occupancy rates.

The on-street parking areas surveyed by Maunsell are shown in Figure 5.2 with the parking capacity and peak occupancy rate shown in Table 5.1.

Figure 5.2: Location of On-Street Parking Surveys



In total 2,256 on-street car parking spaces were surveyed over several separate days. This comprises approximately 50% of the total number of spaces within Precinct 2. This indicates that a significant proportion of the parking spaces within Precinct 2 were examined, and it should be noted that the areas surveyed were located in key areas within the CBA, as well as surrounding the Railway Station and University districts, where parking demands are highest.

As a conservative approach, the maximum occupancy rate for each individual street block obtained during any of the on-street parking surveys has been defined as the “peak occupancy rate”. On site observations, public consultation and parking surveys indicated that the peak demand for parking in Precinct 2 generally occurred during the early afternoon period (1.00pm – 3.00pm). This time is considered the busiest in terms of shoppers and university students. All commercial offices would be occupied (in terms of staff vehicles) at this time as well. Naturally, the individual peak for each street section would not always coincide with the overall precinct peak (1pm to 3pm), however as the surveys were not exhaustive (and did not necessarily represent the peak month of the year, but merely a “typical” day), a conservative approach has been taken, and the individual peak by street has been reported. The on-street peak occupancy by block was determined for all streets which were surveyed within Precinct 1, and this has been shown in Table 5.1.

Table 5.1: On-Street Parking Supply and Occupancy

Street	Map Ref	Street Section	Total Parking Spaces	Peak Occupancy Rate
Mair Street	1	Victoria to Peel	129	71%
	2	Peel to Grenville	85	60%
	3	Grenville to Lydiard	87	77%
	4	Lydiard to Doveton	60	67%
Sturt Street	5	Grenville to Lydiard	130	70%
	6	Lydiard to Doveton	50	92%
	7	Doveton to Dawson	25	92%
Dana Street	8	Humffray to Grenville	88	73%
	9	Grenville to Lydiard	85	66%
	10	Lydiard to Doveton	57	79%
	11	Doveton to Dawson	32	94%
Humffray Street	12	Victoria to Eastwood	24	42%
Little Bridge Street	13	Roundabout to Peel	22	64%
	14	Peel to Grenville	30	83%
Curtis Street	15	Grenville to Peel	45	51%
Peel Street	16	Curtis to Mair	19	32%
	17	Curtis to Dana	77	71%
Grenville Street	18	Dana to Sturt	38	39%
	19	Sturt to Mair	34	68%
Albert Street	20	Grant to Dana	126	98%
	21	Dana to Sturt(Lewis?)	53	91%
Grant Street	22	Armstrong to Albert	62	98%
	23	Albert to Humffray	29	48%
Lydiard Street	24	South of Dana	25	92%
	25	Dana to Sturt	77	81%
	26	Sturt to Mair	80	74%
	27	Railway line to Seymour	49	71%
Armstrong Street	28	Dana to Sturt	44	93%
	29	Sturt to Mair	75	94%
Doveton Street	30	Dana to Sturt	64	91%
	31	Sturt to Mair	62	76%
Dawson Street	32	Dana to Sturt	88	66%
	33	Sturt to Mair	78	81%
Doveton Crescent	34	Armstrong to Seymour	60	95%
Ararat Street	35	Armstrong to Lydiard	33	97%
Anderson St East (Sth Section)	36	Grant to Steinfeld	40	35%
Steinfeld Street South	37	Anderson to Peel	60	42%
Anderson Street West	38	Dana to Grant	94	73%
Anderson St East (north section)	39	Eastwood to Steinfeld	36	72%
Steinfeld Street North	40	Anderson to Peel	23	22%
TOTAL		ALL STREETS	2256	78% (weighted avg)

- *The 78% Weighted Average represents a peak demand of 1760 cars within the survey area, assuming all peak occupancies occurred at the same time. However, as the represented peak occupancies did not all coincide during the afternoon peak (1pm to 3pm) this is a conservatively high weighted average, which may account for localised higher parking demands during different days or months of the year.*

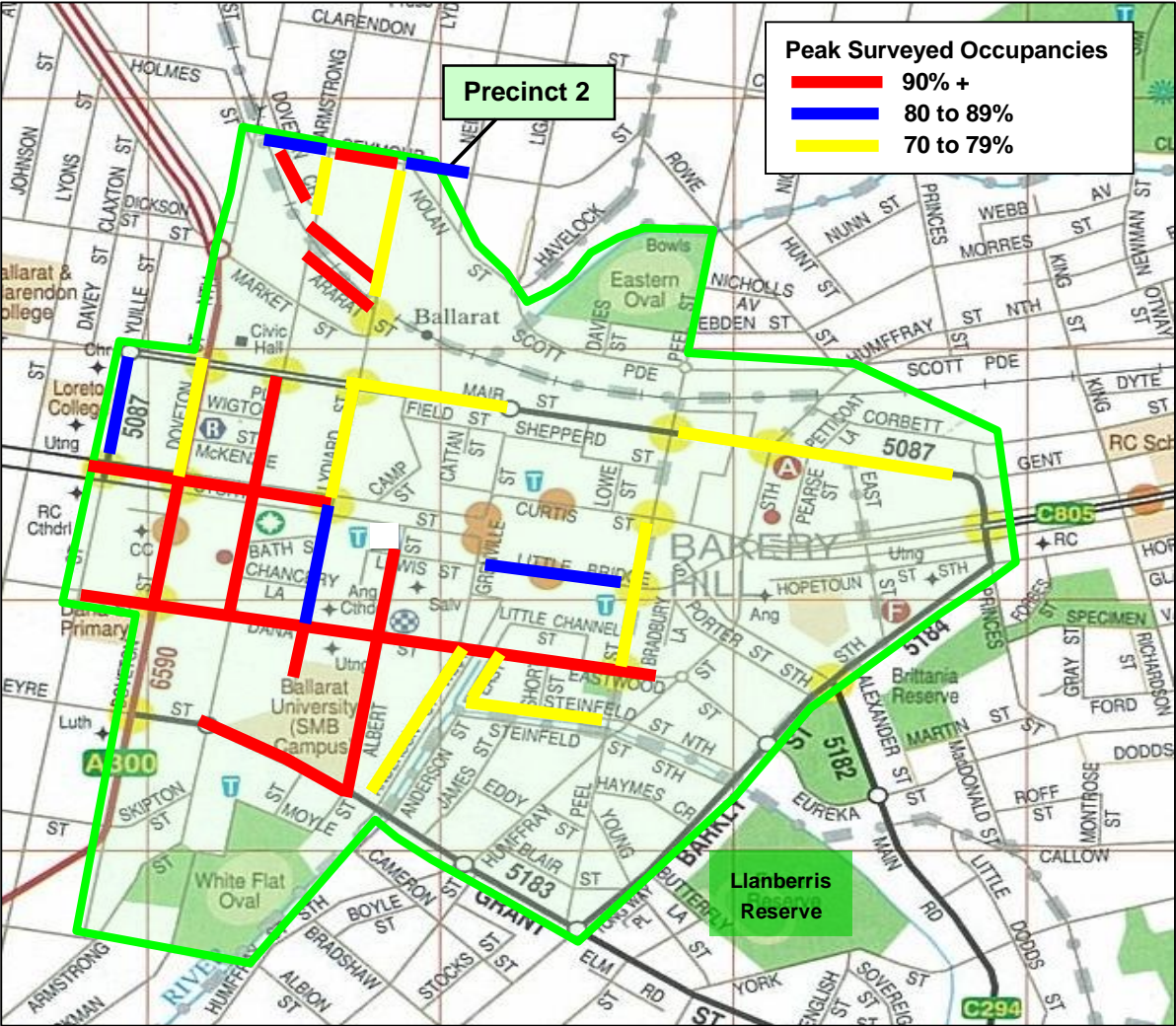
The results indicate that the majority of streets surveyed within Precinct 2 experience high parking occupancy and that the CBA core is nearing capacity during the peak period.

It should also be noted that City of Ballarat have advised that since the parking surveys were undertaken that sections of Seymour Street, Doveton Crescent and Armstrong Street in reasonable proximity to the railway station have increased in parking occupancy significantly. The increased parking occupancies, which have been observed as approximately 90% in the unrestricted areas, are possibly the result of the “fast rail” service between Ballarat and Melbourne. These street sections were originally not surveyed by Maunsell because they were observed to have very low parking occupancy rates which suggested that parked vehicles were most likely residents. Whilst the recent observations would not necessarily change the 78% weighted average significantly, they do highlight the over demand for parking created by the railway station which extends into residential streets.

Parking occupancies for each street section of 70% or greater from Table 5.1 have been shown in Figure 5.3. It shows that the parking demand was greatest on the streets with the central CBA core and in proximity to Ballarat University SMB Campus and the railway station.

The eastern portion of the CBA core has weaker parking demand than the section between Lydiard Street and Dawson Street. Grenville Street and the section of Sturt Street to the east of Lydiard Street were surveyed to contain peak occupancy rates less than 70%.

Figure 5.3: Streets with Surveyed Occupancy Greater than 70%

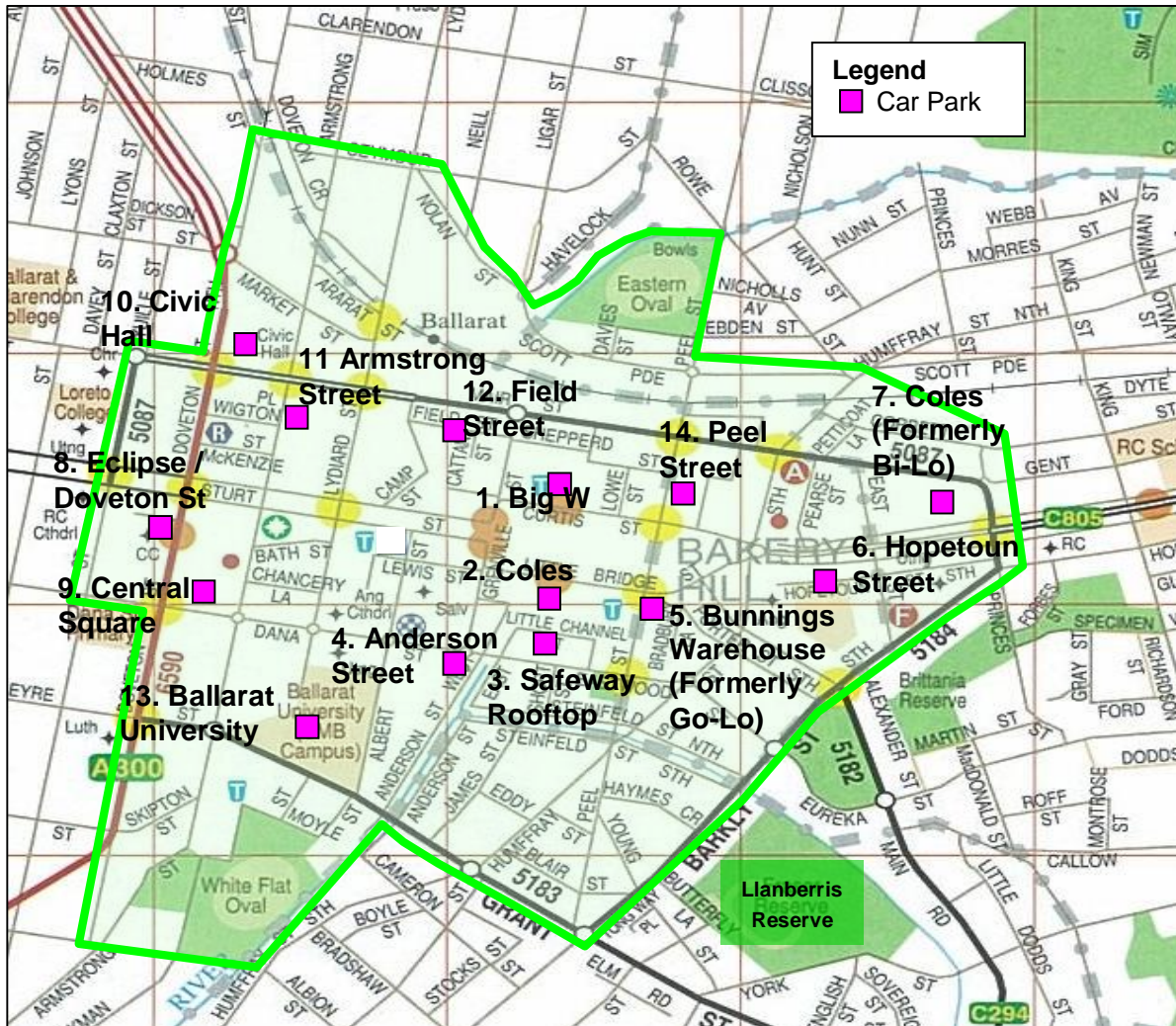


Note: The parking occupancies recently observed by City of Ballarat for Seymour Street, Doveton Crescent and Armstrong Street surrounding the railway station have been included in Figure 5.3 to highlight the high demand for parking created by the railway station since the operation of the fast rail service. As noted, these street sections were not included in the original on-street surveys conducted by Maunsell and therefore have not been included in Table 5.1.

5.2 Main Off-Street Parking Supply and Demand

On-site surveys performed by the City of Ballarat and Maunsell have provided information pertaining to the location, capacity and occupancy of several of the main off-street car parks located throughout Precinct 2. Figure 5.4 shows the locations of these surveyed sites and Table 5.2 provides a summary of the results.

Figure 5.4: Main Off-Street Car Park Survey Sites



The maximum occupancy rate for each individual car park has been used to illustrate the worst case scenario in terms of parking demand. Again the on site observations, public consultation and parking surveys all suggest that the peak demand for parking in Precinct 2 occurred over the early afternoon period (12 midday – 1:00pm), which was the busiest time in terms of office and retail staff numbers, shoppers in the retail areas and University students. Table 5.2 provides a summary of the results.

Table 5.2: Main Off-Street Car Park Occupancy Rates

Car park	Map Ref.	Paid / Free	Total Parking Spaces	Peak Occupancy Rate (%)
Big W	1	Free	368	100%
Coles & Safeway-Ground Level	2	Free	580	99%
Safeway Rooftop	3	Free	136	55%
Anderson Street	4	Paid	103	15%
** Bunnings Warehouse (Formerly Go-Lo)	5	Free	101	99%
Hopetoun Street	6	Free	48	96%
** Coles (Formerly Bi-Lo)	7	Free	170	90%
Eclipse/Doveton St	8	Paid	40	100%
Central Square	9	Free*	645	86%
Civic Hall	10	Free	80	82%
Civic Hall	10	Paid	180	82%
Armstrong Street	11	Paid	31	92%
Field Street	12	Paid	59	71%
Ballarat University SMB	13	Free	240	100%
Peel Street	14	Paid	36	44%

* Note: Central Square contains free parking for the first two hours of stay, and is then fee charging thereafter.

** Note: At the time when the parking surveys were undertaken, Bunnings Warehouse was Go-Lo and Coles was Bi-Lo. Therefore the parking demands presented in Table 5.2 were manifested by the previous businesses.

Table 5.2 shows that many off-street car parks in Precinct 2 experience very high occupancies during the lunchtime period. In particular, the car parks in proximity to Bridge Mall and within the CBA core generally exhibit very strong parking demand.

The main off-street car parks which had low surveyed peak occupancy rates are discussed below.

Coles Ground Level and Safeway Rooftop Car Parks

The Coles Ground Level and Safeway Rooftop car parks are located adjacent to each other to the south of Bridge Mall as shown in Figure 5.5.

The ground level car park consists of 580 "2 hour limit" car parking spaces, whilst the rooftop car park consists of 136 unrestricted car parking spaces. The car parks service staff and shoppers of the Coles and Safeway supermarkets as well as the retail outlets located in Bridge Mall.

Figure 5.5: Coles Ground Level Car Park and Safeway Rooftop Car Park



The peak occupancy rate recorded for the Safeway Rooftop car park was 80%. This survey was conducted by City of Ballarat during the Christmas shopping period on 16 December 2005. Maunsell conducted a survey of this car park in May. The lunchtime occupancy was 55%. Consultation with the community and Council has indicated that this occupancy level is far more indicative of the general peak occupancy rate. This occupancy rate is considered very low in comparison to the ground level Coles car park which had recorded occupancy rates of 99% at both 11.00am and 1.00pm when surveyed in December 2005. Consultation with the community and general observations indicate that during the peak lunch-time period the occupancy in this car park is generally quite full for most of the year.

Feedback obtained during a public consultation session held at Bridge Mall in May 2006 revealed that there was a safety concern for potential users of the Safeway Rooftop car park. Traders stated that even though this rooftop car park has all day free parking, staff do not park here due to vehicle and personal safety concerns. As such, staff park their vehicles in the "2 hour limit" ground level car park and continuously move their cars during the day. The traders suggested that if security and lighting were vastly improved on the rooftop car park that Bridge Mall staff would park in this location. This would also create the positive effect of freeing up more ground level spaces for genuine short-term shoppers who require more convenient and accessible parking than staff who are working for longer periods.

Law Courts Car Park

The Law Courts car park is located behind the Law Courts building on Grenville Street with access available from Grenville Street and Lewis Street. This car park has free unrestricted public car parking after 5:00pm on weekdays and all day free public parking on Saturday and Sunday. In total there are 130 public car spaces available in this car park. During weekday office hours the car park is reserved for permit holders only with no public parking permitted at all.

Figure 5.6: Signs at the Law Courts Car Park



On-site observations suggest that this site is under-utilised as people are not aware of this available parking after hours and on weekends. The signs informing drivers of the car park regulations are not effective in promoting the car park to the public as they present strong negative messages to non-permit holders. Note in

Figure 5.6 that the legend promoting the area as a public car park is in narrow font and dominated by the other text. In addition the permanent permit parking signs and line marking add to the confusion.

Anderson Street Car Park

During the public consultation many Bridge Mall traders stated that the pedestrian route security and lighting between Bridge Mall and the Anderson Street car park was unsatisfactory for staff who finish after dark, due to poor lighting and a lack of a defined path.

The \$3 per day fee was also a major deterrent for staff. As Table 5.2 shows the car park had a very low occupancy rate of 15%, with only 16 of 105 spaces occupied during the peak period.

Consideration should be given to reducing or removing fees from this car park by Council to promote its use. Council may lose some revenue however, the current low occupancy rates mean that little revenue is currently being collected and that the car park is operating extremely inefficiently. In addition if lighting and security were improved some Bridge Mall traders indicated they would use this car park.

Other Fee Paying Car Parks

High occupancy rates were recorded for the following paid car parks.

- Armstrong Street (Combination of \$4 per day and 80 cents per hour parking)
- Eclipse (2P metered – 80 cents per hour)
- Field Street (Combination of \$3 per day and 80 cents per hour parking).

The high occupancy rates of these fee charging off-street car parks indicates that commuters are willing to pay for off-street car parking provided that the car parks are well located and physically well maintained.

However, all of these three car parks each contain less than 40 parking spaces and are located in areas within the CBA core. Therefore, we cannot say with confidence that a larger off-street fee charging car park located on the periphery of the CBA could attract similarly high occupancy rates.

5.3 Smaller Off-Street Car Parking Supply and Demand

There are also numerous smaller public and private off-street car parks located in Precinct 2 servicing individual properties. Several “drive-by” surveys were performed to provide some base data on the capacity and demand for these smaller sites. It was estimated that, in total, there were approximately 393 retail, 335 commercial and 21 university car spaces available in smaller car parks in Precinct 2 and that the occupancy was approximately 50% in the peak period.

6.0 Assessment of Parking Supply Rates in Precinct 2

Clause 52.06-5 of the City of Ballarat Planning Scheme outlines the Statutory Rates required for the provision of car parking for developments in the City of Ballarat. Table 6.1 provides an extract of these rates for three key land-use categories found in Precinct 2.

Table 6.1: Planning Scheme Parking Requirements

Land Use	Planning Scheme Rate
Retail	8 spaces / 100m ²
Commercial	3.5 spaces / 100m ²
University	0.6 spaces / student

Reference: Clause 52.06-5. Car Parking Table. City of Ballarat Planning Scheme.

These three land-uses are the major influences on parking demands within Precinct 2. Whilst, the required parking demand for residential development is not the objective or focus of this report, it is recommended that parking dispensation be afforded to developments of above ground level traditional residential dwellings which are located within a Heritage Overlay on account of their historic value.

The proposed reuse and development of upper storey traditional residential dwellings is in accordance with state policy and the relevant Overlay provisions that encourage the reuse and retention of heritage fabric. It is considered that the site constraints which are inherently associated with traditional small lots limit the opportunity to provide parking. The limited land available means that it is not feasible to meet the applicable parking rates set out in Clause 52.06 while simultaneously retaining the intact heritage fabric of the site.

Additionally it is noted that the central location of many heritage overlay sites in conjunction with the provision of sustainable transport options will ensure that the requirement to use a private vehicle will be minimized.

Consequently it is proposed that this parking strategy consider exempting above ground level traditional residential development from any requirement to provide parking, if the building is within a heritage overlay. This proposal aims to ensure that the value of the site in terms of housing supply and heritage character is fully utilized. Appendix F provides a map of the heritage overlay zones.

The three categories in Table 6.1 were assessed against the existing supply and the existing demand for both off-street and on-street parking. The assessment has been used to determine whether these rates were adequate or whether they required modification to more accurately reflect the requirements of the precinct.

Currently, there is a mechanism that would allow University of Ballarat – SMB Campus to be exempted from the Planning Scheme through the Minister. Therefore, the parking rates determined for the university in this report may be used as a guide to determine the parking requirements of the university for any future development.

6.1 Parking Rates – Determined by Parking Supply

6.1.1 Existing Parking Supply

This section determines the existing supply of on-street and off-street car parking spaces for retail, commercial and university land-uses within Precinct 2.

Council feedback, on-site observations and parking surveys were used to assign the number of car spaces for each street and off-street car park, to specific land-uses so that the parking supply for each land-use could be established. Table 6.2 provides a summary of the results.

Table 6.2: Existing Parking Supply for each Land-Use

Land-Use	On-street spaces (See Section 5.1)	Main Off-Street Car Park spaces (See Section 5.2)	Smaller Off-Street Car Park spaces (See Section 5.3)	Total Existing Parking Supply
Retail	2108	2172	393	4673
Commercial	371	378	335	1084
University	501	267	21	789
Total	2980	2817	749	6546

Table 6.2 shows that the majority of parking spaces in Precinct 2 are available for retail use. This is consistent with the high retail land-use in Precinct 2, including Bridge Mall, Central Square Shopping Centre and the retailers located along Sturt Street.

6.1.2 Existing Land-Use

The car space measures are used in the Planning Scheme to determine the parking requirements for proposed developments. Table 6.3 provides a summary of the existing car space measures obtained during the preparation of this parking strategy.

Table 6.3: Car Space Measure of each Land Use

Land-Use	Car Space Measure	Source
Retail	101,054 square metres of lettable floor space	Essential Economics. "City of Ballarat Retail Development Strategy, 2003".
Commercial	69,124 square metres of lettable floor space	Commercial Valuations Spreadsheet, City of Ballarat, May 2006
University	3770 students present on a busy day	Direct consultation with Ballarat University

Note: The total number of university students does not include the recently opened trade school in Grant Street.

6.1.3 Total Parking Spaces Required by Planning Scheme

Table 6.4 shows the total number of parking spaces that would be required if the existing planning scheme rates were applied to the level of existing development as determined in Section 6.1.2. The number of existing parking spaces as determined in Section 6.1.1 has also been included in the table to enable a comparison between the planning scheme requirement and the actual number of car spaces available within Precinct 2 for the various land-uses.

Table 6.4: Number of Car Spaces – Existing Planning Scheme and Existing Supply

Land Use	Number of Car Spaces		
	Existing Planning Scheme	Existing Supply	Variance
Retail	8084	4673	(-ve 3411)
Commercial	2419	1084	(-ve 1335)
University	2262	789	(-ve 1473)
Total	12766	6546	(-ve 6220)

Table 6.4 shows that the existing supply is significantly less than what is required by the Planning Scheme. This may be due to the limited space within Precinct 2 to provide both off-street and on-street parking opportunities.

6.1.4 Supply Based Empirical Parking Rates

An empirical parking rate based on existing parking supply has been determined for each land-use in Precinct 2. This has been calculated by dividing the existing parking supply (Table 6.2) by the measure of each land-use (Table 6.3). This supply based empirical rate is based on a theoretical 100% occupancy of all the parking spaces associated with a given land use. Table 6.5 provides a summary of the results which compares the existing Planning Scheme parking rates, the proposed DPCD report parking rates and the Supply Based Empirical parking rates. It is noted that for the purposes of this study Precinct 2 has been considered reflective of an Activity Centre given the high concentration of land uses. Therefore the "Activity Centre" parking rates proposed by the DPCD report have been included.

Table 6.5: Planning Scheme Rate and Supply Based Empirical Parking Rates

Land Use	Planning Scheme Rates	DPCD Report Proposed Rates	Supply Based Empirical Parking Rate
Retail	8 spaces / 100m ²	3.5 spaces	4.6 spaces / 100 m ²
Commercial	3.5 spaces / 100m ²	3.0 spaces	1.6 spaces / 100 m ²
University	0.6 spaces / student	0.3 spaces	0.21 spaces / student

6.2 Parking Rates – Determined by Parking Demand

The peak occupancy has been determined for the on-street, public off-street and private off-street car parks in Precinct 2. This enables a demand based empirical parking rate to be calculated that reflects the current level of demand for parking.

The assumptions of peak average parking occupancy are outlined below. These assumptions have been based on the results of the on-street and off-street parking surveys summarised in Sections 5.1 and 5.2 along with general observations of parking occupancy.

6.2.1 On-street Car Parking Demand

The average occupancy rate for on-street car parking was determined from occupancy surveys undertaken by Maunsell and the City of Ballarat. Overall, the results yielded an average on-street occupancy of 78% during the peak demand period (lunchtime / early afternoon).

6.2.2 Main Off-street Car Parking Demand

The peak occupancy of the main off-street car parks in Precinct 2 was determined using survey data from Maunsell and the City of Ballarat. The land-use split was determined using previous studies, aerial photographs, information from Council and feedback from consultation. Table 6.6 provides a summary of the results summarising the actual peak occupancy of each car park by land use, rather than the peak occupancy rate as a percentage.

Table 6.6: Main Off-street Car Park Occupancy

Car Park	Parking Capacity	Peak Parking Occupancy			
		Retail	Commercial	University	Total
Big W	368	368			368
Coles	580	574			574
Safeway Rooftop	136	75			75
Anderson Street	103	8	7		15
Go-Lo	101	100			100
Hopetoun Street	48	15	31		46

Car Park	Parking Capacity	Peak Parking Occupancy			
		Retail	Commercial	University	Total
Bi-Lo	170	153			153
Eclipse/Doveton St	40	40			40
Central Square	645	444	111		555
Civic Hall	260	106	106		212
Armstrong Street	31	15	14		29
Field Street	59	8	14	20	42
Ballarat University	240			240	240
Peel Street	36	16			16
TOTAL	2817	1903	264	260	2427

6.2.3 Smaller Off-street Car Parking Demand

On-site drive-by surveys were conducted along several key streets in Precinct 2 to obtain an understanding of the capacity and occupancy of smaller public private off-street car parks. Following analysis of the data it was determined that the average occupancy of these car parks was approximately 50% during the peak period.

6.2.4 Summary of Parking Demand

Table 6.7 provides a summary of the total demand for car parking spaces within Precinct 2. These figures were obtained by applying the peak car parking occupancy rates to the car parking supply figures which were outlined in Table 6.2.

Table 6.7: Existing Car Parking Demand

Land-Use	On-street Demand (78%)	Main Off-Street Car Park Demand (Refer Table 6.6)	Smaller Off-Street Car Park Demand (50%)	Total Existing Parking Demand
Retail	1644	1921	197	3762
Commercial	289	284	167	741
University	391	260	11	662
Total	2324	2464	375	5163

Table 6.8 provides a comparison for each land-use between the planning scheme requirement, the existing capacity and the existing parking demand.

Table 6.8: Planning Scheme Requirement, Existing Parking Capacity and Existing Parking Demand.

Land Use	Planning Scheme Requirement	Total Existing Parking Supply	Total Existing Parking Demand
Retail	8084	4673	3762
Commercial	2419	1084	741
University	2262	789	662
Total	12766	6546	5163

Table 6.8 shows that in all land-use categories, the existing supply, which includes on-street car spaces, exceeds the actual demand. However, the retail demand (80% of the available capacity) and the university demand (84% of the available capacity) are approaching saturation throughout the precinct. It is noted that in the peak areas surrounding the Bridge Mall and Sturt Street that on-street and off-street parking areas are currently operating at near capacity. Whilst the commercial demand is only approximately 66% of the total capacity, the above figures and observations suggest that the investigation of a future car parking facility located in the vicinity of the Bridge Mall may be warranted. Council should act as a facilitator in the investigation of the feasibility of such a proposal, and liaise with key stakeholders in the precinct.

6.2.5 Summary of Empirical Parking Rates

Table 6.9 shows the comparison between the Planning Scheme Rates, the supply based empirical parking rate and the demand based parking rates for each land-use in Precinct 2.

Table 6.9: Planning Scheme Rate, Maximum Potential Rate and Demand Based Rate

Land Use	Planning Scheme Rate	DPCD Report Proposed Rates	Supply Based Empirical Parking Rate	Demand Based Empirical Parking Rate
Retail	8 spaces / 100m ²	3.5 spaces	4.6 spaces	3.7 spaces
Commercial	3.5 spaces / 100m ²	3.0 spaces	1.6 spaces	1.1 spaces
University	0.6 spaces / student	0.3 spaces	0.21 spaces	0.17 spaces

Table 6.9 shows that the demand based empirical parking rates for all land-uses are less than half that of the planning scheme rates suggesting that the planning scheme rates are much higher than required for Precinct 2. It has been recognised that when parking rates begin to exceed 80% of available capacity, it is possible that suppressed parking demand could occur. However, it is considered unlikely that this phenomenon is currently occurring in central Ballarat at any significant level.

6.3 Future Increased Land-Use

In order to assess the impact of potential changes to the Planning Scheme parking rates, it is necessary to gain an understanding of the likely future increases for each land-use category.

An investigation was undertaken to identify the potential for future retail, commercial and University development within Precinct 2 that is projected by 2016. Several sources were used and where data was not available, the assumptions used have been stated.

6.3.1 Future Retail Development

There is expected to be an 11% increase³ in existing retail floor space which equates to 10,757 square metres in Precinct 2. *"City of Ballarat Retail Development Strategy, 2003. Page 87."*

6.3.2 Future Commercial Development

No data was available for future commercial growth so it was assumed that this growth would occur in line with the projected retail growth. As such an 11% growth was applied to the current commercial floor space, resulting in an increase of 8,519 square metres in Precinct 2 by 2016.

³ Floor area growth rate applies to total growth for both Precincts 1 and 2, and a suitable distribution between these precincts for retail and commercial growth was assumed

6.3.3 Future University Development

It has been forecast that 300 new students will be enrolled in the new Building & Construction Training Centre on the south side of Grant Street, according to Ballarat University.

Additionally, it has been assumed that the general population of Ballarat University (SMB and Sturt/Lydiard Campus's) will grow at a rate in line with population growth within Ballarat over the period from 1996 to 2003. This rate is 1.5% per annum and will result in an increase in a further 605 students from present figure. (See Page 39 – *Essential Economics. "City of Ballarat Retail Development Strategy, 2003"*)

Thus, in total it is projected that there will be an increase of 905 University students in Precinct 2 by 2016.

6.3.4 Other Development

Future residential growth is not expected to be a key consideration in this parking precinct plan. However, it is proposed that the development of traditional residential dwellings, above the ground floor, in buildings located within the historic heritage overlay, should be considered for exemption from parking provisions as detailed towards the beginning of Section 6.0.

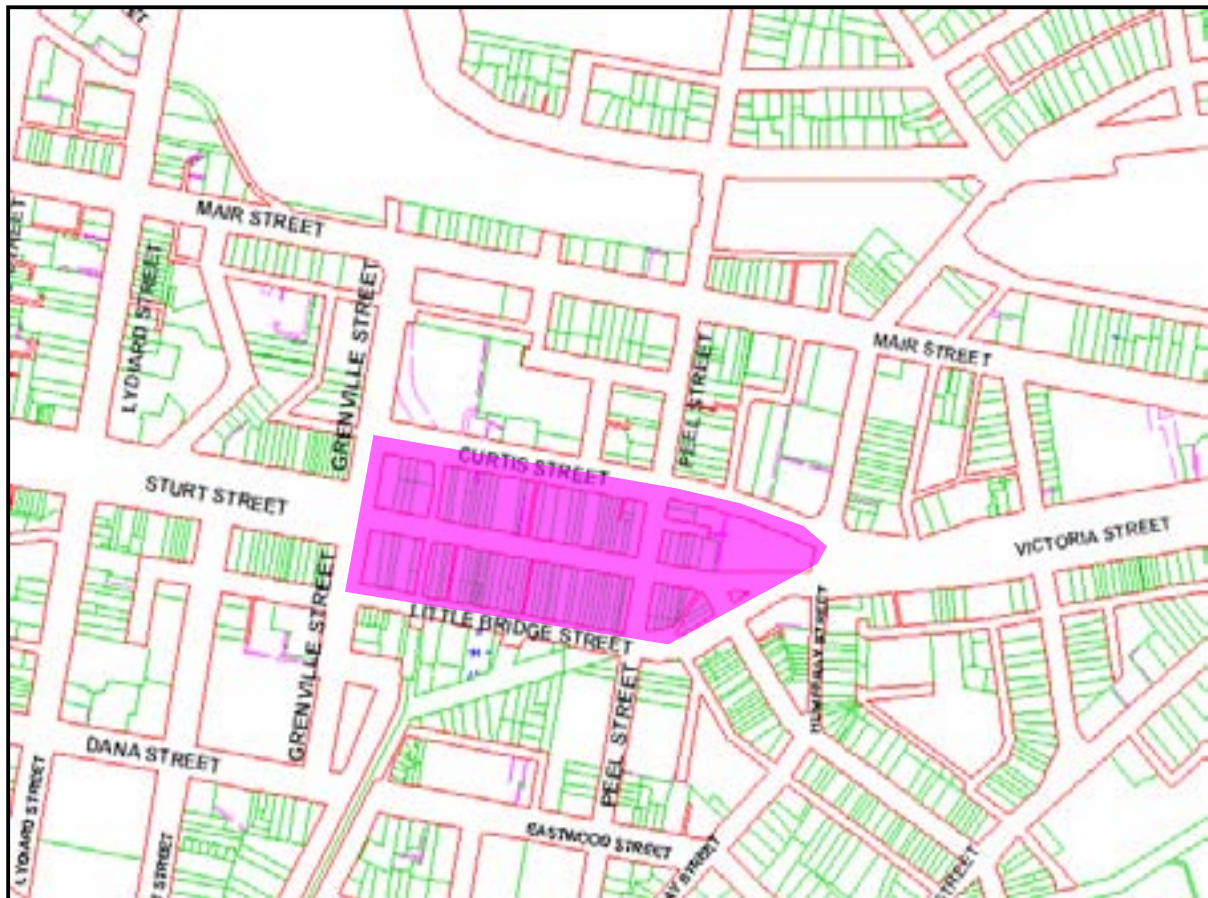
For the purposes of parking demand forecasts it has been assumed that all other new residential development will comply with the relevant Planning Scheme rates and hence address parking demand through appropriate provision of off-street parking.

6.4 Bridge Mall Precinct Special Rates

The Bridge Mall Precinct is shown in Figure 6.1. Property owners in this precinct are currently subject to a Special Rate which is paid to City of Ballarat annually and redistributed directly back to the Bridge Mall Traders Association. This rate is referred to as the *Bridge Mall Extra Rate* and is contributes towards the funding of:

- Promotion and Marketing Activities;
- Security measures; and
- The employment of the Bridge Mall Centre Manager by the Bridge Mall Traders Association.

Figure 6.1: Bridge Mall Precinct Subject to Special Rates



Although none of these rates apply specifically to car parking it is important to consider the impact that imposing a payment in lieu scheme to these property owners may have on future development in Bridge Mall.

Any investment made by property owners of Bridge Mall premises creates a positive externality for the remainder of Bridge Mall as a whole. Any economic growth or refurbishment is predicted to increase the overall attractiveness of the Bridge Mall precinct and encourage an increase in customers to visit this area.

For this reason, it is recommended that consideration be given to exempting property owners, who develop their premises and cannot satisfy the car parking requirement and are required to contribute the payment in lieu scheme, from the Special Rates payments for a period to be determined by Council from completion of the development. This exemption would be in appreciation of the contribution that their development will make towards the entire growth of the Bridge Mall precinct.

It is understood that the current *Bridge Mall Extra Rate* agreement expires in June 2008. Therefore, it is recommended that the consideration to exempt developments from the Extra Rate in the first year of operation (if they contribute to the payment in lieu scheme) be given as part of the reassessment of the new Special Rate which will be imposed starting July 2008.

It is recommended that Council liaise with the Bridge Mall Traders Association when determining whether any exemption should be available. It is understood that the reassessment process will begin approximately March 2008.

7.0 Parking Outcomes in Precinct 2

The parking surveys, observations and analysis undertaken to prepare this parking strategy have revealed that:

- The peak time for overall car parking demand in Precinct 2 occurs around lunchtime (12 midday – 1:00pm) when staff are at work, students are on campus and shoppers are in the CBA.
- On-street occupancy levels are greater than 90% in some streets within the CBA and in the streets surrounding the University and Railway Station during the peak period.
- Off-street car parks adjacent to Bridge Mall such as Big W and Coles are almost 100% occupied during the peak period.
- Several Bridge Mall traders park in the 2 hour time restricted Coles ground level car park, continuously moving their vehicles every two hours due to a lack of secure close parking facilities.
- The Law Courts car park has free unrestricted public car parking between 5:00pm and 6:00am Monday to Friday and all day free public parking on Saturday and Sunday. However intimidating signs and line marking result in its under-utilisation by the public, particularly on weekends. (This car park was excluded from the parking supply/demand analysis).
- The calculated Supply Based and Demand Based parking rates for retail, commercial and university land uses are significantly lower than the Statutory Planning Scheme rates in Precinct 2.
- Council should liaise with the Bridge Mall Traders Association to determine whether property owners in Bridge Mall who develop their premises and are required to contribute to the payment in lieu scheme, should be considered for exemption from the Special Rates payment for that one year. The exemption could be justified by the fact that these developers are already contributing to the overall improvement of the Bridge Mall area.
- The need for a future multi level car park facility within the proximity of Bridge Mall, Mair Street (within this precinct boundary) and the rail station should be evaluated. Council should work in collaboration with other key stakeholders regarding the proposal. The proposed facility could be partly paid for by Council using funds collected under a framework which will be discussed in Section 7.3.

In response to these findings it is proposed to:

- Amend Clause 52.06-5 - Statutory Planning Scheme parking rates; and
- Initiate Payment in Lieu scheme to collect monies from those future developments unable to provide off-street parking spaces in accordance with the amended rates to fund;
 - Improvements to existing car parks
 - Construction of new car parks
 - Improvement in pedestrian links between car parks and attractions/destinations
 - Improvement in cycling links
 - Public transport improvement initiatives
 - Other sustainable transport initiatives.

7.1 Amend Planning Scheme Parking Rates

The recommended amendments to the car parking rates for Precinct 2 are provided in Table 7.1.

Table 7.1: Statutory Planning Scheme and Recommended Car Parking Rates

Land Use	Planning Scheme Rate	Recommended Rate
Retail	8 spaces / 100m ²	3.5 spaces / 100m ²
Commercial	3.5 spaces/ 100m ²	1.5 spaces/ 100m ²
University	0.6 spaces / student	0.30 spaces / student

The recommended car parking rates in Table 7.1 represent a compromise between the supply based and demand based empirical parking rates, apart from the recommended retail parking rate (3.5 spaces per 100m²) which is slightly lower than the empirical demand based parking rate (3.7 spaces per 100m²). This approach was taken to provide consistency with the with the DPCD report and to encourage more sustainable forms of transport. It is noted that there is no guarantee that the parking rates proposed in the DPCD report will be approved. Notwithstanding this, it is noted that regardless of this process, it has been considered that any mechanism such as a parking precinct plan, which recommends parking rates which are higher than proposed in the DPCD report will not be looked on favourably given the extensive research that has contributed to the DPCD report and the many Victorian State Government's strategies which aim to promote more sustainable forms of transport,

The approach used to recommend the proposed rates for Commercial and University land uses in Precinct 2 is conservative given that the recommended parking rates (Table 7.1) are greater than the demand based rates (Table 6.9) which represent the actual demand for parking in Precinct 2. It has been recognised that it is possible that suppressed parking demand could be occurring considering the relatively high parking occupancy. However, it is considered unlikely that this phenomenon is currently occurring in central Ballarat at any significant level. It is noted that the recommended parking rate for University land use is higher than the supply based empirical parking rate. This option has been chosen to provide consistency with Precinct 1 and represents a conservative approach, whilst still aligning with the recommended parking rates provided in the DPCD report.

This relatively conservative approach for most land uses allows for additional future parking capacity which may allow the existing on-street parking spaces to be used for other purposes (e.g. tree planting or landscaping some existing on-street parking spaces).

Due to the high occupancy of existing on-street parking in Precinct 2, it is recommended that the future provision of parking spaces, in accordance with the amended parking rates above, be provided off-street.

There are no changes proposed to the Planning Scheme rates for other land-uses not specified in Table 7.1.

7.2 Future Car Parking Provision

In order to meet the future (2016) parking demands generated by the expected future increases in land-use in Precinct 2, the following increases in parking supply may arise based on the amended parking rates outlined in Table 7.1. However, the exact extent of any parking requirement should be reviewed and is dependant on the success of the recommended sustainable and public transport initiatives.

- For 10,757 m² retail floor space, approximately 376 spaces would be required.
- For 8,519 m² commercial floor space, approximately 128 spaces would be required.
- For 905 new university students, approximately 272 spaces would be required.

The **increased parking demand** may be approximately **776 spaces**. However, given that the University of Ballarat has a current mechanism that allows it to be exempted from the Planning Scheme it is prudent to discount its requirement in this instance. The net increase can therefore be estimated as **504 spaces** which would have to be **provided off-street within the precinct**.

Within Precinct 2 it is realistic to assume given the existing space and heritage overlay considerations, that perhaps only 25% or 126 spaces will be provided privately off-street as part of future development, thereby leaving a **potential shortfall of 378 parking spaces**.

7.3 Payment in Lieu Scheme

Future developments unable to satisfy their off-street car parking requirements will be required to make a financial contribution to the City of Ballarat to assist in funding initiatives to manage the impact of parking shortfalls. The contribution will be required by owners of new developments, extensions to existing buildings and when a change of use occurs to an existing building. When the land use remains the same, developers will not be required to make any contribution.

The introduction of a Payment in Lieu scheme in conjunction with the amended statutory parking rates is designed to provide clarity and equity with respect to parking requirements. Where applicants are unable to provide on-site parking due to constraints, Council will be able to collect funds in lieu of parking and use these to address the impacts of the parking shortfall. This system also removes the need for Council to provide dispensation to developers who are unable to provide the statutory parking rates on-site.

In this instance, a payment in lieu scheme is considered a more appropriate system for addressing future parking matters, compared to a "special rates" scheme. It is noted that a "special rates" scheme would require all properties to contribute funds regardless of the extent to which they may have already satisfied statutory parking requirements. The comprehensive parking surveys undertaken indicated that whilst some localised areas in the Ballarat CBA are subject to high levels of parking demand, the overall existing level of parking supply in the CBA is able to cope with the parking demand and some spare parking capacity exists. In this context it is considered that currently, over the entire CBA, there is not a significant parking problem that can be collectively attributed to existing developments. It would therefore be unreasonable to seek a financial contribution from all existing developments (as possible through a "special rates" scheme) for the purposes of addressing parking issues.

However, having established more realistic parking rates for key land use categories, it is reasonable for all future developments to achieve those parking supply levels. Where developments are unable to provide the requisite parking, a financial contribution in lieu of parking should take place. Council will use the collected funds to address the impacts arising from the parking shortfalls.

Leader Property Practice prepared a report for the City of Ballarat dated 17 October 2005 and titled "The cost of a car space in the Ballarat Central Business Area". This report is provided in Appendix B. One of the objectives of the report was to estimate an appropriate payment in lieu rate for businesses unable to provide the required level of car parking. The report determined that the likely current cost (at that time) of providing a ground level car park would be in the order of \$17,000 per space (including GST), whilst the cost of providing a multi-storey space was estimated at \$32,000 (including GST). Land costs are included in the calculated rates. When estimating the applicable land cost the report acknowledged the heritage values of buildings in the city, and made the reasonable assumption that a future car parking site would most likely be developed on the fringe of the CBA. Construction costs were derived from the "Rawlinsons Cost Guide" publication.

Therefore, it is recommended that a cash contribution in the amount of **\$24,500 (plus GST)** in respect of each car parking space or part thereof which is required under this Scheme and which is not provided on the land (but the net of car parking credits) must be paid to the responsible authority. The amount of \$24,500 (plus GST) represents the average forecast cost between providing a ground level car park and a multi level car park. The amount of \$24,500 (plus GST) is to be adjusted annually from 1 July 2006, which is the approximate period when the car parking cost was derived, using CPI (all groups) as the index. This cash contribution amount will be updated to reflect the adjusted cost rate prior to incorporation in the planning scheme following public exhibition.

Considering the future demand and proportion of spaces which may be provided privately off-street, it was estimated in Section 7.2 that there may be a potential shortfall of approximately 378 parking spaces. As such Council would collect **\$9.26 million in funds** as part of the payment in lieu scheme (adopting the \$24,500 cost per space).

As there may need to be a combination of at-grade and multi-storey car park options to cater for the future parking needs, the \$24,500 cost per parking space shortfall is considered appropriate at this time. This cost will need to be reviewed in the future.

The money raised through payment in lieu contributions must be used by Council to develop schemes that address **parking issues** within Precinct 2. With the priority projects to be determined at the discretion of council these schemes should aim to:

- Increase the stock of available and attractive car parking spaces through.
 - Improvements to existing car parks
 - The construction of new car parks
- Reduce car usage dependency in Ballarat, through;
 - Public transport initiatives
 - Improvement in pedestrian links between car parks and attractions
 - Improvement in cycling links
 - Other sustainable transport initiatives

7.3.1 Improve/Extend Existing Off-Street Car Park Site(s)

As determined in Section 7.2 there may be a requirement for the provision of approximately 418 off-street car spaces within Precinct 2 by 2016. However, the extent of any parking requirement should be reviewed and is dependant on the success of the recommended sustainable and public transport initiatives.

An alternative to constructing a new car park to satisfy this requirement is to investigate the option of improving the efficiency and the amenity of existing off-street car parks.

There may even be the opportunity to extend the size of some car parks to increase the overall capacity. These initiatives would also be funded via the allocation of funds collected via the proposed payment in lieu scheme.

It is important to consider tree planting and landscaping opportunities when developing the schemes.

Some identified improvements and extensions to existing car parks which could help to reduce the requirement for a new car parking structure include:

Safeway Rooftop Car Park

The Safeway Rooftop currently has capacity for 136 parking spaces. However, the security concerns at this car park have resulted in a relatively low peak occupancy rate of 55% (ignoring the 80% occupancy recorded during the Christmas holiday Period) given that all day free parking restrictions apply to this area. Public consultation and feedback from Council revealed that this low utilisation was due to:

- Security concerns (vehicle break-ins and personal security)
- Poor Lighting and no CCTV cameras
- Poor access (lift malfunctions, stairs unsavoury)
- Limited signage

The utilisation of this car park could be improved if the above issues were rectified. Assuming that the above issues are resolved it is fair to estimate an improvement in the occupancy rate from the current rate of 55% to 90% given the demand for parking in this area created by the supermarkets and Bridge Mall. It is noted that access to Safeway via a safe and effective elevator lift would be extremely easy from this location. Consultation with staff of Bridge Mall stated that they would park in the Safeway Rooftop car park if lighting and security were improved dramatically.

This estimated increase in occupancy rate of the Safeway rooftop car park would effectively increase the stock of parking available in Precinct 2 by **47 spaces**, given that it is understood that currently a considerable number of people are concerned with using the existing parking facility.

7.3.1.1 Civic Hall

It is understood that Council is considering purchasing this site and would explore options for an extensive redevelopment of the Civic Hall car park site. This may include the installation of an additional third car parking level which would increase the stock of available parking by approximately 65 spaces.

It is noted that this proposed development is considered as the construction of a new site rather than the improvement of an existing site. Therefore, the addition of 65 spaces will not be included in this analysis and this redevelopment will be discussed further in the following section when multi-storey car parking options are explored.

Peel Street

The Peel Street car park has capacity for 36 parking spaces and is located very close to Bridge Mall. Subsequently, it would be expected that this car park would experience very high occupancy levels.

However, surveys have indicated that the car park currently is only 44% occupied during the peak period. Consultation and site observations suggest that the low occupancy rates are the result of the \$3 per day fee and the poor condition of the car park road surface. It has been stated that this car park continually contains 'pot holes' which make this car park undesirable.

It is predicted that if this problem is resolved and the parking fees are reduced that the peak occupancy of this car park could be increased to 100% given its premium location.

This estimated increase in the occupancy rate of the Peel Street car park would increase the stock of parking available in Precinct 2 by **20 spaces**.

Anderson Street Car Park

The Anderson Street car park has capacity for 103 parking spaces and is located in relatively close proximity to Bridge Mall and Safeway and Coles supermarkets. Subsequently, it would be expected that this car park would experience reasonably high occupancy levels.

However, surveys have indicated that the car park currently is only 15% occupied during the peak period. Council indicates that occupancy may have increased marginally since the survey period to approximately 20%, which is still regarded as an extremely poor utilisation. Consultation and site observations suggest that the low occupancy rates are the result of the \$3 per day fee and the poor pedestrian connectivity between the car park and Bridge Mall.

It is predicted that if improved lighting, security and pedestrian footpaths are installed and the parking fees are reduced that the peak occupancy of this car park could be increased to 90% given its premium location.

This estimated increase in the occupancy rate of the Anderson Street car park would increase the stock of parking available in Precinct 2 by **72 spaces** (assuming the existing occupancy is 20%).

7.3.1.2 Summary

The estimated increases in occupancy rates and capacity rates of the existing car parks listed above would **increase the total stock of parking in Precinct 2 by 139 spaces**. This assumes that each of the problems and redevelopments identified can be resolved and implemented respectively.

In total it has been predicted that 504 new parking spaces may be required by 2016. It is predicted that 25% of these parking spaces (126 spaces) will be provided privately off-street by developers, thereby leaving a shortfall of approximately 378 parking spaces.

Assuming that the existing parking spaces can accommodate an increase in overall demand of 139 vehicles, it is predicted that by 2016 there may be a need for a new car parking structure to be constructed with capacity for **239 parking spaces**.

The provision of a new 239 space capacity car park is considered a worst case scenario considering that it is recommended that some of the total \$9.26 million in collected funds be spent on initiatives to reduce the level of car dependency in Ballarat and thus reduce the parking demand. These initiatives include:

- Public transport initiatives;
- Sustainable transport initiatives; and
- Other improvements and/or extensions of existing car parks.

If sustainable transportation initiatives and improvements to existing car parks do not alleviate future parking demands it is recommended that the feasibility of constructing a new multi level car park should be investigated.

The following sections explore possible options for the provision of new car parking sites, and discuss the public and sustainable transport initiatives which may be implemented.

7.3.2 Proposed New Parking Site(s)

Ideally public and sustainable transportation initiatives should be introduced in an aim to reduce the overall level of car parking demand, and therefore reduce the requirement for construction of additional car parking sites. A framework for encouraging and improving sustainable and public transportation is outlined in Section 7.3.3.

However, if the future parking demand is not resolved by improvements to existing car parks and sustainable forms of transportation, it is recommended that a new car parking facility (possibly multi level) should be considered.

The provision of a new parking structure should be located relatively close to Bridge Mall which is where the greatest parking demands in Precinct 2 occur.

A car park located in this area may also be utilised by University students and retail shoppers accessing Sturt Street and Bridge Mall, as well as commercial office workers.

The following ground level and multi level car parking options should be considered. Whilst a number of options have been identified below the City of Ballarat have indicated a preference for the establishment of a multi-story car park on an existing or new site rather than to continue to develop large areas of car parking footprints at ground level (i.e. Big W, Coles/Safeway, etc).

7.3.2.1 Scott Parade

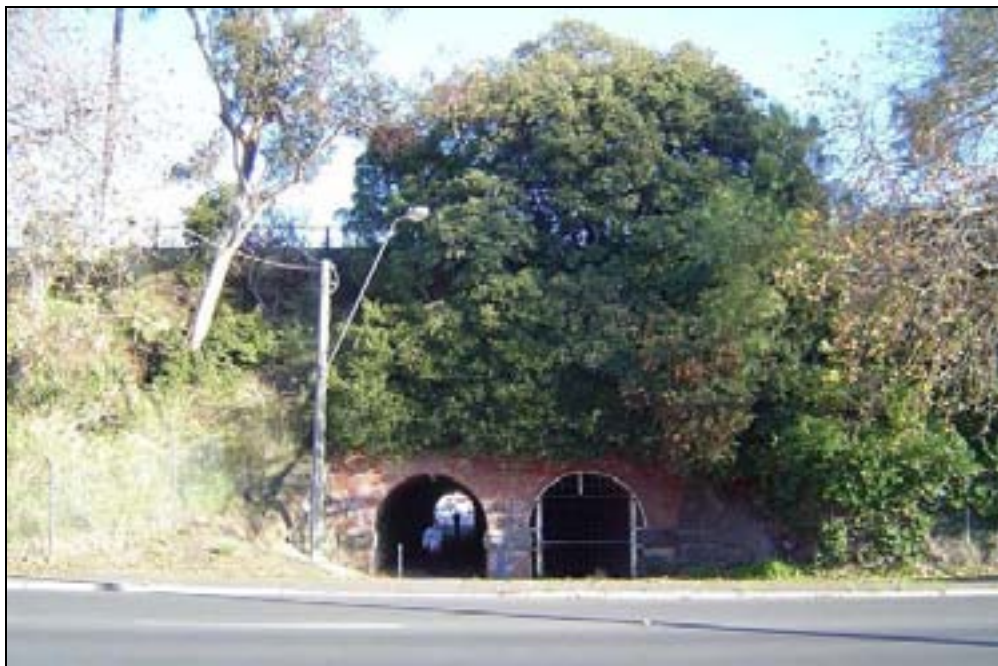
One proposed location for a new car parking structure is an existing site on the north side of Scott Parade. Currently this site is used by a small number of vehicles as shown below in Figure 7.1.

Figure 7.1: Proposed Scott Parade Car Park



A pedestrian underpass connects this parking area to Mair Street. The underpass is considered extremely unappealing due to the presence of graffiti and a total lack of lighting and security as shown in Figure 7.2.

Figure 7.2: Pedestrian Underpass Link between Scott Parade and Mair Street



This pedestrian link which ultimately connects to the CBA core and Bridge Mall would have to be upgraded **significantly** to a level where pedestrians feel safe and secure if this proposed site was to be promoted as a formal Car Parking Site.

It is predicted that approximately **90 parking spaces** could be developed as a ground level car park on this site. The site is currently owned by City of Ballarat and therefore would not create a land acquisition cost. It is also believed that this site is used as a car park on weekends by spectators when football and cricket matches are played at Eastern Oval.

7.3.2.2 Multi-Storey Car Park Options

It is expected that other initiatives (which will be discussed below) to increase the use of sustainable transportation modes may reduce the overall car usage dependency in Ballarat and thus reduce car parking demand.

However, as future parking demand continues to grow it may be determined that the construction of a multi-storey car park is required. Whilst a new site may be required including land acquisition, several sites as listed below are identified as feasible options for the construction of a multi-storey car parking structure:

- The existing Coles ground level car park adjacent to Little Bridge Street;
- The proposed Scott Parade car park (see comments in the section 7.3.2.1);
- Locations that support the development of Mair Street into an arterial road with dual lane capacity in each direction in the role of the CBA by-pass (see Ballarat Road Transport Strategy and Ballarat Urban Design Framework);
- Car parking options identified in the 2002 Daryl Jackson, Ballarat Railway Station Precinct Masterplan; and
- Expansion of the existing 2 storey Civic Hall car park that is subject to a proposed redevelopment at the time of preparing this report.

7.3.3 Public and Sustainable Transport Alternatives

As discussed, alternative initiatives aimed at reducing overall car parking demand should be trialled before considering the construction of additional car parking sites.

The aim of reducing car parking demand and encouraging a culture of public transport, walking and cycling is in line with Council policy, as outlined in the key urban design principles of the Central Business Area Urban Design Framework (UDF):

- *Establish clear traffic routes and improve public transport linkages and accessibility.*
- *Improve the 'walkability' of the CBA through the provision of convenient, safe and attractive pedestrian access ways.*
- *Enhance the level of service, access and comfort of the public transport service in Ballarat to encourage increased use*

Promoting the policies by using a proportion of collected funds to improve public and sustainable transportation has the potential to reduce traffic congestion, vehicular accidents and green house gas emissions.

Public Transport - Route Bus Services

Funds obtained from a Payment in Lieu scheme may be used to contribute to infrastructure improvements for the existing route bus services in Precinct 2. This should include improved seating, shelter and dynamic timetable and service information. In addition to the above, the existing bus stops should all be upgraded to be DDA compliant.

Public Transport - Central Area Transit (CAT) System

A Central Area Transit (CAT) system is a high frequency bus service that operates around a city centre, providing a regular and reliable link between the main attractions. Funds obtained from a Payment in Lieu scheme may contribute to infrastructure for such a system and other Central Business Area bus system improvements.

Improve Pedestrian Links

This report recommends that some Payment in Lieu contributions be directed towards improving pedestrian links throughout Precinct 2. Consultation with the public and City of Ballarat has identified that there is a culture within Ballarat of driving to every destination and expecting to park directly outside this destination.

Directing funding towards improving pedestrian links is recommended to encourage walking in preference to car dependency within Precinct 2, and would be in line with the Council's new policies of promoting a culture that encourages walking throughout the CBA of Ballarat.

Signal phase timings and other surveys conducted by Maunsell have identified major issues which discourage walking throughout the CBA core. These include:

- **Sturt Street**

There is insufficient *green time* to facilitate a complete crossing of Sturt Street. Most pedestrians are able to complete their crossing during the *flashing red* phase, however the elderly are unable to complete this crossing in one go.

Additionally, there is no provision for pedestrian crossings at Armstrong Street.

- **Links between CBA and Ballarat Railway Station**

The pedestrian links between the CBA and the railway station should be improved significantly to attempt to reduce the dependency on private car usage to access the railway station. These links should include the path through to the Mair Street bus stop as well as links along Mair Street and Camp Street into the CBA.

- **Links between Sturt Street and Bridge Mall**

Site observations and consultation undertaken by Maunsell have identified that there is a lack of integration between these two main retail districts of Ballarat. The signal phasing at Grenville Street and Sturt Street discourages pedestrian flow across Sturt Street and between Sturt Street and Bridge Mall.

7.3.4 Sustainable Transport Initiatives

Payment in Lieu contributions can be directed towards improving sustainable transport modes within and leading to/from Precinct 2. Bicycle routes, walking routes and other alternate travel modes rather than car dependency should be encouraged to all commuters to attempt to reduce overall car parking demand. Proposed improvements to the existing public transport, bicycle and pedestrian network have been identified in other City of Ballarat strategies.

Two identified initiatives which are recommended for investigation are the Department of Infrastructure's (DoI) Travel Smart Program and Local Area Access Program (LAAP).

Travel Smart Program

The DoI has developed a Travel Smart program which has been set up to provide communities with information on alternative modes of travel available to them locally as opposed to the private car.

Until now, the Travel Smart program has been primarily targeted towards assisting local governments within metropolitan Melbourne. However, consultation with DoI has suggested a desire for future expansion of the program into rural Victorian communities.

DoI has stated they will request rural local governments identify what they believe are the major issues preventing the use of alternative travel modes specific to their community.

Dol will then consider grant applications by local governments for funding of the Travel Smart program. However, it is expected that this initiative will be based on a shared funding partnership.

The Travel Smart initiative has developed four separate program streams. Each program stream aims to target a separate section of the community. The four streams are:

- Community Program
- Schools Program
- Universities Program
- Workplace Program.

It is recommended that Council investigate initiating the Travel Smart Program throughout Ballarat. A portion of the parking funds collected should be used as part of a shared fund partnership with Dol to the establishment of Travel Smart

This may involve Council appointing a full-time Sustainable Transport Officer, who would be responsible for providing guidance and advice in regards to developing and implementing school and workplace travel plans. The Sustainable Transport Officer would also be responsible for the implementation and monitoring of public and sustainable transportation initiatives within Ballarat.

Initiatives that can be investigated include car pooling for retail, commercial and hospital staff. In the case of hospital employees there may be an incentive to car pool via reduced parking fees in the off-street car parks which could have an allocated area specifically for car pooling. Alternatively, a permit scheme could be developed, offering discounted parking fees for car pooling.

It is also recommended that the Sustainable Transport Officer firstly implement a Green Travel Plan within the Council's officers. This plan could be used as a 'blue print' for other schools and businesses within Ballarat and will show the community that Council themselves are becoming proactive and attempting to lead from the front on this matter. It is recommended that the implementation and success of the Council Green Travel Plan be marketed and advertised to the community.

Additionally, a portion of the funds collected is recommended to be allocated to the provision and formalisation of bicycle lanes throughout the study area. Further information will be provided in the City of Ballarat's Bicycle Strategy

Local Area Access Plan (LAAP)

The Local Area Access Program is part of an Accessible and Sustainable Travel Grants Package. Therefore, municipalities can receive grants from the State Government to allow the Council to specifically focus on improving sustainable transport initiatives, particularly for walking, cycling and public transport.

The Dol website states that funded projects will typically focus on:

- provision or improvement of walk and cycle links (e.g. paths) to activity centres, other major destinations and the public transport network.
- infrastructure works to overcome local obstacles or discontinuities (either physical or perceived) that impede cycling, walking or access to public transport.
- other improvements to walking and cycling networks that encourage their use.
- improving the understanding of local access needs.

It is recommended that Council continue to pursue grants under the LAAP program to assist in the improvement of walking, cycling and public transport initiatives.

7.4 Operational Parking Recommendations

In addition to the revised Parking Rates developed in this Precinct Plan, there are opportunities to explore other parking management options and/or techniques within the precinct. These are discussed below and may also be funded via the allocation of collected payment in lieu funds.

7.4.1 Proposed Mair Street Upgrade

The Ballarat Road Transport Strategy and Ballarat Urban Design Framework recommends the upgrade of Mair Street to provide two through traffic lanes in each direction.

The proposed upgrade of Mair Street will require all on-street parking to be converted to kerbside parallel parking, and will therefore result in a localised reduction of approximately 113 on-street parking spaces between Princess Street and Doveton Street. This result would lead to further pressure to construct a multi-storey car park within Precinct 2.

Site observations have shown that the majority of properties along Mair Street have significant off-street parking capacity, which was underutilised. The majority of private off-street car parking was provided at the rear of businesses, and in most instances are poorly advertised and it is expected that many visitors may not realise that these parking areas exist. Therefore, it is recommended that improved signage be installed to direct and encourage motorists visiting businesses to utilise these rear off-street parking areas.

It is envisaged that improved utilisation of these off-street parking areas would off-set any localised deficiency in on-street parking supply created by the Mair Street upgrade.

However, it is noted that the parking impact can also be managed in the context of a CBA wide strategy. In this regard, the management of parking on Mair Street needs to be considered in the context of an overall parking strategy for the entire Ballarat CBA, as this report has recognised.

The community, and in particular the businesses which abut Mair Street, should be informed of the overall benefit which the proposed upgrade of Mair Street will create for Ballarat. It is considered that the impact of reduced on-street parking along Mair Street is modest in comparison to the potential gains throughout the Ballarat CBA which will be created as a result of the upgrade of Mair Street. Notwithstanding the above, the consultation process indicates that some of the Mair Street business owners themselves will strongly oppose any proposal to remove on-street parking abutting their properties.

If the Mair Street upgrade is undertaken, future parking demand in the area should be reviewed. If on-street parking demand is deemed to be heavily saturated this will support a proposal for a multi level car parking facility to be constructed within Precinct 2.

7.4.2 Ballarat Railway Station

The existing railway car park is not sufficient to cope with the demand for parking by railway station bound commuters. This creates an intrusion of parking demand into surrounding residential streets, which has been observed to have increased significantly since the operation of the "fast rail" service began.

This parking strategy has identified the high demand for parking around the railway station, and it is considered that without a new parking structure, commuters could be discouraged from using rail as their mode of transportation and may choose to use private car.

This would create increased negative externalities such as traffic congestion, increased vehicular accidents and air pollution. Therefore, it is considered critical that the Ballarat community is encouraged to use public transport.

Therefore, it is recommended that City of Ballarat continue to lobby the State Government for funding for a new off-street parking structure to service the railway station. It is noted that the Department of Infrastructure (DoI) are investigating securing land to facilitate the development of a new railway station car park.

Should a new off-street car parking facility be developed, it is recommended that the City of Ballarat should explore options to protect on-street parking in residential areas from commuter intrusion and encourage the alternative off-street parking options. This could include the installation of pockets of “2 hour limit – resident excepted” parking restrictions in streets extending to Semour Street and Doveton Crescent. The extent of on-street parking demand should be determined more accurately once a new car parking facility is established.

It is also noted that the proposed construction of a new railway station at Gillies Street may attract a significant proportion of visitors away from the existing Ballarat rail station. This new railway station is proposed to be located approximately 4 to 5 minutes drive from the existing Ballarat railway station. This new station may alleviate some of the existing parking demand which occurs at Ballarat railway station.

Therefore, the parking demand at Ballarat rail station should be reassessed following the operations of the proposed Gillies Street rail station prior to implementing on-street parking restrictions to protect residents surrounding the Ballarat Railway Station.

7.4.3 University of Ballarat SMB Campus

The recent construction of the Trade School on the south side of Grant Street opened in February 2007 that accommodates an additional 300 students. In addition, the White Flat Oval and surrounding road network attracts high levels of student parking as free all day parking is available in these areas. With the main campus located north of Grant Street, it is expected that the students attending the Trade School and those parking at White Flat Oval will require an appropriate crossing facility across Grant Street.

VicRoads at the time of preparing this report funded the construction of a temporary pedestrian crossing for Grant Street, which has provided a pedestrian facility linking the trade school, main campus and parking facilities. It is also understood that the University is investigating the option of providing a grade separated crossing facility midway between Armstrong Street and Albert Street. This initiative would result in a safe and secure link between the parking facilities at White Flat Oval, the Trade School and the main campus. The City of Ballarat is currently in the process of formalising (re-line marking) parking at White Flat Oval to maximise the available area for student parking.

There are currently plans being refined for the development of a Technical College on the Armstrong Street frontage of the University of Ballarat. Whilst this proposed development will occupy existing car parking space, it is proposed to construct an off-street, multi-deck car park to compensate for the loss. and to attempt to prevent the overflow of student parking onto surrounding streets.

The University is intending to maintain the net number of parking spaces following completion of the development and advise that as the Technical College will be pre-driver aged students, there will be no additional parking demand in the precinct.

7.4.4 Public Open Space Car Parking

It is noted that there are instances where formal and informal parking is occurring on public open space (e.g. around the perimeter of White Flat Oval). Such use of open public space should be managed to minimise the impact of passive and active recreational activities.

Whilst it is not recommended that all parking should be banned within public open space areas, ultimately, Council should pursue in the longer term the relocation of car parking from public open space and encourage more sustainable transport modes.

8.0 Ballarat CBA Car Parking Policy

The key findings and directions arising from this Parking Strategy can be formulated into a CBA car parking policy – a succinct statement that outlines Council’s position with respect to the provision, management and operation of car parking in the CBA.

This policy applies to all land in the Ballarat CBA car parking study area, as identified in Figure 1.1 of this Parking Strategy Report. The policy applies to:

- New developments;
- Extensions to existing buildings; and
- Change of use of existing buildings.

As such, any development which involves the land use remaining the same, and no increase in floor size or other parking rate measure, will be exempt from this policy and will not be required to make a contribution of funds.

8.1 Policy Basis

The Ballarat CBA contains a combination of retail, commercial, university, hospital, medical and residential land use types which all generate varying levels of parking demand. Clause 52.06 contains provisions relating to car parking, including a table which specifies the rate which car parking must be supplied for each land use type. Clause 52.06 of the Ballarat Planning Scheme also enables Council to grant a permit to reduce (or waive) the car parking requirements so long as the reduction can be justified.

This parking strategy assessed parking on a precinct wide basis and determined that whilst there is currently adequate parking supply within the overall Ballarat CBA, forecast future development is predicted to create high levels of parking demand in parts of the CBA. The extensive analysis of parking data and detailed site observations also determined that some of the car parking rates specified in Clause 52.06 are much higher than the actual demand that is currently being manifested within the CBA.

Notwithstanding the lower observed parking demand (compared to statutory planning scheme rates), it is considered that public and sustainable transport initiatives should also be pursued in an effort to reduce future car parking demand. These initiatives include improved promotion of bus services, pedestrian links and cycling facilities. This formal Parking Strategy has been developed to ensure that future parking demand is met by parking supply or other means.

Therefore, the following policy will be applied to all planning applications in the Ballarat CBA car parking study area and be used to guide on-going management of public on-street parking. The car parking rates in Clause 52.06 will continue to be used in all other areas of the municipality outside of the CBA study area.

8.2 Objectives

- To ensure that future off-street car parking is provided at a realistic rate which promotes retail and commercial activity within the Ballarat CBA;
- To ensure that future car parking supply is sufficient to support a vibrant economic CBA;
- To provide equitable and consistent evaluation of development’s parking requirements by implementing a payment in lieu scheme whereby developers are required to contribute monies if they are unable to provide the required level of car parking;
- To promote public and sustainable forms of transportation in an aim to reducing the future overall car dependency and thus car parking demand within the Ballarat CBA;

- To discourage on-street long term commuter parking within the CBA core area which includes the Sturt Street spine and Bridge Mall;
- To encourage provision of short term on-street parking within the CBA core; and
- To provide an adequate level of resident priority parking within residential streets to protect residential parking amenity, whilst still acknowledging the contribution made by on-street parking in supporting the vibrancy of retail and business activities.

8.3 Policy

It is policy that:

- The City of Ballarat will require the provision of car parking for the following land use categories in the Ballarat CBA area in accordance with Table 8.1 for each of the two precincts which were specified in Figure 1.1 of this Parking Strategy Report.

Table 8.1: Car Parking Rates

Land Use	Car Space Measure	Parking Rate	
		Precinct 1	Precinct 2
Retail	Car spaces to each 100 sq m of leasable floor area	4.0 spaces	3.5 spaces
Commercial	Car spaces to each 100 sq m of net floor area	3.5 spaces	1.5 spaces
University	Car spaces to each full time student	0.3 spaces	0.3 spaces
Hospital	Car spaces to each bed	1.3 spaces	No Change
Medical Practices	Car Spaces to each Practitioner	3.0 spaces	No Change

- Developments unable to provide the required level of car parking must contribute monies to a payment in lieu scheme;
- A cash contribution in the amount of \$24,500 (plus GST) in respect of each car parking space or part thereof which is required under this Scheme and which is not provided on the land (but the net of car parking credits) must be paid to the responsible authority. The amount of \$24,500 (plus GST) is to be adjusted annually from 1 July 2006 using CPI (all groups) as the index.
- The funds collected by Council shall be used to assist in funding initiatives to manage the impact of parking shortfalls. These initiatives should aim to:
 - Increase the stock of available and attractive car parking spaces through:
 - Improvements to existing car parks; and/or
 - The construction of new car parks.
 - Reduce car usage dependency in Ballarat, through;
 - Public transport initiatives;
 - Improvement in pedestrian links between car parks and attractions;
 - Improvement in cycling links and/or
 - Sustainable transport initiatives.
- That Council actively pursue the consistent provision of short to medium term metered parking within the CBA core, in preference to free and/or long term parking.
- That Council actively pursue the provision of a mixture of 2 hour limit free parking with resident exception and unrestricted parking restrictions in residential streets surrounding the hospital/ medial precincts, railway station and other high demand areas impacting on parking in predominately residential areas..

- That parking dispensation be considered to developments of above ground level traditional residential dwellings which are located within a Heritage Overlay on account of their historic value. The proposed reuse and development of upper storey traditional residential dwellings is in accordance with state policy and the relevant Overlay provisions that encourage the reuse and retention of heritage fabric. It is considered that the site constraints which are inherently associated with traditional small lots limit the opportunity to provide parking. The limited land available means that it is not feasible to meet the applicable parking rates set out in Clause 52.06 while simultaneously retaining the intact heritage fabric of the site.

Appendix A VPP Practice Notes



This VPP Practice Note gives guidance on what can be considered in deciding whether to develop a Parking Precinct Plan and the information that can be included in it.

It examines:

- what a Parking Precinct Plan is
- what a Parking Precinct Plan does
- whether a Parking Precinct Plan is necessary
- how a parking strategy can be decided
- the contents of a Parking Precinct Plan
- how a Parking Precinct Plan can be given statutory force
- how a Parking Precinct Plan can be monitored and reviewed.

What is a Parking Precinct Plan?

The parking characteristics of an area are affected by a number of factors, such as the:

- demographics of the surrounding population
- types of land use and development in the area
- parking demand profile of the various uses
- interaction between different uses and developments
- availability and use of public transport
- impact of transport and parking policies, and the strategies that are designed to influence parking outcomes.

The car parking provisions are outlined in Clause 52.06. Clause 52.06-5 includes a table of standard parking requirements for specified land uses. Normally, the provisions of this table are applied on a case-by-case basis. However, in some circumstances, the factors influencing parking demand and supply may not coincide with the parking requirements in this table. In this case, a planning permit is required to reduce or waive the provisions of the Clause 52.06-5 Car parking table. When considering this type of permit application or drafting conditions, the responsible authority must consider all relevant factors that influence parking demand for the proposed use before determining the number of car spaces required.

As an alternative, Clause 52.06-6 enables Parking Precinct Plans to be prepared. These are locally prepared strategic plans that contain parking provisions for an area or 'precinct'. They allow all the parking issues arising in a precinct to be considered and a strategy to be implemented to address them. They can replace the rates in the table and reduce or remove the need for potentially complex parking investigations to support individual permit applications.

Parking Precinct Plans can be prepared for any precinct where local parking issues can be identified, and a common strategy can be adopted to respond to them. Once prepared, they become part of the planning scheme and can only be changed by a planning scheme amendment.

Parking Precinct Plans are new planning tools. As yet, only a few have been prepared, so this practice note focuses on the potential offered by the plans and illustrates their possible applications. It does not preclude new approaches that have yet to be tested. There is still scope for plans to be adapted to fit circumstances that are not identified and discussed here.

However, any plan must meet the requirements of Clause 52.06-6 and should respond to the content and structure guidance in this practice note.

What does a Parking Precinct Plan do?

The Parking Precinct Plan's primary function is to manage parking in a precinct, rather than on a site-by-site basis. Plans measure the parking characteristics of their precinct and provide procedures for evaluating the number of car spaces required, based on those characteristics and the desired change. Within the precinct, they can:

- set out how car spaces can be provided
- regulate the demand for, and supply of, parking
- specify car parking rates derived from local research, where the rates specified in the Clause 52.06-5 Car parking table are found to be inapplicable

- specify car parking rates that incorporate efficiencies achievable with a precinct-wide approach (such as requiring shared provision)
- simplify the information required to support individual planning permit applications.

The responsible authority must also consider a plan when examining an application for a planning permit to reduce or waive a parking requirement; to vary access, driveway or car space dimensions; or to approve a car parking plan within the precinct.

Supporting strategic planning

Parking Precinct Plans can support strategic plans for a municipality or area in a number of ways. They can:

- help to implement Municipal Strategic Statement (MSS) transport objectives and integrated transport strategies
- provide links and consistency between parking policies, the MSS and other relevant local planning policies
- enable the relationship between parking and the heritage interest, urban character or economic performance of a precinct to be considered
- provide an essential justification for financial measures such as special rate charges, cash-in-lieu contribution schemes or shared (multi-owner) parking provision.

Supporting sustainable development

Parking Precinct Plans can support the achievement of sustainable development. They can:

- help to facilitate the use of public transport
- support measures such as car reduction schemes or the development of alternative modes of transport, including walking and cycling
- support the efficient use of urban land through the integration of car parking with other forms of development
- promote the better environmental performance of car parking areas.

A Parking Precinct Plan offers an opportunity for creative and flexible parking solutions by providing the mechanism to consider a precinct's parking needs together with the needs of other use and development, and relevant social, economic and environmental factors. Involving the community and business in the planning process can also lead to new agreements and partnerships being established to improve the ways in which parking is provided and managed.

When is a Parking Precinct Plan necessary?

A number of physical, social and economic indicators may suggest the need for a Parking Precinct Plan, such as:

- the precinct contains significant or dynamic retail, commercial or mixed uses
- the precinct is undergoing a rapid rate of development or land use change
- the precinct attracts significant numbers of trips from elsewhere

- the precinct experiences high levels of traffic congestion
- the precinct has an established parking provision deficit and experiences physical or market conditions that affect the future provision of parking
- the precinct experiences consistently lower-than-average parking demand
- the existing parking requirements are likely to be too large, too small or otherwise inadequate for the precinct's needs in the foreseeable future.

For example, a plan might be prepared for a highly accessible and busy inner-city retail precinct where it could be used to minimise parking impacts and encourage the use of alternative modes of transport. In an outer suburban or rural centre, it could be used to ensure adequate and convenient public car parking provision to meet patterns of demand, and to support the equitable distribution of parking costs between land uses. It could also help an area to identify and respond to particular patterns of parking demand such as those created by a major sports venue or other tourism generator where the current parking requirements are inadequate.

In contrast, if a precinct has a simple land use pattern, little traffic congestion and an existing adequate mix of public and private parking provision, or there are no parking finance measures in prospect, it may not warrant a plan being prepared. However, a responsible authority may consider that the conservative nature of the parking requirements in the Clause 52.06-5 Car parking table place an onerous demand on developers and result in the provision of additional car spaces that are not likely to be needed in the foreseeable future. In such cases, a parking precinct plan could be prepared to reduce or remove the current parking requirements for defined uses. This could be relevant to a location with a proven oversupply of well-located public parking.

Administrative factors may also suggest that a plan should be prepared. A precinct may already be subject to a measure designed to raise finance for parking (such as a special rate or a 'cash-in-lieu' of parking scheme), or this type of measure may be proposed. Where such a measure has no strategic basis in the planning scheme, preparing a plan will be essential to secure its continued implementation or review.

Deciding on a parking strategy

Before a Parking Precinct Plan is drafted, it will normally be necessary to carry out a **study** to ascertain the precinct's parking needs, and to relate these to broader social, economic and environmental considerations. This study will provide an objective basis for deciding on a parking **strategy**, which sets out what the planning authority wishes to achieve. Once in place, a strategy can provide the basis for, and be implemented by, a Parking Precinct Plan and other statutory mechanisms if necessary.

This practice note refers to these survey and strategic processes together as a parking study and strategy. A study and strategy may or may not be prepared and presented as separate documents.

It is necessary to distinguish between the content of:

- a parking study and strategy process that diagnoses the

parking conditions and needs of an area as a step toward preparing a Parking Precinct Plan, and

- the Parking Precinct Plan that implements it in a statutory form.

Parking study and strategy

A parking study and strategy will include objectives, strategies and means of implementation to be incorporated into the Parking Precinct Plan. However, as a creative and non-statutory process, it may, and often should, go further. It may consider parking as part of an environmental, transport or economic development strategy or urban design framework for a precinct. It may also consider more detailed issues such as the relationship between parking, loading and internal traffic circulation in large sites. It may have relationships with parts of the planning scheme other than Clause 52.06. For example, it may provide local guidance for planning permit applications to reduce or waive the requirements of Clause 52.07 (Loading and Unloading of Vehicles) or provide the basis for a related local planning policy.

For these reasons, the study and strategy may need several means of implementation. Where it relates to the interaction between parking and other planning policies, it may be necessary to implement part of a study and strategy by changing the MSS or Local Planning Policies rather than by including them in a Parking Precinct Plan.

Parking Precinct Plan

As a statutory document, the Parking Precinct Plan should be as brief as possible while being self-contained. It does not need to include unnecessary background information.

When deciding to include material in a Parking Precinct Plan to implement a parking study and strategy, ask: 'Is the material necessary to justify and explain the way in which Clause 52.06 will be applied in the precinct?'

If necessary, a parking study and strategy can become a reference document to the plan it supports. This avoids the need to include bulky background material in the planning scheme.

Figure 1 shows the relationships between a parking study and strategy, a Parking Precinct Plan and the statutory documentation surrounding it.

Guidance on the preparation of a parking study and strategy and its relationship to a Parking Precinct Plan is included in Appendix 1.

An assessment of parking demand and supply must be carried out to justify a Parking Precinct Plan and is a key component of any study.

The assessment of demand should be based on a survey of past and existing conditions and a projection of likely future conditions in the precinct. It should take into account the catchment areas for the land uses present or likely to be present, opportunities to travel to the precinct, its attractiveness, and the behaviour and expectations of precinct users.

The assessment of supply should be based on a survey of existing conditions in the precinct that takes into account all forms of parking that are available within it including off and on street provision, public and private provision, and provision that is both free and charged to the user. While

the plan does not have to record the precise location and type of every parking space, it should present an analysis of the general availability of parking in the precinct, and the numbers of spaces of each type that are available. Significant patterns of parking provision should be mapped, for example, by showing streets with on-street provision and significant off-street parking locations.

An understanding of the use of the existing parking supply and demand over time is likely to be important. This should take into account fluctuations in a normal day due to work, retail or entertainment patterns. In some areas, other issues (such as the seasonal impact of tourism or the impact of sporting or cultural events) may need to be considered. Trends may also need to be identified, for example, where the area contains land uses that are likely to grow in size or attractiveness. If the plan contains measures that address changes in parking supply and demand over time, the assessment of parking supply and demand should mention these.

Figure 1. Parking Precinct Plans and parking studies and strategies



Contents of a Parking Precinct Plan

The contents of a Parking Precinct Plan that must be included in an incorporated document are specified in Clause 52.06-6. These include:

- the purpose of the plan
- the area to which the plan applies
- an assessment of car parking demand and supply
- the parking outcomes to be achieved by the plan

- any locational, financial, landscape or other actions necessary to implement the plan.

Other material can be included. The plan's format is not prescribed.

The purpose of the plan

The plan should outline its primary purpose. This can usually be expressed in simple or generic terms; for example:

'To encourage public transport use by visitors to the Gumnut retail and fashion precinct'.

A brief summary of the precinct's use and development history and the need for the plan can also be included.

This statement of the plan's purpose, and basis for it, can provide a means of determining whether a particular proposal is in accordance with the plan, should the parking outcomes not be clear. A planning authority cannot predict all possible future parking configurations for a precinct. It is likely to receive proposals that do not specifically meet the parking outcomes in the plan. However, if a proponent can demonstrate that such proposals do meet the plan's purpose and deliver relevant outcomes, they should normally be supported.

The area to which the plan applies

The area to which the plan applies is the 'precinct' and must be defined. This task is usually best carried out with a map.

Assessment of parking demand and supply

The plan should include a statement of the assessed demand and supply. The assessment documentation will be part of the parking study and strategy and does not need to appear in the plan.

A sound assessment of parking demand and supply must lie at the heart of every plan.

The parking outcomes

The parking outcomes respond to the plan's purpose and the assessment of parking demand and supply by proposing outcomes that the plan intends to achieve. Parking outcomes need to be more specific than the general statement or purpose of the plan.

Relevant outcomes may include:

- parking supply targets
- desired or preferred parking locations
- approaches to parking layout, urban and landscape design, street furniture and materials
- methods to deliver parking demand management or car use reduction
- the approach to be taken to parking fees and other parking management tools
- detailed proposals for applying financial measures, such as special rate or cash-in-lieu of parking contributions.

Example

If the purpose is:

- to encourage public transport use by visitors to an enhanced Gumnut retail and fashion precinct.

Then relevant parking outcomes may be that:

- parking provision in Gumnut Road will be limited to short stay, disabled and loading provision

- the pedestrian amenity and streetscape of Gumnut Road will be enhanced through the removal of existing parking areas
- public car parks will be provided at Yellowville tram intersection, Orange Junction and Blue Gum Heights train stations
- a public 'park and ride' bus service from major parking locations and surrounding residential areas to Gumnut Road will be provided and funded
- permit only resident and business parking for Gumnut Road and adjacent precincts will be provided
- a parking development charge will be introduced for new retail uses in Gumnut Road.

It is important that a parking study and strategy identifies the individual precinct's needs and suggests ways to translate these into relevant outcomes.

While it is valuable for each parking outcome to be presented as a statement that summarises a single idea in the manner shown above, it will normally be necessary to support each outcome statement with some additional detailed requirements, such as:

- articulating the actions necessary to implement the parking outcomes
- setting out any particular requirements, criteria or performance measures that new parking proposals in the plan area should meet, including changes to the standard parking requirements in the Clause 52.06-5 Car parking table
- setting out decision guidelines that the responsible authority should have regard to in exercising its parking or other related discretions
- setting out procedural guidance; for example, specifying the information that an applicant must provide to the responsible authority on how a proposed parking charge is to be calculated.

Any requirements should flow logically from, and implement, parking outcomes. If a requirement changes the normal provisions of the Clause 52.06-5 Car parking table, these need to be included in the schedule to Clause 52.06-2 so they can be implemented. Other specific requirements, such as cash contributions or changes to parking bay dimensions, must also be included. However, plan requirements do not have to be included in the schedule unless it is necessary to do so. A plan may be prepared that leaves the parking provisions of the Clause 52.06-5 Car parking table unaltered, but guides the exercise of the responsible authority's discretion. In this case, it would only be necessary to change the schedule to Clause 52.06-2 to refer to the plan as a Parking Precinct Plan.

Once written, the parking outcomes should always be checked against broader planning policies. If they contradict or repeat existing LPPF policies, the planning authority must consider which should be changed to bring the plan into general conformity with the LPPF.

Implementation

The Parking Precinct Plan needs to contain an implementation statement. An MSS objective is normally accompanied by a short description of the actions proposed to achieve it. In the same way, a Parking Precinct Plan needs

to set out the means by which the planning authority considers it will be implemented.

The specific nature of plan outcomes will often provide a strong implementation focus and it may not be necessary to provide great detail here. However, a statement of necessary actions should be set out in relation to each outcome. For each action, it will often be valuable to record:

- what is to be done
- where it is to be done, with reference to a map or plan if required
- the agency to be responsible for its delivery
- the anticipated timing of its delivery, particularly if the overall plan is required to be implemented in phases
- any other relevant financial and resource statements. These may be necessary to make the operation of a cash-in-lieu scheme transparent.

The implementation section can also include measures for monitoring the effectiveness of a plan and the time-scale for its review.

Giving the plan statutory force

A plan is given statutory force by amending the planning scheme to incorporate the Parking Precinct Plan and to introduce relevant local provisions into the schedule to Clause 52.06-2. Changes to the plan can then only be made by a further amendment to the scheme.

There will normally be at least two statutory components to a Parking Precinct Plan amendment.

A Parking Precinct Plan document

This should be an incorporated document to the scheme under Clause 81.

A schedule to Clause 52.06-2

The schedule requires the plan document to have been incorporated into the scheme: it must be referred to in the schedule as an incorporated document. The schedule can then set out the special car parking rates, off-site parking provisions and other particular provisions that apply in the precinct to implement the plan document.

It may not always be appropriate, or possible, to apply the new provisions set out in a schedule. Therefore, it is

important that the schedule always provides that a permit may be granted to reduce or waive the requirement.

An example of a schedule is shown in Appendix 2.

The example illustrates only one of many approaches that could be taken in drafting a schedule.

As suggested above, a parking study and strategy may contain actions that go beyond the scope of the Parking Precinct Plan and a schedule. The development of a Parking Precinct Plan may also:

- provide a clear strategic justification for changes to the MSS or local planning policies
- allow council to review its corporate plan
- allow financial measures (such as special rate or cash-in-lieu schemes) to be established or revised.

Monitoring and review

The characteristics of precincts will change over time.

A Parking Precinct Plan's main benefit is that it describes the parking conditions for the precinct and sets future directions. It is important that the plan is regularly monitored and reviewed to ensure it continues to reflect the precinct's actual parking characteristics, and is consistent with future plans.

It is recommended that the plan be reviewed in tandem with the MSS at least every three years to ensure the specified parking rates still reflect the parking demand for each land use. Depending on the result of the review, the plan can be amended or extended for another term.

If the plan is meeting its objectives, the review process may be limited. However, where a plan is not meeting its objectives, or new issues have arisen, it may be necessary for the review process to include a revision of the plan's purpose, outcomes and policy. Parking studies used to prepare the strategy may need to be repeated. It may also be necessary to obtain new data from areas that were not surveyed when the plan was prepared.

It is also important that monitoring and review processes are regular and transparent. The plan should contain a written commitment to monitoring and review as part of its implementation statement.

Appendix 1. The parking study and strategy process

The guidance set out below is intended to identify a typical path toward preparing a parking study and strategy to underpin the adoption and approval of a Parking Precinct

Plan. However, it is only indicative. The needs of particular precincts or areas may suggest that different processes are used in a different order. There is no single 'standard model' and planning authorities are advised to discuss processes and costs with the staff or consultants likely to be preparing the study and strategy, and the eventual plan.

1. Identify the likely issues and objectives

What is the strategic context – its relationship to other relevant policies and provisions?

What are the planning, transport or parking issues that the strategy seeks to resolve?

What objectives might the plan need to have?

It is essential to start from a sound assessment of the strategic context. Later work may change the initial assessment of issues and objectives. However, it is valuable to start from a 'hypothesis' that can be tested.

2. Define the survey area

What area appears to be subject to the identified issues?

Are there apparent 'spill-over' parking effects in nearby streets that need to be considered?

A survey will provide data on which to base the plan. Before starting survey work, the planning authority needs to identify a survey area.

The survey area may need to be larger than the anticipated plan area, especially where 'spill-over' effects could be identified.

3. Survey existing conditions

Supply data

Quantify, record and map:

- the number of parking spaces
- the location of parking spaces
- ownership or management
- restrictions on use (for example, access, time, or cost)
- enforcement data.

Demand data

What is the demand for public and private parking, on and off street?

All data needs to build a picture of how existing car parking is used in the area and the social economic and environmental effects that this might have.

Surveys are necessary to gather factual material to support the policy. It is important to establish what survey work will need to be carried out. These suggestions are likely to be a minimum and can be added to: see below.

Some data may already be available from recent surveys carried out by developers or by the planning authority for another purpose.

The planning authority should consider appointing a reference group to assist this process. The list of survey information to be gathered could be tested against knowledge of local conditions to ensure that all relevant factors are considered.

4. Define the precinct

The precinct will normally be a single area. However, it needs to encompass all the places where actions may be undertaken and could comprise more than one area.

5. Identify issues and options

Once data has been collected, it can be used to finally define the precinct, to test initial assumptions and to identify issues and options.

The detail of this process depends on the local conditions and on analysis of the survey data to:

- identify relevant trends and issues
- model options or scenarios based on predictions of likely change in the precinct
- develop preferred responses with close reference to initial objectives and relevant SPPF and LPPF policy.

The analysis of the data to test assumptions is critical. It may validate assumptions, confirm the precinct area and objectives. However, it may show the need to revise the area, change assumptions or objectives or seek further information.

The identification of issues and options should be tested with any reference group and wider stakeholders.

6. Develop objectives and strategies

Once issues and options have been identified and tested, preferred responses can be developed into final policy objectives.

Strategies for implementing those objectives will also be required.

Strategies can relate to the operation of parking provisions. These may require the introduction of new parking measures and rates to be incorporated into the schedule to Clause 52.06-2.

Other mechanisms may include management of public and private parking (for example, time restrictions, costs), cash-in-lieu schemes, special rate charges and the related provision of new spaces, shared parking requirements, permits for residents, workers and visitors, administration of properties with difficult parking histories, allowances for heritage conservation, etc.

The parking measures for uses set out in the Clause 52.06-5 Car parking table are a good starting point. They generally represent industry standard or accepted means of measurement that are appropriate to that use.

The rates set out in the Clause 52.06-5 Car parking table are much more amenable to change to respond to the needs of a local area. Most plans will need to determine suitable new parking rates for land uses or additional floor areas in the precinct. These rates will often be associated with and justified by the implementation of other mechanisms.

6. Develop objectives and strategies cont.

Strategies can also guide the exercise of broader planning discretions that have an impact on transport, traffic, parking and related issues. They can include measures which manage parking demand, limit the growth of parking supply, aim to reduce private vehicle use or support public transport.

Static rates (that is, fixed rates associated with uses) or dynamic rates (ie rates calculated for a collection of uses across typical days in the precinct) may both be used as the basis for calculating new rates.

However, if a dynamic rate model is used, it must determine fixed rates that can be incorporated into the planning scheme. A planning scheme cannot provide for the variation of parking rates, other than through an amendment process.

7. Develop implementation mechanisms

What action will be taken?

When will the action be taken?

Who will take the action?

The proposed implementation mechanisms should be tested with any reference group and wider stakeholders.

The strategy making process is also likely to require the following:

- **A commitment to information, consultation and partnership**

To pass through a planning scheme amendment process and be successfully implemented through a Parking Precinct Plan, a strategy needs to be widely understood and, where possible, supported by the community it affects. For example, there is little value in preparing a technically 'perfect' strategy and plan that does not respond to local retailers' needs or concerns when these could have been identified using an appropriate process. The cost of involving stakeholders in key decisions from the earliest part of the parking strategy process is likely to pay dividends once the Parking Precinct Plan is exhibited as a planning scheme amendment.

- **A multidisciplinary team**

It is normal for parking strategy content to make responses to the precinct that extend beyond the scope of traffic engineering. This suggests that preparation will benefit from a multi-disciplinary team that includes traffic engineers and land use planners. For a larger strategy or more specialised precinct, the team may also include people with social planning/social research, urban design and economics expertise. Considerations such as the impact of parking on a heritage precinct, vegetation or landscape interest can also merit the inclusion of additional professional advisers in the team.

- **A commitment to research**

To make a rational and soundly based plan, it will be necessary to carry out research. Basic parking supply and demand data is essential; however, this will often need to be supplemented by a wider range of data (including behavioural data) outlined below.

It may seem that data collection on this scale is expensive. However, the cost of collecting necessary data should be balanced against the cost of not collecting it, which can be large when the eventual operation of the parking policy is adversely reviewed by VCAT. It should also be balanced against the cost of providing car spaces.

There are methods of reducing the cost of some forms of data collection, such as using schools, TAFEs, universities, volunteers from local community and business organisations. However, where data is obtained at low cost, additional quality control may be required or expectations about its usefulness lowered.

Possible research approaches

Time-based observation can establish:

- the turnover of parking use
- the number and location of spaces used
- the flow of cars in and out of car parking areas.

User behaviour questionnaire surveys of parking users can examine:

- trip origin and destination(s)
- mode(s) of travel
- reasons for using the area
- frequency of using the area
- time spent in the area, and at each destination or attraction
- time spent in each parking space
- travel and parking preferences
- sensitivity to change (for example, whether parking factors enhanced or reduced the attractiveness of the area)
- the likelihood of measures influencing behaviour to support strategic outcomes.

A land use survey can:

- identify and map existing and approved land uses
- obtain critical parking measures (for example, relationships between numbers of users or customers over time and retail or office floor areas, restaurant seats or hours of operation)
- identify particular sites that need to be protected from the adverse impacts of parking (for example, heritage places, public open space)
- identify particular sites that represent parking opportunities.

The availability of alternative modes of transport from relevant catchment areas can be studied, including:

- the existence of public transport routes and patronage
- taxi use and patronage
- the feasibility of bike and pedestrian access.

Planning histories can be reviewed to:

- understand the influence of current and previous policies and controls on parking availability
- identify and understand the operation of any parking finance measures.

Appendix 2. Example Schedule

This example schedule has been prepared to support a Parking Precinct Plan for a revitalised large strip shopping centre. The centre has shops specialising in fashion retail with limited parking provision and no rear access.

A retail development and parking strategy was prepared. It identified the potential to combine small shops to create larger units and proposed parking improvements.

Significant outcomes included the development of 'park

and ride' schemes from nearby public transport nodes.

A 'cash-in-lieu' scheme was established to fund its development. Part of the funds raised would be used for streetscape and forecourt enhancements that would reduce the number of on-site car spaces. Remaining spaces would be large and enable flexible use for loading.

A discretion to consider a permit to reduce or waive these parking provisions was provided in the schedule.

GUMNUT PLANNING SCHEME		LOCAL PROVISION	
SCHEDULE TO CLAUSE 52.06-2			
Name of Incorporated Parking Precinct Plan	Requirement		
Gumnut Parking Precinct Plan, ABC & Associates for Gumnut City Council, August 2000	1.0 Car Parking Rates		
	USE	CAR SPACE MEASURE	RATE
	Shop	Car spaces to each 100 sq m of leasable floor area.	2
	2.0 Off-Site Parking Provision		
	USE	CAR SPACE MEASURE	RATE
	Shop	Cash contribution of \$8,000 in lieu of car spaces to each 100 sq m of leasable floor area.	6
3.0 Other Requirements			
<ul style="list-style-type: none"> ▪ One on site car space shall be at least 7.6 metres long and 3.6 metres wide to facilitate use by delivery vehicles. On site spaces shall be subject to a 1 hour limit. ▪ A permit may be granted to reduce the number or dimensions of car spaces required to be provided on site or to waive the requirement. ▪ A permit may be granted to reduce or waive the number of car spaces required to be provided off site or to waive the requirement. 			
PARTICULAR PROVISIONS - CLAUSE 52.06-2- SCHEDULE 29 MARCH 2001		PAGE 1 OF 1	

Appendix B The Cost of car space in the Ballarat CBA



CONSULTANCY REPORT
BALLARAT CITY COUNCIL
PO BOX 655
BALLARAT VIC 3350

THE COST OF A CAR SPACE IN THE
BALLARAT CENTRAL BUSINESS AREA

CLIENT Ballarat City Council

REPORT DATE 15th October 2005

Your Ref: Economic Development Unit
Our Ref: 510/23903



17 October, 2005



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INTRODUCTION

- **Instructing Party:** Mr David Keenan
Manager Economic Development Unit
Ballarat City Council
PO Box 655
BALLARAT VIC 3353

- **Purpose Of Report**

To provide advice on the current cost of providing a car space in the Ballarat Central Business Area.

BACKGROUND

In considering town planning applications, Council is, amongst other things, required to give consideration to the provision of off street car parking. Whilst the car parking requirements contained within the planning scheme apply across the municipality, this report focuses on the Ballarat Central Business Area (CBA).

In some instances off street car parking is unable to be provided.

For example:

- Assume an existing building in the CBA that is built across the entire site, the building has been sold and the new owner proposes to refurbish it as offices.
- The planning scheme requires that off street car parking be provided. As there is no ability to provide car parking on site, an alternative is required eg "cash in lieu"

Council could consider a monetary contribution, on a per space basis, from the owner of the land. The funds generated from these contributions could then be channelled into the provision of car parking in the CBA. As a single contribution, funds received are likely to be inadequate, however, when put together with other contributions from land owners and combined with other Council funds or grants from other levels of Government, Ballarat City Council has a real and genuine opportunity to assist and ensure the future viability of the Ballarat CBA by providing adequate car parking.

The purpose of this report is to provide guidance on the current cost of providing alternative car parking in the Ballarat Central Business Area.

RATIONALE

If car parking cannot be provided on a particular site, then the rationale is that additional land needs to be secured nearby so that it can be utilised for that purpose. The market reality is that in many instances it will not be possible to purchase the land next door or in the immediate vicinity of the subject property. To address this issue, Council could consider a dollar contribution amount on a per car space basis that can be applied to the Ballarat CBA.

To explore this option we have provided a value per space that should reasonably apply for the Ballarat CBA. It acknowledges the heritage values of our city in that buildings cannot be readily demolished to provide for car parking at ground level. The more likely and more appropriate outcome is that there may be some other opportunities, typically on the fringe of the CBA, to assemble a site for car parking. Our assessment of value has been derived from an analysis of property sales within the CBA over the last eighteen months.

As an alternative to this, we have also provided some advice on a per space rate for the provision of multi storey car spaces. We have adopted an indicative market value for the land and added to this an amount for the construction of a multi level carpark. These costings have been derived from the "Rawlinsons Cost Guide" publication and serve as a guide only. It should be recognized that the actual cost will vary with each site having regard to the issues of the site, including topography, location and services issues, etc.

ANALYSIS

Ground Level Car Space:

Assume each car space not less than 2.7m x 5.9m = 15.93 m ²	Say 16 m ²
Allowance for driveway entry and exit, etc	Say <u>15 m²</u>
Total space required per car space	31 m ²

Assume the market value of land at \$475/m²

Land component	31 m ² x \$475/m ² =	\$14,725 per space
Construction of carpark	Say	<u>\$ 2,300</u> per space
Total		\$17,025 per space

Adopt \$17,000 per space

Multi Storey Space:

Land component	31 m ² x \$475/m ² =	\$14,725 per space
Construction of carpark	Say	<u>\$ 17,300</u> per space
Total		\$32,025 per space

Adopt \$32,000 per space

Basement:

This will vary depending upon site conditions and the nature of the building to be constructed above, however, as a guide, we advise that the construction cost is around **\$40,000*** per space.

*Note that this does not include any allowance for the cost of the land.

CONCLUSION

Whilst the above quantifies the likely current cost of providing car parking in the CBA, we believe that in formulating Council policy on the matter, it would be prudent to have some flexibility in the policy.

For example, if the spaces are required during the day for the occupiers of a particular building and they may be able to be used by the general public during the evenings or weekends, for example, then there should be some recognition for this.

Or, if a building is constructed in an area with demonstrated low usage, then again perhaps a full fee requirement is not required.

There may be a site that is a "bomb site" or has above average costs to develop it, yet Council wish to see it developed to improve a streetscape, etc. Any car parking policy must have adequate flexibility in it to allow Council to achieve the outcome it requires. Council may wish to provide some incentive or rebate on car parking in order to encourage the land owner to redevelop and hence remove an eyesore from the streetscape.



Adrian K Doyle, FAPI,
Certified Practising Valuer
for Leader Property Practice
18 October, 2005

Appendix C Public Consultation Summary



Appendix C Public Consultation Summary

It is noted that the Public Consultation sessions were undertaken in May 2006. The community were consulted regarding both traffic and parking issues. As such, the summary of the main traffic issues raised has also been included below.

Statistics:

Fri 19 May 06 Bridge Mall

Viewed –	40
Asked questions -	46
Traders -	20
TOTAL	106

Sat 20 May 06 Central Square

Viewed –	53
Asked questions -	47
TOTAL	100

Key Issues

- **Lack of Parking and Security near Little Bridge Mall**
 - Traders complained of lack of parking for customers.
 - All day parking (for staff) is located in unsafe, dark locations which are too far and insecure to allow their staff to park in. Particular concerns for female staff.
 - Any multi-level car parks or alternative car park sites must be safe, well lit and secure!
 - Traders said they may use the Safeway Rooftop car park if it contained better lighting, security cameras and maybe a Security Guard.
 - Rooftop car park is 80% occupied during the midday shopping peak, but only 63% occupied at 3.30pm. This indicates that shoppers (not staff) are using this car park. Many staff end their shifts when it is dark and they consider this car park too dangerous to park in.
 - The Anderson Street car park contains very low occupancy because it contains fee parking. This car park along with the Safeway rooftop car park could be promoted as staff car parking areas if security improvements are installed.
 - There is a relatively large grass area bounded by car parking at the north-east corner of Grenville Street and Dana Street. This “park area” could be developed into car parking, as it is unlikely that the public would use this land as a park anyway.
 - An informal car park is located to the north of the rail line. This car park could be promoted if a safe path is provided from Little Bridge Mall with adequate lighting and security, particularly through the Peel Street rail underpass. However, it is considered unlikely that shoppers or staff will be willing to park so far away.
 - *It has also been suggested that the Elderly Citizens Premises located in the Little Bridge Car Park Premises could be removed to make far more parking – I will have to check on this statement. Is the Elderly Services still needed??*
- **More Pedestrian Crossings in Curtis Street and Little Bridge Street**
 - Traders asked that raised zebra crossings be installed in both streets, particularly adjacent to Drury Lane where a large volume of pedestrians access the mall from the adjacent car parks.
 - The raised zebra crossing would be identical to the existing pedestrian crossing located towards the west end of Little Bridge Street.
 - An increased number of raised zebra crossings would promote pedestrian movements and discourage vehicles from using these routes. Both outcomes are in line with our overall traffic objectives.
 - The pedestrian operated signals are too slow and pedestrians risk crossing against red pedestrian phase. Additionally “see through” occurs when drivers see a green signal at Grenville and drive through a red signal at the crossing.

- **Big W Car Park “Hang-Out”**
 - Traders noted that teenagers use the Big W car park as a “hang-out” at night time.
 - This often creates vandalism and potentially dangerous situations.
 - They requested that the car park be locked and closed off after 10.00pm each night, the time when Subway restaurant is the last retailer to close.

- **Big W Car Park Access Problems**
 - Many traders highlighted congestion and safety concerns with regards to traffic entering and exiting the Big W car park.
 - One trader stated that vehicles exit the car park onto Curtis Street travelling extremely fast. She said that a road hump needs to be installed directly after the exit and also a raised zebra crossing shortly after that.
 - Other traders suggested that the access should be restricted to “ENTRY ONLY”. An “exit only” access would be installed further east.
 - Many traders suggested that the car park should contain one-way lanes and that the existing 90 degree parking bays should be converted to angled parking.

- **Traffic Islands**
 - Many locals complained about the indented traffic islands which have been installed in side streets, in particular off Sturt Street.
 - They stated that these traffic islands were unsafe and created congestion.
 - When I questioned them as to why they were unsafe they could not provide me with an explanation. In fact I actually convinced a few people that perhaps they even increased safety.
 - However, I can certainly understand that they create congestion as they have reduced the intersection capacity from two turning lanes to one lane.

- **Humffray Street (One-Way)**
 - Two people recommended that Humffray Street needs to be restricted as one-way south of Victoria Street.
 - They stated the existing Bakery Hill roundabout is confusing and potentially dangerous because vehicles exiting from Humffray Street are often unsure whether a vehicle with their left turn indicator on is intending on turning into Humffray Street or into Little Bridge Street.
 - They also noted that Humffray Street is too narrow to carry such high traffic volumes (approx 10,000 per day)
 - One of the people suggested that intersection should be restricted as “exit only”. He stated that this way motorists could still turn at Porter Street if they had missed the Barkly Street turn-off.

- **Signage**
 - A number of people considered that the signage throughout Ballarat was unclear and confusing.
 - In particular the sign on Victoria Street when entering the CBA contains too much information and doesn’t provide any clear direction.

Maunsell Traffic Proposals

- **General Philosophy to Reduce Traffic Volumes within the Centre of Town**
 - Almost everyone consulted agreed with this overall objective.
 - There was strong support for improved pedestrian access within Sturt Street and between Bridge Mall and Sturt Street.
 - Also, the elderly were very concerned with pedestrian access throughout the CBA and in particular between the railway station and the CBA.

- **Mair Street Upgrade**
 - The majority of the public really supported this proposal, and indicated that they did believe this would be successful in encouraging through traffic trips to use this route.
 - One person raised issue that the roundabout located at the intersection of Grenville Street and Mair Street would require signalisation. (We agree with this proposal.)
 - One trader from Mair Street strongly objected this proposal due to the reduction of parking. When queried about whether the parking was generally highly occupied, he stated that the parking is adequate as long as it remains as angled parking.
 - I suspect that the majority of Mair Street traders will be strongly in opposition to this proposal. However, I believe that almost 100% of the remaining public will support the upgrade to two lanes in each direction.

- **Sturt Street**
 - The majority of people were initially very concerned about any proposal to change the existing layout of Sturt Street.
 - However, the majority of the public support the proposal to reduce traffic volumes using Sturt Street to increase the pedestrian amenity.
 - Surprisingly, a high proportion of people supported the proposal to reduce Sturt Street to one traffic lane after the Mair Street bypass has been upgraded.
 - However, initially most people were sceptical and are very concerned about any changes to the existing layout of Sturt Street. This was primarily a historical concern rather than a traffic concern.
 - I believe an advertising campaign to explain that this proposal only intends to increase the amenity of Sturt Street could be effective in obtaining general support throughout Ballarat for this proposal.

- **Doveton Street Congestion**
 - Many people complained about the traffic congestion which occurs between Dana Street and Sturt Street during the peak times.
 - I suggested that I believed the problem was accentuated by poor line marking. Currently there is no line marking and vehicles are unsure whether to travel in two lanes or one.
 - I recommended a proposal to install clear line marking of one traffic lane and a bicycle lane. Most people strongly supported this proposal.

- **Signalisation of Sturt Street / Armstrong Street Intersection**
 - Almost everyone consulted agreed with the signalisation of this intersection, particularly for increased pedestrian access.
 - However, one person noted that he believed he had previously seen a proposal for signalising this intersection which had been rejected. He said the proposal was turned down because of a fear that the traffic signals would ruin the visual amenity at this location.

- **Sturt Street / Grenville Street Intersection**
 - Many locals raised this intersection as a concern themselves stating how dangerous it was.
 - Everyone supported the proposal to simplify the intersection by providing one left turn lane and one right turn lane only.

- **Dana Street Congestion**
 - Many people considered this as one of the most important issues.
 - A lot of people confessed to using the Armstrong Street shortcut themselves.
 - However, despite so many people confessing to currently using the shortcut, everyone agreed with the proposal to signalise the southern leg of the Dana Street / Armstrong Street intersection to improve traffic flow on Dana Street.
 - A few people noted that the problem was of such a concern that it also disrupts turning movements from Dana Street into residential streets such as Raglan Street and Lyons Street because the traffic queues are so dense.
 - One couple requested that the Eyre Street / Armstrong Street intersection remain as a roundabout. This couple also complained of trucks from "Camerons Steel Works" double parking on Eyre Street and disrupting traffic flow.

- **Peel Street Pedestrian Crossing**
 - Everyone consulted strongly supported the proposal to remove the existing double zebra crossing from Bridge Mall and install signalisation.
 - Many people considered Peel Street an essential north-south traffic route.
 - People also considered that the proposal would increase pedestrian safety as well.

- **Market Street / Armstrong Street**
 - Very few people raised this intersection as a concern
 - However, when consulted the public did support this proposal to improve the safety of the intersection.

- **Victoria Street / Mair Street**
 - A high proportion of people raised the left turn trap lane issue with regards to the existing layout of this intersection.
 - They all agreed that our proposal would resolve this problem.
 - The majority of people supported the two right turn lanes into Mair Street as a means to encourage the use of this route.
 - Many people also stated that it was confusing that there is currently only one through lane into Victoria Street from the signals with Mair Street. Victoria Street then immediately opens into two lanes, and then shortly after the two lane lanes merge into one lane.
 - Almost everyone strongly supported a proposal to widen the central median and provide only one westbound lane on Victoria Street, between Mair Street and the Humffray Street roundabout.

- **40 km/hr Central CBA Speed Limit**
 - Almost everyone consulted supported the proposal to install a “Blanket” 40km/hr speed limit.
 - In particular, many traders considered that motorists travel in Curtis Street too fast creating a potentially dangerous conflict with pedestrians.
 - The public agreed that the “Blanket” 40 km/hr speed limit would remove confusion and have greater effect in slowing motorists down in key locations.

Other Minor Issues Raised

- Review location of Loading zones on Little Bridge Street. Currently block Florist frontage. Can be placed at locations where back of shops are not at shop frontages which should be for the customers. Similarly Loading zones in Curtis St should be reviewed.
- Motorists are using Nolan Street and Scott Parade as shortcuts from Lydiard Street. Traffic calming devices may need to be installed.
- Little Channel Street is dangerous and should be converted to one-way.
- Eyre Street and Dana Street require traffic calming for the residential sections between Pleasant Street and Doveton Street.
- Short-term (10 minute) parking required for the Victorian Business Centre, located on Sturt Street, near Camp Street.
- The businesses at the east end of Sturt Street have significantly less business than the other sections of Sturt Street. There is a need to integrate pedestrian connectivity between Sturt Street and Bridge Mall to improve business activity in this section of Sturt Street. Had suggestion from two people that
- Lydiard Street / Doveton Street is a major pedestrian crossing point in the centre of Ballarat. However, the crossing points contain no Disabled Tactile Tiles. There is no definition between the road and the kerb for guide dogs to differentiate between.

- Encourage Armstrong Street – Skipton Street route from Grant Street as the primary truck route in preference to travelling through the Doveton Street / Grant Street signals. (I'm not sure I totally agree with this, but it may warrant investigation).
- Motorists are using Wendouree Parade and Burnbank Street as shortcuts from the Wendouree Village Shopping Centre. This is creating increased congestion at the Drummond Street / Macarthur Street roundabout.
- Despite being located out of study area, traffic calming should be installed and motorists encouraged to travel via the arterial roads such as Gillies Street, Howitt Street and Midland Highway. This can be justified because the current shortcut travel routes are impacting on roads and intersections within our study area.
- The right turn from Peel Street into Curtis Street should be banned. Otherwise, there needs to be an exclusive right turn lane installed because under the existing layout any right turner completely obstructs through Peel Street traffic.
- Signals are required at the intersection of Drummond and Mair Streets, rather than the existing roundabout (I don't know if I agree).
- Talbot Street parking is a concern. Hospital staff park there.
- Bike path link between Steinfeld Street and Scott Parade needs to be off-road. (Where is this???)
- School crossing on Drummond Street is too close to the roundabout. It should be mid-block.
- The children's playground in Bridge Mall should be covered. There is overhead coverings at locations nearby in Bridge Mall, but surprisingly not above the playground.
- School zone times should be reduced. (could we do this, or are the times set state-wide)
- Overhead walk way needed to travel over the top of Mair Street between the railway station and "The Good Guys".

Appendix D Review of Previous Studies



Appendix D Review of Previous Studies

Ballarat CBA Strategy Plan (1995)

In November 1995, the City of Ballarat commissioned the *Ballarat Central Business Area Strategy Plan* to enhance the role, form and operation of the Ballarat CBA.

This plan comprised eleven separate sections with *Section 5 Traffic Situation* prepared by Greg Tucker and Associates Pty. Ltd. (GTA). This section of the Plan examined the traffic issues in the Ballarat CBA and included issues raised by Council officers, VicRoads and key stakeholders.

Section 5 specifically focused on the:

- Road network and classification;
- Traffic volumes;
- Accident situation;
- Pedestrian and cycle movements; and
- Public transport provision.

Key Points

Key traffic issues raised by GTA are summarised below:

- There are problems associated with the north-south traffic access in the Ballarat CBA such that;
 - Peel Street has limited capacity;
 - Lydiard Street is affected by the at-grade rail crossing and is not continuous south of Dana Street;
 - Armstrong Street is effectively closed between Sturt and Dana Streets; and
 - Doveton Street experiences traffic congestion.
- East-west traffic routes in the Ballarat CBA have substantial capacity;
- The Little Bridge Street, Grenville Street, Curtis Street loop is intimidating and difficult for pedestrians to cross, particularly Curtis Street;
- There is strong community support towards the introduction of two-way traffic in Armstrong Street;
- The construction of the Ballarat bypass has reduced traffic volumes on Mair Street by over 50%;
- Since the completion of the Ballarat bypass there is strong justification to develop an effective access road system around the periphery of the CBA (Mair Street, Eastwood Street, Dana Street);
- There appears to be strong community feeling to reinstate the historic tram in the CBA. As well as promoting tourism in Ballarat this would link the two retail ends of the CBA. Should the tram not be reinstated then consideration should be given to providing a shuttle or courtesy bus to provide a link between precincts in the CBA;
- Increase the opportunities for cyclists to access the Ballarat CBA. Consider the use of Lydiard and Peel Street. Locate bicycle racks at near the intersections of Lydiard and Sturt Street and Peel Street and Bridge Mall.

Transportation Strategy (1996)

In March 1996, the Technical Operations Department of the City of Ballarat developed a *Transportation Strategy* that provided a summary and review of the major studies and strategies prepared or underway up to March 1996.

Transport Studies reviewed included:

- Transportation Study 1971
- CBA Study (1995)
- South-west bypass (1993)
- Lake Wendouree Precinct Traffic Study (1993)
- Hospital Precinct Development Strategy (1995)
- Railway Station Precinct Study (1995)
- Road Signing Review
- Principle Traffic Routes Study (1996)
- Ballarat Bike Plan (1985)

The Transportation Strategy generally suggested that the actions arising from the transport studies be adopted or further developed. It is important to note that the Transportation Strategy reviewed documents prior to 1996 and with studies completed after this date superseding those reviewed in the strategy. Additionally, the strategy covered an area much greater than the Ballarat CBA.

Key Points

Key actions stated that:

- In consultation with the community and transport authorities and users a Transportation Study is required for the City of Ballarat.
- A comprehensive signage review including Statutory, Regulatory, Directional, Community, Tourist and Advisory signs is required.
- A Municipality wide strategy for Local Area Traffic Management (LATM) is required.
- The 1985 Bike Plan be reviewed in consultation with the community, transport authorities and Bicycle Victoria.

Grenville Street Reopening Study (2002)

Hyder Consulting investigated the proposal to reopen Grenville Street at Sturt Street in March 2002. The purpose of the study was to estimate traffic volumes on the surrounding road network as a result of the reopening to identify locations where remedial works may be required to reduce congestion over the next 20 years. Traffic intersection analysis software, aaSIDRA, was used to analyse the effect of the reopening on 22 key intersections.

Key Points

The study concluded the following:

- Grenville Street can be reopened to two-way traffic at Sturt Street with minimal impact on the surrounding road network in the short term (0 – 5 years). In the medium term (5 – 10 years) queues will become unacceptable at peak times and minor remedial works will be required.
- For Mair Street to operate effectively as the primary bypass route, two through lanes are required in each direction in the short-term (0 – 5 years) to provide additional capacity along the length of Mair Street.
- The major impact of providing two through lanes is the removal of centre of the road parking in Mair Street and converting angle parking to parallel parking along the length of Mair Street (loss of parking capacity).
- The Dana Street/Eastwood Street bypass operates adequately with only one treatment, a roundabout at Dana Street/Dawson Street, required in the short-term (0 – 5 years).
- Replace existing pedestrian crossings in Peel Street with Pedestrian Operated Signals as a high priority to improve the operation of Peel Street.

- Extend right turn lanes on all approaches at the Mair Street/Armstrong Street intersection.
- Doveton Street/Mair Street - Extend the right turn lane on the Mair Street eastbound approach and Doveton Street northbound approach.

Blackspot Investigation – Sturt Street / Armstrong Street Intersection (2005)

In July 2005 Traffix Group was commissioned by the City of Ballarat to undertake a Blackspot investigation of the Sturt Street/Armstrong Street intersection. Crash statistics for the five year period 1 January 2000 to 31 December 2004 were reviewed revealing that:

- In the 5 year period there were a total of 22 casualty crashes;
- Of these 22 crashes, 45% were classified as cross-traffic; and
- In 2000 there were 8 crashes but the subsequent 4 years averaged only 3.5 crashes per year as a result of intersection improvements (narrowing of the intersection) in late 2000/early 2001.

Traffic management options examined included the:

- Installation of traffic signals;
- Restriction of some traffic movements;
- Closing off of the median opening;
- Reversal of the one-way flow in Armstrong Street South; and
- Installation of a roundabout.

Key Points

In the short-term Traffix recommended a full closure of the median for a one-week trial followed by an assessment and then a further six month trial period. In the long-term they recommended a full closure of the median on a permanent basis or the installation of traffic signals dependant on the outcomes of the trial assessment.

Hospital Precinct Development Strategy (1995)

The *Hospital Precinct Development Strategy* was completed by Ratio Consultants in May 1995. This document investigated the growth and expansion of health facilities, expansion of the Australian Catholic University, integration of the St John of God and Ballarat Base Hospitals, streetscape improvements, parking and traffic. In terms of traffic issues, this strategy identified several streets which have experienced problems historically and discussed possible high level solutions to alleviate these issues.

Key Points

The following traffic issues were discussed:

- Parking demand in the precinct has increased due to the growth and expansion of medical and educational facilities.
- Daily Traffic flows observed on;
 - Drummond Street are approximately 10,000vpd
 - Mair Street are approximately 7,000vpd
 - Webster Street are approximately 1,500vpd
- Traffic signals at the intersection of Sturt Street and Ripon Street may improve traffic flow in the precinct.
- A roundabout at the intersection of Ripon Street and Mair Street may improve traffic flows in the precinct (it has since been constructed)
- The relocation of the pedestrian crossing in Drummond Street (north of Mair Street) may alleviate queuing problems at the roundabout.

Road Safety Strategic Plan (2000)

In April 2000, Ratio Consultants Pty Ltd prepared the *City of Ballarat – Road Safety Strategic Plan*. The aim of the Plan was to help protect and improve safety for all people who use roads in the City of Ballarat.

As part of the development of the Plan, crash data for the 5 year period 1993 to 1998 was analysed and the following revealed:

- Over this period 1,106 people in the City of Ballarat received injuries that required medical treatment due to road accidents, 408 people were seriously injured and 24 were killed.
- The cost to the community of these accidents was estimated to be \$63.5 million.
- Ballarat has the highest proportion of pedestrian accidents per resident population in rural Victoria. The main danger areas were identified as Doveton Street, Sturt Street and Little Bridge Street.
- 166 Cyclists were injured during this 5 year period. Most were aged 13-17 years old.

Seven priorities for road safety in action in the City of Ballarat were identified:

- Leadership and coordination of road safety planning and action;
- Reducing pedestrian casualties in Ballarat;
- School road safety promotion and school transport safety;
- Safe cycling;
- Young children 0 to 5 years and their families;
- Safe road use by older people and disabled people; and
- Vehicle safety.

Key Points

Strategies developed under the seven priorities for road safety were comprehensive. Some strategies relevant to this study have been listed below:

- Establish an ongoing road safety working group, led by Council and including representatives from key agencies;
- Promote pedestrian safety in the central business areas of Ballarat;
- Introduce special signage in high risk areas warning pedestrians and encouraging them to use safer crossing points;
- Introduce an integrated set of traffic management measures aimed reducing vehicle speeds, reducing pedestrian crossing distances and optimising traffic signal cycle times at problem locations in the CBA;
- Introduce traffic calming to reduce the speed and volume of vehicles in residential streets;
- Implement the 'Safe Routes to Schools' program;
- Review pedestrian safety near major school bus stops on arterial and collector roads and provide improved pedestrian safety at identified locations;
- Plan and provide for an integrated, safe and user friendly network of cycle paths and routes;
- Review the provision of bicycle facilities; and
- Consider the introduction of traffic calming measures and a red light camera in Sturt Street and Victoria Street.

Ballarat Regional and City Bus Review (2006)

In January 2006, Maunsell completed the *Ballarat Regional and City Bus Review* Final report for the Department of Infrastructure. The Final report provided a summary of recommendations for public transport enhancements (excluding rail-based) in Ballarat and was structured around five main categories:

- Regional service improvements;
- Central area routing and interchange;
- City fringe routing and interchange;
- Scheduling; and
- Promotion.

Preceding this was the Ballarat Regional and City Bus Review Baseline report, prepared by Maunsell in November 2005 that investigated the existing state of public transport services in and around the City of Ballarat.

Key Points

The key recommendations are as follows:

- The City of Ballarat is very well covered spatially by Davis Bus Service, with virtually all developed areas within a 400 metre catchment buffer of one or more bus routes;
- City bus services in the evenings and on weekends are limited, indicating opportunity for further development of services and patronage during these times;
- The 'split' central city interchange and bus routing pattern within the CBD leaves several key destinations with indirect or sub-optimal service, including the railway station; and
- The supporting underlying infrastructure of the bus system—including shelters, signage and informational services—could benefit from a coordinated design/development program to boost the image and usability of the system.

Appendix E Stakeholder Workshop



Appendix E Stakeholder Workshop



Traffic Management Plan & Parking Strategy Workshop

Issues and Opportunities Paper

City of Ballarat

April 2006

MAUNSELL | AECOM

Issues and Opportunities Paper

Prepared for
City of Ballarat

Prepared by

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Quality Information

Document Issues and Opportunities Paper

Ref 300 188 06

Date April 2006

Prepared by Todd Blasch

Reviewed by Stephen Pelosi

Revision History

Revision	Revision Date	Details	Authorised	
			Name/Position	Signature
A	18/04/2006	Draft Paper	Stephen Pelosi Associate Director	Original signed

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1.0 Introduction

Maunsell, on behalf of the City of Ballarat, facilitated a Stakeholder Workshop for the Traffic Management Plan and Parking Strategy Study on Thursday 6 April 2006. The aim of the Workshop was to obtain local knowledge of traffic and parking issues in the Ballarat CBA from the Stakeholders. It was a chance for Stakeholders to discuss their concerns with regards to traffic and parking and their organisation. This issues and opportunities paper provides a summary of the information obtained from the Stakeholders at the Workshop.

2.0 Stakeholders

Table 1 shows that 16 out of the 34 invited Stakeholders attended the Workshop.

Table 1 - Stakeholders

Name	Organisation	Attended
Adrian Doyle	Commerce Ballarat	Y
Eugene Kneebone	Blueprint Ballarat Committee	Y
Mark Middleton	Rural Ambulance Victoria	Y
Graeme Davis	Kefford Corporation	Y
David Smith	Davis Bus Lines	Y
Melanie Hogarth	Bridge Mall Shopping Centre	Y
Jim Burrough	University of Ballarat	Y
Adam Parrot	Open Space Planner	Y
Jason Martin	VicUrban	Y
Michael Richardson	V/Line	Y
Miriam Semmel	BCC – Strategic Planner	Y
Kevin Brown	CFA	Y
Sen. Sgt. Murray Rowe	VicPol – TMU	N
Ken Jones	Ballarat Taxis	N
Neville Gower	Western Improvement of Passenger Services	N
John Barnes	BalBUG	Y
Gerard Ryan	Central Highlands Roadsafe Committee	N
Jodi Kennedy	VicUrban	Y
Gerardine Christou	Blueprint Ballarat Committee	N
Richard Emary	Central Square Shopping Centre	N
Jason Lowson	Central Square Shopping Centre	N
Peter Voterakis	Armstrong Street North Traders	N
Andrew Rowe	Ballarat Health Services	N
John Fogarty	St. John of God Hospital	N
Matthew Lyttle	St. John of God Hospital	Y
George Sossi	City of Ballarat	N
Jamie Sargeant	Sargeant Transport	N
Ross Haby	Committee for Ballarat	N
Laura Carrington	Disability Advisory Committee	Y
Mandy Jean	City of Ballarat – Heritage	N
Fiona Davey	CoB – Economic Development	N
Ian Rossiter	CoB – Strategy Dev. & Corporate Projects	N
Hedley Thomson	Ballarat Environment Network	N
Russell Symons	Ratio	N

3.0 Workshop Format

The Workshop was facilitated by;

- Stephen Pelosi – Maunsell
- Todd Blasch – Maunsell
- Ruth Davies – Maunsell.

Jim Leonard from the City of Ballarat Infrastructure Planning Department was present and observed the running of the workshop, participating as necessary.

The Workshop followed the following format;

- Maunsell presented a brief presentation (refer to Appendix A) of existing traffic and parking data in the Ballarat CBA. This included a list of issues that was identified in previous studies.
- Stakeholders were separated into three separate groups to discuss issues that were of concern to them. Stakeholder issues were documented on A5 paper.
- Four separate categories were defined (Traffic, Parking, Road Safety, Other – PT, cycle, walking, access etc.)
- Stakeholder issues were attached to the whiteboard under the appropriate category.
- There was a group discussion of the expanded list of issues. Stakeholders ranked the issues in terms of importance to them. The issues were ordered accordingly on the whiteboard.
- The categories were reduced from four to two – Traffic (incorporating PT, road safety, cycling, walking etc) and Parking.
- Stakeholders were separated into 3 separate groups to develop potential solutions for the issues.
- Each group gave a short presentation on the final solutions developed for the issues.

4.0 What Issues were raised?

The issues raised by the Stakeholders are documented below by category.

4.1 Traffic Flow

- Mair Street – Traffic signals are not synchronised. Results in continuous stops at red signals even though it is an arterial road and should have priority.
- Dana Street – Roundabouts slow traffic flow and create congestion, particularly at Armstrong Street.
- Emergency access to properties in Ballarat CBA is hindered by small laneways and congestion on main roads. It is difficult to get vehicles close to buildings.
- Sturt Street – traffic flows are too high. Problem with speeding vehicles (particularly young drivers). Give pedestrians higher priority to vehicles.
- Lack of provision of intermodal transportation
- Inner by-pass (Mair St, Dana St – Bakery Hill to Drummond St) not working well enough.
- Problem with traffic flow on Grenville St due to lane changes.

4.2 Road Safety

- Sturt St/Armstrong St intersection dangerous due to numerous vehicle and pedestrian movements.

4.3 Parking

- Off-street car parking is under-utilised.
- Drivers circulating at slow speeds searching for on street car parking create congestion.
- Car park on top of Safeway not safe
- Existing car parks “ugly” therefore not used (perception of safety issues)
- Camp Street – parking difficult.
- Hospital Precinct
 - Need hospital precinct strategy to indicate parking and traffic issues.
 - Concern that establishment of more medical offices in houses in hospital precinct placing pressure on parking and traffic flow.
 - Large number of staff and shift changeover create parking problems for residents, visitors etc.
 - Disabled car parking spaces in wrong location.
- Traders do not park in off-street car parks e.g. Anderson St, Civic Hall. Instead they park on-street outside their place of business.
- Council fails to collect parking contributions from developers.
- Parking dispensations need management
- Inconsistency in parking restrictions.
- Inconsistency in parking fees.
- Lack of disabled car parking spaces around Bridge Mall, Regent Theatre, Armstrong St etc.
- Existing disabled car spaces in wrong location and many non-compliant to DDA requirements.

- Grant Street – Uni of Ballarat
 - Proposed construction of a new Technical School will result in a loss of car parking.
 - Pedestrian flows may increase across Grant Street due to development.

4.4 Other – Public Transport, cycling, walking etc.

- Access to buses for disabled passengers/those with prams etc is difficult. Buses themselves have ramps however the majority of stops are not DDA compliant.
- Problem with “out of town” coaches parking in local bus stops/lay over areas.
- Railway Station
 - Railway station car park always full so commuters unable to park
 - CoB do not patrol railway station car park
 - Vehicles over flow to park in Ararat St, Lydiard St, Doveton St, Nolan St
 - No secure bicycle parking
 - Pedestrian routes not clear in and around station
 - Pedestrian access from the north poor (cross tracks or bridge)
 - Pedestrian access to Sturt St and University is limited from station
 - Pedestrians crossing railway tracks near “Good Guys” up to station is dangerous
 - Pedestrians access the railway tracks at Humffray St and walk along tracks to railway station – dangerous.
- Bus timetables not coordinated.

5.0 What Solutions were presented?

The Stakeholders developed the following solutions;

5.1 Traffic Flow

- Sturt St
 - Reduce traffic volumes (promote alternative routes i.e. Mair St and Dana St).
 - Install speed humps or more traffic lights to stop speeding vehicles.
 - Give pedestrian a higher priority to vehicles. Integrate with UDF.
 - Make Sturt St less desirable for east-west traffic.
- Improve Mair St/ Dana St so they are attractive alternative (by-pass) to Sturt St. May create additional opportunities for more parking on Sturt St.
- Synchronise traffic signals on Mair St to provide priority for east-west traffic.
- Grenville St; Sturt St has two lanes into one lane – make Sturt St one lane.
- Improve Doveton St/Dana St intersection and Armstrong St roundabout.

5.2 Road Safety

- Traffic signals at Sturt St/Armstrong St

5.3 Parking

- Use revenue raised from parking to provide more/upgrade existing parking infrastructure.
- Collect money from CBD re-developments and direct towards new parking facilities.
- More rational use of car parking fees to create working capital for new infrastructure.
- Identify suitable locations for multi-storey car parks (safe).
- Multi-level car-park on Coles site. Integrate with bus interchange.
- Disabled Parking Solutions
 - Provide disabled car park spaces at end of blocks on Sturt St where ground is more level and where there is more space to enter/exit vehicles.
 - Increase the number of disabled parking spaces in the central area including Central Square Shopping Centre.
 - Increase number of disabled car parking spaces in the rear car park at Base Hospital as existing spaces on Drummond St are not suitable.
 - Develop a strategy that identifies appropriate locations for disabled parking spaces in terms of geography, accessibility and services etc.
- Big W car park
 - One-way entry from Curtis St only. Prevent exit at this point.
 - One-way exit at Lowe St to get onto Curtis St.
 - Block off Lowe St to provide more parking.
 - Close Big W car park after hours for security.
 - Reduce speed limit on Curtis St to 40kph
 - Install speed humps on Curtis St
- Synchronise traffic signals at Little Bridge St and Grenville St.
- Improve safety on roof car park on top of Safeway. Security cameras.
- Increase turnover of spaces by improving enforcement.
- Reduce 4hr restrictions to 3hrs to deter use by employees of CBD businesses.
- Reduce parking time limits on north side of Little Bridge St.
- Need for multi-level.

- Hospital Precinct
 - Promote car parking behind medical businesses to get cars off the street.
 - Review potential use of existing residential properties for medical facilities.

5.4 Other – Public Transport, cycling, walking etc.

- There is a need to develop a safe network of cycleway/pedestrian routes.
- Improve/upgrade pedestrian links to the CBD to increase safety and amenity.
- Replace existing pedestrian crossing on Peel St at Bridge Mall with one large one.
- Improve pedestrian links from Humffray St North to railway station.
- Improve pedestrian crossing points on Mair St
- Improve pedestrian crossing points on Lydiard St
- Improve pedestrian access from north side of station to south side – on Lydiard St or overpass?
- Improve pedestrian access across Curtis St

6.0 Implementation

The Stakeholders raised some issues that had not yet been identified and they have presented a variety of potential solutions for most of these issues. The outcomes of this workshop will be investigated in greater detail and some will be incorporated into the final TMP and Parking Strategy documents as appropriate.

Appendix A: Presentation on Existing Traffic and Parking Data in Ballarat CBD

City of Ballarat Traffic Management Plan & Parking Strategy Stakeholder Workshop



Stephen Pelosi, Ruth Davies & Todd Blasch
6 April 2006

Workshop Format

- Welcome
- Traffic and Parking Presentation & Identified issues (Maunsell)
- Stakeholder introduction & key issues (15 mins)
- Small group session issues (30 mins)
 - Traffic management
 - Road Safety
 - Parking
 - Other transport modes (PT, cycling, walking etc)
- Complete issues list (discussion)
- Prioritisation of issues (full group discussion 20 mins)
- Afternoon Break (20 mins)
- Develop potential solutions for high priority issues (small groups)
- Develop potential solutions for remaining issues (discussion)
- Final issues vs. solutions list (discussion)
- Post workshop – future steps

The Bigger Picture

- Literature review of previous studies
- Analysis of existing conditions (traffic and parking)
- **Stakeholder workshop**
- Develop draft TMP and Parking Strategy
- Public Consultation
- Finalise TMP and Parking Strategy

The Study

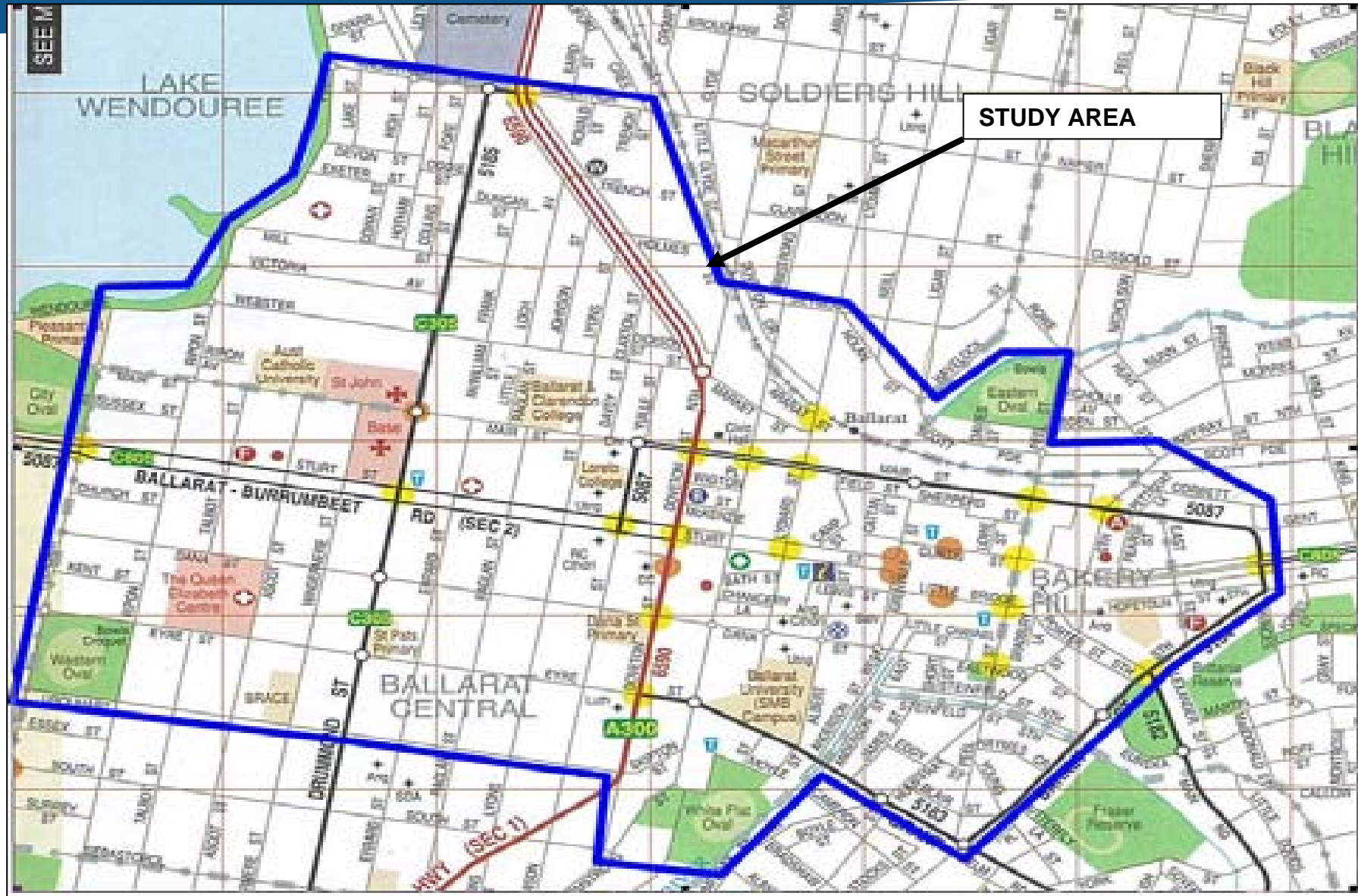
- **Traffic Management Plan**

- Identify the existing and future transport requirements of the CBA including circulation, capacity and connectivity.
- Develop a comprehensive Traffic Management Plan that satisfies the needs for CBA access and accommodates appropriate levels of through traffic.
- Outline the strategic direction for Traffic Management in the CBA.
- Identify traffic issues and develop appropriate treatments to address these issues.

- **Parking Strategy**

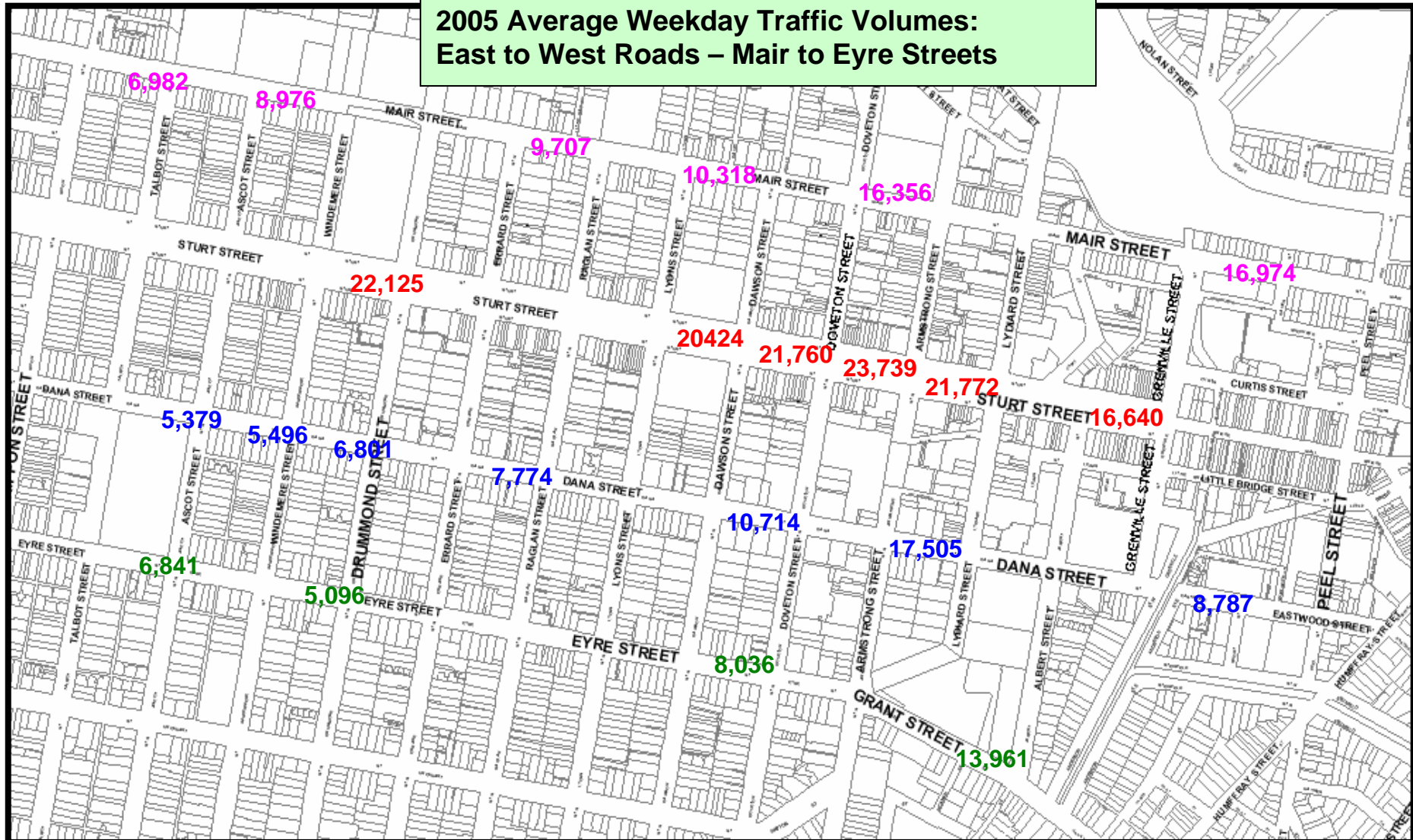
- Rationalise the overall parking structure throughout the CBA.
- Analysis of parking supply & demand, and the associated time limits and pricing on parking.
- Develop a Parking Precinct Plan.

The Study Area



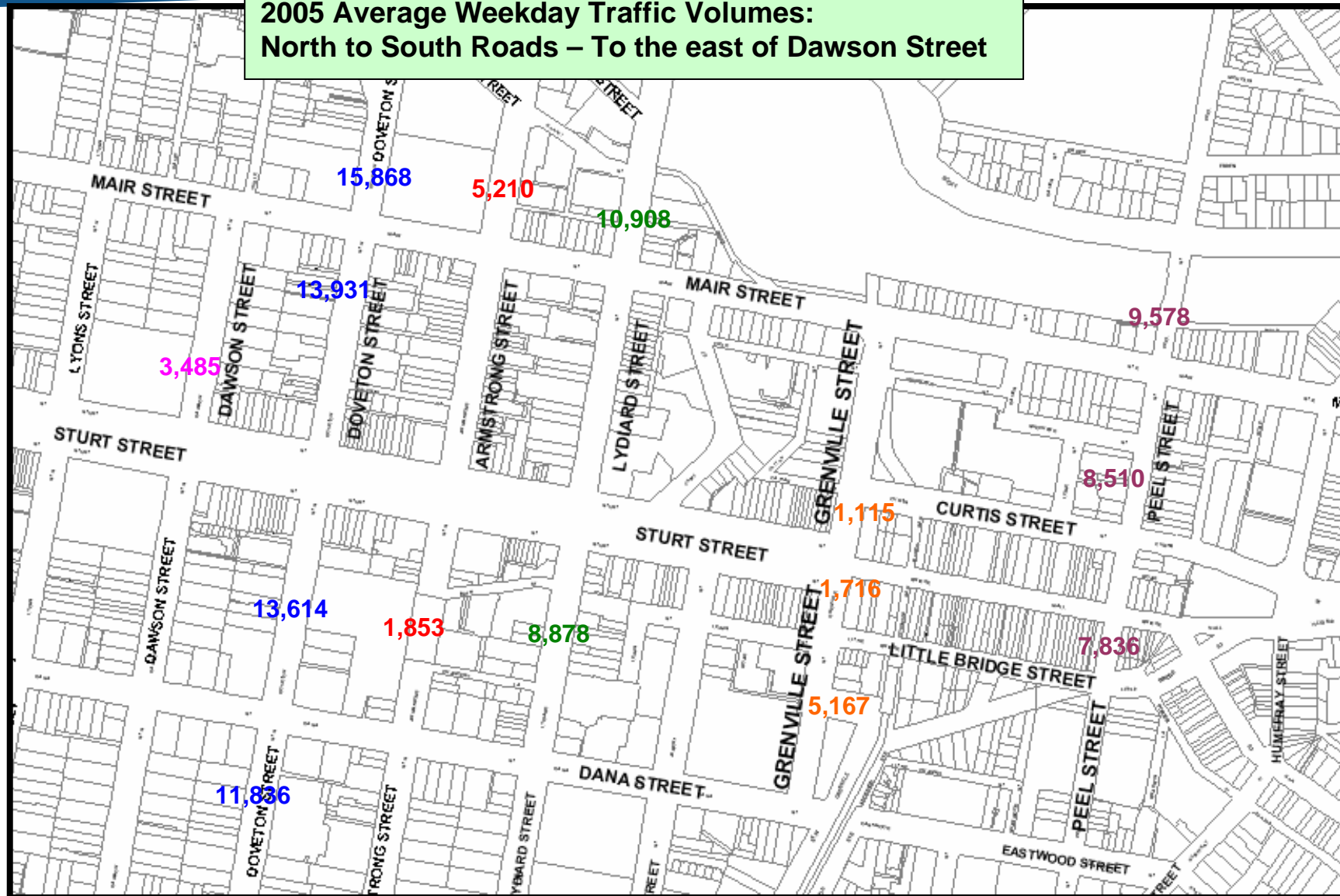
TMP – Existing Traffic Volumes (East-West)

2005 Average Weekday Traffic Volumes:
East to West Roads – Mair to Eyre Streets

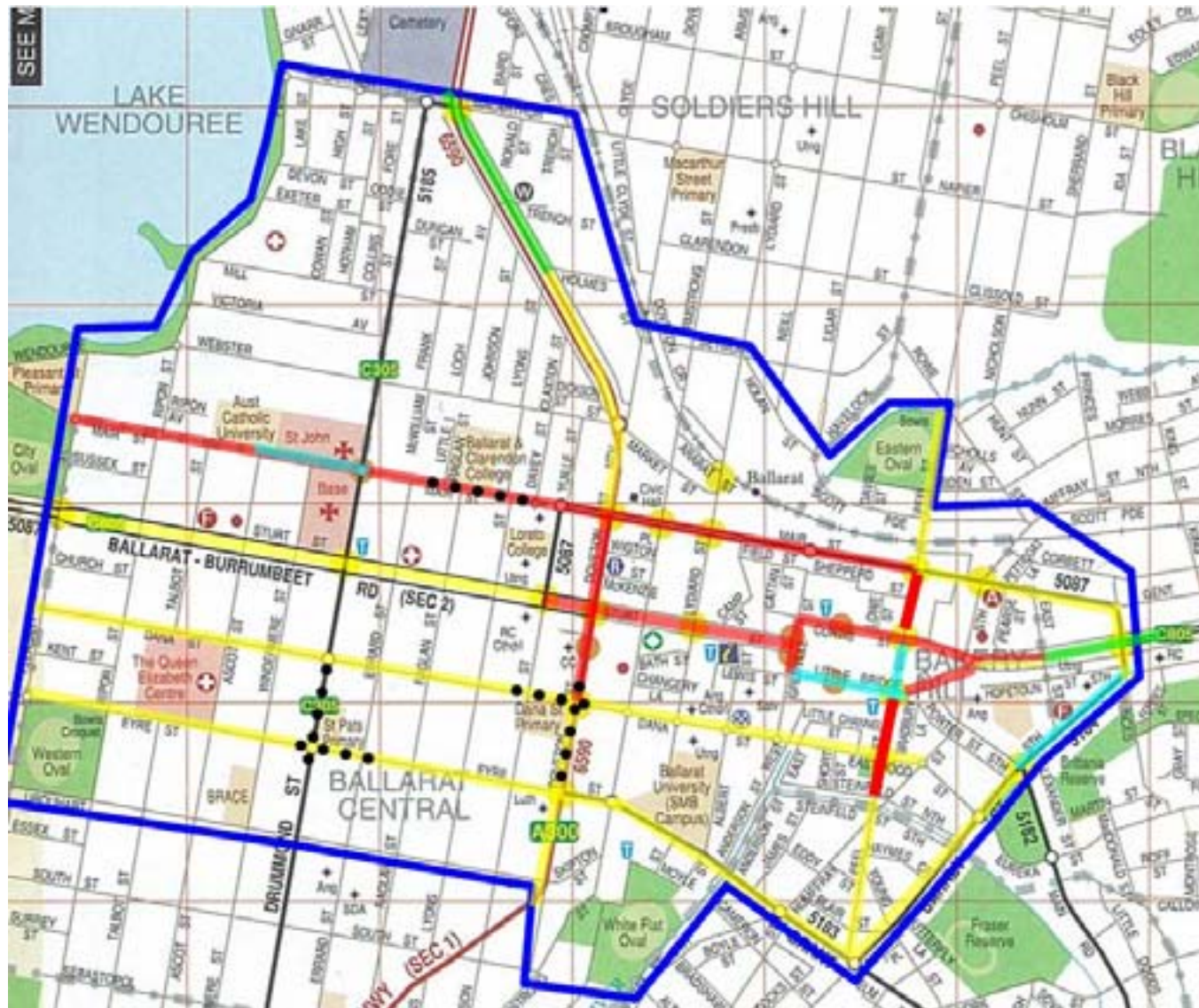


TMP – Existing Traffic Volumes (North-South)

2005 Average Weekday Traffic Volumes:
North to South Roads – To the east of Dawson Street



Speed Limits



- Speed Limits**
- 70 km /hr
 - 60 km /hr
 - 50 km /hr
 - 40 km /hr
 - 40 km /hr School

Bus Routes



Identified Issues

Traffic Flow

- Grenville Street North congestion
 - result of vehicles entering/exiting the Big W car park
 - result of vehicles entering/exiting angled parking bays
- Mair Street (east of Doveton Street) not used as inner city bypass as intended
 - single lane arterial road
 - constantly changing alignment
 - 50kph speed limit (west of Peel St)
 - angled on-street car parking
 - centre road car parking
- Dana Street congestion (between Doveton St & Armstrong St)
 - queuing at Armstrong St roundabout (eastbound traffic)
- Doveton Street congestion
 - single lane arterial road
 - 50kph between Dana Street & Mair Street
 - angled on-street car parking
- Peel Street congestion at Bridge Mall
 - two zebra crossings result in queues
- *Is there a need for a better circulation system in the CBA?*

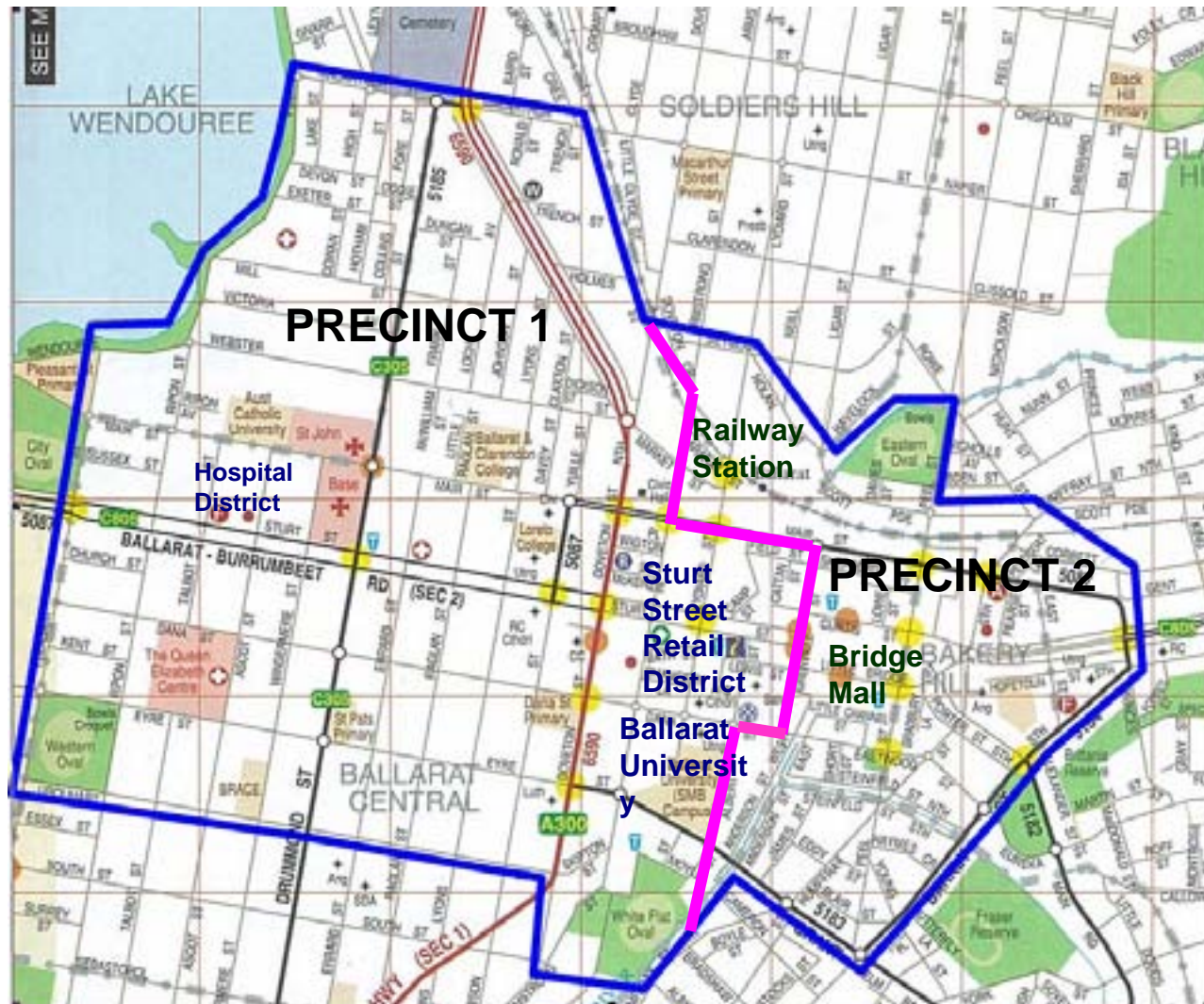
Identified Issues

Road Safety

- Sturt Street / Armstrong Street Intersection “Accident Blackspot”
 - 22 casualty accidents from Jan 00 to Dec 04
 - 10 of these were “cross-traffic accidents”
 - 6 were Serious Injury accidents
 - intersection allows numerous vehicle movements and has zebra crossings
- Phoenix Mall
 - 1,853 vehicles per day
 - vehicle speeds exceed 10kph limit
- Armstrong Street/Market Street
 - used as a short-cut for drivers from A300 to Mair Street
 - large intersection

Parking Strategy

- Study Area divided into two Precincts



Parking Strategy

- **Hospital Precinct**

- Parking restrictions are relatively inconsistent. The area contains a variety of mainly ½ Hour, 1 Hour and 2 Hour Parking. This parking is a mixture of paid and non-paid.
- High occupancy (80 to 100%) very close to Hospitals (south of Webster Street and north of Sturt Street)
- Low Occupancy (Less than 30%) on Webster Street (which is still reasonably close to the hospitals)

- **Ballarat University**

- Very High (95%) occupancy of unrestricted parking along Grant Street, Albert Street, Anderson Street West and the north section of Anderson Street East
- Low (30 to 40%) occupancy of unrestricted parking along the south section of Anderson Street East and Steinfeld Street South.
- Very low occupancy (15%) of all paid parking restrictions in this area. There is free parking available in such close proximity which is obviously preferable.

Parking Strategy

- **Sturt Street Retail District**

- Majority of parking along Sturt Street is restricted as: 1P Meter Monday to Saturday & 2P Meter Sunday.
- Occupancy of paid parking is very high b/w Lydiard and Doveton Street, but low b/w Lydiard and Grenville Street.

- **Railway Station**

- Unrestricted parking is very highly occupied (98%) along Market Street, Ararat Street and Lydiard Street (between the railway line and Seymour Street)
- 2 Hour parking spaces along Lydiard Street had relatively low occupancy rates (approx 40%)

- **Bridge Mall**

- Occupancy is approx 50 – 70% along Curtis Street and Little Bridge Street.
- Paid parking spaces contain less than 20% occupancy rates.

Identified Issues

Parking & Pedestrian Access

- Anderson Street car park low occupancy
 - Anderson Street car park has fees of 80c per hour or \$3 all day but adjacent streets have unrestricted free parking
- Civic Hall low occupancy
 - Despite being one block from Sturt Street Civic Hall car park is under-utilised
- Preference to park in free parking areas
 - Except in very centrally located car parks. This drives motorists further into residential unrestricted areas (as emphasised in the examples above)
- Big W car park
 - location of access points to Big W car park and the pedestrian operated signals result in queuing on Curtis Street
 - pedestrian links to Bridge Mall poor
- Pedestrian crossings in Little Bridge and Curtis Street
 - high pedestrian and vehicle movements result in delays to both
- Peel Street / Bridge Mall
 - existing zebra crossings confusing for drivers and cause vehicle delays

Appendix F Heritage Overlay Areas

Appendix F Heritage Overlay Areas

