Traffic Engineers and Transport Planners

Traffix Group Pty Ltd
ABN 32 100 481 570

Address
Suite 8, 431 Burke Road
Glen Iris Victoria 3146

Contact
Telephone 03 9822 2888
Facsimile 03 9822 7444
admin@traffixgroup.com.au
www.traffixgroup.com.au

BALMAIN PRECINCT

LOCAL AREA NO. 20 - TRAFFIC MANAGEMENT STUDY

FINAL REPORT

PREPARED FOR

CITY OF YARRA

BALMAIN PRECINCT - LOCAL AREA NO. 20

LOCAL AREA TRAFFIC MANAGEMENT STUDY

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EXECUTIVE SUMMARY

Traffix Group has been engaged by City of Yarra to undertake a Local Area Traffic Management (LATM 20) study of the Balmain Precinct. The study area is bounded by Swan Street, Mary Street, Citylink and Punt Road in Cremorne/Richmond. The study area comprises approximately 2,300 properties and includes residential, commercial and community uses.

The LATM study has involved extensive consultation with the local community to identify local traffic issues, a review of traffic complaints contained in Council files and engineering investigations undertaken by Traffix Group. Other components of the study have included the collection of traffic volume and speed information and a review of available crash data to quantify traffic problems.

The community consultation component of the study has included questionnaire surveys, circulars and the formation of a Traffic Study Group to assist with this study. The Traffic Study Group comprised nominated members from the local community, local ward Councillors, Council officers and traffic engineers from Traffix Group. The Traffic Study Group provided input into the various stages of the study.

Information gathered through the above sources was used to identify the key traffic issues and provided the basis for formulating traffic management recommendations for the Balmain Precinct.

The traffic issues identified in the study area relate to:

- Traffic problems in the following streets:
  - Cremorne Street (traffic speed and through traffic),
  - Balmain Street (traffic speed and through traffic volumes),
  - Mary Street (traffic speed and through traffic volumes),
  - Kelso Street (traffic speed),
  - Stephenson Street (traffic speed),
  - Brighton Street (traffic speed and through traffic volumes),
  - James Street (traffic speed and through traffic volumes),
  - Wellington Street (through traffic volumes),
  - Gordon Street (through traffic volumes),
  - Chapel Street (through traffic volumes),
  - Local Area east of Church Street (through traffic volumes),
  - Mary Street/Madden Grove (conformance to existing No Right Turn restriction),
  - Mary Street/Swan Street (conformance to existing No Left Turn restriction),
  - Chapel Street (vehicles driving against existing one-way restriction), and
- Traffic safety concerns at the following locations:
  - Balmain Street (on-street parking between Cremorne Street and Cubitt Street), and
  - Walnut Street (pedestrian safety south of Balmain Street).
- Bicycle safety concerns at the following locations:
  - Swan Street,
  - Cremorne Street, and
  - Balmain Street.
- Pedestrian safety concerns at the following locations:

- Mary Street (pedestrian crossing located adjacent to Richmond Primary School), and
- Cremorne Street / Swan Street (pedestrian safety).

The adopted objectives of the Traffic Management Plan were to develop cost-effective solutions which:

- Improve the safety of local streets by reducing traffic speeds,
- Reduce the incidence and potential for vehicle and pedestrian crashes in the area,
- Discourage through traffic from using the local area,
- Develop proposals that address traffic concerns raised by the community while maintaining adequate levels of accessibility for local residents, local businesses and emergency services, and
- Maximise the safety benefits of available funding (with priority given to reported crash locations and those streets with the greatest level of community concerns).

A Traffic Management Plan was developed for the Balmain Precinct in consultation with Council officers and the Traffic Study Group. A copy of the proposed plan, in addition to supporting information, was distributed to all property occupiers within the local area for public comment in January, 2013. The reply-paid circular requested residents to indicate whether they fully support, partly support or do not support the plan and provide comments to support their response where appropriate.

Overall, 392 responses (a response rate of 17.1%) were received to the second circular from properties in the area. This response was higher than the 221 responses (a response rate of 9.6%) received to the initial questionnaire survey on traffic issues for the study area in August, 2012.

The survey responses indicated that support for the Proposed Traffic Management Plan from the local community was mixed. Of the respondents who indicated a preference, 18% were in full support and 61% partly supported the proposed Traffic Management Plan. A total of 21% of respondents did not support the proposed plan. When all responses are considered, 5% did not indicate their support or otherwise for the overall plan. A detailed analysis of community responses to the circular is provided in this report.

In view of the above, a detailed review of each device was undertaken to assess the overall support from the whole study area, the support from properties in the streets with proposed devices and the support from the properties adjacent to the proposed devices. Following this review, a number of the traffic management proposals have been abandoned due to a lack of community support (principally in Cremorne Street and Balmain Street). Furthermore, a number of new treatments have been included that were identified through comments/suggestions from the local community and further engineering investigation (principally in Cremorne Street, Rose Street and Cotter Street). A Recommended Traffic Management Plan has been developed which outlines the final recommended treatments for the local area.

A copy of the Recommended Traffic Management Plan is provided in this summary.

Other issues or suggestions raised by the community and service authorities were investigated where appropriate and incorporated into the Recommended Traffic Management Plan where warranted.

On the basis of the comprehensive traffic management study undertaken by Traffix Group for the Balmain Precinct, community feedback on the proposed Traffic Management Plan and other related issues, the following recommendations are made to the City of Yarra:

a) Council adopt the Recommended Traffic Management Plan for the Balmain Precinct No. 20, as detailed in Section 9 of this report,

b) Council consult with property owners abutting the device locations at the design stage regarding exact locations and design,

c) Council review parking on Cremorne Street on the approach to Swan Street, with a view to improving intersection capacity,

d) Council contact VicRoads to seek an investigation and review of signal phasing and timing at the intersection of Swan Street and Cremorne Street with a view to improving capacity and pedestrian safety,

e) Council continue to monitor truck activity in Gwynne Street and undertake the following actions:

   i. Council continue to work with waste collection companies on scheduling truck activity in Gwynne Street,

   ii. Enforce Local Law No. 32 as required, and

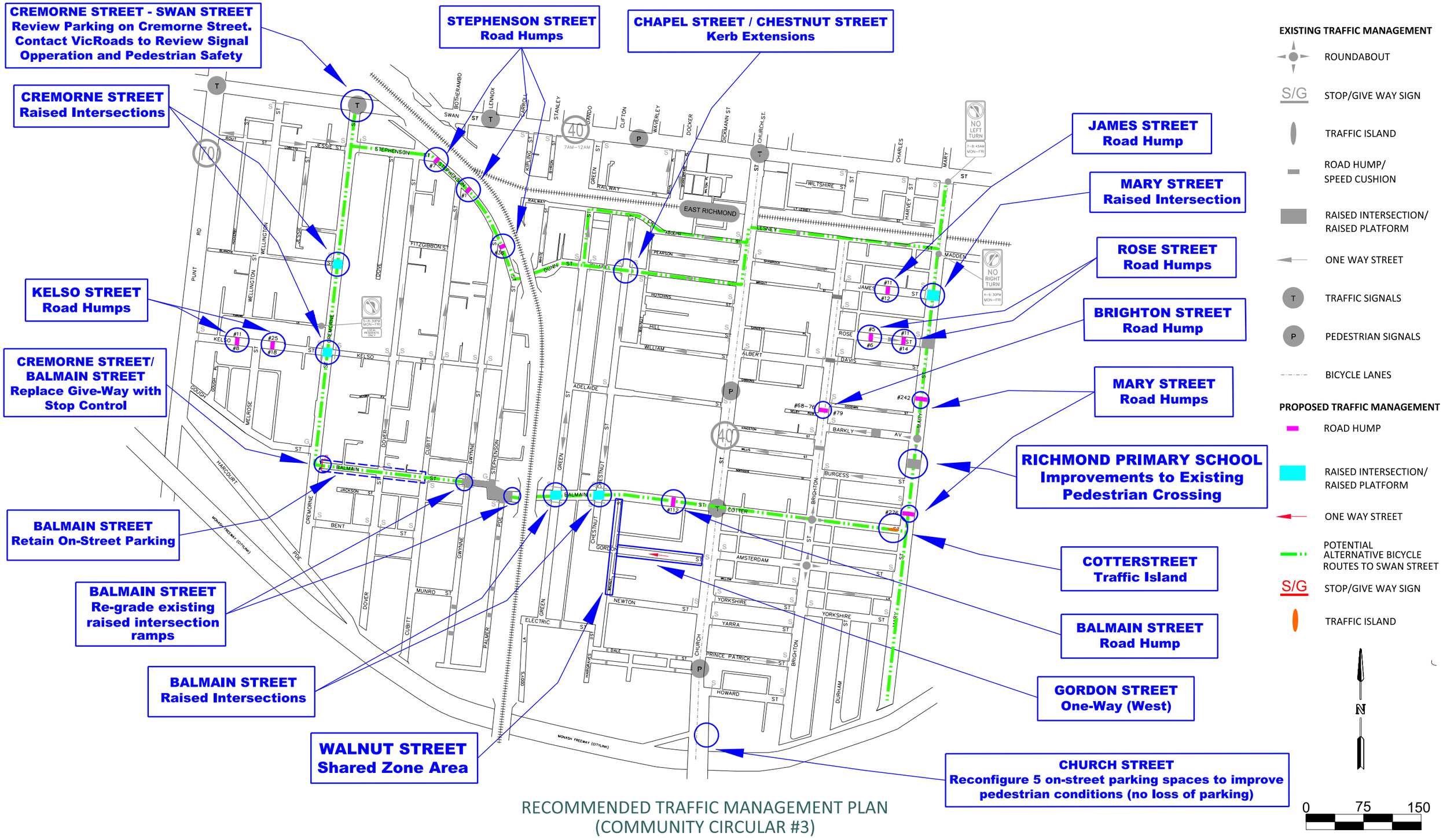
   iii. Continue to work with Rosella Complex representatives to consolidate waste collection.

f) Council to advocate for increased police enforcement, in particular for traffic speed and compliance with the existing intersection turn bans treatments at Mary Street / Madden Grove and Swan Street / Mary Street,

g) Council monitor the additional traffic issues raised by the local community identified in Section 8.3 of this report,

h) Council continue to monitor intersection safety and performance throughout the study area, and

i) Council implement and monitor the Traffic Management Plan as outlined in Section 9 of this report as funding becomes available.



RECOMMENDED TRAFFIC MANAGEMENT PLAN
(COMMUNITY CIRCULAR #3)

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1. INTRODUCTION

Traffix Group has been engaged by the City of Yarra to undertake a Local Area Traffic Management (LATM 20) study of the Balmain Precinct Local Area.

The study area comprises approximately 2,300 properties and is bounded by Swan Street in the north, the Yarra River in the south, Punt Road in the west and Mary Street in the east. The study area is identified in Figure 1 below.

The following report outlines the study process, information gathered/investigations undertaken throughout the study and the Recommended Traffic Management Plan for the Balmain Precinct.

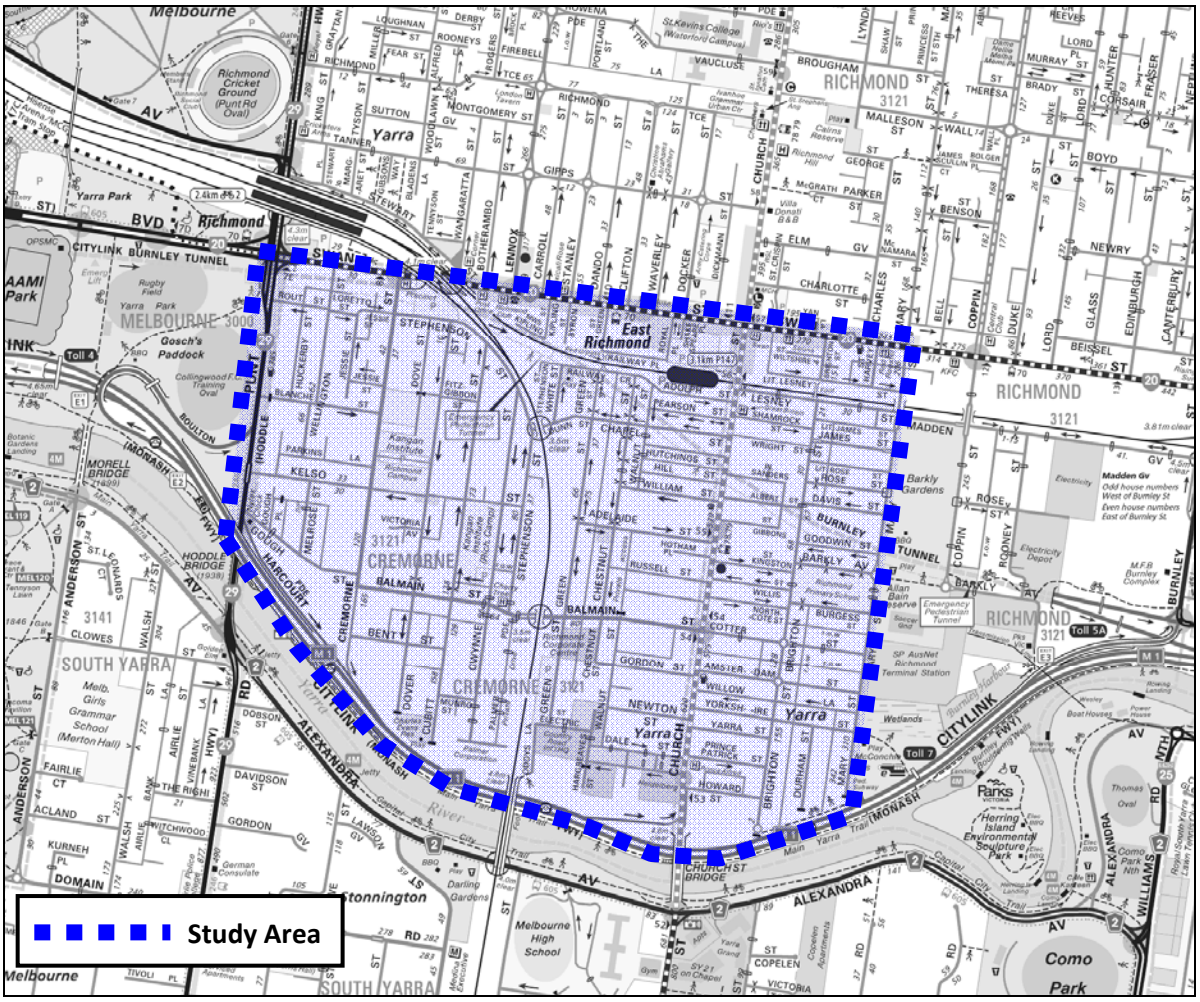

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Figure 1: Study Area

2. STUDY METHODOLOGY

The objective of this study is to prepare a Local Area Traffic Management (LATM) plan for the Balmain Precinct Local Area No. 20 in Cremorne, which addresses the main traffic issues in the area and reflects the requirements and expectations of the local community.

This has been achieved through a process of extensive community consultation undertaken by Traffix Group, including questionnaire surveys and circulars, and the development and co-ordination of a Traffic Study Group to oversee the study.

The adopted study process consists of five main components, namely: -

- Familiarisation with the study area,
- Data collection and collation,
- Consultation,
- Development of proposals, and
- Reporting.
    - Community Questionnaire Survey Summary,
    - Issues Paper, and
    - Final Report.

The flowchart presented in Figure 2 broadly details the study process.

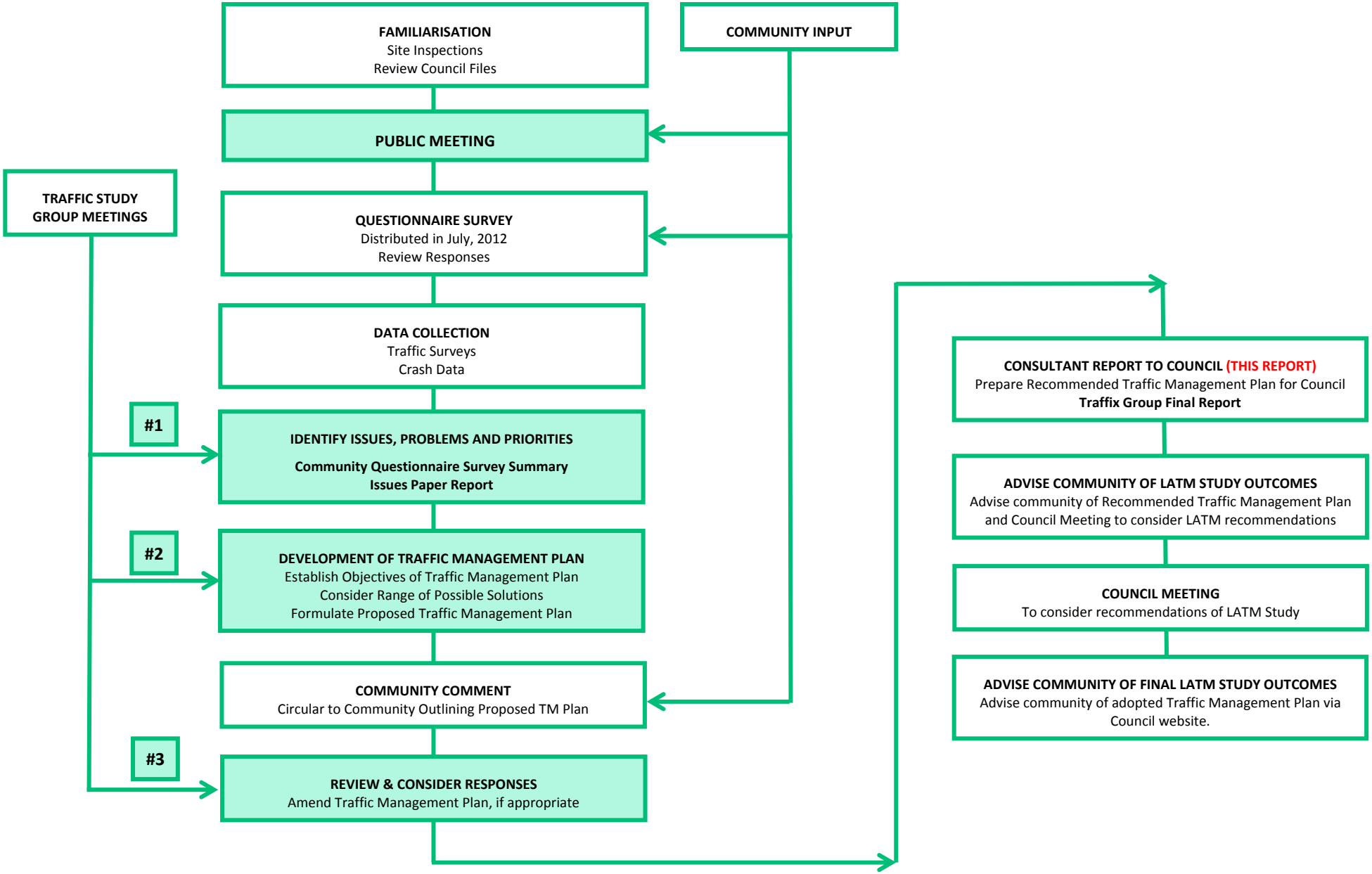


Figure 2: Study Process

2.1. COMMUNITY CONSULTATION

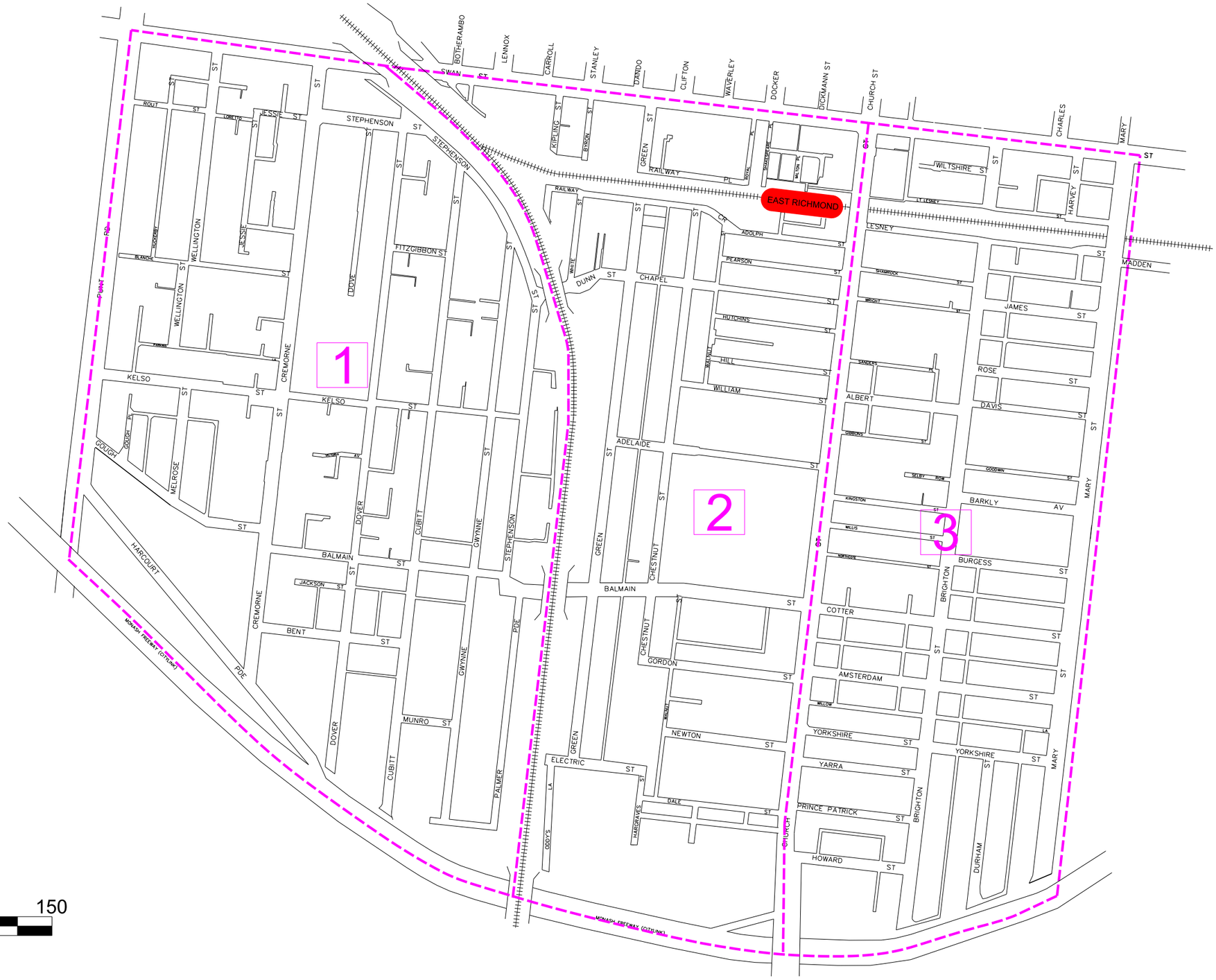
A successful LATM study requires an appropriate level of consultation with the local community, as without which, any scheme is unlikely to gain community acceptance and may not address residents' or business operators' concerns. In addition, consultation with the community plays a major role in the identification of key issues and is often a useful source of local knowledge.

On this principle, it follows that in undertaking area-wide LATM studies, the views of all residents living or working within the whole study area or precinct should be sought.

The study process flowchart shows the stages in the study process where community input was sought. The process is briefly described below.

- **Initial Community Circular** – A community circular was distributed by Council to all properties in the study area at the onset of the study, requesting residents and business operators to complete a questionnaire survey on traffic problems in their street and the local area. The survey also sought nominations for individuals to act as community representatives in the Traffic Study Group. A detailed summary of the community responses to the questionnaire survey is in a separate report titled Balmain Precinct, Local Area Traffic Management Study, Community Questionnaire Survey (August 2012).
- **Public Meeting** – A public meeting was held on Thursday, 26th July, 2012 to outline the traffic study process, provide the community with the opportunity to discuss local traffic issues and to take nominations for community representatives to form a Traffic Study Group.
- **Selection of Traffic Study Group** – A number of nominations were received from the community to participate in the Traffic Study Group. For the purposes of selecting a broad range of community representatives, the study area was divided into three precincts. Thirteen (13) members of the local community, spread throughout the three sub areas were selected for the Traffic Study Group. The sub-areas are presented in Figure 3.
- **Traffic Study Group Meetings** – Three committee meetings were held at the Richmond Town Hall in Richmond for the study. These meetings were attended by community representatives, local ward Councillors, Council officers, and members of Traffix Group.
- **Committee Meeting #1** – An Issues Paper was prepared for the study area detailing existing traffic conditions (crashes, speed, volume etc.), constraints of the road network and key community issues. This report was presented to the Traffic Study Group to assist in identifying and prioritising the main traffic and parking issues for the area.
- **Committee Meeting #2** – Traffix Group prepared information detailing appropriate traffic management options developed for the local area. Traffix Group and the Council officers provided technical and other advice to the Traffic Study Group in relation to the advantages and disadvantages of various treatments to assist in their evaluation of these options. This process focused on developing cost-effective options, which address the concerns of the community, and any specific safety issues identified by the engineering investigations. A proposed Traffic Management Plan was agreed upon by the Traffic Study Group.

- **Second Community Circular –** A community circular, which detailed the objectives and components of the proposed Traffic Management Plan was distributed to all residents and business operators in the study area in January, 2013 for comment. The circular was also distributed to relevant service authorities (i.e. Victoria Police, Metropolitan Ambulance Service and Metropolitan Fire Brigade) for comment.
- **Committee Meeting #3 –** A final meeting was held with the Traffic Study Group to consider the community response to the proposed Traffic Management Plan and make recommendations to Council. A detailed summary was presented at this meeting which summarised the community responses to the second community circular. Final recommendations of the Traffic Study Group were made.
- **Final Community Circular –** A community circular, which details the components of the recommended Traffic Management Plan will be distributed to all residents and business operators in the study area after the completion of the LATM study. The circular will invite interested parties to attend the Council meeting where the Traffic Management Plan for Balmain Precinct will be considered.



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SUB AREAS

FIGURE 3: BALMAIN PRECINCT SUB-AREA PLAN

3. BACKGROUND INFORMATION

3.1. PREVIOUS STUDIES

City of Yarra has undertaken a number of traffic and transport studies over recent years which are relevant to the study area. The following is a summary of previous studies and their relevance to the Balmain Precinct study area.

3.1.1. City of Yarra – Traffic Management Strategy, 1996

The City of Yarra Traffic Management Strategy was developed in 1996 following the amalgamation of City of Richmond, City of Collingwood, City of Fitzroy and part of the City of Melbourne and City of Northcote. Primarily the purpose of the strategy was to review the transport policies of the previous municipalities to form a framework for the City of Yarra moving forward.

The road network across the City of Yarra was reviewed to develop an appropriate road function and amenity classification system. This classification is largely redundant given the introduction of the Road Management Act (2004), which required road authorities to formalise their classification and maintenance of public roads. City of Yarra now maintains a Road Management Plan, which includes a Road Register that forms the basis of the functional hierarchy used in this study.

The Traffic Management Strategy identified the following transport policy objectives for the City of Yarra:

- to actively encourage and promote the use of alternative transport modes, in particular walking, cycling and public transport as viable options to private vehicle use,
- to moderate the future growth of motor vehicle travel throughout the municipality,
- to encourage through traffic to use arterial roads and acknowledge the need for 'traffic routes' to continue to cater for both local and regional traffic needs,
- to discourage through traffic from using the local street network, yet retain adequate accessibility for the needs of residents and businesses,
- to create a safer road network throughout the municipality for all road users,
- to provide an attractive streetscape environment that improves the visual amenity of the city,
- to maintain reasonable access and comfort for emergency service vehicles, freight vehicles and road based public transport, and
- to provide effective opportunities to directly involve the community in making key transport decisions.

The strategy defined the current 21 LATM areas across the municipality, including the Balmain precinct which is under review through this study

This strategy has recommended a procedure for conducting LATM studies, which is generally in-line with the methodology adopted for this study.

The Traffic Management Strategy also identified policies for cyclist and pedestrians, which have generally been superseded by the City of Yarra Bicycle Strategy and the Encouraging and Increasing Walking Strategy presented below.

3.1.2. City of Yarra – Strategic Transport Statement, 2012-2016

Originally developed in 2006, the City of Yarra Strategic Transport Statement aims to outline Council's encouragement of sustainable transport options. The core principle of the Strategic Transport Statement is 'to *meet the transport needs of residents, businesses, visitors and commuters while minimising the negative impact of cars on Yarra's community'.*

A key concept presented in the Statement is a hierarchy of transport modes, which should form the basis of actions and decision making in relation to transport in the city of Yarra. The adopted transport hierarchy is as follows:

More sustainable transport modes

1. Pedestrians*
2. Cyclists
3. Tram
4. Bus / Train
5. Taxi users / car sharers

(*includes using wheelchairs and walking with prams)

Less sustainable transport modes

6. Freight vehicles
7. Motorcyclists
8. Multiple occupant local traffic
9. Single occupant local traffic
10. Multiple occupants through traffic
11. Single occupant through traffic

The Strategic Transport Statement's vision is to *'To create a city which is accessible to everyone irrespective of levels of personal mobility and where a fulfilling life can be had without the need for a car'.* The Statement utilises a number of Key Strategic Objectives (STO) to support and achieve the vision. The Key Strategic Objectives (STO) and the relevant actions to the Balmain LATM precinct are presented below. Note, the actions listed below are from Yarra City Council recommended changes and actions (2012-2016).

- **STO 1.Create a city which is a great and safe place to walk and increase the numbers of those walking in Yarra.**
  - **Action 1.3 –** Advocate for reduced road speeds, especially in areas of high pedestrian activity e.g. residential streets, shopping strips and school zones. Progressively apply for 40km/h in remaining LATMs over the next five years as LATMs program is completed (this will also include developing shared zones where applicable). Once all local streets are reduced to 40km/h, begin progressive program of applying for 30km/h speed limits in residential areas.
  - **Action 1.8 –** Widen footpaths by allocating road space in favour of pedestrians over cars.

- **Action 1.19 –** Improve intersection treatments when undertaking LATMs to take account of pedestrians, cyclists and access for all.
- **Action 1.19 –** Ensure Local Area Traffic Management process reflects the transport hierarchy and considers the impact on adjacent areas.

- **STO 2. Create the most bicycle friendly city in Australia and increase the numbers of those cycling in Yarra.**
  - **Action 2.3 –** Ensure all arterial and local roads are line marked for bicycles where possible.
  - **Action 2.4 –** Where possible, provide a separate lane for bicycles and maximise off-road cycle paths.
- **STO 3. Advocate for increased performance of public transport across Melbourne and thereby reduce the number of car trips and through traffic by both Yarra and non-Yarra residents.**
- **STO 4. Ensure that any new road construction is not in conflict with encouraging more sustainable transport use.**
- **STO 5. Ensure Council's response to parking demand is based on Yarra's parking hierarchy and sustainable transport principles.**
- **STO 6. Work to limit freight movement to arterial roads and freeways within Yarra and work to reduce freight movement through Yarra.**
- **STO 7. Encourage Council staff to use more sustainable transport for their travel and increase the capacity of the Council as a whole to respond to and initiate positive actions to further strategic transport objectives 1 to 6.**

3.1.3. City of Yarra - Bicycle Strategy, 2010-2015

The City of Yarra Bicycle Strategy outlines a long term vision for cycling within the municipality. Specifically, strategies and actions are utilised to develop and support cycling as an alternative mode in the City of Yarra.

The City of Yarra already contains some of the most highly developed bicycles facilities throughout Melbourne, however, the strategy aims for Yarra to be a leader Australia wide in the provision and usage of bicycle facilities. One of the key aims in relation to the Balmain LATM study area is *'to triple participation in cycling to work in the southern portion (Richmond area) of Yarra from 1.4 % (2006 census) to 4.2% by 2015'.*

The key Strategies of the Bicycle Strategy and the relevant actions to the Balmain LATM precinct are presented below:

Infrastructure:

- **Strategy 1** – Better On-Road Bicycle Network
  - Church Street Route (Abbotsford to Cremorne): Remove parking to create bicycle parking and kerbside lane, separated bicycle lane near shopping precincts at Bridge Road and Swan Street – Low priority
- **Strategy 2** – Better Local Streets for Cycling
- **Strategy 3** – Better Off-Road Bicycle Network
- **Strategy 4** – Better Bicycle Network Maintenance
- **Strategy 5** – Better End of Trip Facilities - Bicycle Parking

- **Strategy 6** – Better Bicycle Network Accountability
- **Strategy 7** – Better Bicycle Safety by Reducing Conflicts

Participation:

- **Strategy 8** – Better Council Use of Bicycles
- **Strategy 9** – Better Recruitment and Retention of Cyclists
- **Strategy 10** – Better Policies
- **Strategy 11** – Better Innovation and Relationships

3.1.4. Encouraging and Increasing Walking Strategy, 2005

The Encouraging and Increasing Walking Strategy has been developed to guide decision making to encourage and increase walking trips within the City of Yarra.

The strategy outlines four (4) key action areas including:

- 1) Continued improvement of internal co-operation within Council, so that the interests of pedestrians are supported across all Council Departments,
- 2) New hardware and infrastructure
- 3) The promotion of behaviour change programs across Yarra, and
- 4) Continue to develop and strengthen land use and transport policies that lead to an improvement of the walking environment as new development takes place.

The Strategy presents a number of case studies which aim to indicate how the strategy methodology can be used to encourage walking and cycling. The methodology is broadly based around an audit of the existing conditions, with recommendations based around hardware and software (i.e. education programs).

Finally, the study presents a summary of the priority actions based on community consultation. The relevant actions to the Balmain LATM study include:

- Traffic Speed and Volume – Road Crossings – Install more crossings, reduce detour crossings, improve responsiveness of pedestrian lights,
- Footpaths – Quality – Increase widths and maintenance,
- Policy Focus – Pedestrian Emphasis – Ensure people are prioritised over private vehicles especially where competition for funding or space may arise, and
- Road Crossings – Improve road 'crossability' with medians, pedestrian light responsiveness, pedestrian light - duration of crossing time, installation of new crossings.

3.1.5. City of Yarra – Gwynne Street Road Safety Audit

The City of Yarra engaged RSA Pty Ltd in March 2011 to conduct a Road Safety Audit of Gwynne Street (south of Balmain Street) in Cremorne. The audit focused on the potential full road closure of Gwynne Street south of Munro Street.

The key findings of the report related to the ability for vehicles (particularly large vehicles) to turn around in Palmer Parade if a full road closure is implemented on Gwynne Street. The conclusion of the road safety audit report indicated:

'From a road safety perspective, given the narrow roads and curvilinear alignment of Palmer Parade at the southern end, there is limited space for U-turn or 3-point movements. Therefore the closure of Gwynne Street increases the potential for conflict by requiring a driver of a large vehicle to perform reversing and U-turns where it is undesirable to do so' .

3.2. ROAD NETWORK

The study area is located approximately 4km east of Melbourne's Central Activities District.

The study area generally forms a formal grid pattern and is bounded by Swan Street, Mary Street, Yarra River (Monash Freeway) and Punt Road. The Caulfield group railways lines (Cranbourne, Pakenham, Sandringham and Frankston lines) operate north-south through the centre of the local area and generally divide the area into two halves due to the limited crossing points of the railway line at Swan Street, Dunn Street and Balmain Street.

3.2.1. Road Management Plan, July 2009

City of Yarra has prepared a Register of Public Roads including a classification scheme for all roads within the municipality. This classification scheme describes how roads operate and are managed day to day, in particular for maintenance purposes.

A review of the roads within the local area indicates the following classifications under the Road Management Plan:

- **Freeway** – Citylink / Monash Freeway
- **Arterial Roads** – Swan Street, Church Street, Punt Road
- **Local Roads** – Remaining streets within the study area.

3.2.2. Adopted Functional Road Hierarchy for LATM Study

Traffix Group has undertaken a review of the roads within the local area to review their functional role in the local road network, with particular emphasis on the existing traffic volumes, road alignments and carriageway components.

The basic classification of roads ranges from local streets which principally provide an access function, to primary arterial roads which principally provide for through traffic movements.

Figure 4 below shows the Functional Road Hierarchy which has been adopted for this study area. The basic functional classification of roads within the local area is described as follows:

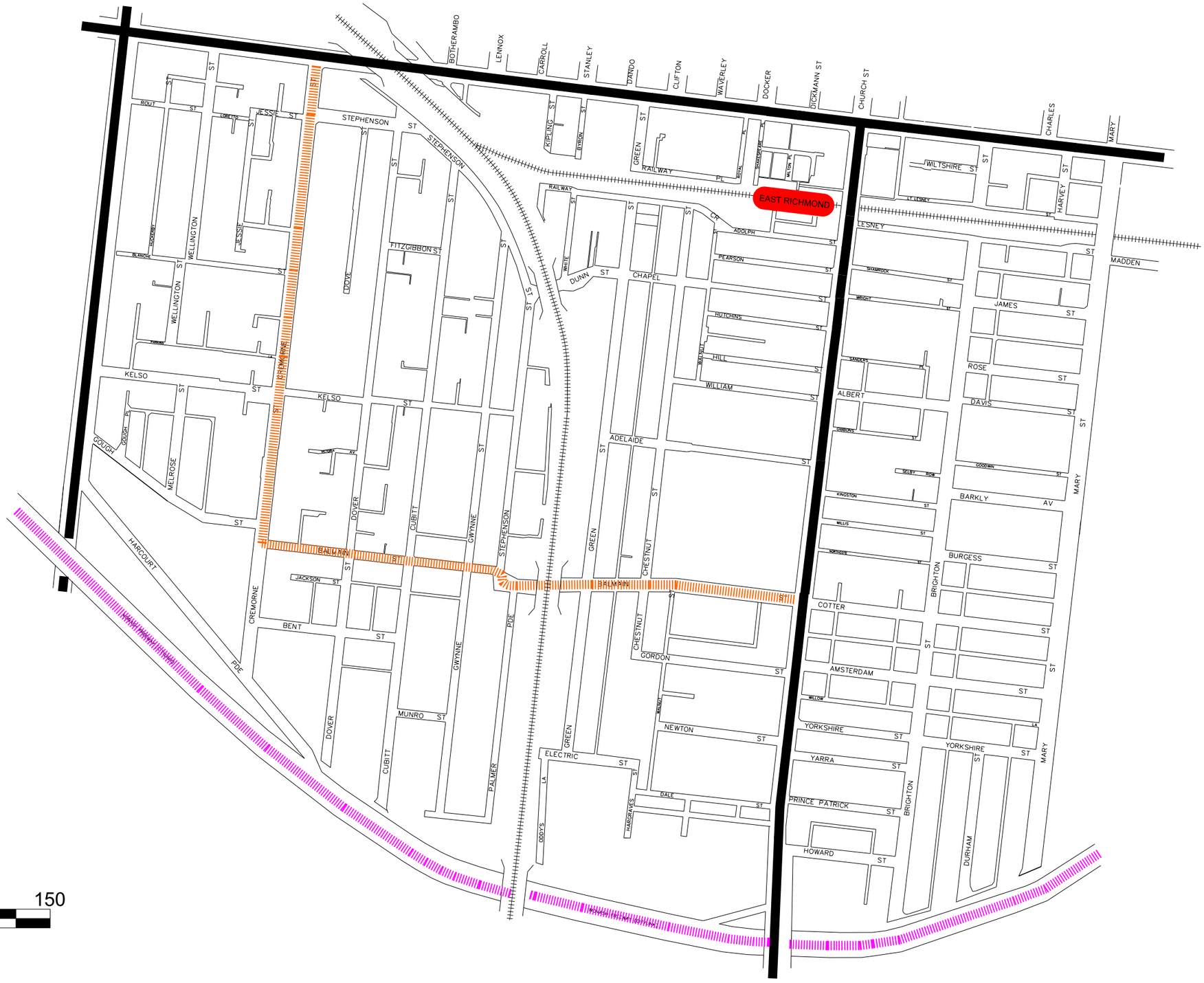
LOCAL STREETS

Collector Road – Balmain Street and Cremorne Street

The function of a C*ollector Road* is to distribute traffic between the arterial road network and local streets, and to provide access to abutting properties. These roads may also provide local connections between arterial roads to some degree. Accordingly, it is important to ensure that any traffic management applied to a collector road is appropriate and supports the function of the road.

Local Roads – Remaining Streets within the Study Area

Local Streets are those roads whose function is to provide access to properties and/or other local streets. All other local roads contained within the study area are classified as local streets.



CITYLINK

DECLARED PRIMARY ARTERIAL ROAD (VICROADS)

COLLECTOR ROAD (COUNCIL)

LOCAL ROAD (COUNCIL)

FIGURE 4: FUNCTIONAL ROAD HIERARCHY

4. EXISTING TRAFFIC CONDITIONS

The following section provides a summary of available data used to establish the existing traffic and land use conditions within the study area.

The data includes an assessment of road crash information and the results of traffic volume and speed surveys undertaken by Council over recent years. In addition, a summary of resident complaints on traffic issues and other relevant information contained in Councils files to provide background has been provided.

The existing conditions data will provide the basis for identifying and quantifying, where possible, traffic problems in the study area and prioritising areas or locations for treatment.

4.1. LAND USE

The area comprises approximately 2,300 properties and includes residential, commercial and community uses.

Significant land uses in the area include:

- Swan Street Strip Shopping Centre,
- Church Street Strip Shopping Centre,
- East Richmond Railway Station (Church Street),
- Richmond Primary School (Mary Street, Barkly Avenue, Burgess Street),
- Kangan Institute (Cremorne Street, Kelso Street, Dover Street, Cubitt Street, Gwynne Street, Balmain Street),
- Charles Evans Reserve (Dover Street, Cubitt Street), and
- SP AusNet Richmond Terminal Station (Mary Street),

A land use plan for the study area is provided at Figure 5. This plan has been prepared in line with the land use zoning in the Yarra Planning Scheme.

Whilst a typical LATM area is predominantly residential, this study area is predominantly zoned for commercial / business uses with small pockets of residential zonings throughout the study area. The bulk of the residential zoning in the study area occurs to the east of Church Street.

This level of commercial / business zoning will impact on a number of issues in the study area including the traffic volume profiles throughout the day and the level of commercial vehicle activity throughout the study area.

FIGURE 5: LAND USE

4.2. PUBLIC TRANSPORT ROUTES

Public transport within the Balmain precinct comprises of train, tram, and bus services. East Richmond Railway Station (Burley Group lines) is located within the study area with tram routes operating along Swan Street and Church Street. The locations of these routes are shown in Figure 4.

The presence of a tram or bus route in a street has implications to the type of traffic management which can be installed. Any traffic management proposals along tram or bus routes require the approval of the Department of Transport and Yarra Trams or the local bus company.

The following tram services operate in the local area:

Swan Street:

- Routes 70 (Wattle Park – Waterfront City, Docklands).

Church Street:

- Route 78 (North Richmond to Prahran), and
- Route 79 (North Richmond to St Kilda Beach).

The following bus services operate in the local area:

Punt Road:

- Routes 246 (Elsternwick – La Trobe University via Clifton Hill and St Kilda Junction).
- Route 605 (Gardenvale – City via Kooyong Road).

Church Street:

- Nightrider Route 968 (City – Knox – Bayswater – Belgrave).

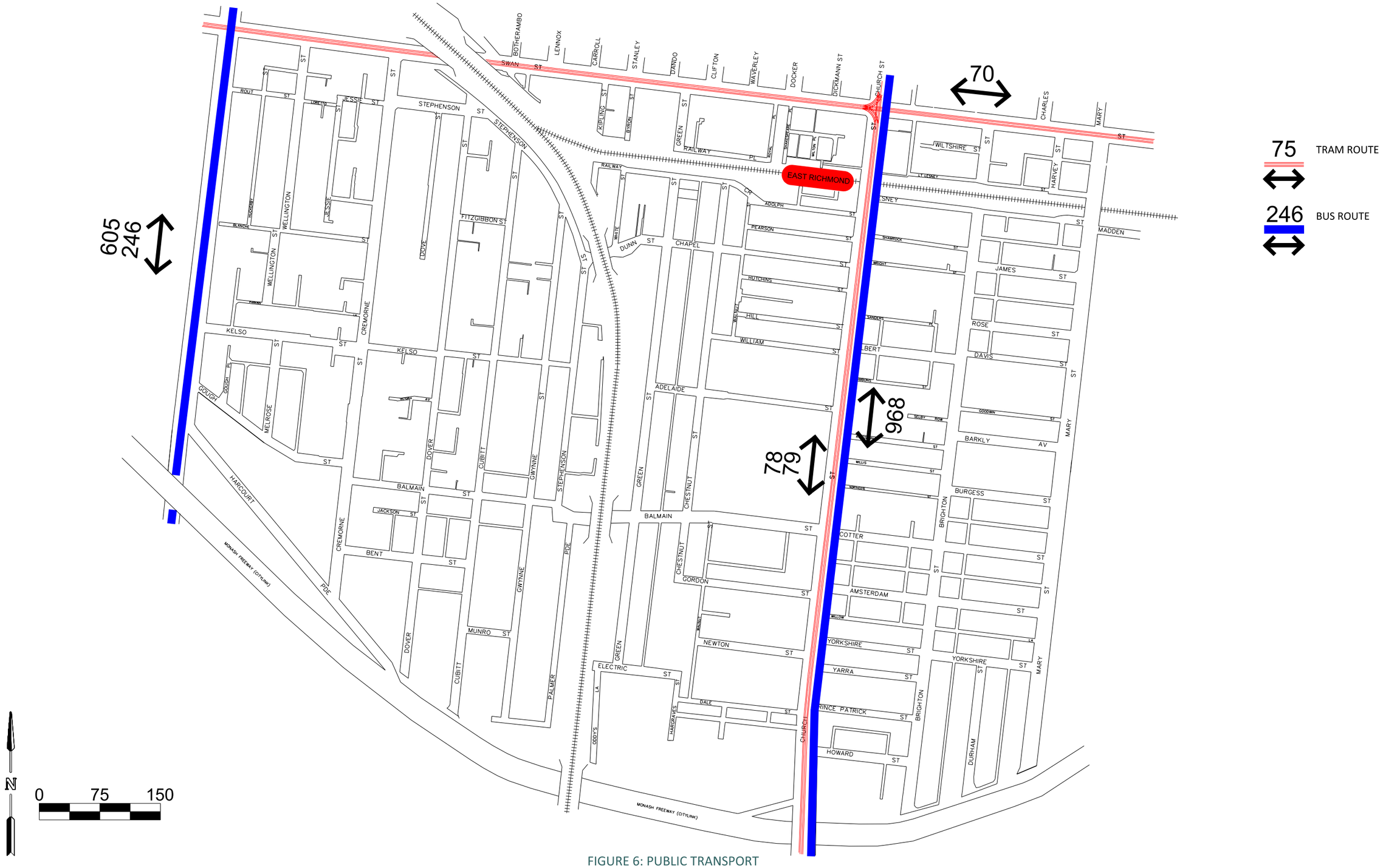


FIGURE 6: PUBLIC TRANSPORT

4.3. EXISTING TRAFFIC MANAGEMENT

Existing traffic management has been implemented in the local area by Council and VicRoads as a result of previous traffic management investigations. Treatments have generally been installed at isolated sites or on a street by street basis.

Key traffic management treatments in the area include:

- Traffic signals are provided at the following intersections:
  - Balmain Street/Church Street,
  - Swan Street/Church Street,
  - Swan Street and Lennox Street, and
  - Swan Street/Cremorne Street.
- Pedestrian operated signals are provided at the following locations:
  - Church Street between Adelaide Street and William Street,
  - Church Street between Dale Street and Monash Freeway off-ramp, and
  - Swan Street between Royal Place and Green Street.
- Roundabouts are located at the following intersections:
  - Brighton Street and Cotter Street,
  - Mary Street and Barkly Avenue, and
  - Brighton Street and Amsterdam Street.
- Road humps are located in the following streets:
  - Lesney Street (2 humps),
  - Brighton Street (3 humps),
  - Cotter Street (2 humps),
  - Chestnut Street (1 hump),
  - Walnut Street (3 humps),
  - Electric Street (1 hump),
  - Dale Street (3 humps),
  - Hargraves Street (1 hump), and
  - Palmer Parade (3 humps).
- Raised intersection / raised platforms:
  - Mary Street (2 locations), and
  - Balmain Street (1 location).
- One-way treatments are provided on the following streets:
  - Rout Street – east to west between Wellington Street and Punt Road,
  - Loretto Street – west to east between Wellington Street and Jessie Street,
  - Blanche Street – west to east between Wellington Street and Cremorne Street,
  - Kelso Street – east to west between Dover Street and Cremorne Street,

- Jessie Street – east to west & south to north between Cremorne Street and Cremorne Street,
- Dover Street – north to south between Stephenson Street and Balmain Street,
- Cubitt Street – south to north between Balmain Street and Stephenson Street,
- Gwynne Street – north to south between Stephenson Street and Balmain Street,
- Stephenson Street – south to north between Balmain Street to Gwynne Street,
- Cremorne Street – north to south between Bent Street and Harcourt Parade,
- Harcourt Parade – west to east between Punt Road and Monash Freeway,
- Royal Place – south to north between Railway Place and Swan Street,
- Shakespeare Place – north to south from Swan Street,
- White Street – south to north between Dunn Street and Railway Crescent,
- Green Street – south to north between Adelaide Street and Railway Crescent,
- Chestnut Street – north to south between Railway Crescent and Balmain Street,
- Adolph Street – west to east between Walnut Street and Church Street,
- Walnut Street – north to south between Adolph Street and Chapel Street,
- Chapel Street – east to west between Church Street and Chestnut Street,
- Pearson Street – east to west between 50m west of Church Street and Walnut Street,
- Adelaide Street – west to east between Chestnut Street and Church Street,
- William Street – east to west between Church Street and Chestnut Street,
- Dale Street – west to east between Walnut Street and Church Street,
- Prince Patrick Street – west to east between Church Street and Brighton Street,
- Willow Lane – east to west between Mary Street and Church Street,
- Northcote Street – west to east between Church Street and Brighton Street,
- Willis Street – east to west between Brighton Street and Church Street,
- Kingston Street – west to east between Church Street and Brighton Street,
- Shamrock Street – west to east between Church Street and Brighton Street,
- Rose Street – west to east between Brighton Street and Mary Street,
- Davis Street – east to west between Mary Street and Brighton Street,
- Goodwin Street – east to west between Mary Street and Brighton Street,
- Barkly Avenue – east to west between Mary Street and Brighton Street, and
- Burgess Street – east to west between Mary Street and Brighton Street.

- Turn Bans are provided at the following locations:
  - Mary Street / Swan Street – No Left Turn 7:00am – 8:45pm Mon-Fri
  - Mary Street / Madden Grove – No Right Turn 4:00pm – 6:30pm Mon-Fri
  - Cremorne Street / Parkins Lane – No Left Turn 5:00pm – 6:30pm Mon-Fri
- Traffic islands, raised intersection/threshold treatments and kerb extensions are provided at a number of locations within the study area.

Figure 7 shows the existing traffic management throughout the study area.

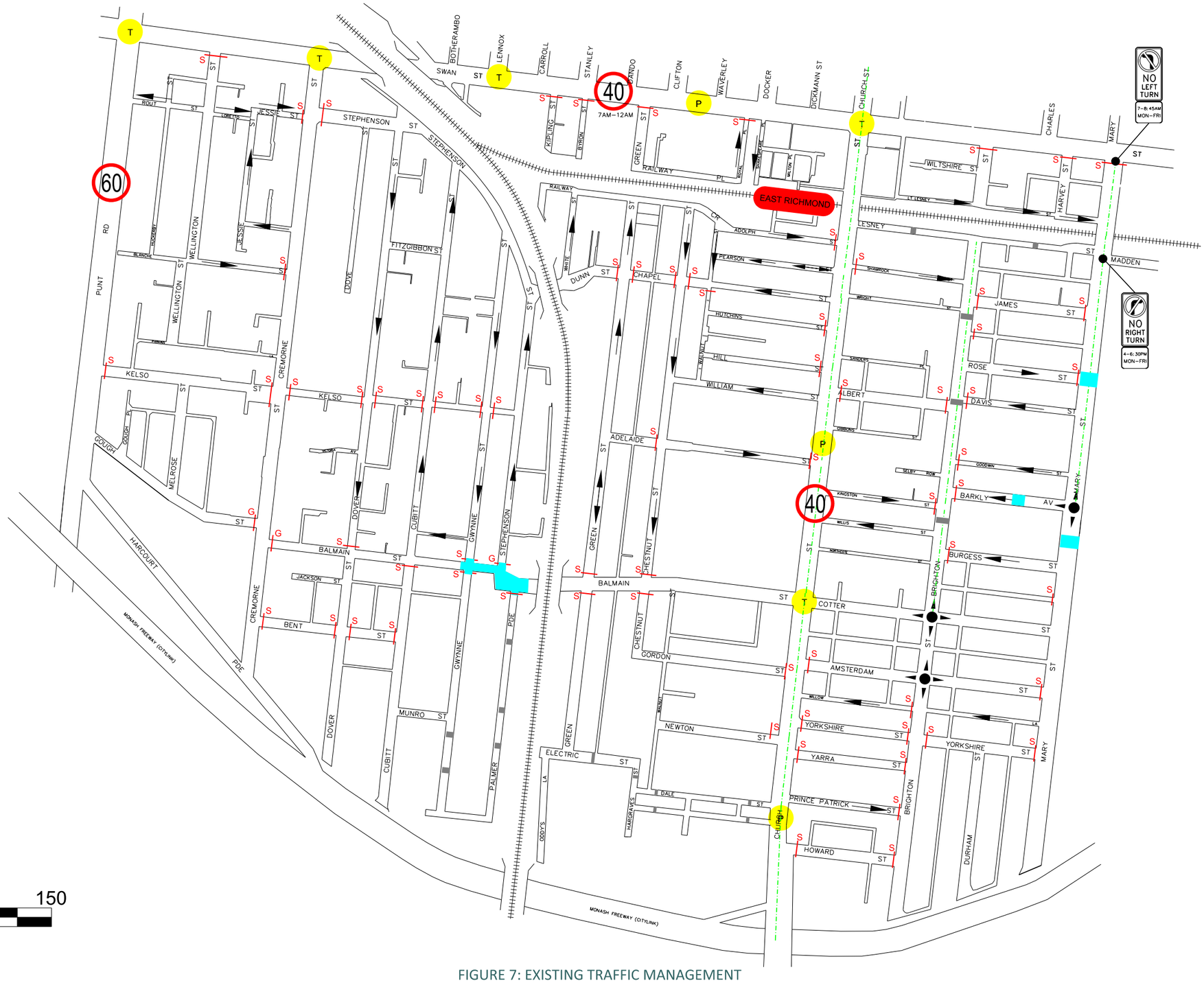


FIGURE 7: EXISTING TRAFFIC MANAGEMENT

4.4. TRAFFIC SURVEY INFORMATION

Over recent years, the City of Yarra has undertaken traffic volume and speed surveys in the study area to investigate local traffic concerns. Additional data has been collected at a number of locations as a result of the community's traffic concerns.

Table 1 below summarises the results of the most recent traffic surveys conducted in the study area. A full summary of all available traffic survey information is provided at Appendix A.

Figure 8 provides a summary of the available traffic survey information.

Traffic speed information is provided in terms of the *85th percentile speed*. The *85th percentile speed* is defined as the speed at or below which 85% of vehicles surveyed are travelling. That is, a further 15% of vehicles are travelling at a speed greater than the *85th percentile speed*.

Table 1: Available Traffic Survey Information

Location	Year	Weekday Daily Volume			85th %ile (km/h)	% of Vehicles Faster Than	
		EB/NB	WB/SB	Total		40 km/h	50 km/h
Amsterdam Street b/w Church Street and Brighton Street	2012	670	602	1,272	41.8	21.2	1.5
Balmain Street b/w Gwynne Street and Rail Bridge	2012	2,752	4,024	6,776	37.1	7.1	0.3
Balmain Street b/w Cremorne Street and Cubitt Street	2010	2,393	3,193	5,586	43.2	26.8	3.3
Balmain Street b/w Church Street and Chestnut Street	2012	2,372	3,501	5,874	42.8	26.9	2.9
Barkly Avenue b/w Mary Street and Brighton Street	2011	5	281	286	27.4	2.4	0.3
Brighton Street b/w Yarra Street and Prince Patrick Street	2012	1,000	720	1,720	41.8	22.6	1.8
Brighton Street b/w Burgess Street and Barkly Avenue	2011	861	835	1,696	32.0	0.9	0.0
Burgess Street b/w Mary Street and Brighton Street	2011	5	163	168	33.1	3.3	0.2
Chapel Street b/w Walnut Street and Church Street	2012	20	502	522	41.0	18.9	1.3
Chapel Street b/w Green Street and Chestnut Street	2012	372	541	913	32.0	0.8	0.0
Chestnut Street b/w Adelaide Street and Chapel Street	2012	5	643	648	31.0	2.2	0.0
Cotter Street b/w Church Street and Brighton Street	2012	768	1,147	1,916	35.3	3.5	0.1
Cremorne Street b/w Gough Street and Kelso Street	2011	2,860	2,463	5,323	46.8	46.7	7.6

Location	Year	Weekday Daily Volume			85th %ile (km/h)	% of Vehicles Faster Than	
		EB/NB	WB/SB	Total		40 km/h	50 km/h
Cremorne Street b/w Bent Street and Balmain Street	2012	509	1,546	2,056	43.9	32.9	3.9
Cremorne Street b/w Swan Street and Stephenson Street	2010	4,174	3,719	7,894	38.2	7.7	0.4
Cubitt Street b/w Kelso Street and Stephenson Street	2012	742	12	754	40.0	15.3	1.6
Davis Street b/w Brighton Street and Mary Street	2012	145	10	155	36.7	9.0	0.2
Dover Street b/w Kelso Street and Fitzgibbon Street	2012	6	605	611	40.0	14.8	1.1
Goodwin Street b/w Mary Street and Brighton Street	2011	4	30	34	28.8	3.3	0.0
Gordon Street b/w Walnut Street and Church Street	2012	273	310	583	33.5	3.8	0.3
Green Street b/w Adelaide Street and Chapel Street	2012	501	11	512	33.8	2.9	0.2
Gwynne Street b/w Kelso Street and Stephenson Street	2012	11	596	607	40.3	15.9	2.3
Gwynne Street b/w Balmain Street and Munro Street	7/2012	253	244	497	33.1	2.9	0.2
	9/2012	271	258	529	34.2	3.2	0.2
Howard Street b/w Church Street and Brighton Street	2011	693	756	1,449	38.2	10.7	0.8
James Street b/w Brighton Street and Mary Street	2011	693	756	1,449	38.2	10.7	0.8
Jessie Street b/w Loretto Street and Cremorne Street	2012	199	17	216	27.4	0.0	0.0
Kelso Street b/w Melrose Street and Cremorne Street	2012	860	617	1,477	45.7	43.6	5.9
Mary Street b/w Barkly Avenue and Burgess Street	2011	1,431	1,595	3,026	24.8	0.1	0.0
	2010	1,512	1,541	3,053	26.3	0.2	0.0
Mary Street b/w Goodwin Street and Davis Street	2010	1,345	1,740	3,086	45.7	47.6	5.1
Mary Street b/w James Street and Madden Grove	2010	2,493	1,929	4,422	45.4	38.1	5.6
Parkins Lane b/w Wellington Street and Cremorne Street	2009	19	52	71	24.8	0.0	0.0
Rose Street b/w Brighton Street and Mary Street	2011	888	1	889	37.4	8.1	0.2
Stephenson Street b/w Kelso Street and Dunn Street	2012	690	19	709	38.9	12.9	1.6

Location	Year	Weekday Daily Volume			85th %ile (km/h)	% of Vehicles Faster Than	
		EB/NB	WB/SB	Total		40 km/h	50 km/h
Stephenson Street b/w Gwynne Street and Cubitt Street	2010	777	714	1,491	46.4	40.8	7.9
Wellington Street b/w Blanche Street and Loretto Street	2012	165	215	380	39.2	13.6	0.9
Wellington Street b/w Blanche Street and Parkins Lane	2012	96	48	144	31.7	0.0	0.0

Note: EB/NB: Eastbound/Northbound (direction of traffic flow).
WB/SB: Westbound/Southbound (direction of traffic flow).

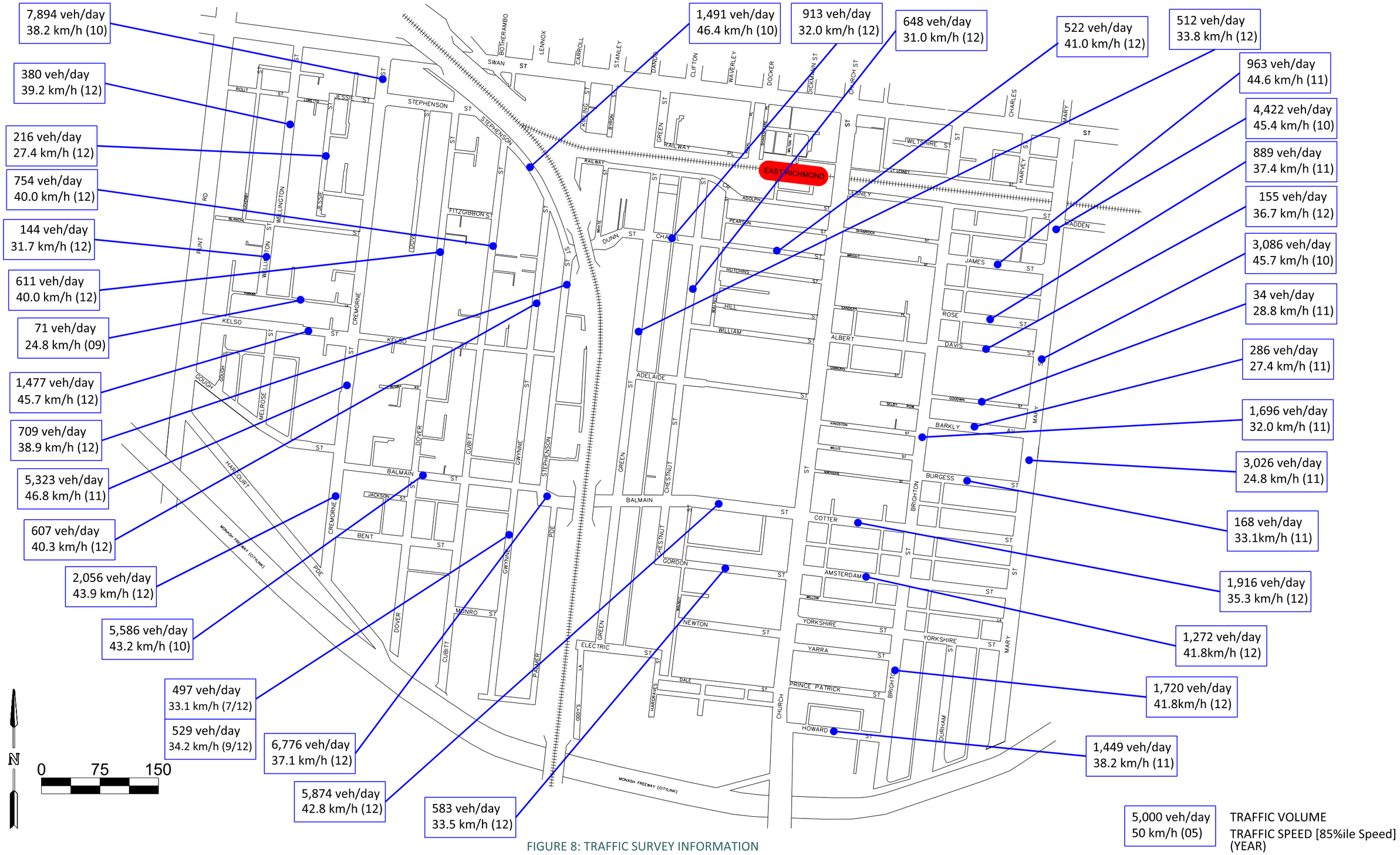


FIGURE 8: TRAFFIC SURVEY INFORMATION

4.5. CRASH HISTORY

An assessment of the crash history for the study area was undertaken by analysing crash data for the past five years (January 2007 – December 2011) of State Crash Records. The State Crash database contains all reported casualty crashes, which include the categories of Fatal, Serious Injury and Other Injury crashes. Non-injury or property-damage only crashes are not included in this database.

The categories of crash severity are defined as follows:

- *Fatal*: one or more persons are killed in the crash, or die within 30 days from injuries sustained in the crash.
- *Serious Injury*: one or more persons are admitted to hospital as a result of injuries sustained in the crash.
- *Other Injury*: one or more persons are given medical treatment for injuries sustained in the crash.

Definitions for Classifying Accidents (DCA's) are used to describe crash type by indicating the initial movement of vehicles (and/or pedestrians) involved in an accident.

Figure 9 highlights the location of crashes and indicates the total number of accidents and the most severe at each site in the study area.

In the five year period between January 2007 and December 2011, a total of 119 casualty crashes were reported in the study area, including 33 serious injury crashes and no fatalities. A breakdown of the crashes is as follows:

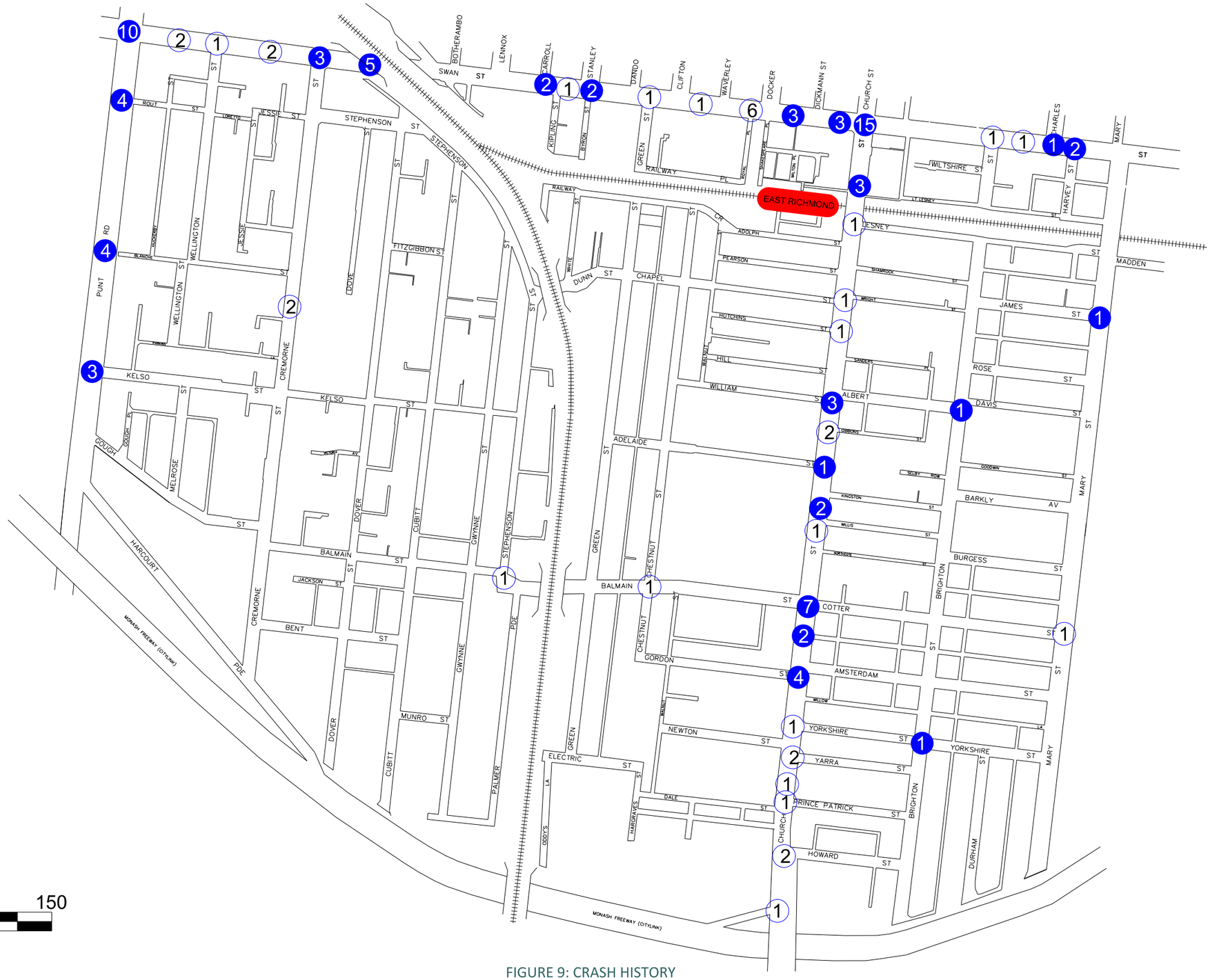
- 111 crashes occurred on the boundary Arterial Roads including:
  - 75 crashes were at arterial road intersections,
  - 36 crashes were on arterial roads at mid-block locations,
- 8 crashes occurred on the internal local road network including:
  - 6 crashes were at local street intersections (i.e. non-arterial road intersections),
  - 2 crashes were on local streets at mid-block locations,
- 44 crashes involved a bicyclist,
- 23 crashes involved a pedestrian, and
- 17 crashes involved a motorcycle.

A summary of the crash information is provided in Appendix B, as follows:

Part A - DCA (Definitions for Classifying Accidents) Chart,

Part B - Tabulated Summary of Crash History by location, detailing the date, time, severity and type of accident (DCA code), and

Part C - Collision Diagrams for key crash locations throughout the study area.



1 OTHER INJURY - MOST SEVERE ACCIDENT (1. No. CASUALTY ACCIDENTS AT SITE

2 SERIOUS INJURY - MOST SEVERE ACCIDENT (2 No. CASUALTY ACCIDENTS AT SITE)

FIGURE 9: CRASH HISTORY

4.6. RESIDENT TRAFFIC COMPLAINTS

Table 2 below provides a brief summary of the nature of traffic complaints received from residents over recent years for the study area. This information has been collated from Council files.

Table 2: Summary of Residents' Complaints

Location	Date	Issue/Response
Madden Grove	March 2012	• Resident raised concerns about the level of traffic ignoring the 'No Right Turn' restriction. • Council responded by indicating that traffic counts would be conducted to measure the extent of the problem.
	November 2011	• Resident raised concerns about the level of traffic ignoring the 'No Right Turn' restriction. • Council referred the issue to Victoria Police for enforcement
Richmond Primary School	March 2011	• Concerns regarding traffic safety for children in the vicinity of Richmond Primary School. • Council responded by indicating that a number of existing signs would be relocated to improve conditions in Mary Street. Council also committed to conducting this LATM study.
Jessie Street	June 2008	• Resident concerned with trucks parking illegally blocking Jessie Street while they wait to unload for businesses that front onto Cremorne Street. The trucks block the street forcing drivers to travel against the one-way restrictions particularly in Loretto Street.
Chapel Street	February 2012	• Resident raised concerns regarding the usage of Chapel Street and in particular the speed of vehicles through the one-way section. Furthermore, the resident indicated that a number of vehicles travel in the wrong direction in the one-way section.
Gwynne Street	Various	• Residents of Gwynne Street (south of Balmain Street) have raised concerns regarding the level of truck usage due to the Rosella Complex which has access to the south of Munro Street.
Parkins Lane	November 2009	• A resident of Wellington Street raised concerns regarding the level of traffic utilising Parkins Lane as a rat run after 4pm. The resident requested that the street is reconfigured to operate one-way from west to east.
Wellington Street	May 2012	• Concerns regarding the speed and volume of vehicles in Wellington Street in the AM and PM peak periods. • Council responded by committing to conducting this LATM study.
	April 2011	• Resident raised concerns regarding carparking within Wellington Street principally due to sporting events in the nearby area and a local car rental business. The resident requested that the street is regularly patrolled for illegally parked vehicles.
Loretto Street	April 2011	• Resident raised concerns regarding the volume and speed of vehicles travelling in the wrong direction. The resident requested that the one-way is enforced or that better signage / traffic management is installed.

Location	Date	Issue/Response
Walnut Street	December 2011	• Local businesses raised concerns regarding the traffic speed given the narrow carriageway and high pedestrian activity and requested that Walnut Street between Balmain Street and Gordon Street be designated as a shared zone.

5. IDENTIFICATION OF ISSUES - COMMUNITY INPUT

The information presented in the previous sections provides background information on traffic conditions and crash history for the study area.

The following summarises traffic issues identified through consultation with the local community.

5.1. COMMUNITY CIRCULAR

A circular was distributed to all property occupiers within the study area on Friday, 12th July, 2012 which advised residents and other interested parties of the upcoming Public Meeting and the formation of a Traffic Study Group. This circular also included a questionnaire survey on traffic issues and sought nominations from residents to act as community representatives on the Traffic Study Group.

A copy of the community questionnaire circular is provided in Appendix C.

5.2. PUBLIC MEETING

A public meeting was held at Richmond Town Hall, on Thursday, 26th July, 2012. Residents and other interested parties were invited to attend via a circular, as outlined above.

The purpose of the public meeting was to outline the traffic study process, provide residents with the opportunity to discuss any local traffic issues and nominate community representatives to form the Traffic Study Group. The local traffic issues identified at the public meeting are summarised in Table 3 below.

The public meeting was attended by twenty-seven (27) members of the local community, in addition to a local Councillor, four representatives from Council and two members of the Traffix Group team.

For the purposes of selecting representatives for the Traffic Study Group, the study area was divided into three sub-areas and 4 representatives were sought from each area.

A copy of the minutes of the public meeting are provided at Appendix D.

Table 3: Issues Identified by Community at Public Meeting

Location	Issue	Comments
Balmain Street	Through Traffic and Traffic Speed	A number of residents raised concerns with regard to the level of through traffic utilising Balmain Street to avoid the intersection of Church Street and Swan Street.
	Chicane/raised intersection in the vicinity of the Cherry Tree Hotel	A resident noted that when the existing chicane was installed traffic speeds noticeably dropped. However the chicane was subsequently modified and vehicles now drive faster through the chicane.
	Footpath on southern side in the vicinity of Gwynne Street	A resident indicated that the footpath in this region is narrow and as the footpath level is the same as the road surface, there is potential for vehicles to mount the footpath.
	Width due to on-street parking	On-street parking along both sides of Balmain Street causes one-lane, two-way operation. A number of drivers believe that two vehicles can pass, however this can result in vehicle mirrors being clipped.
Richmond Primary School	Pedestrian safety on Mary Street	A representative of Richmond Primary School indicated that the size of the school had dramatically increased over the past few years. The key concern was related to pedestrian safety as children regularly crossed Mary Street to access the reserve on the eastern side of the road for sporting activities. The representative indicated that the school would like to see Mary Street closed to traffic.
	Barkly Avenue Pedestrian Crossing	A resident raised concern in relation to parents parking on the school crossing in Barkly Avenue. They indicated that it caused safety issues for children using the crossing and caused traffic congestion in the local area. They indicated that enforcement would be the most suitable solution. A representative of the Richmond Primary School indicated that the school regularly tried to educate parents and enforcement may provide a solution. However in the past the problem has only been solved for a month or so and then parents revert back to parking on the school crossing.
Mary Street	Right turn from Mary Street into Swan Street	A resident indicated that the right turn movement into Swan Street is very difficult due to the volume of vehicles on Swan Street. He questioned the safety of this manoeuvre. The resident indicated a preference to have the existing 'No Right Turn' ban at Madden Grove removed to allow right turns to occur at Coppin Street at the traffic signals.
	Through Traffic	A resident indicated that Mary Street is used as a rat run.

Location	Issue	Comments
Mary Street	SP AusNet Upgrade Works	A resident of the area indicated that upgrades of the existing electricity sub-station are proposed to occur over the next 5 years. They indicated that a TMP has been produced to identify the routes that will be used to assess the area for heavy vehicles.
Study Area	Bicycle Facilities	A resident noted that cyclist facilities are discontinuous through the area. One resident noted that a number of bluestone treatments through the area made it quite difficult to cycle around.
	Parking during MCG and AAMI Park events	A number of residents noted that parking occupancies were high when events were staged at the MCG and AAMI Park. A resident requested that any investigation of parking issues should take into account these events.
Kelso Street	Traffic Speeds	A resident indicated that traffic speeds in Kelso Street are high. They noted that people test driving cars from local dealerships often speed through the street.
Davis Street	Traffic Speeds	A resident noted that high traffic speeds occur through Davis Street.
Gough Street	Traffic Safety and accessibility	A resident indicated that vehicles had very limited sight distance exiting the laneway between Melrose Street and Cremorne Street, principally due to the bend in Gough Street. This was exacerbated by the volume and speed of vehicles using Gough Street.
Balmain Street / Cremorne Street / Gough Street	Sight Distance	A resident indicated that the intersection of Balmain Street/Cremorne Street and Gough Street/Cremorne Street had poor sight distance. It was noted that a significant number of vehicles utilise Gough Street to access Cremorne Street and Balmain Street.
Chapel Street / Dunn Street	Through Traffic and Traffic Speed	Significant level of through traffic as Chapel Street/Dunn Street provides one of only two underpasses beneath the railway line.
	Drivers ignoring stop signs	A resident indicated that drivers frequently ignore the stop signs along Chapel Street causing many near misses.
	U-turning vehicles	A resident indicated that a significant number of property damage incidents had occurred in the vicinity of the unnamed lane between Chestnut Street and Green Street as vehicles attempted to U-turn.
Mary Street / Madden Grove	Lack of Enforcement of existing 'No Right Turn'	A number of local residents indicated that the existing 'No Right Turn' restrictions are not enforced.
Brighton Street	Traffic Speed and Through Traffic	A resident indicated that there were traffic speed and through traffic issues in Brighton Street. This also caused a level of noise for residents.

Location	Issue	Comments
Cremorne Street / Swan Street	Intersection Capacity	A number of residents noted that the capacity of the Cremorne Street approach to the intersection with Swan Street is poor. Of particular concern was the length of the left turn lane (restricted due to parking) and the delays caused by pedestrians crossing the Swan Street approach. A resident indicated that the pedestrian crossing should be relocated to the eastern side of the intersection.
Swan Street	Bicycle Facilities	A resident indicated that there are no bicycle facilities between Cremorne Street and Punt Road on the south side of the road and the carriageway width reduces which causes a 'squeeze point'.

5.3. TRAFFIC STUDY GROUP

The role of community representatives in the Traffic Study Group is to represent the local community, act as a contact person for residents and businesses in their sub-area, attend meetings of the Traffic Study Group and assist in formulating a Traffic Management Plan for the study area.

Nominations were taken from responses to the questionnaire survey in addition to attendees at the public meeting. Community representatives were selected from each of the three sub-areas for the Traffic Study Group. The community representatives selected for the Traffic Study Group are listed in Table 4 below.

Table 4: Traffic Study Group – Community Representatives

Name	Street	Sub-Area
[redacted]	Wellington Street	1
[redacted]	Melrose Street	1
[redacted]	Balmain Street	1
[redacted]	Gwynne Street	1
[redacted]	Rosella Complex	1
[redacted]	Kipling Street	2
[redacted]	Green Street	2
[redacted]	Pearson Street	2
[redacted]	Gordon Street	2
[redacted]	Chapel Street	2
[redacted]	Mary Street	3
[redacted]	Richmond Primary School	3
[redacted]	Brighton Street	3
[redacted]	Howard Street	3
[redacted]	SP AusNet	3

5.4. COMMUNITY QUESTIONNAIRE SURVEY

The questionnaire survey sought community views on a range of traffic issues in their local street and within the whole study area, and asked for their suggestions to overcome these traffic problems.

The local community were asked to comment on the extent of various traffic problems in their street, namely:

- Traffic speed,
- Traffic volume,
- Heavy vehicles,
- Pedestrian facilities,
- Bicycle facilities,

- Parking restrictions,
- Parking enforcement,
- Street lighting, and
- Irresponsible driving.

The survey also sought to identify if any of the above problems occurred at a particular time of day.

The local community were asked to identify the worst traffic problems in the whole study area and comment on possible solutions. The local community were also asked to consider problems they encounter when walking, cycling and parking as well as driving.

The following provides an overview of the information obtained from the questionnaire survey responses. This information provided a basis for identifying the main traffic problems perceived by the local community.

5.4.1. Survey Response

Questionnaire surveys were delivered to all properties in the area in early July, 2012. The official reply date for the survey was Thursday, 26th July, 2012, however, late responses were considered until Friday, 3rd August, 2012.

A total of 221 responses were received, representing a response rate of 9.6%. This rate is a typical level of response for a 'Key Issues' surveys which is in the order of 10%.

Table 5 shows the distribution of responses by street for the study area.

Table 5: Questionnaire Responses, By Street Name

Street Name	No. of Responses	% of Total Responses	Approx. No. Properties in Street	% of Street Responding
Adelaide Street	0	*0.0%*	3	0.0%
Adolph Street	0	*0.0%*	6	0.0%
Albert Street	1	*0.5%*	15	6.7%
Amsterdam Street	7	*3.2%*	41	17.1%
Balmain Street	16	*7.2%*	66	24.2%
Barkly Avenue	2	*0.9%*	9	22.2%
Bent Street	0	*0.0%*	8	0.0%
Blanche Street	0	*0.0%*	7	0.0%
Brighton Street	22	*10.0%*	181	12.2%
Burgess Street	2	*0.9%*	11	18.2%
Byron Street	0	*0.0%*	5	0.0%
Chapel Street	3	*1.4%*	15	20.0%
Chestnut Street	10	*4.5%*	104	9.6%
Church Street	9	*4.1%*	206	4.4%
Cotter Street	1	*0.5%*	37	2.7%

Street Name	No. of Responses	% of Total Responses	Approx. No. Properties in Street	% of Street Responding
Cremorne Street	12	*5.4%*	184	6.5%
Cubitt Street	12	*5.4%*	152	7.9%
Dale Street	0	*0.0%*	9	0.0%
Davis Street	0	*0.0%*	21	0.0%
Dove Street	2	*0.9%*	9	22.2%
Dover Street	12	*5.4%*	118	10.2%
Dunn Street	0	*0.0%*	3	0.0%
Durham Street	1	*0.5%*	37	2.7%
Electric Street	0	*0.0%*	7	0.0%
Fitz-Gibbon Street	0	*0.0%*	4	0.0%
Gibbons Street	0	*0.0%*	-	-
Goodwin Street	1	*0.5%*	6	16.7%
Gordon Street	4	*1.8%*	22	18.2%
Gough Place	0	*0.0%*	8	0.0%
Gough Street	0	*0.0%*	3	0.0%
Green Street	11	*5.0%*	99	11.1%
Gwynne Street	8	*3.6%*	23	34.8%
Hargreaves Street	0	*0.0%*	7	0.0%
Harvey Street	0	*0.0%*	5	0.0%
Hill Street	3	*1.4%*	13	23.1%
Hotham Place	0	*0.0%*	-	-
Howard Street	4	*1.8%*	110	3.6%
Huckerby Street	3	*1.4%*	3	100.0%
Hutchings Street	0	*0.0%*	-	-
James Street	3	*1.4%*	24	12.5%
Jessie Street	0	*0.0%*	23	0.0%
Kelso Street	3	*1.4%*	47	6.4%
Kingston Street	0	*0.0%*	6	0.0%
Kipling Street	2	*0.9%*	27	7.4%
Lesney Street	1	*0.5%*	17	5.9%
Little James Street	0	*0.0%*	-	-
Little Lesney Street	0	*0.0%*	6	0.0%
Little Rose Street	0	*0.0%*	-	-
Loretto Street	0	*0.0%*	-	-
Mary Street	8	*3.6%*	78	10.3%

Street Name	No. of Responses	% of Total Responses	Approx. No. Properties in Street	% of Street Responding
Melrose Street	2	*0.9%*	19	10.5%
Munro Street	0	*0.0%*	-	-
Newton Street	2	*0.9%*	6	33.3%
Northcote Street	1	*0.5%*	8	12.5%
Oddys Lane	0	*0.0%*	-	-
Palmer Parade	1	*0.5%*	23	4.3%
Parkins Lane	0	*0.0%*	-	-
Pearson Street	6	*2.7%*	12	50.0%
Prince Patrick Street	1	*0.5%*	14	7.1%
Punt Road	2	*0.9%*	41	4.9%
Railway Crescent	0	*0.0%*	1	0.0%
Railway Place	0	*0.0%*	2	0.0%
Rose Street	4	*1.8%*	13	30.8%
Rout Street	0	*0.0%*	1	0.0%
Royal Place	0	*0.0%*	1	0.0%
Russell Street	0	*0.0%*	-	-
Sanders Place	0	*0.0%*	7	0.0%
Shakespeare Place	0	*0.0%*	-	-
Shamrock Street	0	*0.0%*	8	0.0%
Stephenson Street	5	*2.3%*	55	9.1%
Swan Street	4	*1.8%*	125	3.2%
Unknown	12	*5.4%*	-	-
Victoria Avenue	0	*0.0%*	2	0.0%
Walnut Street	1	*0.5%*	5	20.0%
Wellington Street	10	*4.5%*	89	11.2%
White Street	1	*0.5%*	22	4.5%
William Street	2	*0.9%*	10	20.0%
Willis Street	2	*0.9%*	8	25.0%
Willow Lane	0	*0.0%*	-	-
Wiltshire Street	0	*0.0%*	8	0.0%
Wright Street	0	*0.0%*	-	-
Yarra Street	1	*0.5%*	8	12.5%
Yorkshire Street	1	*0.5%*	*19*	5.3%
Total	**221**	**100.0%**	**2,292**	**9.6%**

Note: Based on approximate number of lots only

A detailed summary of the survey results is contained in a separate report titled 'Balmain Precinct No. 20, Local Area Traffic Management Study, Community Questionnaire Survey, August, 2012'.

5.4.2. Summary of Main Traffic Issues Identified By the Community

A summary of the main traffic issues identified by residents is provided in Table 6 and Table 7, respectively.

Table 6: Summary of Questionnaire Responses – Nature of Problem

Problems Identified	No Problem		Minor Problem		Major Problem		No Comment		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Traffic Speed	55	25%	57	26%	88	40%	21	10%	221	100%
Traffic Volume	43	19%	70	32%	86	39%	22	10%	221	100%
Heavy Vehicles	76	34%	60	27%	56	25%	29	13%	221	100%
Pedestrian Facilities	116	52%	35	16%	30	14%	40	18%	221	100%
Bicycle Facilities	103	47%	55	25%	22	10%	41	19%	221	100%
Street Lighting	118	53%	46	21%	16	7%	41	19%	221	100%
Irresponsible Driving	48	22%	63	29%	84	38%	26	12%	221	100%
Other	18	8%	3	1%	21	10%	179	81%	221	100%

Table 7: Summary of Questionnaire Responses – Time of Problem

Problems Identified	All Times		Day Time		Peak Hours		Night Time		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Traffic Speed	54	37%	28	19%	45	31%	18	12%	145	100%
Traffic Volume	19	12%	40	26%	92	59%	4	3%	155	100%
Heavy Vehicles	22	19%	64	56%	23	20%	6	5%	115	100%
Pedestrian Facilities	36	51%	17	24%	17	24%	*	*	70	100%
Bicycle Facilities	45	63%	12	17%	14	20%	*	*	71	100%
Irresponsible Driving	57	45%	20	16%	27	21%	23	18%	127	100%
Other	9	50%	6	33%	2	11%	1	6%	18	100%

Note: A proportion of respondents did not identify a 'Time of Problem'.

As can be seen from the above tables, the most common issues raised by residents regarding traffic conditions in **their** street were:-

- **Traffic Speed:** 40% of responses identified traffic speed as a 'major' problem and 26% as a 'minor' problem. 25% stated traffic speed was not a problem in their street. 37% of responses indicated the problem occurs at 'all times', while 31% stated 'peak hours' and 19% stated 'day time'.
- **Traffic Volume Issues:** 39% of responses identified traffic volume as a 'major' problem and 32% as a 'minor' problem. 19% stated that traffic volume was not an issue in their

street. 59% of responses indicated that the problem occurs during 'peak hours', while 26% stated 'day time' and 12% stated 'all times'.

- **Irresponsible Driving:** 38% of responses identified irresponsible driving as a 'major' problem and 29% as a 'minor' problem. 22% stated that irresponsible driving was not a problem in their street. 45% of responses indicated that the problem occurs at 'all times', while 21% stated 'peak hours'.
- **Heavy Vehicles:** 25% of responses identified heavy vehicles as a 'major' problem and 27% as a 'minor' problem. 34% stated that heavy vehicles were not a problem in their street. 56% of responses indicated that the problem occurs at 'day time' while 20% stated the problem occurs at 'all times'.
- **Pedestrian Facilities:** 14% of responses identified pedestrian facilities as a 'major' problem and 16% as a 'minor' problem. 52% stated that pedestrian facilities were not a problem in their street.
- **Bicycle Facilities:** 10% of responses identified bicycle facilities as a 'major' problem and 25% as a 'minor' problem. 47% stated that bicycle facilities were not a problem in their street.
- **Street Lighting:** 7% of responses identified street lighting as a 'major' problem and 21% as a 'minor' problem. 53% stated that street lighting was not a problem in their street.

5.4.3. Main Parking Issues Identified By the Community

Parking issues were identified by the local community as a key issue within the study area. Parking issues relating to safety and traffic flow will be addressed by this Local Area Traffic Management Study. However, issues in relation to the supply of parking and parking restrictions are outside the scope of this study.

On this basis, the responses to the community circular that identified parking supply or restrictions as key issues have been summarised and provided to the Yarra City Council Parking Services Unit for their review and consideration.

A detailed summary of the survey results related to parking is contained in a separate report titled 'Balmain Precinct No. 20, Local Area Traffic Management Study, Community Questionnaire Survey, August, 2012'.

5.4.4. Main Traffic Issues Identified By the Community

A list of the main traffic problems and locations/streets that were identified by the community is provided below in Table 8. Streets that provided at least three responses are included within this Table.

Table 8: Summary of Traffic Issues within the Study Area

Location	Main Traffic Issues
Local Streets & Collector Roads	
Amsterdam Street (7 Responses)	• **Traffic Volume** (57% major problem, 29% minor problem, peak hours)
	Specific Community Issues: • High vehicle speeds (3 responses) • Traffic volume during peak hours **Solutions Suggested by the Wider Community:** • Speed humps (2 responses) • Make street one way • Reduce speed limit • Install speed cameras
Balmain Street (16 Responses)	• **Traffic Speed** (75% major problem, all times) • **Traffic Volume** (50% major problem, 44% minor problem, peak hours)
	Specific Community Issues: • High vehicle speeds (16 responses) • Congestion (9 responses) • Road reduced to one-lane with parked cars causing congestion (7 responses) • Through traffic (7 responses) • Irresponsible driving (6 responses) • Lack of pedestrian facilities outside Cherry Tree Hotel (3 responses) • Vehicle noise (2 responses) • Lack of pedestrian facilities (2 responses) • Vehicle speed in the vicinity of Cherry Tree Hotel (2 responses) • High traffic volume • Heavy vehicles accessing freeway • Industrial bins and cars blocking footpaths • Parked cars hit by vehicles • Difficult for pedestrians to cross between Church Street and Green Street • Dark and narrow footpaths under rail bridge • Speed humps do not slow vehicles down enough • Footpaths not wide enough **Solutions Suggested by the Wider Community:** • Speed humps (9 responses) • Reduce parking to reduce congestion (6 responses) • Install speed cameras (4 responses)

Location	Main Traffic Issues
	• Install 'Local Traffic Only' signs (3 responses) • Install pedestrian crossing outside Cherry Tree Hotel (2 responses) • Install centre line (2 responses) • Close street between Stephenson Street and Cubitt Street and send vehicles via industrial areas • No left turn from Church Street into Balmain Street in the AM peak period • Widen road at certain points • Introduce bicycle lanes • Restrict heavy vehicle usage • Reduce speed limit • Restrict through traffic • Increase height of speed hump outside Cherry Tree Hotel • Improve pedestrian facilities between Church Street and Railway • Clearways during peak hours • Widen footpaths • Turn bans during peak hours • Close road at the railway to reduce through traffic • One-way
Brighton Street (22 Responses)	• **Traffic speed** (50% major problem, 45% minor problem, peak hours)
	Specific Community Issues: • Through traffic (10 responses) • High vehicle speeds (7 responses) • Heavy vehicles at night • Heavy vehicles turning causing congestion • Volume of vehicles using rear laneway • Congestion during school pick-up drop-off **Solutions Suggested by the Wider Community:** • Road closure (2 responses) • One-way (2 responses) • Reduce width to one lane • Increase police presence • Install speed cameras • Stop heavy vehicles using rear lane • Local traffic only signs • Additional 40km/h speed limit signage • On road bicycle lanes • Narrow street using trees / traffic islands

Location	Main Traffic Issues
	• Increase roundabout heights • Speed humps • Restrict heavy vehicles loading at night
Chapel Street (3 responses)	• **Traffic Speed** (67% major problem, all times) • **Irresponsible driving** (67% major problem, all times)
	Specific Community Issues: • High vehicle speed when travelling in the wrong direction • Through traffic • Vehicle travelling against one-way restriction • Heavy vehicle usage **Solutions Suggested by the Wider Community:** • Speed humps (2 responses) • One-way restriction (2 responses) • Chicanes
Chestnut Street (10 Responses)	• **Traffic Speed** (50% major problem, 30% minor problem, day time) • **Irresponsible Driving** (50% major problem, 30% minor problem, all times)
	Specific Community Issues: • Congestion (3 responses) • Through traffic (3 responses) • Traffic speed (2 responses) • Builders regularly close off street without notice • Vehicles loading/unloading within street • Cafe on Balmain Street has access that opens onto street **Solutions Suggested by the Wider Community:** • Local traffic only signs • Roundabout at Chestnut Street and Balmain Street • Remove parking • Introduce clearway to reduce congestion

Location	Main Traffic Issues
Cremorne Street (12 Responses)	• **Irresponsible Driving** (50% major problem, all times) • **Traffic Volume** (50% major problem, peak hours)
	Specific Community Issues: • High vehicle speeds (5 responses) • Through traffic (4 responses) • Congestion (4 responses) • Traffic volume (2 responses) • Unloading of heavy vehicles (2 responses) • Poor street lighting between Kelso Street and Bent Street • Congestion caused by heavy vehicles • Irresponsible driving • High vehicle speeds at night • Vehicles straying across centreline **Solutions Suggested by the Wider Community:** • Speed humps (3 responses) • Install 'Local Traffic Only' signs (2 responses) • Improve street lighting between Kelso Street and Balmain Street • Remove parking adjacent to Precinct Hotel to improve congestion • Ban parking by heavy vehicles • Restrict heavy vehicle usage • Reduce speed limits • Enforcement of speed limits • RRPMs along centreline • Restrict through traffic • Access restrictions during peak hours • Improve bicycle signage to Yarra Trail • Pedestrians crossings
Cubitt Street (12 Responses)	• No significant responses
	Specific Community Issues: • Vehicles doing U-turns at southern end of street • High vehicle speeds • Vehicles ignoring one-way configuration • Traffic volume • Through traffic **Solutions Suggested by the Wider Community:** • Speed humps (3 responses) • Tree planting (2 responses)

Location	Main Traffic Issues
	• No through road / No freeway access signs • Police enforcement • One-way • Traffic islands • Resurface footpaths
Dover Street (12 responses)	• No significant responses
	Specific Community Issues: • Road in poor condition • Inadequate footpaths • Vehicles parking across driveway blocking car park access **Solutions Suggested by the Wider Community:** • Police enforcement • Enforce parking restrictions • Fix road condition
Gordon Street (4 Responses)	• **Heavy Vehicles** (100% major problem, night time) • **Traffic Volume** (50% major problem, 50% minor problem, day time)
	Specific Community Issues: • Through traffic speeding around corners **Solutions Suggested by the Wider Community:** • One-way (2 responses) • Install 'Local Traffic Only' Signs
Green Street (11 Responses)	• No significant responses
	Specific Community Issues: • Congestion caused by heavy vehicles (2 responses) • High vehicles speeds • Car dealership traffic speeding • Vehicles going up one-way street the wrong way • Unable to walk on footpath due to industrials bins left out and parked vehicles • Poor lighting under rail overpass • Insufficient bicycle access at southern end **Solutions Suggested by the Wider Community:** • Speed humps (3 responses) • Better lighting under rail overpass • Improve bicycle access at southern end

Location	Main Traffic Issues
Gwynne Street (8 Responses)	• **Heavy Vehicles** (63% major problem, 38% minor problem, all times) • **Traffic Volume** (50% major problem, peak hours) • **Traffic Speed** (50% major problem, all times
	Specific Community Issues: • Heavy vehicles using the narrow street (5 responses) • Vehicles noise (2 responses) • Unable to walk on footpath due to industrial bins left out and parked vehicles • Heavy vehicles causing damage to other vehicles • High vehicle speeds • Footpath widths too narrow • Narrow street **Solutions Suggested by the Wider Community:** • Close Gwynne Street immediately south of Munro Street (3 responses) • Install 'Local Traffic Only' Signs • More loading zones • Widen footpath • Better regulation of private garbage vehicles
Hill Street (3 Responses)	• No significant responses
	Specific Community Issues: • High vehicle speeds **Solutions Suggested by the Wider Community:** • One-way • Speed humps • Reduce speed limits
Howard Street (4 Responses)	• **Traffic Volume** (100% major problem, day times) • **Irresponsible Driving** (75% major problem, all times) • **Traffic Speed** (50% major problem, 50% minor problem, all times) • **Bicycle Facilities** (50% major problem, 50% minor problem, all times)
	Specific Community Issues: • Through traffic (7 responses) • Congestion (2 responses) • Congestion caused by parked vehicles **Solutions Suggested by the Wider Community:** • One-way (6 responses) • Install local traffic only signs • Restrict through traffic

Location	Main Traffic Issues
	• Make parking only on one side • Reduce size of trees and bluestone
Huckerby Street (3 Responses)	• No significant responses
	Specific Community Issues: • Congestion caused by parked vehicles (3 responses) • Illegal parking (2 responses) **Solutions Suggested by the Wider Community:** • Close road to local residents only when the football is on • Clearways
James Street (3 Responses)	• **Traffic Speed** (67% major problem, 33% minor problem, all times) • **Traffic Volume** (67% major problem, 33% minor problem, peak hours)
	Specific Community Issues: • Through traffic (3 responses) • Traffic volume **Solutions Suggested by the Wider Community:** • Speed humps • Enforce road rules
Kelso Street (3 Responses)	• **Traffic Speed** (100% major problem, all times) • **Traffic Volume** (67% major problem, 33% minor problem, peak hours) • **Irresponsible Driving** (67% major issue, peak hours)
	Specific Community Issues: • High vehicle speeds (3 responses) • Through traffic (2 responses) • Congestion caused by through traffic **Solutions Suggested by the Wider Community:** • Speed humps (4 responses) • Restrict access during peak hours • Enforce speed limits • No left turn at Punt Road
Mary Street (8 Responses)	• **Traffic Volume** (75% major problem, peak hours) • **Traffic Speed** (63% major problem, all times) • **Irresponsible driving** (50% major problem, 50% minor problem, all times)
	Specific Community Issues: • Through traffic (10 responses) • High vehicle speeds (2 responses) • Illegal right turns at Madden Grove (2 responses)

Location	Main Traffic Issues
	• Vehicles not slowing down over pedestrians crossing • No walkway along park side of the street • Congestion caused by school drop off and pick up • Traffic Volume **Solutions Suggested by the Wider Community:** • Close Mary Street outside Richmond Primary School • Narrow school crossing to single lane • Install bicycle lanes to feed into the park • Close Mary Street at the train line • Allow right hand turn into Madden Grove • Install median strip on Mary Street near Madden Grove • One-way • Speed humps
Pearson Street (6 Responses)	• No significant responses
	Specific Community Issues: • High vehicle speeds • Heavy vehicles entering the street and being forced to reverse out **Solutions Suggested by the Wider Community:** • Restrict heavy vehicle access • Install larger signs advising heavy vehicles not to enter • Speed humps • Reduce speed limits
Rose Street (4 Responses)	• **Traffic Volume** (75% major problem, peak hours) • **Traffic Speed** (75% major problem, peak hours) • **Irresponsible Driving** (75% major problem, peak hours)
	Specific Community Issues: • High vehicle speeds due to its western end incline • Through traffic • Two-way traffic **Solutions Suggested by the Wider Community:** • Speed humps (2 responses) • Install median strip on Mary Street near Madden Grove • Prevent vehicle turning right into street from Church street during peak hours

Location	Main Traffic Issues
Stephenson Street (5 Responses)	• **Irresponsible Driving** (60% major problem, all times)
	Specific Community Issues: • High vehicle speeds (4 responses) • Traffic volume (2 responses) • Unable to walk on footpath due to industrial bins left out and parked vehicles (2 responses) • Congestion caused by delivery vehicles (2 responses) • Vehicles ignoring one-way entrance signs (2 responses) • Footpath widths too narrow • Circling traffic looking for parking • Lack of bicycle facilities • Vehicles ignoring give-way signs • Damage to property caused by heavy vehicles • Illegally parked vehicles on footpath • Heavy vehicles getting stuck turning from Balmain Street • Irresponsible drivers from car dealerships in the area **Solutions Suggested by the Wider Community:** • Speed humps (3 responses) • Reduce speed limits (2 responses) • Install vegetated necking's at intersections with Dunn Street and Kelso Street • Coordinate private bin and council bin collections • Remove freeway entrance • Improve street lighting • Police enforcement • Enforce parking restrictions • Remove obstacles on footpath • Widen footpath
Wellington Street (10 Responses)	• No significant responses
	Specific Community Issues: • High vehicle speeds • Being used as a bypass through laneway at the end of the street **Solutions Suggested by the Wider Community:** • Install 'Local Traffic Only' signs (2 responses) • Speed humps • Right of way for pedestrians and cyclists • Install bigger and clearer 'No Through Road' signs

Location	Main Traffic Issues
Arterial Roads	
Church Street (9 Responses)	• No significant responses
	Specific Community Issues: • Congestion (16 responses) • Dangerous for cyclists (4 responses) • Vehicles exiting Monash Freeway making right turn/U-Turn on Church Street • Congestion caused by bicycle lanes • Difficulty turning into Swan Street • Irresponsible drivers • High vehicle speeds • Vehicles parking in loading zones • Vehicles parking on road corners • Vehicles running red light outside Space due to congestion frustration • Traffic entering/leaving side streets of Church street ignoring pedestrians **Solutions Suggested by the Wider Community:** • Clearway in morning southbound and in evening northbound (3 responses) • More clearways (2 responses) • 'No Turning' signs except for residents (2 responses) • Re-develop Monash Freeway off-ramp so driver cannot turn right at Church Street • Enforce clearways • No right turn for northbound traffic • Remove bicycle lanes • Greater policing of bicycle lanes • Bicycle lanes • Traffic Lights on corner of Church Street and Howard Street
Punt Road (2 Responses)	• Less than 3 responses
	Specific Community Issues: • Vehicle noise due to horn use by vehicles frustrated by other vehicles cutting in on them trying to enter Monash Freeway on-ramp (2 responses) • Congestion caused by parked vehicles • Congestion during peak hours **Solutions Suggested by the Wider Community:** • Make left hand lane freeway entry only • Install merge signs where 2 lanes become 1 near Kelso Street

Location	Main Traffic Issues
	• Clearway • Turn footpath on east side of Punt Road a shared use pedestrian/bicycle path
Swan Street (4 Responses)	• **Irresponsible Driving** (50% major problem, peak hours)
	Specific Community Issues: • Congestion (6 responses) • Not enough space for cyclists (5 responses) • Congestions due to illegally parked vehicles • Difficulty turning right into Cremorne • Risk of car dooring **Solutions Suggested by the Wider Community:** • Clearways in both directions (2 responses) • Synchronise traffic lights to reduce congestion (2 responses) • Police to book vehicles doing illegal U-Turns • Remove retailers signs to provide better pedestrian access • Reduce speed limits • Add bicycle lanes
Responses from these streets did not highlight any significant issues:	• Cubitt Street, Dover Street, Green Street, Hill Street, Huckerby Street, Pearson Street, Wellington Street
Less than 3 responses were received from these streets	• Albert Street, Barkly Avenue, Burgess Street, Cotter Street, Dove Street, Durham Street, Goodwin Street, Kipling Street, Lesney Street, Melrose Street, Newton Street, Northcote Street, Palmer Parade, Prince Patrick Street, Punt Road, Walnut Street, White Street, William Street, Willis Street, Yarra Street, Yorkshire Street.
No responses were received from these streets	• Adelaide Street, Adolph Street, Bent Street, Blanche Street, Byron Street, Dale Street, Davis Street, Dunn Street, Electric Street, Fitz-gibbon Street, Gibbons Street, Gough Place, Gough Street, Hargreaves Street, Harvey Street, Hotham Place, Hutchings Street, Jessie Street, Kingston Street, Little James Street, Little Lesney Street, Little Rose Street, Loretto Street, Munro Street, Oddys Lane, Parkins Lane, Railway Crescent, Railway Place, Rout Street, Royal Place, Russell Street, Sanders Place, Shakespeare Place, Shamrock Street, Victoria Avenue, Willow Lane, Wiltshire Street, Wright Street.
Local Street/ Local Street Intersections	
Balmain Street/Cremorne Street	**Specific Community Issues:** • High vehicle speed around a blind corner (3 responses) • Dangerous for pedestrians **Solutions Suggested by the Community:** • Better signage indicating 1 lane only in Cremorne Street • Traffic island • Remove nature strip foliage

Location	Main Traffic Issues
Balmain Street/Gwynne Street	**Specific Community Issues:** • Difficult to see vehicles travelling along Balmain Street when turning out of Gwynne Street (5 responses) • High vehicle speeds (2 responses) • Inadequate footpaths **Solutions Suggested by the Community:** • Mirror to see around corner (2 responses) • Enforce recommended slower speed
Cremorne Street/Stephenson Street	**Specific Community Issues:** • Difficulty turning into Cremorne Street from Stephenson street due to congestion (5 responses) • Vehicles turning right out of Stephenson Street speeding along Cremorne Street to turn right at Swan Street • Lack of vision around corner **Solutions Suggested by the Community:** • Clearway (3 responses) • Traffic lights at intersection • Zebra crossing at intersection
Madden Grove/Mary Street	**Specific Community Issues:** • Illegal right hand turns into Madden Grove from Mary Street (4 responses) • Right turn restrictions into Madden Grove (2 responses) • Vehicles turning left onto Mary Street pull out right onto a pedestrian crossing and can see pedestrians crossing **Solutions Suggested by the Community:** • Enforce turning restrictions (5 responses) • Remove turning restrictions (2 responses) • Clearway • Move pedestrian crossing further down along Mary Street

Location	Main Traffic Issues
Arterial Road/Local Street Intersections	
Church Street/Balmain Street	**Specific Community Issues:** • Dangerous for pedestrians crossing intersection due to vehicles turning left into Balmain Street (3 responses) • Congestion during evening peak caused by vehicles turning right onto Church Street (2 responses) **Solutions Suggested by the Community:** • Green left turn arrow from Church Street into Balmain Street • Better signage indicating that pedestrians are present • Right turn arrow out of Balmain Street • Make Balmain Street exit 2 lanes
Church Street/Howard Street	**Specific Community Issues:** • Congestion caused by difficulty in turning into and out of Church Street • High vehicle speeds • U-Turns in street during congestion **Solutions Suggested by the Community:** • Turning restrictions from Church Street into Howard Street
Swan Street/Cremorne Street	**Specific Community Issues:** • Congestion getting on to Swan Street during peak hour (17 responses) • Congestion due to parked vehicles (2 responses) • Congestion turning into Cremorne Street from Swan Street • Inadequate pedestrian facilities **Solutions Suggested by the Community:** • Longer green lights that do not coincide with pedestrian movements so that traffic flows better (5 responses) • Remove parking near Precinct Hotel (4 responses) • Move pedestrian crossing to eastern side of intersection on Swan Street (4 responses) • Let pedestrians cross diagonally from Station to Precinct Hotel • Make middle lane of Cremorne Street able to turn left or right into Swan Street • Install overpass from train station for pedestrians crossing Swan Street • Green right turn arrow on Swan Street for traffic into Cremorne Street • Improve traffic light times • Install an all direction pedestrian crossing phase and a green turn left phase from Cremorne Street into Swan Street at intersection

Location	Main Traffic Issues
Punt Road/Gough Street	**Specific Community Issues:** • Difficult to turn into Punt Road from Gough Street due to vehicles parking right up to the intersection (2 responses) **Solutions Suggested by the Community:** • Clearway
Swan Street/Mary Street	**Specific Community Issues:** • Illegal left turns into Mary Street during morning peak hours (3 responses) • Vehicles forced to turn right here due to Madden Grove restrictions during peak hour which is difficult to do so (2 responses) **Solutions Suggested by the Community:** • Enforce turning restrictions (3 responses)
Richmond Primary	
Barkly Avenue/Mary Street/Burgess Street	**Specific Community Issues:** • High vehicle speeds (4 responses) • Traffic volume (2 responses) • Unsafe to pick up and drop off children (2 responses) • Difficult to see pedestrians crossing at pedestrian crossing • School children's access to oval opposite the school during school hours • Through traffic makes the area dangerous for children • Vehicles stopping across pedestrian crossings around the school **Solutions Suggested by the Community:** • Close Mary Street across the school (3 responses) • Install traffic lights at Richmond Primary School on Mary Street (2 responses) • Move pedestrian crossing to where it is easier to see pedestrians • Reinstate 10km/h speed limit across school

6. IDENTIFICATION OF ISSUES – ENGINEERING INVESTIGATION

Our investigations of traffic issues raised by the community and review of existing traffic and accident data identified a number of issues (but not limited to) to be considered in the development of the Traffic Management Plan. These include:

- Safety concerns at the following locations:
  - Punt Road and Kelso Street (reduced sight distance due to parked cars),
  - Gough Street and ROW (reduced sight distance due to bend in road),
  - Gough Street and Cremorne Street (reduced sight distance),
  - Cremorne Street and Balmain Street (reduced sight distance),
  - Balmain Street (reduced sight distance exiting Gwynne Street and traffic speed through existing traffic management device),
  - Balmain Street and Church Street (intersection safety),
  - Church Street and Gordon Street (intersection safety),
  - Punt Road and Rout Street (intersection safety),
  - Richmond Primary School (pedestrian safety crossing Mary Street), and
  - Walnut Street (pedestrian safety between Balmain Street and Newton Street).
- Operational issues at the following locations:
  - Swan Street and Cremorne Street (reduced intersection capacity due to pedestrians and parked cars),
  - Stephenson Street and Cremorne Street (difficulty turning right from Stephenson Street into Cremorne Street due to traffic queues),
  - Swan Street and Mary Street (vehicles ignoring existing 'No Left Turn' restriction),
  - Mary Street and Madden Grove (vehicles ignoring existing 'No Right Turn' restriction), and
  - Richmond Primary School (congestion at school pick-up/drop-off times).
- Traffic problems in the following streets:-

  Local Streets/Collector Roads

  - Cremorne Street (traffic speed, traffic volumes and irresponsible driving),
  - Balmain Street (traffic speed and traffic volumes),
  - Brighton Street (traffic speed and traffic volumes),
  - Mary Street (traffic speed, traffic volumes and irresponsible driving),
  - Wellington Street (traffic speed and traffic volumes),
  - Gwynne Street (traffic speed, traffic volumes and heavy vehicles),
  - Stephenson Street (traffic speed and irresponsible driving),
  - Chestnut Street (traffic speed and irresponsible driving),
  - Kelso Street (traffic speed, traffic volumes and irresponsible driving),
  - Chapel Street (traffic speed and irresponsible driving),

- Gordon Street (traffic speed and heavy vehicles),
- Howard Street (traffic speed, traffic volumes, irresponsible driving and heavy vehicles),
- Amsterdam Street (traffic speed and traffic volume),
- Davis Street (traffic speed),
- Rose Street (traffic speed, traffic volume and irresponsible driving), and
- James Street (traffic speed and traffic volume).

Based on the above, the key issues to be investigated in the development of the Traffic Management Plan are identified in Figure 10.

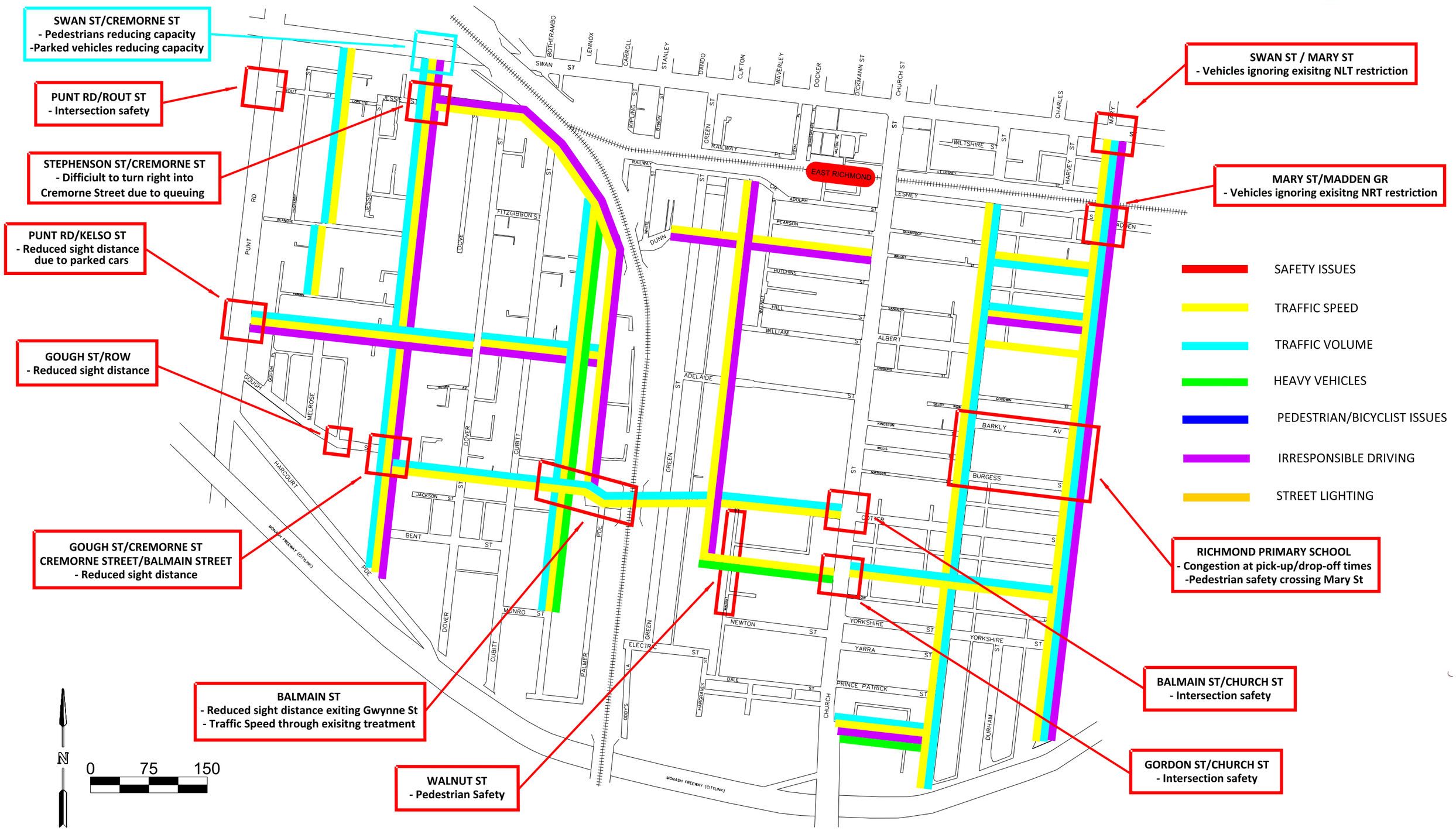


FIGURE 10: COMMUNITY KEY ISSUES DIAGRAM

6.1. TRAFFIC SPEEDS

6.1.1. Traffic Speed in Local Streets

The issue of traffic speed was one of the main concerns raised by the local community in the majority of local streets. Significantly, **66%** of the overall community responses to the initial questionnaire identified traffic speed as either a **major** or **minor** issue in their street.

Table 9 presents the distribution of questionnaire survey responses for the streets within the study area, based on streets with more than 3 responses highlighting traffic speed as a major issue. The table shows that Balmain Street (12 responses) and Brighton Street (11 responses) had the highest number of respondents identifying traffic speed as a **major** issue in their street. Of the remaining local streets, Green Street, Chestnut Street, Mary Street, Cubitt Street, Gwynne Street, Amsterdam Street, Wellington Street, Cremorne Street and Kelso Street also generated a moderate number of respondents identifying traffic speed as a major issue.

Table 9: Responses to the Extent of Traffic Speed Issues in their Street

Street	Questionnaire Responses					
	No. of Responses	No. of Properties	% of Street Responding	Speed Problem		
				Major	Minor	No
Balmain Street	16	66	24.2%	**12**	2	1
Brighton Street	22	181	12.2%	**11**	10	1
Green Street	11	99	11.1%	**5**	4	1
Chestnut Street	10	104	9.6%	**5**	3	2
Mary Street	8	78	10.3%	**5**	2	1
Cubitt Street	12	152	7.9%	**4**	2	4
Gwynne Street	8	23	34.8%	**4**	1	3
Amsterdam Street	7	41	17.1%	**3**	4	0
Wellington Street	10	89	11.2%	**3**	3	4
Cremorne Street	12	184	6.5%	**3**	2	3
Kelso Street	3	47	6.4%	**3**	0	0

All of the streets within the study area have a posted speed limit of 40km/h.

The 85th percentile speed in the surveyed streets (based on the most recent data) ranges between and between 46.8 and 24.8 km/h for the local streets and collector roads. Survey results with an 85th percentile traffic speed greater than 42km/h, ranked by the 85th percentile speed are presented in Table 10, with a diagram of the results provided at Figure 11.

Table 10: Local Street Ranked by 85th Percentile Traffic Speed

Rank	Street	Year	Daily Volume Veh/day	85th %ile speed km/h	Volume of Vehicles Greater Than	
					40 km/h	50 km/h
1	**Cremorne Street** b/w Gough Street and Kelso Street	2011	5,323	**46.8**	2,486	405
2	**Stephenson Street** b/w Gwynne Street and Cubitt Street	2010	1,491	**46.4**	608	118
3	**Kelso Street** b/w Melrose Street and Cremorne Street	2012	1,477	**45.7**	644	87
4	**Mary Street** b/w Goodwin Street and Davis Street	2010	3,086	**45.7**	1,469	157
5	**Mary Street** b/w James Street and Madden Grove	2010	4,422	**45.4**	1,685	248
6	**James Street** b/w Brighton Street and Mary Street	2011	963	**44.6**	362	42
7	**Cremorne Street** b/w Bent Street and Balmain Street	2012	2,056	**43.9**	676	80
8	**Balmain Street** b/w Cremorne Street and Cubitt Street	2012	5,586	**43.2**	1,497	184
9	**Balmain Street** b/w Church Street and Chestnut Street	2012	5,874	**42.8**	1,580	170

Figure 11: 85th Percentile Traffic Speeds (Above 42km/h)

While the 85th percentile speed in several streets is greater than the 40 km/h limit, the volume of traffic in these streets varies considerably. As a result, some low volume streets may have a slightly higher 85th percentile speed, but with few vehicles speeding in real terms compared with other busier streets. Accordingly, it is important to also consider the volume of vehicles speeding when prioritising traffic speeding problems and considering the relative need for treatment. Other considerations in relation to traffic speed issues include road geometry (road width and alignment) and the degree of pedestrian activity in a street (as lower traffic speeds can reduce the potential and severity of pedestrian crashes).

Table 11 ranks the surveyed streets in terms of the number of vehicles exceeding the speed limit (i.e. travelling over 40 km/h), with streets with more than 300 vehicles exceeding the speed limit a day presented.

Table 11: Streets Ranked by Volume of Vehicles Travelling Above the Speed Limit

Rank	Street	Year	Daily Volume Veh/day	85th %ile speed km/h(2)	Volume of Vehicles Greater Than	
					40 km/h	50 km/h
1	**Cremorne Street** b/w Gough Street and Kelso Street	2011	5,323	46.8	**2,486**	405
2	**Mary Street** b/w James Street and Madden Grove	2010	4,422	45.4	**1,685**	248
3	**Balmain Street** b/w Church Street and Chestnut Street	2012	5,874	42.8	**1,580**	170
4	**Balmain Street** b/w Cremorne Street and Cubitt Street	2012	5,586	43.2	**1,497**	184
5	**Mary Street** b/w Goodwin Street and Davis Street	2010	3,086	45.7	**1,469**	157
6	**Cremorne Street** b/w Bent Street and Balmain Street	2012	2,056	43.9	**676**	80
7	**Kelso Street** b/w Melrose Street and Cremorne Street	2012	1,477	45.7	**644**	87
8	**Stephenson Street** b/w Gwynne Street and Cubitt Street	2010	1,491	46.4	**608**	118
9	**Cremorne Street** b/w Swan Street and Stephenson Street	2010	7,894	38.2	**608**	32
10	**Balmain Street** b/w Gwynne Street and Rail Bridge	2012	6,776	37.1	**481**	20
11	**Brighton Street** b/w Yarra Street and Prince Patrick Street	2012	1,720	41.8	**389**	31
12	**James Street** b/w Brighton Street and Mary Street	2011	963	44.6	**362**	42

Table 10 and Table 11 highlight speeding as an issue along many of the streets within the study area. **Cremorne Street** (collector road), **Balmain Street** (collector road) and **Mary Street** (local street) clearly have the highest traffic speeds, with between approximately 1,450-2,500 vehicles per day exceeding the 40km/h speed limit.

Of the other local streets, **Kelso Street, Stephenson Street, Brighton Street and James Street** have also been identified as having speeding issues.

It should be noted that many of the responses to the initial community circular requested greater enforcement of speed limits by police as a deterrent to traffic speed and irresponsible driving.

6.2. TRAFFIC VOLUME

6.2.1. Daily Traffic Volumes

Overall, 71% of community responses to the initial questionnaire identified traffic volume as being a major or minor issue in their street. This percentage is generally higher than other studies completed by Traffix Group in other inner metropolitan areas.

Table 12 presents the distribution of questionnaire survey responses for the key streets within the study area, based on streets with more than 3 responses highlighting traffic volume as a major issue. **Brighton Street** and **Balmain Street** received the highest number of respondents identifying traffic volume as a major issue in their street.

Table 12: Responses to the Extent of Traffic Volume Issues in their Street

Street	Questionnaire Responses					
	No. of Responses	No. of Properties	% of Street Responding	Volume Problem		
				Major	Minor	No
Brighton Street	22	181	12.2%	**8**	10	3
Balmain Street	16	66	24.2%	**8**	7	0
Cremorne Street	12	184	6.5%	**6**	2	2
Mary Street	8	78	10.3%	**6**	0	2
Green Street	11	99	11.1%	**5**	6	0
Chestnut Street	10	104	9.6%	**4**	3	3
Gwynne Street	8	23	34.8%	**4**	2	2
Amsterdam Street	7	41	17.1%	**4**	2	1
Howard Street	4	110	3.6%	**4**	0	0

The daily traffic volumes in the streets surveyed ranged from 34 vehicles per day in Goodwin Street to 7,894 vehicles per day in Cremorne Street. A comparison of the most recent recorded traffic volumes for the streets in identified in Table 12 versus the design classification traffic volumes is presented in Table 13, while a figure presenting the streets with traffic volumes above 1,000 vehicles per day is provided at Figure 12.

Table 13: Road Classification and Maximum Recorded Traffic Volumes

Street	Road Classification	Typical Design Standards Volume (veh/day)	Max. Recorded Volume (veh/day)
Brighton Street	Local Road	0 - 3,000	1,720
Balmain Street	Collector Street	3,000 - 7,000	6,776
Cremorne Street	Collector Street	3,000 - 7,000	7,894
Mary Street	Local Road	0 - 3,000	4,422
Green Street	Local Road	0 – 2,000	512
Chestnut Street	Local Road	0 – 2,000	648

Street	Road Classification	Typical Design Standards Volume (veh/day)	Max. Recorded Volume (veh/day)
Gwynne Street	Local Road	0 – 2,000	607
Amsterdam Street	Local Road	0 – 2,000	1,272
Howard Street	Local Road	0 – 2,000	1,449

Note: Typical Design Volumes based on Cl 56 of the Yarra Planning Scheme.

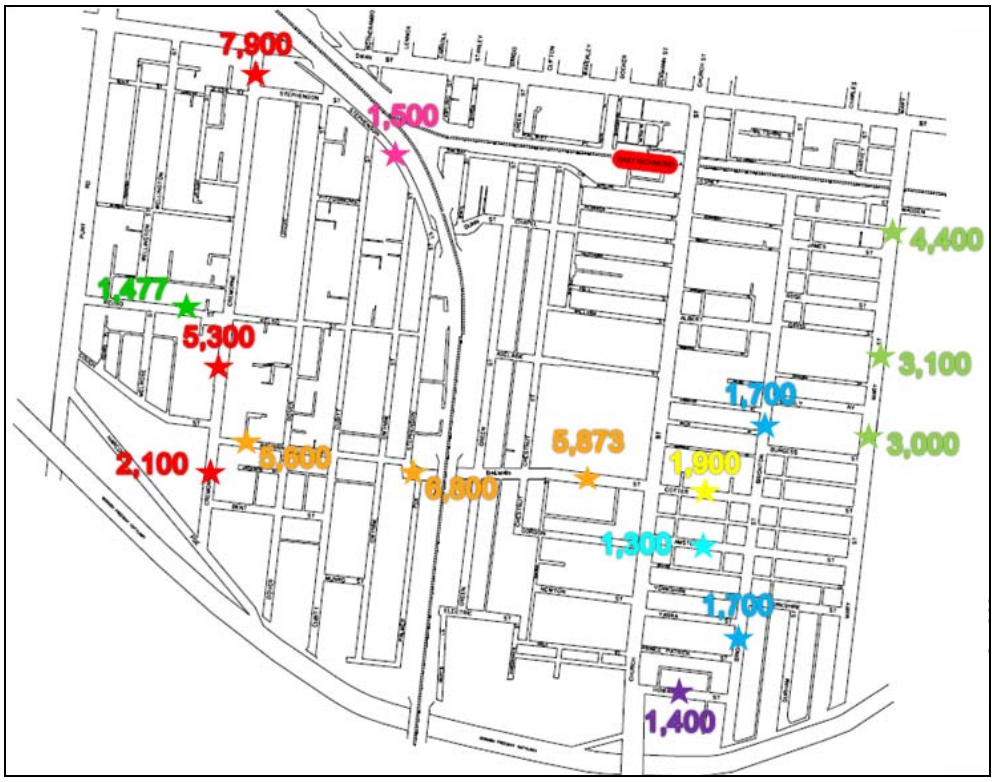


Figure 12: Traffic Volumes above 1,000 Vehicles per Day

Based on Table 13, the daily traffic volumes in the local area are generally within acceptable limits.

The exception relates to Mary Street, where the traffic volumes at the northern end are above the typical traffic volume range and the traffic volumes in the middle section are at the higher end of the typical traffic volume range. On this basis, treatments to reduce traffic volumes on Mary Street are considered to be warranted.

6.2.2. Peak Hour Traffic Volumes

For peak hour traffic volumes, a normal ratio of peak hour to daily traffic volume for a local street is generally below 10-12%, with volumes significantly above this generally indicating a degree of 'rat-running' during peak periods. It is noted that these measures generally apply to purely residential street, however as indicated previous, the study area contains predominantly commercial / business zonings. On this basis, peak hour volumes would be expected to be different to those of street that are purely residential, given the level of staff activity in the local area. This is particularly the case of the section of the local area to the west of Church Street which contains a much higher level of commercial / business zoning than the section of the local area to the east of Church Street.

In any case, these measures have been utilised to provide a guide for potential through traffic in the study area. Recent traffic surveys for the local streets within the study area have shown that the peak hour volumes vary for the various streets within the study area, with the peak hour volumes above 12% noted in the following table.

Table 14: Peak Hour Traffic Volume Ratios

Location	North or East Direction	South or West Direction
AM Peak Period		
Howard Street b/w Church Street and Brighton Street	**17%**	11%
Parkins Lane b/w Wellington Street and Cremorne Street	**16%**	**4%**
Brighton Street b/w Yarra Street and Princess Street	**15%**	**10%**
Davis Street b/w Brighton Street and Mary Street	**14%**	**-**
Kelso Street b/w Melrose Street and Cremorne Street	**13%**	**10%**
Barkly Avenue b/w Brighton Street and Mary Street	-	**22%**
Chapel Street b/w Church Street and Walnut Street	-	**21%**
Mary Street b/w James Street and Madden Grove	8%	**19%**
Cotter Street b/w Church Street and Brighton Street	7%	**18%**
Mary Street b/w Barkly Avenue and Burgess Street	8%	**18%**
Balmain Street b/w Church Street and Chestnut Street	7%	**17%**
James Street b/w Brighton Street and Mary Street	8%	**17%**
Mary Street b/w Goodwin Street and Davis Street	8%	**17%**
Chapel Street b/w Green Street and Chestnut Street	10%	**16%**
Gwynne Street b/w Balmain Street and Munro Street	8%	**16%**
Amsterdam Street b/w Church Street and Brighton Street	8%	**15%**
Brighton Street b/w Burgess Street and Barkly Avenue	12%	**15%**
Gordon Street b/w Walnut Street and Church Street	8%	**15%**
PM Peak Period		
Wellington Street b/w Blanche Street and Parkins Lane	**27%**	8%
Gordon Street b/w Walnut Street and Church Street	**18%**	8%

Location	North or East Direction	South or West Direction
Wellington Street b/w Blanche Street and Loretto Street	**16%**	9%
Jessie Street b/w Loretto Street and Cremorne Street	**14%**	-
Mary Street b/w Barkly Street and Burgess Street	**14%**	10%
Mary Street b/w Goodwin Street and Davis Street	**14%**	11%
Mary Street b/w James Street and Madden Grove	**14%**	10%
Cotter Street b/w Church Street and Brighton Street	**13%**	9%
Green Street b/w Adelaide Street and Chapel Street	**13%**	-
James Street b/w Brighton Street and Mary Street	**13%**	9%
Rose Street b/w Brighton Street and Mary Street	**13%**	-
Parkins Lane b/w Wellington Street and Cremorne Street	11%	**38%**
Brighton Street b/w Yarra Street and Prince Patrick Street	8%	**18%**
Howard Street b/w Church Street and Brighton Street	11%	**17%**
Barkly Avenue b/w Mary Street and Brighton Street	-	**16%**
Burgess Street b/w Mary Street and Brighton Street	-	**15%**
Balmain Street b/w Cremorne Street and Cubitt Street	8%	**14%**
Cremorne Street b/w Bent Street and Balmain Street	12%	**14%**
Goodwin Street b/w Mary Street and Brighton Street	-	**13%**
Kelso Street b/w Melrose Street and Cremorne Street	8%	**13%**

Through traffic routes in the study area have been identified as presented at Figure 13. These routes have been identified based on the available traffic survey data in Table 14, a review the road network connectivity and the number of properties located in each street.

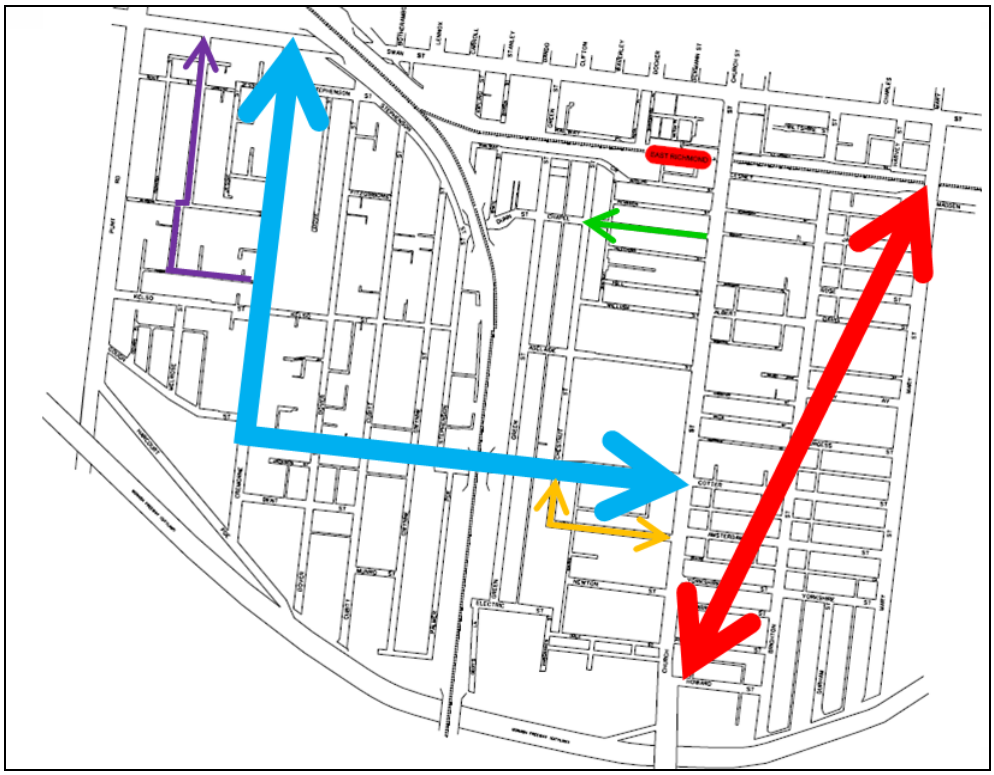


Figure 13: Identified Through Traffic Routes

Based on Figure 13, traffic management to manage peak hour through traffic volumes is considered to be warranted along the identified through traffic routes.

6.2.3. Conformance to Existing Turn Bans

A number of responses to the community questionnaire indicated that vehicles were travelling against the existing 'No Right Turn' ban from Mary Street into Madden Grove and the 'No Left Turn' ban from Swan Street into Mary Street.

The existing turn bans operate at the following times:

- **No Right Turn** (Mary Street into Madden Grove) – 4pm and 6:30pm Monday-Friday, and
- **No Left Turn** (Swan Street into Mary Street) – 7am and 8:45am Monday-Friday.

City of Yarra conducted a turning movement count at the intersection of Mary Street and Madden Grove on Tuesday, 20th September, 2011 to ascertain the level of vehicles turning against the existing right turn ban. A review of the results indicates that:

- **377 vehicles** – Turned right from Mary Street into Madden Grove between 4pm and 6:30pm, and
- **13 vehicles** – Headed northbound on Mary Street and performed a U-turn then turned left into Madden Grove from Mary Street (to avoid the existing No Right Turn ban).

Furthermore, site inspections have indicated that a number of vehicles are not adhering to the 'No Left Turn Ban' at Swan Street and Mary Street.

A review of the wider road network indicates that it is likely that vehicles are ignoring the existing turn bans in order to 'rat run' through the local area and avoid congestion on the arterial roads. In the local area to the east of Church Street, vehicle volumes are generally from north to south in the AM peak period and south to north in the PM peak period.

On the basis of the above, it is considered that the traffic management treatments are warranted to reduce the instances of vehicles travelling against the existing turn bans.

6.3. TRAFFIC SAFETY IN LOCAL STREETS

6.3.1. CrashStats Review

A review of the past 5 years of available crash data for the study area revealed that there were a total of 8 crashes on the internal local streets within the study area in the period from January 2006 to December 2010. Of these crashes, 6 occurred at different local street intersections, and 2 occurred at various mid-block locations on local streets. With regards to the types of crashes which occurred, 3 involved pedestrians struck by vehicles, 2 involved vehicles accessing properties, 1 crash was a cross traffic type crash (at intersection), 1 crash was a right near type crash and 1 crash involved a cyclist.

Given that there was no clear pattern to the crashes which occurred on local streets throughout the study area, no specific remedial actions are considered necessary at this time.

It is noted that traffic speed was likely to be a contributing factor in a number of these crashes and accordingly it is appropriate to reduce traffic speed in key streets (as identified in Section 6.1.1) in order to improve traffic safety.

It is recommended that Council continue to monitor traffic safety on local streets.

6.3.2. Reduced Sight Distance

The local community identified reduced/restricted sight distance at a number of locations throughout the study area as follows:

- Punt Road and Kelso Street (reduced sight distance due to parked cars),
- Gough Street and ROW (reduced sight distance due to bend in road),
- Gough Street and Cremorne Street (reduced sight distance),
- Cremorne Street and Balmain Street (reduced sight distance), and
- Balmain Street (reduced sight distance exiting Gwynne Street).

Site inspections have been undertaken to assess the available sight distance at each locations. Where sight distance restrictions were observed, the sight distance was generally limited by existing buildings and structures on private property.

On this basis, there is no low cost solution to removing the sight distance obstructions within the private properties. However, one of the key objectives of the Traffic Management Plan is to reduce traffic speeds throughout the local area and therefore minimise the potential for crashes at these locations.

6.3.3. Balmain Street

A number of responses to the initial community circular highlighted safety concerns associated with the existing parking spaces on Balmain Street between Cremorne Street and Cubitt Street. Specifically, the safety concerns were related to the width of carriageway that was available when cars were parked on one side of the road.

Site inspections have indicated that the carriageway width of this section of Balmain Street is in the order of 6.2m. When cars are parked within the marked spaces on the northern side of the road the carriageway width is reduced to approximately 4.2m. Given the available carriageway width, drivers may think that two-way simultaneous flow can continue, however, this is likely to lead to collisions and damage to parked vehicles (as indicated by a number of responses to the initial community circular).

Furthermore, the parking also results in drivers having to 'yield' to on-coming traffic, which the community identified is a cause of congestion during peak periods.

In view of the above, traffic management to address these concerns are considered to be warranted.

6.3.4. Balmain Street / Cremorne Street

The intersection of Balmain Street and Cremorne Street was identified by a number of community members as an intersection with safety concerns.

A review of the VicRoads Crashstats database for the past 5 years indicates that no casualty crashes have occurred at the subject intersection in this period.

Community members have suggested that the Balmain Street approach should be controlled with a 'Stop' sign rather than a 'Give Way' sign. A review of the Australian Standard for Traffic Control Devices (AS1742.2-2009) indicates that for a 40km/h speed zone (Cremorne Street and Balmain Street) 'Stop' signs should only be installed at locations where sight distance is below 20m. A review of the available sight distance at the subject intersection indicates that 20m of sight distance is not achieved to the north of the intersection due to the presence of parked cars and vegetation. On this basis the installation of a 'Stop' control is considered to be warranted at this location.

6.3.5. Walnut Street

The local community identified pedestrian safety concerns in Walnut Street to the south of Balmain Street. The concerns related to the presence of a number of pedestrian access points along Walnut Street, in particular the coffee shop in the vicinity of Balmain Street.

Site inspections have indicated that there is a level of pedestrian activity occurring in Walnut Street. The construction of this section of Walnut Street is similar to a small laneway, where vehicles enter via a crossover at Balmain Street.

In order to improve pedestrian safety traffic management treatments were considered to be warranted in Walnut Street.

6.3.6. Chapel Street

A number of responses to the community questionnaire indicated concerns with the number of vehicles driving against the existing one-way treatment (east to west) in Chapel Street between Chestnut Street and Church Street.

A review of recent traffic survey data supports the observations of the local community, with approximately 20 vehicles per day heading eastbound (against the one-way treatment).

Site inspections have indicated that existing signage and linemarking to indicate the one-way restriction at the Chestnut Street end may not be readily identifiable to drivers.

On the basis of the above, it is considered that the traffic management treatments are warranted to reduce the instances of vehicles travelling against the existing 'one-way' restriction on Chapel Street.

6.3.7. Richmond Primary School

A number of responses to the community questionnaire indicated concerns with pedestrian safety and congestion on the roads surrounding Richmond Primary School.

Site inspections during both the school pick up and drop off times have indicated that while traffic volumes and parking demands do increase during these periods, traffic flow is generally maintained. Furthermore, the congestion associated with the peak times at the Primary School only occurs for a short period of time (20-30mins) and therefore no treatments are considered to be required to reduce congestion associated with the Primary School activities.

Site inspections indicate that a significant level of traffic management has previously been installed in the vicinity of the Primary School including a pedestrian crossing, road humps and warning signage. Significantly, the 85th percentile speed along Mary Street adjacent to the Primary School has been recorded at 24.8km/h.

However, there were a number of concerns raised by the community regarding the safety of children crossing Mary Street outside of the times when the crossing is patrolled by a supervisor. Specifically, the school regularly utilises the oval on the eastern side of Mary Street throughout the day.

A number of community members had requested that Mary Street is closed to traffic between Barkly Avenue and Burgess Street. However, an investigation previously undertaken by Traffix Group in 2011 indicates that any form of road closure will have significant impacts on the traffic volumes of the surrounding streets in particular Brighton Street. On this basis, a road closure of Mary Street adjacent to the Primary School is not considered to be an appropriate measure.

However, improvements to the pedestrian crossing are considered to be suitable to further reduce traffic speeds on Mary Street and improve the safety of the pedestrian crossing.

6.4. Safety At Local Street Intersections With Arterial Roads

A number of local street intersections with arterial roads were identified through the initial review of crash data as being locations of safety concerns, including:

- Balmain Street and Church Street (7 crashes),
- Church Street and Gordon Street (4 crashes), and
- Punt Road and Rout Street (4 crashes).

A detailed review of the existing crash data for these sites indicated that there are no particular crash patterns. As a result, there are no remedial engineering solutions that can be applied at this point in time. It is recommended that Council continue to monitor traffic safety at local street intersections with arterial roads.

6.5. Congestion / Capacity Concerns

6.5.1. Cremorne Street / Swan Street Intersection

A number of responses to the community questionnaire indicated concerns with the level of congestion at the intersections of Cremorne Street and Swan Street. The local

community had particular concerns in the evening peak period, due to the traffic volumes heading northbound along Cremorne Street.

Traffix Group undertook observations of the intersection of Cremorne Street and Swan Street and observed a level of congestion at the intersection.

Consistent with a number of community responses, the key capacity constraints were related to the volume of pedestrians crossing on western crosswalk and vehicles parked on the western side of Cremorne Street on the approach to the Swan Street intersection.

It is noted that there is an existing 'No Stopping' restriction that applies to the on-street parking spaces on the western side of the road during the PM peak period.

It is standard design practice to locate pedestrian crosswalks on the left side of the intersection, so that left turning vehicles give way to the pedestrians. The intersection of Swan Street and Cremorne Street is currently under this arrangement. While it is acknowledged that in some locations pedestrian crosswalks are located on the right side of the intersection (i.e. against right turning vehicles), this is generally not the preferred arrangement on safety grounds.

6.5.2. Cremorne Street / Stephenson Street Intersection

A number of responses to the initial community questionnaire indicated difficulty turning right out of Stephenson Street during peak times due to vehicle queues from the Swan Street / Cremorne Street intersection.

The installation of 'Keep Clear' linemarking was indicated as a potential solution by members of the local community. However, the VicRoads Traffic Engineering Manual outlines that the use of 'Keep Clear' linemarking is primarily for the operational and safety benefits of major road traffic and that:

> '*Keep Clear markings are not used solely to assist traffic from a side road turning left and right into a major road. It is expected that drivers on the major road will keep the intersection clear (as they are obliged to do under road rule 128) and show courtesy to drivers entering the major road under queued conditions*'.

In view of the above, 'Keep Clear' linemarking was not considered to be warranted at the intersection of Cremorne Street and Stephenson Street.

6.6. HEAVY VEHICLES

The local community raised concerns in regards to heavy vehicle usage within in the local area. Overall, 52% of the community responses to the initial questionnaire identified heavy vehicles as being a major or minor issue in their street.

Streets with a number of major and minor concern responses related to heavy vehicle usage included Balmain Street (11 responses), Brighton Street (11 responses), Gwynne Street (8 responses), Green Street (8 responses), Dover Street (7 responses) and Gordon Street (4 responses).

For local streets heavy vehicle volumes in the order of 5% of daily traffic volumes are generally considered to be acceptable. For collector roads, the percentage of heavy vehicle volumes is generally expected to be between 5% and 10% of daily traffic volumes. Once again, these target percentages are based on typical residential local streets. In the case of the Balmain local area, land use is predominantly commercial / business zoning and therefore higher heavy vehicle volumes could be expected. This is particularly the case for streets with access points to commercial properties.

A comparison of the most recent recorded heavy vehicle percentage for the streets in identified above versus the target heavy vehicle percentage is presented at Table 15.

Table 15: Heavy Vehicle Percentage of Daily Traffic Volumes

Street	Section	Road Classification	Target Heavy Vehicle Percentage of Daily Traffic Volume	Recorded Heavy Vehicle Percentage of Daily Traffic Volume Percentage (No. Of Vehicles)
Balmain Street	Btw Gwynne St and Rail Bridge	Collector Street	5-10%	3.8% (257)
	Btw Cremorne St and Cubitt St			3.2% (179)
	Btw Church St and Chestnut St			3.9% (229)
Brighton Street	Btw Yarra St and Prince Patrick St	Local Road	5%	2.3% (40)
	Btw Burgess St and Barkly St			6.2% (105)
Gwynne Street	North of Balmain St	Local Road	5%	7.8% (29)
	South of Balmain St			5.5% (29)
Green Street	Btw Adelaide St and Chapel St	Local Road	5%	4.8% (25)
Dover Street	Btw Kelso St and Fitzgibbon St	Local Road	5%	7.1% (43)
Gordon Street	Btw Walnut St and Church St	Local Road	5%	2.1% (12)

The table above indicates that heavy vehicle usage in Gwynne Street, Brighton Street and Dover Street is slightly above the target range, however, given the significant level of commercial land use in the local area, the level of heavy vehicle usage is considered to be acceptable and crucial to allow for access to local business properties.

6.6.1. Gwynne Street, South of Balmain Street – Heavy Vehicles

A number of residents of Gwynne Street indicated concerns with truck usage of Gwynne Street principally associated with the adjacent Rosella Complex.

Traffix Group has undertaken a detailed assessment of this issue as outlined below.

Planning Considerations:

- The Land Use Zoning map within the Yarra Planning Scheme indicates that Gwynne Street is part Residential 1 zoning (west side) and part Business 3 zoning (east side), with the division of the zoning running down the centre of Gwynne Street, south of Balmain Street.
- The zoning map indicates that the change in zoning is along the centre of the street to reflect that Gwynne Street provides for a mixed use and is not purely a Residential 1 Zone street.

- The mixed zoning of Gwynne Street clearly recognises that the street can be legitimately accessed by both residential and commercial properties in accordance with any local laws.
- Our view is that the land use zoning allows for the use of Gwynne Street by both residential properties and commercial properties including the Rosella Complex. Furthermore, our view is that the land use zoning allows for direct vehicle access to Gwynne Street such as the motor repairs shop near Balmain Street.

Existing Traffic Survey Data:

- Existing Traffic survey data for Gwynne Street, south of Balmain Street indicates a daily traffic volume of approximately 500-550 vehicles per day. This traffic volume is well within the acceptable limits for a local street of up to 2,000 vehicles per day.
- Heavy vehicle activity is approximately 5.5% of daily traffic volumes (29 heavy vehicles per day). As presented in Section 6.6, this volume of heavy vehicles is considered to be appropriate, particularly given the existing access point to the Rosella Complex.

Usage of Gwynne Street:

- Gwynne Street (south of Balmain Street) provides a carriageway width of 5.5m, which provides for kerbside parallel parking on one side of the road and a single lane of traffic.
- The street operates as a two-way, single lane configuration. This operation is common place throughout the City of Yarra and is considered an acceptable arrangement.
- An independent Road Safety Audit was commissioned by Council to assess the safety implications of the Rosella Complex operating with only access via Palmer Parade (as outlined previously in Section 3.1.5). The Road Safety Audit concluded as follows:

  'From a road safety perspective, given the narrow roads and curvilinear alignment of Palmer Parade at the southern end, there is limited space for U-turn or 3-point movements. Therefore the closure of Gwynne Street increases the potential for conflict by requiring a driver of a large vehicle to perform reversing and U-turns where it is undesirable to do so'

- We agree that it is appropriate for the Rosella Complex to utilise Gwynne Street from an accessibility point of view where necessary.

Night Time Noise Nuisance:

- The Environmental Protection Agency (EPA) noise control guidelines indicate that residential properties should be protected from noise associated with industrial waste collection during the night period.
- The City of Yarra has an existing local law (Local Law No. 32) that prohibits the collection of trade waste hoppers during the night period, in line with the EPA guidelines as follows:
  - *A person must not empty or permit to be emptied a trade waste hopper between the hours of:*
    - *8pm on any Sunday and 7am the following Monday,*
    - *8pm on any day between Monday and Friday inclusive and 7am on the following day, or*
    - *8pm on a Saturday and 9am the following Sunday.*
- Following correspondence from local residents regarding waste collection occurring during the night period, Council has undertaken traffic surveys that confirmed that waste collection truck activity was occurring during the night period.
- In response to the breaches to the Local Law, Council had undertaken the following measures:
  - Physical enforcement of the Local Law by Council officers,
  - Conduct of 24 hour video surveillance to identify the offending vehicles/operators,

- Direct discussion with the waste collection operators to seek compliance to Local Law,
- Consultation with the Rosella Complex Body Corporate which has resulted in a in the use of larger skips to reduce waste collection, the delivery time changed to the day period for milk deliveries and the investigation of future waste options (i.e. compactors, etc.)

- These actions have been successful in virtually eliminating waste collection truck movements along Gwynne Street in the night period (Local Law times).

Various Resident Requests:

Requests for Road Closure of Gwynne Street at Munro Street (to Rosella Complex):

- As indicated above, the level of daily truck activity within Gwynne Street is well within acceptable limits.
- As indicated above, the Rosella Complex has a legitimate right to vehicle access via Gwynne Street.
- We are of the view that there is no justification to close access to the Rosella Complex

Requests for Truck Ban of Gwynne Street at Munro Street (to Rosella Complex):

- As indicated above, the level of daily truck activity within Gwynne Street is well within acceptable limits. On this basis it would be inappropriate and technically incorrect to apply to VicRoads for a truck ban along Gwynne Street.
- A truck ban within Gwynne Street would be ineffective as the road rules exempt trucks with a 'local destination' from any truck ban. In this situation, the Rosella Complex is a 'local destination'.

Summary:

- Based on the detailed investigations undertaken regarding truck usage of Gwynne Street **there is no basis for any traffic management to restrict truck access along Gwynne Street, south of Balmain Street**. On this basis, we recommend that Council continue their work associated with compliance of the existing local law, as follows:
  - Council continue to work with waste collection companies on scheduling truck activity in Gwynne Street,
  - Enforce Local Law No. 32 as required, and
  - Continue to work with Rosella Complex representatives to consolidate waste collection.

6.7. CYCLIST FACILITIES

Concern has been raised by the local community with regards to a lack of cyclist facilities in the local area as well as general cyclist safety concerns. Overall, 35% of community responses to the initial questionnaire identified cyclist facilities as being a major or minor issue in their street.

Under the existing conditions bicycle facilities are generally provided in isolated locations including on Church Street, Brighton Street and Mary Street.

The specific community responses indicated that Swan Street does not provide enough space for cyclists. This is reinforced by the existing crash data for Swan Street that indicates that 21 crashes in the past 5 years have involved cyclists.

Furthermore, no formal cyclist facilities are currently provided along the collector roads of Cremorne Street and Balmain Street.

In view of the above, cyclist improvement on Swan Street, Cremorne Street and Balmain Street are considered to be warranted.

Given the 40km/h speed zoning throughout the area and the relatively low traffic volumes on the remainder of the local streets, sharing of the carriageway with other road users is considered to be appropriate.

6.8. PEDESTRIAN FACILITIES

Concern has been raised by the local community with regards to pedestrian safety and a lack of pedestrian facilities in the local area. Overall, 30% of community responses to the initial questionnaire identified pedestrian facilities as being a major or minor issue in their street.

No streets were specifically identified by the community as having a lack of pedestrian facilities.

A review of the existing pedestrian facilities indicates that the local street in the area have a footpath provided on at least one-side of the road, with many including a footpath on both sides of the road. While it is acknowledged that some path widths are narrow, there are no low cost solutions to improve these pedestrian facilities.

7. DEVELOPMENT OF TRAFFIC MANAGEMENT PLAN

A Traffic Management Plan was prepared by Traffix Group to address the main traffic issues for the Balmain Precinct in consultation with the Traffic Study Group and Council officers.

7.1. IDENTIFIED ISSUES

Following the extensive review of the community circular responses, the traffic survey results and site inspections/investigations presented in Section 6, the following 'identified issues' have been identified to guide the formulation of the Proposed Traffic Management Plan:

- Traffic problems in the following streets:
  - Cremorne Street (traffic speed and through traffic),
  - Balmain Street (traffic speed and through traffic volumes),
  - Mary Street (traffic speed and through traffic volumes),
  - Kelso Street (traffic speed),
  - Stephenson Street (traffic speed),
  - Brighton Street (traffic speed and through traffic volumes),
  - James Street (traffic speed and through traffic volumes),
  - Wellington Street (through traffic volumes),
  - Gordon Street (through traffic volumes),
  - Chapel Street (through traffic volumes), and
  - Local area east of Church Street (through traffic volumes).
- Traffic safety concerns at the following locations:
  - Balmain Street (on-street parking between Cremorne Street and Cubitt Street), and
  - Walnut Street (pedestrian safety south of Balmain Street).
- Traffic problems at the following locations:
  - Mary Street/Madden Grove (conformance to existing 'No Right Turn' restriction),
  - Mary Street/Swan Street (conformance to existing 'No Left Turn' restriction), and
  - Chapel Street (vehicles driving against existing one-way restriction).
- Bicycle safety concerns at the following locations:
  - Swan Street.
- Pedestrian safety concerns at the following locations:
  - Mary Street (pedestrian crossing located adjacent to the primary school).

7.2. OBJECTIVES

The objectives of the proposed traffic management plan include:

- Reduce the incidence and potential for vehicle and pedestrian crashes in the area,
- Improve the safety of local streets by reducing traffic speeds,
- Discourage through traffic from using the local area,
- Develop proposals that address traffic concerns raised by the community, while maintaining adequate levels of accessibility for local residents, local businesses and emergency services, and
- Maximise the safety benefits of available funding (with priority given to reported crash locations and those streets with the greatest level of community concerns).

7.3. CONSIDERATION OF PROPOSED TRAFFIC MANAGEMENT PLAN

The Traffic Study Group considered a range of traffic management treatments. Information was presented to the Group on the advantages and disadvantages of various treatments, suitable applications and locations.

The proposed Traffic Management Plan that was developed for the Balmain Precinct is detailed in Figure 14 .

The following section provides a summary of the proposals that were presented to the Balmain Precinct community for comment via a questionnaire circular.

A detailed discussion of the community's response to the proposals is outlined in Section 8.

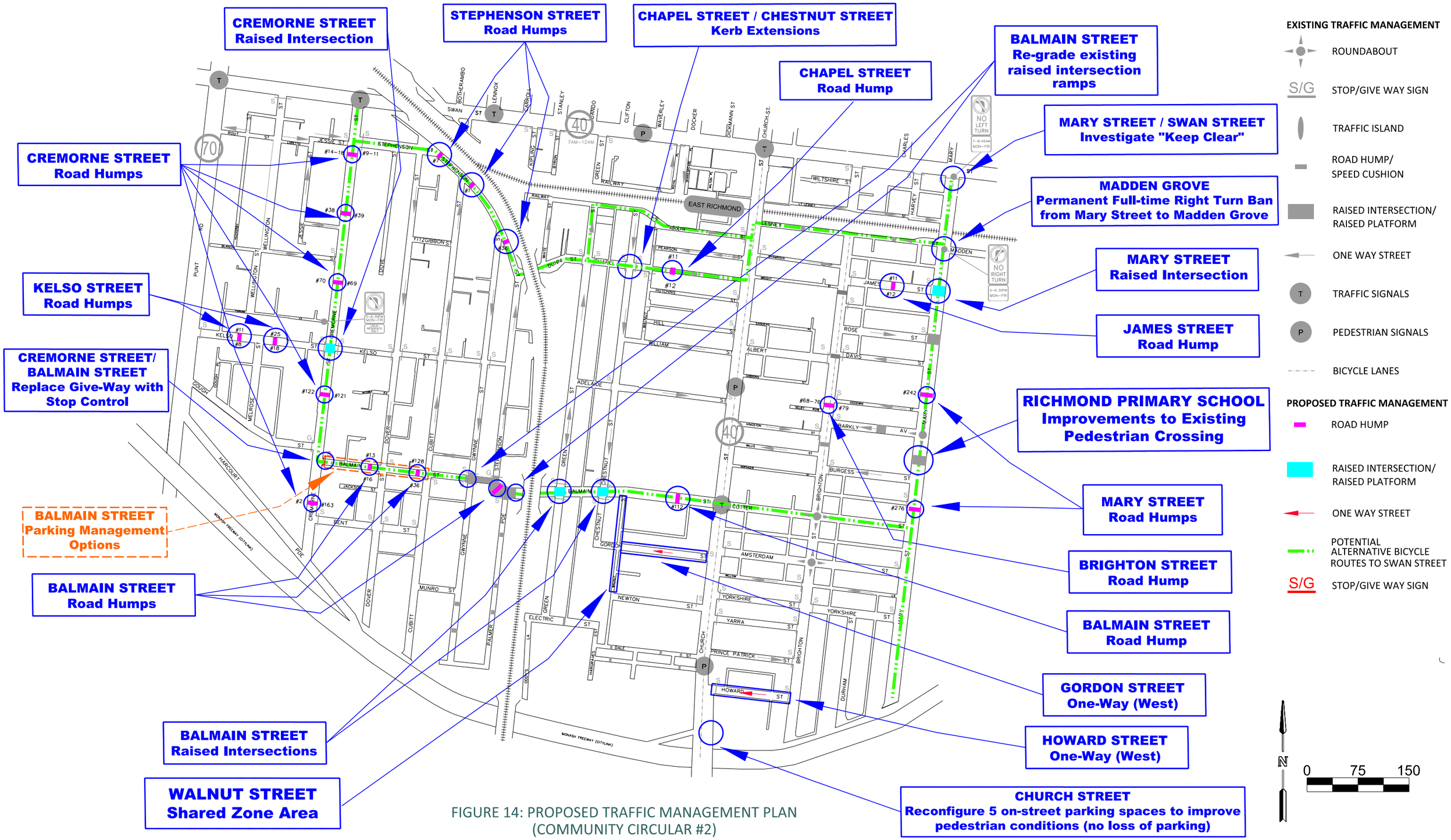


FIGURE 14: PROPOSED TRAFFIC MANAGEMENT PLAN
(COMMUNITY CIRCULAR #2)

7.4. PROPOSED TREATMENTS

The following sections outline the individual treatments included in the Proposed Traffic Management Plan for community consultation.

7.4.1. Cremorne Street

Cremorne Street forms the key north-south route through the western side of the study area. The posted speed limit in Cremorne Street is 40km/h. Traffic speeds along the whole length of the road were identified as a location that warranted traffic management treatments (refer to Section 6.1.1).

Traffic signals are located at the intersections of Swan Street, while the remaining intersections along the street are controlled by Stop/Give Way. Given the constrained carriageway widths of the intersecting roads, it is not possible to incorporate suitably designed roundabouts along Cremorne Street.

In order to achieve the required speed reduction along Cremorne Street traffic management devices were proposed at approximately 100-150m spacings. Given the number of driveways and the existing street trees/rain gardens in Cremorne Street, road humps were considered the only suitable midblock treatment. Furthermore, given the constrained road reserve width, raised intersections were considered to be the only suitable intersection treatment.

The proposed road hump locations were located away from the existing rain gardens along Cremorne Street, to ensure there are no safety issues with vehicles driving into the rain gardens.

In summary, the proposed treatments on Cremorne Street for community consultation included:

- Installation of raised intersection platform at the intersection of Cremorne Street and Kelso Street,
- Installation of road humps at the following locations:
  - Outside #14-18 and #9-11 Cremorne Street,
  - Outside #42 and #43 Cremorne Street.
  - Outside #70 and #69 Cremorne Street
  - Outside #122 and #121 Cremorne Street, and
  - Outside #154 and #155 Cremorne Street.
- Introduction of a bicycle route between Swan Street and Balmain Street.

Cremorne Street b/w Gough Street and Balmain Street – View North

Cremorne Street b/w Gough Street and Balmain Street – View South

7.4.2. Balmain Street

Balmain Street forms the key east-west route through the western side of the study area. The posted speed limit in Balmain Street is 40km/h. Traffic speeds along the whole length of the road were identified as a location that warranted traffic management treatments (refer to Section 6.1.1).

Due to the number and spacing of the existing intersections along Balmain Street, traffic management treatments were generally located at intersections. Furthermore, in order to achieve the required speed reduction along Balmain Street traffic management devices were proposed at approximately 100-150m spacings. It is noted that there are a significant number of existing underground services located along Balmain Street, which has restricted the number of potential locations for road humps or raised intersection.

A number of concerns were raised regarding the speed of vehicles over the existing raised intersection in the vicinity of the Cherry Tree Hotel. In order to slow vehicle speed in this location it was proposed to re-grade the approach ramps to the existing raised intersection (i.e. make them steeper) and install a single road hump on the existing raised pavement.

To the east of Chestnut Street there are no further intersections before Church Street. On this basis a road hump was proposed outside #112 Balmain Street.

In summary, the proposed treatments on Cremorne Street for community consultation included:

- Installation of raised intersection platforms at the following intersections:
  - At Balmain Street and Green Street, and
  - At Balmain Street and Chestnut Street.
- Installation of road humps at the following locations:
  - Outside #112 Balmain Street,
  - On the existing raised intersection between Gwynne Street and Palmer Parade,
  - Outside #128 Cubitt Street and #36 Balmain Street, and
  - Outside #13 and #16 Balmain Street.
- Introduction of a bicycle route between Cremorne Street and Church Street.

Balmain Street b/w Cubitt Street and Dover Street – View West

Balmain Street b/w Cubitt Street and Gwynne Street – View East

7.4.3. Mary Street

Mary Street was identified as a location with traffic speed and through traffic issues. Furthermore, the existing turn bans at Swan Street (No Left Turn) and Madden Grove (No Right Turn) are being ignored by a significant number of drivers.

Under the existing conditions there is an existing raised intersection at Rose Street, a roundabout a Barkly Avenue and a raised treatment adjacent to Richmond Primary School.

In order to slow traffic speeds and discourage through traffic, additional traffic management devices (road humps and raised intersection) were proposed at approximately 100m spacings. These proposed treatments were located on Mary Street either side of Richmond Primary School to ensure low speeds are maintained through the area.

It was proposed to modify the intersection of Mary Street and Madden Grove to reduce the instances of through traffic in the PM peak period. A review of the wider road network indicated that vehicles are ignoring the existing turn bans to access Coppin Street. The proposal to modify the Mary Street / Madden Grove intersection to left in / left out only (through the use of a centre median) will 'break' this through traffic route, forcing all vehicles northbound to the Mary Street / Swan Street intersection. As this intersection is unsignalised, it is likely that vehicles will encounter delays, which will be likely to reduce the 'attractiveness' of rat running through the eastern portion of the study area. It is noted that the proposed treatment will be a physical change to the intersection which will operate 24 hours per day. On this basis, there will be impacts to local residents (such as longer delays, etc.) as they will also not be able to access the traffic signals at Coppin Street.

To reduce the volume of through traffic in the AM peak period, it was proposed to request enforcements of the existing 'No Left Turn' ban at Mary Street and Swan Street. While other potential more permanent options were considered, the access for local vehicles outside of peak hours was considered to be required, particularly given the location of Richmond Primary School.

Discussions with representatives from Richmond Primary School resulted in the proposal to install a 'wombat' raised pedestrian crossing adjacent to the primary school.

It was proposed to continue the bicycle route on Mary Street to the south of Barkly Avenue to link with the proposed bicycle route on Balmain Street / Cotter Street.

In summary, the proposed treatments for community consultation on Mary Street included:

- Installation of road humps at the following locations:
  - Outside #242 Mary Street, and
  - Outside #276 Mary Street.
- Installation of a raised intersection at Mary Street and James Street,
- Modification of Mary Street / Madden Grove to Left in / Left out only,
- Request enforcement of the existing 'No Left Turn' restriction at Swan Street / Mary Street,
- Installation of a wombat crossing adjacent Richmond Primary School, and
- Introduction of a bicycle route from Swan Street to south of Yorkshire Street.

Mary Street b/w Barkly Avenue and Davis Street – View North

Mary Street b/w Burgess Street and Cotter Street – View South

7.4.4. Brighton Street

Brighton Street was identified to have traffic speed and through traffic issues. A review of the existing conditions indicates that a number of traffic management treatments are already installed at approximately 100m spacing including roundabouts at Cotter Street and Amsterdam Street and three road humps north of Burgess Street.

A 'gap' was identified in the existing spacing of devices between the road hump adjacent to Richmond Primary School and the road hump adjacent to Davis Street. These devices have an existing spacing of approximately 140m. It was proposed to install a road hump immediately north of Goodwin Street to reduce the spacing and traffic speed along this section of Brighton Street.

No specific treatments were proposed on Brighton Street to reduce through traffic. It was considered that the proposed changes at Mary Street / Madden Grove and the proposed enforcement at Swan Street / Mary Street will reduce the through traffic volumes through the whole local area to the east of Swan Street.

In summary, the proposed treatment on Brighton Street for community consultation included:

- Installation of road humps at the following locations:
  - Outside #68 and #77 Brighton Street.

Brighton Street at Burgess Street – View North

Brighton Street b/w Burgess Street and Cotter Street – View South

7.4.5. Stephenson Street

Stephenson Street spans along the southern side of the railway line between Cremorne Street and Balmain Street in the local area. Traffic speed between Cremorne Street and Dunn Street were identified as an issue on Stephenson Street.

Under the existing conditions, there are permanent 'No Stopping' restrictions along the northern side of Stephenson Street adjacent to the railway line. The intersection of Dover Street is controlled by a 'give-way' control while the intersections of Cubitt Street and Gwynne Street are 'entry only' due to the one-way (south) nature of both streets.

In order to reduce traffic speeds it was proposed to install road humps at approximately 70 - 100m spacings.

In summary, the proposed treatments for community consultation included:

- Installation of road humps at the following locations:
  - Outside #7 Stephenson Street,
  - Outside #1 Cubitt Street, and
  - Outside #36 Stephenson Street.

7.4.6. Kelso Street

Kelso Street spans east-west between Punt Road and Stephenson in the local area to the west of the Caulfield Group railway lines. Traffic speed between Punt Road and Cremorne Street was identified as an issue on Kelso Street.

Under the existing conditions, Kelso Street is controlled by Stop signs at Punt Road and Cremorne Street with no existing traffic management devices on this section of the road. The distance between Punt Road and Cremorne Street is approximately 200m.

In order to reduce traffic speeds it was proposed to include two road humps to achieve a spacing of approximately 70m.

In summary, the proposed treatments on Kelso Street for community consultation included:

- Installation of road humps at the following locations:
  - Outside #18 and #25 Kelso Street, and
  - Outside #8 and #11 Kelso Street.

Kelso Street b/w Punt Road and Cremorne Street – View West

Kelso Street b/w Punt Road and Cremorne Street – View East

7.4.7. Other Treatments

A number of other isolated treatments were proposed for the study area. A summary of these treatments is presented in the sections below.

Chapel Street:

Recent traffic surveys undertaken in Chapel Street confirm that a number of vehicles per day are driving against the existing one-way restriction.

Under the existing conditions Chapel Street is one-way westbound between Church Street and Chestnut Street and Chestnut Street is one-way southbound to both the north and south of Chapel Street. On this basis, vehicles approaching from the west can only continue south along Chestnut Street due to the one-way restrictions.

It was proposed to modify the existing kerb lines to guide and direct vehicles approaching from the west to the south. This was intended to highlight that vehicles cannot enter Chapel Street from the west.

Furthermore, it was proposed to install a single road hump outside #11 and #12 Chapel Street to reduce traffic speeds

James Street:

Traffic speeds and through traffic between Brighton Street and Mary Street were identified as issues along James Street.

In order to reduce traffic speeds it was proposed to install a single road humps outside #11 and #12 James Street that will result in a spacing of approximately 70m to the intersections at each end.

Howard Street:

Through traffic volumes between Church Street and Brighton Street were identified as an issue on Howard Street.

In order to reduce through traffic volumes it was proposed to reconfigure Howard Street to one-way westbound between Brighton Street and Church Street.

Gordon Street:

Through traffic volumes between Church Street and Chestnut Street were identified as an issue on Gordon Street.

In order to reduce through traffic volumes it was proposed to reconfigure Gordon Street to one-way westbound between Church Street and Walnut Street.

Walnut Street:

Given the lack of footpaths and direct pedestrian access to Walnut Street, pedestrian improvements were considered to be warranted in Walnut Street.

It was proposed to install a 'shared area' along Walnut Street between Balmain Street and Newton Street that will significantly reduce the posted speed limit for vehicles. This arrangement will improve the safety for pedestrians by reducing the speed differential between vehicles and pedestrians.

The final arrangements in regard to linemarking, signage and any traffic management devices (i.e. road humps) will be determined at the detailed design stage.

Walnut Street b/w Balmain Street and Gordon Street – View South

Walnut Street and Balmain Street Intersection

Church Street:

The City of Yarra is proposing to introduce additional public open space on the site of the former Church Street freeway off-ramp on the eastern side of Church Street. In order to improve pedestrian conditions it was proposed to reconfigure the existing indented parking spaces (5 spaces) to a standard parallel parking arrangement. There will be no loss of parking as a result of this reconfiguration.

8. COMMUNITY CONSULTATION – PROPOSED TRAFFIC MANAGEMENT PLAN

A community circular detailing the proposed Traffic Management Plan for the Balmain Precinct was delivered to the residents and businesses within the study area on Monday, 21st January, 2013. The nominated return date for comments on the proposed Traffic Management Plan was Monday, 4th February, 2013, however responses were accepted until Friday, 1st March, 2013.

The circular included a plan detailing the proposed Traffic Management Plan, its objectives and a brief description of the devices proposed. The circular sought the community's opinions on whether they support the proposed plan in full, part or not at all. The circular response was achieved via a simple questionnaire survey which converted into a reply-paid envelope to encourage responses.

The community were asked to indicate their support, or otherwise, for each component of the Proposed Traffic Management Plan. They were also invited to make comments to support their opinions.

A copy of the final circular is provided at Appendix E to this report.

8.1. COMMUNITY CIRCULAR RESPONSE

Approximately 2,300 questionnaire surveys were delivered to the area. A total of 392 responses were received, which represents a response rate of 17.1%. This represents a higher response rate than the 221 responses received to the initial questionnaire survey on traffic issues.

A typical response rate for similar circulars in metropolitan Melbourne is in the range of 10% - 15%.

Table 16 below presents the distribution of responses by street in the study area, and the overall level of support towards the overall proposed plan.

Table 16: Number of Responses by Street

Street	Support Treatments? No. of Responses			No Pref. Stated	Total No. of Resp.	% of Total Resp.	Aprx No. lots in street(1)	Aprx. % of Street Resp.(2)
	Full	Part	No					
Adelaide Street	0	1	0	0	1	0.3%	3	33.3%
Adolph Street	0	1	0	0	1	0.3%	6	16.7%
Albert Street	0	0	0	0	0	0.0%	15	0.0%
Amsterdam Street	1	6	4	1	12	3.1%	41	29.3%
Balmain Street	7	9	2	1	19	4.8%	66	28.8%
Barkly Avenue	0	0	0	0	0	0.0%	9	0.0%
Bent Street	0	1	2	0	3	0.8%	8	37.5%
Blanche Street	0	0	1	0	1	0.3%	7	14.3%
Brighton Street	2	21	4	3	30	7.7%	181	16.6%
Burgess Street	0	8	3	0	11	2.8%	11	100.0%

Street	Support Treatments? No. of Responses			No Pref. Stated	Total No. of Resp.	% of Total Resp.	Aprx No. lots in street[1]	Aprx. % of Street Resp.[2]
	Full	Part	No					
Byron Street	0	0	0	0	0	0.0%	5	0.0%
Chapel Street	1	1	0	0	2	0.5%	15	13.3%
Chestnut Street	2	8	2	0	12	3.1%	104	11.5%
Church Street	1	12	2	1	16	4.1%	206	7.8%
Cotter Street	0	6	0	1	7	1.8%	37	18.9%
Cremorne Street	7	12	6	1	26	6.6%	184	14.1%
Cubitt Street	3	15	5	0	23	5.9%	152	15.1%
Dale Street	0	0	0	0	0	0.0%	9	0.0%
Davis Street	0	3	0	0	3	0.8%	21	14.3%
Dove Street	2	1	0	0	3	0.8%	9	33.3%
Dover Street	2	10	3	0	15	3.8%	118	12.7%
Dunn Street	1	0	0	0	1	0.3%	3	33.3%
Durham Street	0	6	5	0	11	2.8%	37	29.7%
Electric Street	0	0	0	0	0	0.0%	7	0.0%
Fitz-Gibbon Street	0	0	0	0	0	0.0%	4	0.0%
Gibbons Street	0	0	0	0	0	0.0%	-	-
Goodwin Street	0	0	1	0	1	0.3%	6	16.7%
Gordon Street	2	3	1	0	6	1.5%	22	27.3%
Gough Place	0	0	0	0	0	0.0%	8	0.0%
Gough Street	0	1	0	1	2	0.5%	3	66.7%
Green Street	1	6	1	1	9	2.3%	99	9.1%
Gwynne Street	1	12	1	1	15	3.8%	23	65.2%
Hargreaves Street	0	0	0	0	0	0.0%	7	0.0%
Harvey Street	0	0	0	0	0	0.0%	5	0.0%
Hill Street	0	0	0	1	1	0.3%	13	7.7%
Hotham Place	0	0	0	0	0	0.0%	-	-
Howard Street	3	4	3	0	10	2.6%	110	9.1%
Huckerby Street	0	0	0	0	0	0.0%	3	0.0%
Hutchings Street	0	0	0	0	0	0.0%	-	-
James Street	2	6	1	0	9	2.3%	24	37.5%
Jessie Street	1	2	0	0	3	0.8%	23	13.0%
Kelso Street	4	1	1	1	7	1.8%	47	14.9%
Kingston Street	0	1	0	0	1	0.3%	6	16.7%
Kipling Street	0	0	0	0	0	0.0%	27	0.0%
Lesney Street	0	0	0	0	0	0.0%	17	0.0%

Street	Support Treatments? No. of Responses			No Pref. Stated	Total No. of Resp.	% of Total Resp.	Aprx No. lots in street[1]	Aprx. % of Street Resp.[2]
	Full	Part	No					
Little James Street	0	0	0	0	0	0.0%	-	-
Little Lesney Street	0	0	0	0	0	0.0%	6	0.0%
Little Rose Street	0	0	0	0	0	0.0%	-	-
Loretto Street	0	0	0	0	0	0.0%	-	-
Mary Street	3	8	5	1	17	4.3%	78	21.8%
Melrose Street	0	3	3	0	6	1.5%	19	31.6%
Munro Street	0	0	0	0	0	0.0%	-	-
Newton Street	0	1	0	0	1	0.3%	6	16.7%
Northcote Street	0	1	1	1	3	0.8%	8	37.5%
Oddys Lane	0	0	0	0	0	0.0%	-	-
Palmer Parade	0	1	0	0	1	0.3%	23	4.3%
Parkins Lane	0	0	0	0	0	0.0%	-	-
Pearson Street	0	1	0	1	2	0.5%	12	16.7%
Prince Patrick Street	0	1	0	0	1	0.3%	14	7.1%
Punt Road	1	3	2	0	6	1.5%	41	14.6%
Railway Crescent	0	0	0	0	0	0.0%	1	0.0%
Railway Place	0	0	0	0	0	0.0%	2	0.0%
Rose Street	1	4	1	1	7	1.8%	13	53.8%
Rout Street	0	0	0	0	0	0.0%	1	0.0%
Royal Place	0	0	0	0	0	0.0%	1	0.0%
Russell Street	0	0	0	0	0	0.0%	-	-
Sanders Place	0	0	1	0	1	0.3%	7	14.3%
Shakespeare Place	0	0	0	0	0	0.0%	-	-
Shamrock Street	0	1	0	0	1	0.3%	8	12.5%
Stephenson Street	3	1	0	0	4	1.0%	55	7.3%
Swan Street	0	0	1	0	1	0.3%	125	0.8%
Unknown	2	9	2	1	54	13.8%	-	-
Victoria Avenue	0	0	0	0	0	0.0%	2	0.0%
Walnut Street	0	0	0	0	0	0.0%	5	0.0%
Wellington Street	0	3	0	2	15	3.8%	89	16.9%
White Street	4	2	0	0	6	1.5%	22	27.3%
William Street	0	0	0	0	0	0.0%	10	0.0%
Willis Street	1	0	1	0	2	0.5%	8	25.0%
Willow Lane	0	0	0	0	0	0.0%	-	-
Wiltshire Street	0	0	0	0	0	0.0%	8	0.0%

Street	Support Treatments? No. of Responses			No Pref. Stated	Total No. of Resp.	% of Total Resp.	Aprx No. lots in street(1)	Aprx. % of Street Resp.(2)
	Full	Part	No					
Wright Street	0	0	0	0	0	0.0%	-	-
Yarra Street	0	0	0	0	0	0.0%	8	0.0%
Yorkshire Street	0	2	1	0	3	0.8%	*19*	15.8%
TOTAL	**68**	**228**	**76**	**20**	**392**	**100.0%**	**2,292**	**17.1%**

Notes: (1) Generally based on number of lots only
(2) Percentages based on those respondents that indicated a preference

The above results show that the community support for the proposed plan was generally mixed. Of the respondents who indicated a preference, 18% were in full support and 61% partly supported the proposed Traffic Management Plan. A total of 21% of respondents did not support the proposed plan. When all responses are considered, 5% did not indicate their support or otherwise for the plan overall.

Although the response rate only provides a sample of the general community response to the plan, in our experience, people who oppose traffic management proposals (all or part) are more likely to respond than people who favour the proposals.

Appendix F provides a summary of responses received from each property, sorted by street name.

8.2. Review of Community Response For Each Proposal

The circular asked respondents to indicate which devices or treatments they did or did not support. An summary of the support for each treatment is shown below in Table 17. The support is reviewed on three different levels including:

- **Overall Support:** Support from all responses to the questionnaire for each individual device.
- **Street Support:** Support from questionnaire response from the street with the proposed treatment.
- **Adjacent Properties:** Number of properties directly adjacent to the proposed treatment who 'Support' and 'Do Not Support' the proposed treatment.

It is noted that the percentage level of support is calculated only from the number of responses who stated a preference (i.e. non-responses to particular questions or no response to the whole circular are not included in analysis).

The final two columns present any specific negative community comments from all the circular responses and our comments / recommendation.

This information is based on the response to the traffic management circular including questionnaire response and other related correspondence.

Table 17: Consideration of Community Responses

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
5) Raised Intersection Platform	**Cremorne Street / Kelso Street**	71%	86% (Kelso St) 71% (Cremorne St)	Support: 1 No Support: 1	• Include pedestrian crossings at the raised intersection • Will cause difficulty getting in and out of my driveway	Overall there was good level of support from the wider community and a good level of support from Cremorne Street and Kelso Street residents. There was mixed support from the properties directly adjacent to the proposed device. The key concern from the directly adjacent properties that did not support the proposal relates to ease of accessibility to their property. It is noted that the proposed design will ensure adequate accessibility to all properties. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
6) Road Hump	**#14-18 & #9-11 Cremorne Street**	51%	42%	Support: 1 No Support: 0	• No Specific Comments	Overall there was a mixed level of support from the wider community and a low level of support from Cremorne Street residents. There was also mixed support from the properties directly adjacent to the proposed devices. No specific comments were recorded in relation to the proposed devices, however, a number of general comments were received regarding the effectiveness and noise creation of road humps. **Recommendation:** Given the low level of support from Cremorne Street residents, it is recommended to abandon the road hump proposals. Given the community support for the raised intersection at Kelso Street (above), it is proposed to include a raised intersection at Blanche Street as an alternative traffic speed control device.
7) Road Hump	**#42 & #43 Cremorne Street**	55%	46%	Support: 0 No Support: 1	• No Specific Comments	
8) Road Hump	**#69 & #70 Cremorne Street**	52%	42%	Support: 0 No Support: 0	• No Specific Comments	
9) Road Hump	**#121 & #122 Cremorne Street**	55%	46%	Support: 1 No Support: 1	• No Specific Comments	
10) Road Hump	**#154 & #155 Cremorne Street**	53%	42%	Support: 5 No Support: 5	• No Specific Comments	

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
11) Stop Control	**Cremorne Street / Balmain Street**	79%	82% (Balmain St) 96% (Cremorne St)	Support: 9 No Support: 1	• Not required if trees/shrubs are trimmed on the approaches	Overall, there is a high level of support for this proposal, including from Balmain Street residents. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
12) Raised Intersection	**Balmain Street / Green Street**	62%	88% (Balmain St) 88% (Green St)	Support: 1 No Support: 1	• Include pedestrian crossing at the raised intersection	Overall there is a moderate level of support from the wider community and a good level of support from Balmain Street residents. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
13) Raised Intersection	**Balmain Street / Chestnut Street**	60%	88% (Balmain St) 50% (Chestnut St)	Support: 0 No Support: 0	• Include pedestrian crossing at the raised intersection	Overall there is a moderate level of support from the wider community and a good level of support from Balmain Street residents. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
14) Regrade existing raised intersection ramps	**Btw Gwynne Street & Palmer Parade**	64%	83%	Support: 0 No Support: 0	• No Specific Comments	Overall there is a moderate level of support from the wider community and a good level of support from Balmain Street residents. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
15) Road Hump	**#13 & #16 Balmain Street**	48%	68%	Support: 0 No Support: 2	• Prefer on street parking as opposed to speed humps (4 responses)	Overall there is a low level of support from the wider community and a good level of support from Balmain Street residents. Given that the support from the wider community is less than 50%, it is difficult to proceed with the proposal. Furthermore, it is noted that two (2) adjacent residents have indicated no support for the device. As there is community support to retain the on-street parking on Balmain Street in this area, the parking will continue to provide a form of speed reduction as vehicles give-way to pass. **Recommendation:** Given the low level of support from wider community and the adjacent properties, it is recommended to abandon this proposal.
16) Road Hump	**#128 Cubitt Street & #36 Balmain Street**	47%	78%	Support: 2 No Support: 0	• No Specific Comments	Overall there is a low level of support from the wider community and a good level of support from Balmain Street residents. Given that the support from the wider community is less than 50%, it is difficult to proceed with the proposal. As there is community support to retain the on-street parking on Balmain Street in this area, the parking will continue to provide a form of speed reduction as vehicles give-way to pass. **Recommendation:** Given the low level of support from wider community, it is recommended to abandon this proposal.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
17) Road Hump	**On existing raised intersection btw Palmer Parade & Gwynne Street**	47%	68%	Support: 0 No Support: 0	• No Specific Comments	Overall there is a low level of support from the wider community and a good level of support from Balmain Street residents. Given that the support from the wider community is less than 50%, it is difficult to proceed with the proposal. As there is community support to regrade the approach ramps to the existing raised intersection, there will be some form of speed control in the area. **Recommendation:** Given the low level of support from wider community, it is recommended to abandon this proposal.
18) Road Hump	**#112 Balmain Street**	50%	83%	Support: 0 No Support: 0	• Removal of on street parking in this section of Balmain Street as compromise (1 response)	Overall there is a moderate level of support from the wider community and a good level of support from Balmain residents. The removal of on-street parking in this area will not achieve a reduction in speed. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
19) Retain On-Street Parking	**Balmain Street between Cremorne Street and Cubitt Street**	68%	79%	Support: 14 No Support: 5	• Against retention of on street parking as it creates a dangerous one way lane (1 response) • Against retention of on street parking between Cremorne Street and Cubitt Street (4 responses)	Overall there is a good level of support from the wider community and a good level of support from Balmain Street residents to retain the on-street parking. Vehicles will continue to have to yield to on-coming traffic, therefore slowing vehicle speeds. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
20) Road Hump	**#242 Mary Street**	54%	53%	Support: 0 No Support: 0	• No Specific Comments	Overall there is a moderate level of support from the wider community and a moderate level of support from Mary Street residents. The traffic survey data collected indicates that there are traffic speed issues along Mary Street. Furthermore, given that the 'No Right Turn' proposal from Mary Street into Madden Grove will be abandon, it is critical to control the through traffic volumes that are likely to continue to utilise the local area. **Recommendation:** Incorporate this proposals into the Recommended Traffic Management Plan.
21) Road Hump	**#276 Mary Street**	53%	50%	Support: 0 No Support: 0	• No Specific Comments	
22) Raised Intersection	**Mary Street / James Street**	59%	86% (James St) 41% (Mary St)	Support: 2 No Support: 0	• No Specific Comments	

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
23) Right Turn Ban	**Mary Street into Madden Grove**	25%	41%	n/a	• Will cause congestion and delays on Mary Street and Swan Street (18 responses) • Severely impede access for residents (25 responses) • Require access to Madden Grove to reach the traffic signals at Coppin Street / Swan Street (23 responses) • Right turns into Swan Street from Mary Street difficult and unsafe (43 responses) • Proper enforcement / better policing with existing restrictions kept (10 responses) • Would want signalised intersection at Swan Street/Mary Street as alternative (11 responses) • Installing No Left Turn restriction into Mary Street from Swan Street with effective enforcement (1 response) • Install peak No Right Turn restrictions on all streets off Church Street, except Cotter Street, whilst maintaining existing restrictions at Mary Street/Madden Grove (1 response)	Overall there is a low level of support from the wider community and a very low level of support from Mary Street residents. There was significant concern in relation to resident accessibility and the potential safety implications of vehicles right turning at the intersection of Mary Street and Swan Street. **Recommendation:** Given the high level of objection from wider community and from the residents of Mary Street, it is recommended to abandon this proposal.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
24) Road Hump	**#7 Stephenson Street**	54%	100%	Support: 0 No Support: 0	• No Specific Comments	Overall there is a moderate level of support from the wider community and a good level of support from Stephenson Street. **Recommendation:** Incorporate these proposals into the Recommended Traffic Management Plan.
25) Road Hump	**#1 Cubitt Street**	57%	100%	Support: 1 No Support: 0	• No Specific Comments	
26) Road Hump	**#36 Stephenson Street**	56%	100%	Support: 0 No Support: 0	• No Specific Comments	
27) Road Hump	**#8 & #11 Kelso Street**	53%	86%	Support: 0 No Support: 1	• No Specific Comments	Overall there is a moderate level of support from the wider community and a good level of support from Kelso Street. **Recommendation:** Incorporate these proposals into the Recommended Traffic Management Plan.
28) Road Hump	**#18 & #25 Kelso Street**	52%	86%	Support: 4 No Support: 0	• No Specific Comments	
29) Road Hump	**#76 & #79 Brighton Street**	50%	52%	Support: 2 No Support: 0	• No Specific Comments	Overall there is a moderate level of support from the wider community and a moderate level of support from Brighton Street residents. Investigations have indicated an existing 'gap' in traffic management along Brighton Street and the local community identified traffic speed as a major issue on Brighton Street. **Recommendation:** Incorporate these proposals into the Recommended Traffic Management Plan.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
30) Road Hump	**#11 & #12 James Street**	50%	63%	Support: 0 No Support: 2	• No Specific Comments	Overall there is a moderate level of support from the wider community and a good level of support from James Street residents. The adjacent properties that indicated 'no support' for the road hump did not provide any specific comments in relation to the proposal. **Recommendation:** Incorporate the proposal into the Recommended Traffic Management Plan.
31) One-way (westbound)	**Gordon Street**	63%	83%	n/a	• Not required as volumes within acceptable limits • Will transfer the problems to other streets • Change to one way (eastbound) (1 response) • Extend one way arrangement to Chestnut Street (1 response) • Change to residents only (1 response)	Overall there is a good level of support from the wider community and a good level of support from Gordon Street residents. **Recommendation:** Incorporate the proposal into the Recommended Traffic Management Plan.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
32) One-way (westbound)	**Howard Street**	60%	30%	n/a	• Not required as volumes within acceptable limits • Will transfer the problems to other streets • Change to one way (eastbound) (5 responses) • Against one way arrangement (6 responses) • Another street to be made eastbound only as compromise (1 response) • Traffic will bank up due to difficulty of right turns into Church St (2 response) • Inconvenient/dangerous for residents (2 responses) • Alternative is to make turning into Howard St from Church St illegal (1 response) • Alternative peak hour turn bans as opposed to permanent one way arrangement (2 responses) • Howard St changes will result in increasing traffic volumes along Yorkshire St and Yorkshire St/Brighton St intersection (1 response) • Change to residents only (1 response)	Overall there is a moderate level of support from the wider community and a low level of support from Howard Street residents. One-way proposal are generally a very localised issue and without the support of the subject street a one-way proposal cannot be successful. **Recommendation:** Given the high level of objection from the residents of Howard Street, it is recommended to abandon this proposal.

Treatment	Location	Overall Support	Street Support	Adjacent Properties	Specific Community Comments	Comments / Recommendation
33) Road Hump	**#11 & #12 Chapel Street**	60%	50%	Support: 0 No Support: 1	• No specific comments	Overall there is a moderate level of support from the wider community and a mixed level of support from Chapel Street residents. It is noted that only 2 responses were received from Chapel Street residents, with one 'support' response and one 'No Support' response (which was from a property directly adjacent to the subject site). There are no other alternative locations for road humps in Chapel Street given the number of property access points and street lighting locations. **Recommendation:** Given the low response rate and the 'no support' from the adjacent property, it is recommended to abandon this proposal.
34) Reconfigure Intersection	**Chapel Street / Chestnut Street**	60%	100% (Chapel St) 90% (Chestnut St)	Support: 1 No Support: 0	• No specific comments	Overall, there is a good level of support for this proposal, including from Chapel Street residents. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
35) Shared Zone	**Walnut Street (btw Balmain Street and Newton Street)**	60%	n/a	n/a	• No specific comments	Overall, there is a good level of support for this proposal. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.
36) Reconfigure parking spaces	**Church Street**	60%	83%	n/a	• No specific comments	Overall, there is a good level of support for this proposal. **Recommendation:** Incorporate this proposal into the Recommended Traffic Management Plan.

8.3. OTHER RELEVANT COMMENTS

Other issues or suggestions given by respondents to the proposed traffic management plan have been summarised and listed as follows (excluding those related to specific proposals listed in the previous tables):

- Summary of Other Requests (Table 19), and
- Summary of Other Issues (Table 20).

Where the same comment has been received by more than one respondent, the total number of respondents is indicated.

Table 18: Summary of Other Requests

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
Albert Street	Make one way westbound	1	Not raised as a significant issue in throughout the study process.
Balmain Street	Install speed humps outside #50, #52 or #48 Balmain Street	1	Given the other traffic management proposals for Balmain Street, additional road humps in this area are not considered to be required.
	Ban parking between Cremorne Street and Cubitt Street between 8-10am and 3-6pm	1	The local community has supported the retention of on-street parking on Balmain Street.
	Clearway 8-9.15am and 4.30-6pm Mon-Fri between Stephenson Street and Cremorne Street	1	
	Extend on-street parking on Balmain Street between Cremorne Street and Gwynne Street	1	No significant community requests for the extension of on-street parking in this area.
	Widen left turn lane on Balmain Street at Balmain Street/Church Street intersection	1	Unclear request, no left turn lane exists on the Balmain Street approach to this intersection.
	Install 'Local Traffic Only' signs	1	'Local Traffic Only' signs are not enforceable and are therefore not recommended.
	Cut back trees that obscure sight distance when turning right from Balmain Street onto Cremorne Street	3	Council has recently trimmed the trees/shrubs in this location. Council to continue to monitor and prune as required.
	Widen footpath on north and south side of Balmain Street between Cremorne Street and Gwynne Street	1	High cost item outside the scope of this LATM study.
	Install convex mirrors at all streets coming off Balmain Street	1	Convex mirrors are not typically recommended given the maintenance liability associated with broken mirrors.
	Install convex mirror at Balmain Street/Gwynne Street intersection	1	

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
Brighton Street	Install speed humps in Brighton Street south of Yorkshire Street intersection	2	Traffic survey data in this section of Brighton Street indicates an 85th percentile speed of 41.8km/h which is considered to be within acceptable limits.
Chestnut Street	Install bollard at corner of Chestnut Street/Balmain Street to prevent vehicles obstructing visibility by parking close to edge	1	Enforcement of vehicles parking too close to intersections should be undertaken by Council's Local Laws Officers.
	Remove on-street parking between Gordon Street/Chestnut Street and Chestnut Street/Balmain Street to allow residents to get out of their garages	1	Property access may require a number of manoeuvres in narrow street within the study area.
Church Street	Install a barrier to the centre of Church Street to prevent illegal right turns from the Monash Freeway	1	Enforcement of the existing 'No Right Turn' bans is the responsibility of Victoria Police.
	Introduce longer green arrow for right turning vehicles at Church Street/Swan Street intersection	1	Outside of the scope of this LATM study, both Swan Street and Church Street are controlled by VicRoads.
	Install traffic lights at Howard Street/Church Street at the pedestrian crossing	1	Additional traffic signals along Church Street are unlikely to be supported by VicRoads and would be likely to encourage additional rat running through the local area.
Cotter Street	Install speed humps between Mary Street and Brighton Street	2	Traffic survey data in this section of Cotter Street indicates an 85th percentile speed of 35.3km/h which is considered to be within acceptable limits.
	Install traffic island at Cotter Street/Mary Street intersection due to traffic cutting corners turning into Cotter Street from Mary Street	1	**Considered to be a suitable treatment to improve vehicle compliance at the intersection. Include in Recommended Traffic Management Plan.**
	Make Cotter Street one way eastbound between Mary Street and Church Street	1	Provides a key link to the traffic signals at Cotter Street and Church Street and therefore a one-way treatment is not considered suitable.
Cremorne Street	Relocate pedestrian crossing at Swan Street/Cremorne Street to the other side (east) of Cremorne Street to alleviate congestion of left turning vehicles onto Swan Street	7	**Council to review on-street parking on the Cremorne Street approach to Swan Street.** **Council to contact VicRoads and**

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
	Remove on-street parking at top of Cremorne Street to allow better two lane turning onto Swan Street	9	**Yarra Trams with a view to improving intersection capacity and pedestrian safety.**
	Change signal timing at Swan Street/Cremorne Street to provide more time to Cremorne Street in afternoon	3	
	Reduce traffic using Cremorne Street to get onto Swan St by making Swan Street and Church Street more attractive	2	
	Introduce right turn ban at Cremorne Street/Swan Street between 6-9am with both lanes going left	1	
	Install raised intersection at Cremorne Street/Stephenson Street	1	The Stephenson Street intersection is located in close proximity to the intersection with Swan Street and does not 'match' the spacing of the other proposed devices along Cremorne Street.
	Install traffic lights or 'keep clear' line marking on Cremorne Street/Jessie Street/Stephenson Street intersection	1	
	Install pedestrian crossing opposite the TAFE	1	Pedestrian volumes along Cremorne Street were not observed to be particularly high and are therefore unlikely to meet the required warrants for a formal pedestrian facility.
Cubitt Street	Install road hump outside #30 Cubitt Street	1	Traffic survey data in this section of Cubitt Street indicates an 85th percentile speed of 40.0km/h which is considered to be within acceptable limits.
	Introduce 'No Parking' signs at rear lane accesses (on Dover Street near Stephenson Street) to properties on Cubitt Street	1	Unclear as to the exact request.
	Install 'No Freeway Access' at Cubitt Street and 'No Through Road' at Cubitt Street/Munro Street	1	Unlikely to be a significant number of vehicles which are 'lost' and therefore signage not considered to be required.
Davis Street	Install two speed humps between Mary Street and Brighton Street	1	Traffic survey data in this section of Davis Street indicates an 85th percentile speed of 36.7km/h which is considered to be within acceptable limits.

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
Dover Street	Install speed hump near corner of Dover Street and Stephenson Street	1	Traffic survey data in this section of Dover Street indicates an 85th percentile speed of 40.0km/h which is considered to be within acceptable limits.
Fitzgibbon Street	Make one way	1	These proposals are generally led by a significant level of community request, which is not the case in Fitzgibbon Street.
Gordon Street	Install 'local traffic only' signage	1	'Local Traffic Only' signs are not enforceable and are therefore not recommended.
	Widen street to allow fire trucks to move within it	1	Proposal to make the street one-way will eliminate the instances of vehicles meeting in opposing directions.
Gough Street	Change streetscape to allow vehicles to park half on the footpath and half on road (similar to Yarra St, Abbotsford) with south footpath removed altogether	1	Existing on-street parking provides a passive from of traffic management, reducing vehicles speeds. Therefore removal of parking is not supported.
	Install speed hump	1	The existing on-street parking provides a form of traffic management, as vehicles must yield to on-coming traffic.
Green Street	Install speed humps	1	Traffic survey data in this section of Green Street indicates an 85th percentile speed of 33.8km/h which is considered to be within acceptable limits.
	Make bicycle route on Green Street use lane to east of Green Street or White Street	1	The proposed bicycle routes are only preliminary and will be subject to further investigation by Council's Sustainable Transport Team.
Gwynne Street	Install bollards at the southern end of Gwynne Street to stop access from the Rosella Complex to Gwynne Street	1	Issues have been extensively investigated as part of this study. Traffic volumes, traffic speeds and truck activity levels are all within acceptable limits. There is no justification to close a legitimate access to the Rosella Complex.
	Install 'No Trucks' signs in Gwynne Street entries southbound at Balmain Street and northbound at Munro Street.	2	
	Close off access into Gwynne Street south of Munro St from Rosella Complex	12	

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
	Install speed humps outside #20/96 and #122 Gwynne Street	4	Traffic survey data in this section of Gwynne Street indicates an 85th percentile speed of 34.2km/h which is considered to be within acceptable limits.
	Install mirror at Gwynne Street/Balmain Street to address poor sight distance when turning left or right from Gwynne Street into Balmain Street	1	Convex mirrors are not typically recommended given the maintenance liability associated with broken mirrors.
Howard Street	Install traffic island near corner of Howard Street/Brighton Street to slow down traffic entering Howard Street from Brighton Street	1	The width of Howard Street does not allow for the installation of a splitter island.
Jessie Street	Introduce at least one speed hump	1	Traffic survey data in this section of Jessie Street indicates an 85th percentile speed of 27.4km/h which is considered to be within acceptable limits.
Kelso Street	Install 'residents only' sign in lane between Kelso Street and Wellington Street	1	'Local Traffic Only' signs are not enforceable and are therefore not recommended.
	Make one way between Dover Street and Cremorne Street	2	These proposals are generally led by a significant level of community request, which is not the case in Kelso Street.
	Introduce 'Keep Clear' line marking at the intersection with Cremorne Street	1	Does not meet the VicRoads warrants for installation.
Loretto Street	Measures to prevent cars from accessing the street in the wrong direction	1	Not considered to be a significant issue given the low speeds and volumes in Loretto Street.
Mary Street	Install flashing lights for the pedestrian crossing in front of Richmond Primary School	2	Modifications to the existing crossing are proposed in the Traffic Management Plan.
	Lower the height of the existing raised intersection at Rose Street and smooth the gradient of the ramps to avoid suspension damage	2	The existing raised intersection will play a key role in reducing traffic speed in conjunction with the other proposed Mary Street treatments.
	Introduce partial road closure adjacent to Richmond Primary School during school hours	3	Not considered to be an acceptable outcome due to the transfer of traffic volumes to the surrounding streets.
	Change parking from parallel to angled and remove trees in middle of the street	1	Mary Street was previously in this arrangement, however the trees were installed as part of street scaping works.

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
Melrose Street	Install road hump at southern end of Melrose Street	1	Melrose Street was not identified as a location with major traffic speed issues.
Parkins Lane	Make permanent one way to prevent rat runs	1	Very low level of 'rat run' traffic due to the lane width and poor surface condition. Not considered to be a major issue.
Prince Patrick Street	Make one way westbound	1	These proposals are generally led by a significant level of community request, which is not the case in Prince Patrick Street.
Rose Street	Install two speed humps between Brighton Street and Mary Street	1	**Given that the proposed Right Turn Ban from Mary Street into Madden Grove has been abandoned, additional measures to reduce the impact of through traffic are considered to be warranted.** **Include in Recommended Traffic Management Plan.**
Stephenson Street	Make one way only	1	These proposals are generally led by a significant level of community request, which is not the case in Stephenson Street.
	Install speed hump or raised intersection at Stephenson Street/Kelso Street	1	Traffic survey data in this section of Stephenson Street indicates an 85th percentile speed of 38.9km/h which is considered to be within acceptable limits.
	Install signals or crossings to support cyclists cutting across Church Street (bicycle route from Stephenson Street to Lesney Street)	1	The proposed bicycle routes are only preliminary and will be subject to further investigation by Council's Sustainable Transport Team.
Walnut Street	Make one way northbound between Newton Street and Balmain Street	1	These proposals are generally led by a significant level of community request, which is not the case in Walnut Street.
	Install warning signage prior to intersection with Gordon Street	1	Traffic Management Plan to include a shared zone in this section of Walnut Street which will include a reduced regulatory speed limit.
	Remove bush on northeast corner of Walnut Street and Chapel Street obstructing sight distance for traffic turning from Walnut Street to Chapel Street	1	Issue to be refer to Council's Parks and Gardens Team.

Street Name of Issue	Community Comments	No. Of Responses	Action/Response
Wellington Street	Install speed hump outside #77/78 Wellington Street	4	Traffic survey data in this section of Wellington Street indicates an 85th percentile speed of 39.2km/h which is considered to be within acceptable limits.
Yarra Street	Reconfigure Yarra Street to one way westbound	2	These proposals are generally led by a significant level of community request, which is not the case in Yarra Street.
Bicycles	Extend bicycle routes to Burgess Street/Brighton Street/Cotter Street	1	The proposed bicycle routes are only preliminary and will be subject to further investigation by Council's Sustainable Transport Team.
	Consider better on road signage/lines to provide safety for cyclists	2	
	Improve access to Balmain Street from bicycle network along north side of the Yarra	1	
	Make bicycle network use Swan St rather than cut through Cremorne	2	Advice from Council's Sustainable Transport Team indicates that bicycle lanes on Swan Street are hard to achieve given all the competing road users, hence the proposed bicycle routes through the local area.
	Leave enough flat space on sides for cyclists	4	Road humps will be constructed as 'Flat Top' versions and therefore cyclists will simply be able to ride over the humps.

Table 19: Summary of Other Issues

Street Name of Issue	Comments	No. Of Responses	Action/Response
Brighton Street	Traffic speed in Brighton Street south of Amsterdam Street regularly exceeds speed limit	1	Traffic survey data in this section of Brighton Street indicates an 85th percentile speed of 41.8km/h which is considered to be within acceptable limits.
Church Street	Poor traffic movement requiring further investigation	1	Outside the scope of this LATM Study.
Cotter Street	High traffic speeds	2	Traffic survey data in Cotter Street indicates an 85th percentile speed of 35.3km/h which is considered to be within acceptable limits.

Street Name of Issue	Comments	No. Of Responses	Action/Response
Cremorne Street	Traffic jams on Cremorne Street caused by northbound traffic entering Swan Street	7	**Council to review on-street parking on the Cremorne Street approach to Swan Street.**
	Waiting time for vehicles turning left onto Swan Street due to pedestrian traffic	3	**Council to contact VicRoads and Yarra Trams with a view to improving intersection capacity and pedestrian safety.**
	Height of the trees on the corner of Balmain Street/Cremorne Street	2	Council has recently trimmed the trees/shrubs in this location. Council to continue to monitor and prune as required.
	Cyclist safety between Swan Street and Stephenson Street	1	The proposed bicycle routes are only preliminary and will be subject to further investigation by Council's Sustainable Transport Team.
Dover Street	Signage at corner of Dover Street/Stephenson Street intersection obstructed by building	1	A number of intersections in this area have limited sight distance dur to existing buildings. There are no low cost solutions to this issue.
Gough Street	Parked vehicles on south side of street and vehicles turning left onto Punt Road block access to vehicles turning left into Gough Street from Punt Road	1	Existing on-street parking provides a passive from of traffic management, reducing vehicles speeds. Therefore removal of parking is not supported.
	Gough Street not wide enough to accommodate its level of traffic	1	
Gwynne Street	Illegal flow of traffic on Gwynne Street	1	Issue has been extensively investigated as part of this study. Traffic volumes, traffic speeds and truck activity levels are all within acceptable limits. No justification to close a legitimate access to the Rosella Complex.
	Limited sight distance while exiting Gwynne Street into Balmain Street, particularly unable to see traffic coming east along Balmain Street when turning right	2	It is acknowledged that there is limited sight distance at this location, however, there are no low cost solutions to improve sight distance. The Traffic Management Plan include regrading of the ramps associated with the existing raised intersection and therefore traffic speeds on Balmain Street in the vicinity of Gwynne Street will be lower.
	Abuse of short term parking in Gwynne Street due to Rosella Complex	2	Issues have been forwarded to Council's Parking Services Team.

Street Name of Issue	Comments	No. Of Responses	Action/Response
	TMP doesn't address speeding on Gwynne Street	1	Traffic survey data in this section of Gwynne Street indicates an 85th percentile speed of 34.2km/h which is considered to be within acceptable limits.
Howard Street	Congestion at west end due to parking and narrowing of street to only one lane	1	One-way proposal was presented to the community, however, only gained a low level of support from Howard Street properties.
	New opening of restaurant 'Baby' at corner of Church Street/Howard Street and re-opening of Prince Alfred Hotel causing substantial increase in traffic on Howard Street and Brighton Street. More is needed in addition to one way arrangement for Howard Street.	1	
	Difficulty of turning right onto Church Street resulting in motorists turning left and then doing a U-turn	1	Right turning vehicles can utilise the local road network to access the existing traffic signals at Cotter Street / Church Street.
Mary Street	Pedestrian crossing at Madden Grove/Mary Street dangerous because cars cannot see pedestrians due to parked cars on Mary Street	1	A kerb outstand is provided for pedestrians to be visible to approaching traffic.
Rose Street	High level of traffic on Rose Street for a one way street, proposed TMP does not address traffic cutting through Rose Street (west to east)	1	Recommended Traffic Management Plan to include two (2) road humps on Rose Street.
	One way arrangement at corner of Rose Street/Brighton Street is hazardous for pedestrian as cars cut the corner	1	Given the width of Rose Street and the one-way operation, a splitter island cannot be installed to regulate vehicle movements into Rose Street.
Stephenson Street to Lesney Street (Bicycle Route)	Lack of consideration for safety of cyclists cutting across or turning into Church Street	2	The proposed bicycle routes are only preliminary and will be subject to further investigation by Council's Sustainable Transport Team.
Swan Street	Remove parking on Swan Street between Cremorne Street and Punt Road after 4pm	1	Parking in this area is very important for local traders and is not considered to be appropriate to remove.
	Poor traffic movement requiring further investigation	1	Outside of the scope of this LATM study.

Street Name of Issue	Comments	No. Of Responses	Action/Response
Wellington Street	Intersection of Wellington Street/Swan Street dangerous and requires attention	1	Council have recently requested VicRoads install a no U-turn sign at this intersection for eastbound vehicles on Swan Street.
	Non-residents using southern and northern parts of Wellington Street between Parkins Lane, Blanche Street and Swan Street to bypass Cremorne Street into Swan Street	2	Traffic counts suggest there are only a limited number of vehicles utilising Parkins Lane to access Wellington Street.

9. RECOMMENDED TRAFFIC MANAGEMENT PLAN

10.1. DETAILS OF THE RECOMMENDED TRAFFIC MANAGEMENT PLAN

Based on the extensive community consultation, recommendations of the Traffic Study Group and further investigations undertaken by Traffix Group, the following amendments to the Proposed Traffic Management Plan are recommended:

Items to be Removed:

1) Cremorne Street:

- Road Hump outside #14-18 and #9-11,
- Road Hump outside #42 and #43,
- Road Hump outside #69 and #70,
- Road Hump outside #121 and #122, and
- Road Hump outside #154 and #155.

2) Balmain Street:

- Road Hump outside #13 and #16,
- Road Hump outside #36, and
- Road Hump outside on existing raised intersection between Palmer Parade and Gwynne Street.

3) Mary Street:

a) Permanent right turn ban from Mary Street into Madden Grove, and

b) Investigate 'Keep Clear' linemarking at the intersection of Mary Street and Swan Street.

4) Howard Street:

a) 'One-way' westbound in Howard Street between Church Street and Bryant Street.

5) Chapel Street

a) Road Hump outside #11 and #12 Chapel Street.

New Items to be Included:

6) Cremorne Street

a) Install raised intersection at Blanche Street.

7) Rose Street

a) Install two (2) flat top road humps between the existing kerb outstands at #5 & #6 Rose Street and #11 & #14 Rose Street.

8) Cotter Street

a) Install splitter island at the intersection with Mary Street.

9) Cremorne Street / Swan Street Intersection

a) Council review parking on Cremorne Street on the approach to Swan Street, with a view to improving intersection capacity, and

b) Council contact VicRoads to seek an investigation and review of signal phasing and timing with a view to improving capacity and pedestrian safety

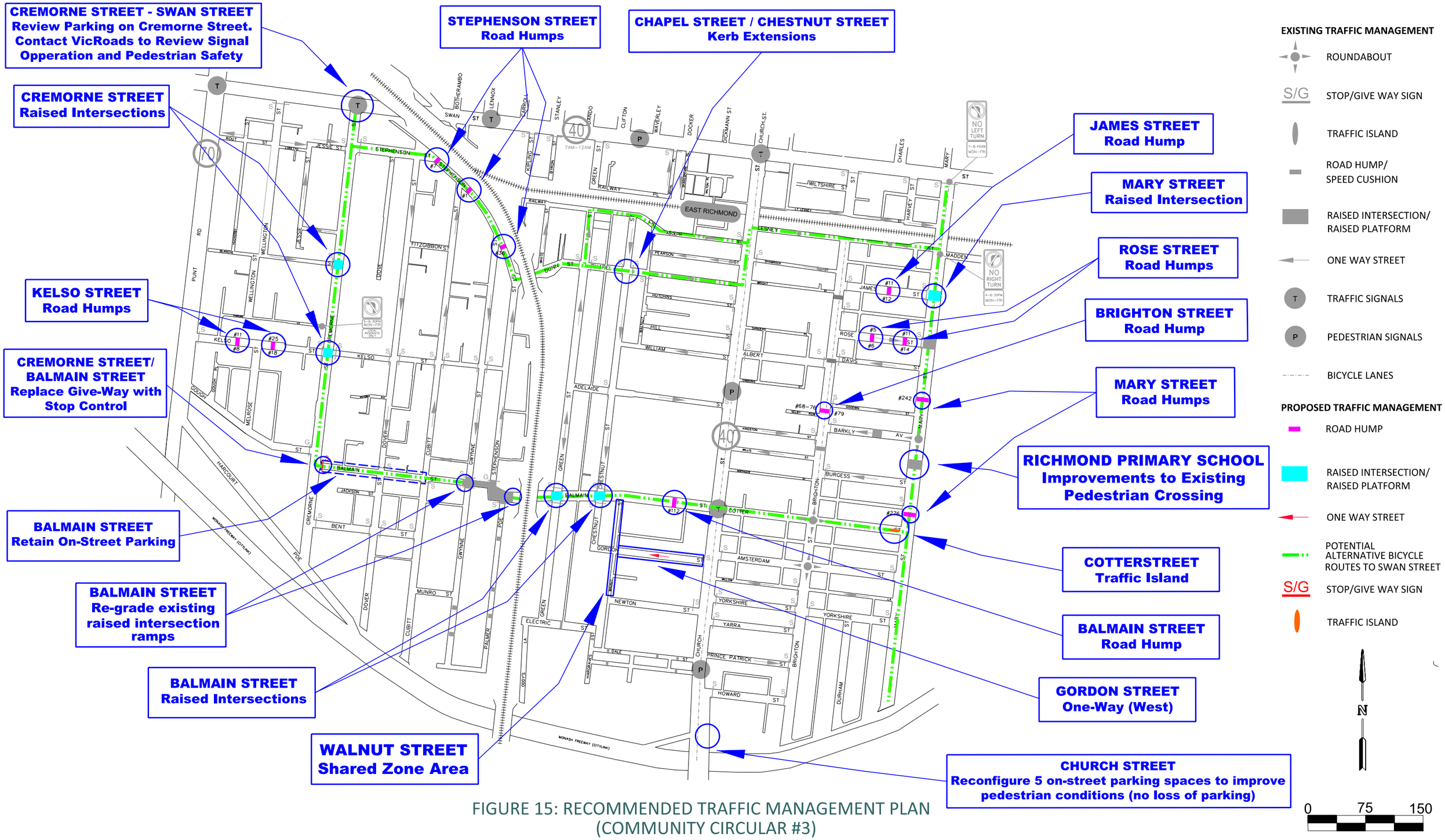


FIGURE 15: RECOMMENDED TRAFFIC MANAGEMENT PLAN (COMMUNITY CIRCULAR #3)

10.2. Draft Funding & Implementation

Table 20 outlines the indicative component cost and recommended staging of the Traffic Management Plan for the Balmain Precinct.

The estimated costs are indicative only, and have been arrived at to assist in devising an implementation plan. The installation costs of traffic management can vary considerably and largely depend on the extent and design of devices. The main components which influence construction costs are the materials used, need for kerb reconstruction, impact on existing drainage, discovery of other underground services e.g. gas, water, possible relocation of power poles, and degree and type of landscaping.

In the case of these works, while staging of the scheme is generally necessary due to funding constraints, the staging of works needs careful consideration to minimise the interim impact of treatments on untreated streets.

In staging the Implementation Plan, the following considerations should be made:

- Maximum effort should be made to avoid transferring traffic impacts, regardless of their duration,
- Locations where crash problems have been identified should be given priority,
- The benefits should be immediate and obvious to residents. The staging should appear logical to residents to ensure acceptance of the Plan,
- Installation should be delayed for treatments which may not be required or may need to be modified depending on the effects of earlier stages,
- Possible cost savings from grouping devices into a single stage or focusing on one location should be considered, where possible, and
- Temporary treatments, such as spike-down kerbing, should only be considered as a last resort.

Table 20: Estimated Cost and Staging Plan

Location	Treatment	Indicative Cost	Priority	
			1	2
Cremorne Street				
At Kelso Street	Raised Intersection	$35,000	♦	
At Blanche Street	Raised Intersection	$15,500	♦	
Balmain Street				
At Cremorne Street	Install 'Stop' control	$1,000	♦	
At Green Street	Raised Intersection	$27,000	♦	
At Chestnut Street	Raised Intersection	$27,000	♦	
At the existing raised intersection	Regrade Approach Ramps	$5,000	♦	
Outside #112 Balmain Street	Flat Top Road Hump	$8,500	♦	
Mary Street				
At James Street	Raised Intersection	$24,500		♦
Outside #242 Mary Street	Flat Top Road Hump	$11,000	♦	
Outside #276 Mary Street	Flat Top Road Hump	$9,000	♦	
Outside Richmond Primary School	Wombat Crossing	$9,000	♦	
Stephenson Street				
Outside #7 Stephenson Street	Flat Top Road Hump	$8,500	♦	
Outside #1 Cubitt Street	Flat Top Road Hump	$8,500	♦	
Outside #36 Stephenson Street	Flat Top Road Hump	$8,500	♦	
Kelso Street / Brighton Street / James Street				
Outside #8 and #11 Kelso Street	Flat Top Road Hump	$8,000		♦
Outside #18 and #25 Kelso Street	Flat Top Road Hump	$8,000		♦
Outside #68-76 and #79 Brighton Street	Flat Top Road Hump	$8,000		♦
Outside #11 and #12 James Street	Flat Top Road Hump	$8,000	♦	
Gordon Street				
Between Church Street and Walnut Street	One-way westbound	$2,000	♦	
Other Treatments				
At Chapel Street and Chestnut Street	Reconfigure Intersection	$15,000		♦
Walnut Street between Balmain Street and Newton Street	Shared Zone	$2,500	♦	
Cotter Street at Mary Street	Splitter Island	$5,000		♦

Location	Treatment	Indicative Cost	Priority	
			1	2
Outside #5 and #6 Rose Street	Flat Top Road Hump	$8,000		♦
Outside #11 and #14 Rose Street	Flat Top Road Hump	$8,000		♦
TOTAL		**$271,500**	**$187,000**	**$84,500**

10.3. Monitoring And Assessment Of Traffic Management Plan

It is anticipated that the recommended Traffic Management Plan will adequately address the main traffic concerns identified in the Balmain Precinct.

Following implementation of the traffic management treatments, it is recommended that a monitoring program be introduced to assess the performance of the plan. This would involve a series of traffic speed and volume surveys in treated and untreated streets, where previous surveys have been undertaken. In addition, road crashes and traffic complaints from residents and businesses should be monitored.

The monitoring program will enable the performance of the plan to be assessed and indicate whether the implementation of additional traffic management is warranted.

10. CONCLUSIONS AND RECOMMENDATIONS

The objective of this study was to prepare a Local Area Traffic Management (LATM 20) plan for the Balmain Precinct in Richmond, which addresses the main traffic issues in the area and reflects the requirements and expectations of the local community.

The LATM study for the Balmain Precinct has involved extensive consultation with the local community to identify local traffic issues, a review of traffic complaints contained in Council files and engineering investigations undertaken by Traffix Group. Other components of the study have included the collection of traffic volume and speed information and a review of available crash data to quantify traffic problems.

The community consultation component of the study has included questionnaire surveys, circulars and the formation of a Traffic Study Group to assist with this study. The Traffic Study Group comprised nominated members from the local community, local ward Councillors, Council officers and traffic engineers from Traffix Group. The Traffic Study Group provided input into the various stages of the study.

Information gathered through the above sources was used to identify the key traffic issues and provided the basis for formulating traffic management recommendations for the Balmain Precinct.

The key traffic issues identified in the study area generally related to traffic problems in many local streets such as traffic speed and through traffic volumes.

A Traffic Management Plan was developed in consultation with Council Officers and the Traffic Study Group. A copy of the proposed plan, in addition to supporting information was distributed to the local community and emergency services for public comment in January, 2013. The survey responses indicated a mixed level of support for the proposed Traffic Management Plan. Of the respondents who indicated a preference, 18% were in full support and 61% partly supported the proposed Traffic Management Plan. A total of 21% of responses did not support the Proposed Traffic Management Plan.

In view of the above, a detailed review of each device was undertaken to assess the overall support from the whole study area, the support from properties in the streets with proposed devices and the support from the properties adjacent to the proposed devices. Following this review, a number of the traffic management proposals have been abandoned due to a lack of community support (principally in Cremorne Street and Balmain Street). Furthermore, a number of new treatments have been included that were identified through comments/suggestions from the local community and further engineering investigation (principally in Cremorne Street, Rose Street and Cotter Street). A Recommended Traffic Management Plan has been developed which outlines the final recommended treatments for the local area.

On the basis of the comprehensive traffic study undertaken by Traffix Group for the Balmain Precinct and community feedback on the proposed Traffic Management Plan, the following recommendations are made to the City of Yarra:

a) Council adopt the Recommended Traffic Management Plan for the Balmain Precinct No. 20, as detailed in Section 9 of this report,

b) Council consult with property owners abutting the device locations at the design stage regarding exact locations and design,

c) Council review parking on Cremorne Street on the approach to Swan Street, with a view to improving intersection capacity,

d) Council contact VicRoads to seek an investigation and review of signal phasing and timing at the intersection of Swan Street and Cremorne Street with a view to improving capacity and pedestrian safety,

e) Council continue to monitor truck activity in Gwynne Street and undertake the following actions:

   i. Council continue to work with waste collection companies on scheduling truck activity in Gwynne Street,

   ii. Enforce Local Law No. 32 as required, and

   iii. Continue to work with Rosella Complex representatives to consolidate waste collection.

f) Council to advocate for increased police enforcement, in particular for traffic speed and compliance with the existing intersection turn bans treatments at Mary Street / Madden Grove and Swan Street / Mary Street,

g) Council monitor the additional traffic issues raised by the local community identified in Section 8.3 of this report,

h) Council continue to monitor intersection safety and performance throughout the study area, and

i) Council implement and monitor the Traffic Management Plan as outlined in Section 9 of this report as funding becomes available.

APPENDIX A

TRAFFIC SURVEY DATA SUMMARY

Balmain Precinct, Cremorne: LATM Study
Traffic Survey Information
Our Ref: GRP14494

Location	Year	Weekday Daily Volume (vehicles/day)			AM Peak						PM Peak						85th %ile	% faster than			Heavy Vehicles - Average Weekday Volumes					
		N/E	S/W	Combined	N/E	Ratio	S/W	Ratio	Combined	Ratio	N/E	Ratio	S/W	Ratio	Combined	Ratio	Speed	40km/h	50km/h	60km/h	N/E	%	S/W	%	Total	%
Amstrerdam Street	2012	670	602	1,272	51	8%	88	15%	132	10%	77	11%	48	8%	125	10%	41.8	21.2%	1.5%	0.0%	29	4.3%	24	4.0%	53	4.2%
b/w Church Street and Brighton Street		E	W		9-10am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Balmain Street	2012	2,752	4,024	6,776	301	11%	390	10%	691	10%	238	9%	478	12%	716	11%	37.1	7.1%	0.3%	0.0%	121	4.4%	137	3.4%	257	3.8%
b/w Gwynne Street and Rail Bridge		E	W		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Balmain Street	2010	2,393	3,193	5,586	276	12%	323	10%	600	11%	191	8%	433	14%	624	11%	43.2	26.8%	3.3%	0.3%	81	3.4%	102	3.2%	179	3.2%
b/w Cremorne Street and Cubitt Street		E	W		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Balmain Street	2012	2,372	3,501	5,874	157	7%	583	17%	722	12%	271	11%	235	7%	452	8%	42.8	26.9%	2.9%	0.2%	90	3.8%	144	4.1%	229	3.9%
b/w Church Street and Chestnut Street		E	W		10-11am		8-9am		8-9am		5-6pm		1-2pm		5-6pm											
Barkly Avenue	2011	5	281	286	1	20%	62	22%	63	22%	1	20%	44	16%	44	15%	27.4	2.4%	0.3%	0.2%	-	-	-	-	5	1.6%
b/w Mary Street and Brighton Street		E	W		8-9am		8-9am		8-9am		9-10pm		3-4pm		3-4pm											
Brighton Street	2012	1,000	720	1,720	154	15%	69	10%	223	13%	82	8%	132	18%	214	12%	41.8	22.6%	1.8%	0.0%	30	3.0%	10	1.4%	40	2.3%
b/w Yarra Street and Prince Patrick Street		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Brighton Street	2011	861	835	1,696	104	12%	126	15%	230	14%	98	11%	98	12%	196	12%	32.0	0.9%	0.0%	0.0%	21	2.4%	85	10.2%	105	6.2%
b/w Burgess Street and Barkly Avenue		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Burgess Street	2011	5	163	168	-	-	19	12%	19	11%	1	20%	24	15%	24	14%	33.1	3.3%	0.2%	0.0%	-	-	-	-	2	1.2%
b/w Mary Street and Brighton Street		E	W		-		8-9am		8-9am		4-5pm		3-4pm		3-4pm											
Chapel Street	2012	20	502	522	2	10%	105	21%	106	20%	3	15%	35	7%	37	7%	41.0	18.9%	1.3%	0.0%	-	-	-	-	31	6.0%
b/w Church Street and Walnut Street		E	W		10-11am		8-9am		8-9am		1-2pm		5-6pm		5-6pm											
Chapel Street	2012	372	541	913	36	10%	86	16%	119	13%	31	8%	35	6%	66	7%	32.0	0.8%	0.0%	0.0%	17	4.7%	37	6.8%	54	5.9%
b/w Green Street and Chestnut Street		E	W		9-10am		8-9am		8-9am		5-6pm		12-1pm		5-6pm											
Chestnut Street	2012	5	643	648	1	20%	65	10%	65	10%	-	-	57	9%	57	9%	31.0	2.2%	0.0%	0.0%	-	-	-	-	25	3.8%
b/w Adelaide Street and Chapel Street		N	S		9-10am		8-9am		8-9am		-		5-6pm		5-6pm											
Cotter Street	2012	768	1,147	1,916	51	7%	203	18%	253	13%	97	13%	100	9%	197	10%	35.3	3.5%	0.1%	0.0%	24	3.1%	41	3.6%	67	3.5%
b/w Church Street and Brighton Street		E	W		10-11am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Cremorne Street	2011	2,860	2,463	5,323	226	8%	222	9%	448	8%	356	12%	209	8%	565	11%	46.8	46.7%	7.6%	0.6%	89	3.1%	143	5.8%	224	4.2%
b/w Gough Street and Kelso Street		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Cremorne Street	2012	509	1,546	2,056	56	11%	132	9%	188	9%	59	12%	223	14%	283	14%	43.9	32.9%	3.9%	0.4%	22	4.3%	68	4.4%	90	4.4%
b/w Bent Street and Balmain Street		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Cremorne Street	2010	4,174	3,719	7,894	271	6%	322	9%	556	7%	408	10%	290	8%	661	8%	38.2	7.7%	0.4%	0.0%	196	4.7%	227	6.1%	418	5.3%
b/w Swan Street and Stephenson Street		N	S		10-11am		8-9am		8-9am		5-6pm		1-2pm		5-6pm											
Cubitt Street	2012	742	12	754	81	11%	1	8%	82	11%	65	9%	2	17%	66	9%	40.0	15.3%	1.6%	0.0%	-	-	-	-	46	6.1%
b/w Kelso Street and Stephenson Street		N	S		8-9am		8-9am		8-9am		5-6pm		3-4pm		5-6pm											
Davis Street	2012	145	10	155	20	14%	1	10%	21	14%	13	9%	1	10%	14	9%	36.7	9.0%	0.2%	0.0%	7	4.6%	-	-	7	4.6%
b/w Brighton Street and Mary Street		E	W		8-9am		8-9am		8-9am		6-7pm		6-7pm		6-7pm											
Dover Street	2012	6	605	611	1	17%	66	11%	67	11%	1	17%	51	8%	51	8%	40.0	14.8%	1.1%	0.0%	-	-	-	-	43	7.1%
b/w Kelso Street and Fitzgibbon Street		N	S		11-12noon		11-12noon		11-12noon		3-4pm		1-2pm		1-2pm											
Goodwin Street	2011	4	30	34	-	-	2	7%	2	6%	1	25%	4	13%	4	12%	28.8	3.3%	0.0%	0.0%	-	-	-	-	1	2.2%
b/w Mary Street and Brighton Street		E	W		-		11-12noon		11-12noon		6-7pm		5-6pm		5-6pm											
Gordon Street	2012	273	310	583	21	8%	45	15%	62	11%	48	18%	25	8%	66	11%	33.5	3.8%	0.3%	0.0%	6	2.1%	6	2.0%	12	2.1%
b/w Walnut Street and Church Street		E	W		9-10am		8-9am		9-10am		5-6pm		1-2pm		5-6pm											
Green Street	2012	501	11	512	40	8%	2	18%	41	8%	64	13%	1	9%	65	13%	33.8	2.9%	0.2%	0.1%	-	-	-	-	25	4.8%
b/w Adelaide Street and Chapel Street		N	S		9-10am		10-11am		9-10am		5-6pm		5-6pm		5-6pm											
Gywnne Street	2012	11	596	607	2	18%	63	11%	65	11%	1	9%	52	9%	53	9%	40.3	15.9%	2.3%	0.2%	-	-	-	-	47	7.8%
b/w Kelso Street and Stephenson Street		N	S		8-9am		8-9am		8-9am		12-1pm		12-1pm		12-1pm											
Gywnne Street	7/2012	253	244	497	22	9%	37	15%	53	11%	31	12%	22	9%	45	9%	33.1	2.9%	0.2%	0.0%	16	6.5%	12	4.8%	29	5.8%
b/w Balmain Street and Munroe Street		N	S		11-12noon		8-9am		8-9am		5-6pm		1-2pm		12-1pm											
	9/2012	271	258	529	22	8%	41	16%	54	10%	31	11%	22	9%	53	10%	34.2	3.2%	0.2%	0.0%	16	6.0%	13	5.0%	29	5.5%
		N	S		9-10am		8-9am		8-9am		5-6pm		3-4pm		12-1pm											
Howard Street	2011	693	756	1,449	120	17%	83	11%	202	14%	78	11%	131	17%	209	14%	38.2	10.7%	0.8%	0.1%	29	4.2%	33	4.4%	61	4.2%
b/w Church Street and Brighton Street		E	W		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
James Street	2011	498	465	963	41	8%	78	17%	119	12%	65	13%	41	9%	106	11%	44.6	37.6%	4.4%	0.8%	34	6.8%	13	2.7%	45	4.7%
b/w Brighton Street and Mary Street		E	W		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Jessie Street	2012	199	17	216	17	9%	2	12%	18	8%	28	14%	3	18%	29	13%	27.4	0.0%	0.0%	0.0%	-	-	-	-	16	7.5%
b/w Loretto Street and Cremorne Street		E	W		9-10am		10-11am		9-10am		5-6pm		6-7pm		5-6pm											
Kelso Street	2012	860	617	1,477	112	13%	64	10%	176	12%	65	8%	80	13%	142	10%	45.7	43.6%	5.9%	0.3%	29	3.4%	15	2.5%	44	3.0%
b/w Melrose Street and Cremorne Street		E	W		8-9am		8-9am		8-9am		12-1pm		5-6pm		5-6pm											
Mary Street	2011	1,431	1,595	3,026	121	8%	281	18%	401	13%	202	14%	157	10%	358	12%	24.8	0.1%	0.0%	0.0%	36	2.5%	27	1.7%	64	2.1%
b/w Barkly Street and Burgess Street		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
	2010	1,512	1,541	3,053	101	7%	229	15%	330	11%	200	13%	164	11%	359	12%	26.3	0.2%	0.0%	0.0%	32	2.1%	20	1.3%	52	1.7%
		N	S		9-10am		9-10am		9-10am		6-7pm		7-8pm		6-7pm											
Mary Street	2010	1,345	1,740	3,086	106	8%	296	17%	402	13%	188	14%	192	11%	380	12%	45.7	47.6%	5.1%	0.2%	28	2.1%	31	1.8%	62	2.0%
b/w Goodwin Street and Davis Street		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Mary Street	2010	2,493	1,929	4,422	203	8%	359	19%	561	13%	344	14%	200	10%	544	12%	45.4	38.1%	5.6%	0.9%	62	2.5%	104	5.4%	168	3.8%
b/w James Street and Madden Grove		N	S		8-9am		8-9am		8-9am		5-6pm		5-6pm		5-6pm											
Parkins Lane	2009	19	52	71	3	16%	2	4%	4	6%	2	11%	20	38%	21	30%	24.8	0.0%	0.0%	0.0%	1	3.4%	2	3.2%	2	3.3%
b/w Wellington Street and Cremorne Street		E	W		8-9am		9-10am		8-9am		6-7pm		5-6pm		5-6pm											
Rose Street	2011	888	1	889	81	9%	-	-	81	9%	117	13%	-	-	117	13%	37.4	8.1%	0.2%	0.0%	14	1.6%	-	-	14	1.6%
b/w Brighton Street and Mary Street		E	W		8-9am		-		8-9am		5-6pm		-		5-6pm											
Stephenson Street	2012	690	19	709	62	9%	2	11%	63	9%	75	11%	2	11%	76	11%	38.9	12.9%	1.6%	0.0%	-	-	-	-	38	5.4%
b/w Kelso Street and Dunn Street		N	S		9-10am		10-11am		10-11am		5-6pm		3-4pm		5-6pm											
Stephenson Street	2010	777	714	1,491	66	8%	70	10%	132	9%	86	11%	61	9%	146	10%	46.4	40.8%	7.9%	1.0%	44	5.7%	34	4.8%	78	5.2%
b/w Gwynne Street and Cubitt Street		N	S		8-9am		9-10am		9-10am		5-6pm		5-6pm		5-6pm											
Wellington Street	2012	165	215	380	19	12%	21	10%	37	10%	27	16%	20	9%	47	12%	39.2	13.6%	0.9%	0.0%	6	3.8%	6	2.8%	13	3.3%
b/w Blanche Street and Loretto Street		N	S		8-9am		9-10am		8-9am		5-6pm		5-6pm		5-6pm											
Wellington Street	2012	96	48	144	10	10%	5	10%	15	10%	26	27%	4	8%	28	19%	31.7	0.0%	0.0%	0.0%	1	1.0%	2	3.5%	3	1.8%
b/w Blanche Street and Parkins Lane		N	S		8-9am		8-9am		8-9am		5-6pm		4-5pm		5-6pm											

APPENDIX B

CRASH INFORMATION

PART A

DCA CHART

vicroads

DEFINITIONS FOR CLASSIFYING ACCIDENTS

PEDESTRIAN ON FOOT IN TOY / PRAM	VEHICLES FROM ADJACENT DIRECTIONS (INTERSECTIONS ONLY)	VEHICLES FROM OPPOSING DIRECTION	VEHICLES FROM SAME DIRECTION	MANOEUVRING	OVERTAKING	ON PATH	OFF PATH ON STRAIGHT	OFF PATH ON CURVE	PASSENGER AND MISCELLANEOUS
NEAR SIDE 100	CROSS TRAFFIC 110	1 - WRONG SIDE 2 - OTHER HEAD ON (not overtaking) 120	VEHICLES IN SAME LANE REAR END 130	'U' TURN 140	HEAD ON (not sideswipe) 150	PARKED 160	OFF CARRIAGEWAY TO LEFT 170	OFF CARRIAGEWAY RIGHT BEND 180	FELL IN/FROM VEHICLE 190
EMERGING 101	RIGHT FAR 111	RIGHT THROUGH 121	VEHICLES IN SAME LANE LEFT REAR 131	'U' TURN INTO FIXED OBJECT PARKED VEHICLE 141	OUT OF CONTROL 151	DOUBLE PARKED 161	LEFT OFF CARRIAGEWAY INTO OBJECT - PARKED VEHICLE 171	OFF RIGHT BEND INTO OBJECT/PARKED VEHICLE 181	LOAD OR MISSLE STRUCK VEHICLE 191
FAR SIDE 102	LEFT FAR 112	LEFT THROUGH 122	VEHICLES IN SAME LANE RIGHT REAR 132	LEAVING PARKING 142	PULLING OUT 152	ACCIDENT OR BROKEN DOWN 162	OFF CARRIAGEWAY TO RIGHT 172	OFF CARRIAGEWAY LEFT BEND 182	STRUCK TRAIN 192
PLAYING, WORKING, LYING, STANDING ON CARRIAGEWAY 103	RIGHT NEAR 113	RIGHT/LEFT 123	VEHICLES IN PARALLEL LANES LANE SIDE SWIPE 133	ENTERING PARKING 143	CUTTING IN 153	VEHICLE DOOR 163	RIGHT OFF CARRIAGEWAY INTO OBJECT - PARKED VEHICLE 173	OFF LEFT BEND INTO OBJECT/PARKED VEHICLE 183	STUCK RAILWAY CROSSING FURNITURE 193
WALKING WITH TRAFFIC 104	TWO TURNING RIGHT 114	RIGHT/RIGHT 124	VEHICLES IN PARALLEL LANES LANE CHANGE RIGHT (not overtaking) 134	PARKING VEHICLES ONLY 144	PULLING OUT - REAR END 154	PERMANENT OBSTRUCTION ON CARRIAGEWAY 164	OUT OF CONTROL ON CARRIAGEWAY 174	OUT OF CONTROL ON CARRIAGEWAY 184	PARKED CAR RUN AWAY 194
FACING TRAFFIC 105	RIGHT/LEFT FAR 115	LEFT/LEFT 125	VEHICLES IN PARALLEL LANES LANE CHANGE LEFT 135	REVERSING 145		TEMPORARY ROADWORKS 165	OFF END OF ROAD 'T' INTERSECTION 175		
ON MEDIAN/FOOTPATH 106	LEFT NEAR 116		VEHICLES IN PARALLEL LANES RIGHT TURN SIDE SWIPE 136	REVERSING INTO FIXED OBJECT - PARKED VEHICLE 146		STRUCK OBJECT ON CARRIAGEWAY 166			
DRIVEWAY 107	LEFT/RIGHT FAR 117		VEHICLES IN PARALLEL LANES LEFT TURN SIDE SWIPE 137	EMERGING FROM DRIVEWAY - LANE 147		ANIMAL (not ridden) 167			
STRUCK WHILE BOARDING OR ALIGHTING VEHICLE 108	TWO LEFT TURN 118			FROM FOOTWAY 148					OTHER 198
OTHER PEDESTRIAN 109	OTHER ADJACENT 119	OTHER OPPOSING 129	OTHER SAME DIRECTION 139	OTHER MANOEUVRING 149	OTHER OVERTAKING 159	OTHER ON PATH 169	OTHER STRAIGHT 179	OTHER CURVE 189	? UNKNOWN 199

1. Definition for classifying accidents (DCA) should be determined by first selecting a column using the text above & then by diagrammatic sub-division.
2. The sub-division chosen should describe the general movement of vehicles involved in the initial event. It does not assign a cause to the accident.
4. The number 1,2 identify individual vehicles involved when the DCA is linked with other vehicle/driver information.
5. These codes were used for 1987 accidents and replace the Road User Movement (RUM) code.

PART B

CRASH HISTORY

CASUALTY CRASH DATA – BALMAIN PRECINCT

(January 2007 to December 2011)

Council Roads

Location	Year	Time	Severity	Type (DCA code)	Type of Crash
On Cremorne Street between Blanche Street and Parkins Lane	2011	17:10	OI	142	Vehicle reversed out of carparking into vehicle
	2011	16:43	OI	142	Vehicle reversed out of accessway into vehicle
At Balmain Street and Stephenson Street	2011	09:00	OI	132	Right rear
At Balmain Street and Chestnut Street	2011	18:50	OI	110	Cross traffic
At Albert Street and Brighton Street	2009	20:00	SI (P)	100	Pedestrian struck by vehicle
At James Street and Mary Street	2008	19:00	SI (P)	109	Pedestrian struck by vehicle
At Brighton Street and Yorkshire Street	2011	07:30	SI (P)	103	Pedestrian struck by vehicle
At Cotter Street and Mary Street	2011	17:25	OI (B)	121	Vehicle turned into path of oncoming cyclist.

Arterial Roads - Crash Data

(January 2007 to December 2011)

Location	Year	Time	Severity	Type (DCA code)	Type of Crash
Arterial Road & Arterial Road Intersections					
Punt Road					
On Punt Road between Swan Street and Rout Street	2008	01:30	SI	102	Pedestrian hit by northbound vehicle
	2009	14:30	OI	130	Rear end
	2008	09:30	SI	130	Rear end
	2009	19:30	OI	130	Rear end
On Punt Road between Rout Street and Citylink On-ramp	2008	16:30	SI (B)	121	Vehicle turned right in front of bicycle
	2011	10:45	OI (P)	107	Vehicle exiting private premises stuck pedestrian on footpath
	2007	09:00	SI (B)	147	Vehicle exiting private premises stuck southbound cyclist
	2008	07:15	OI (B)	147	Vehicle exiting private premises stuck bicycle on footpath
Punt Road and Kelso Street	2010	21:10	OI (M)	145	Vehicle reversing into traffic stream and striking vehicle
	2007	22:05	SI	120	Head on
	2011	17:15	OI	130	Rear end
Swan Street					
At Swan Street and Punt Road	2010	13:30	OI	132	Right near
	2009	10:20	OI	121	Right through
	2011	21:10	OI	132	Right rear
	2007	12:10	OI	131	Left rear
	2007	08:00	OI (B)	137	Left turn side swipe
	2007	20:30	OI (B)	133	Lane side swipe
	2008	14:05	OI	130	Rear end
	2008	16:00	SI (P)	109	Pedestrian crash
	2008	22:30	OI (M)(P)	100	Pedestrian hit by motorcycle
	2009	19:30	OI	130	Rear end

Location	Year	Time	Severity	Type (DCA code)	Type of Crash
On Swan Street between Punt Road and Wellington Street	2010	00:10	OI	103	Pedestrian struck approaching moving taxi
	2009	15:40	OI (B)	135	Lane change left
At Swan Street and Wellington Street	2007	07:15	OI (B)	121	Right through
On Swan Street between Wellington Street and Cremorne Street	2009	20:50	OI (P)	100	Pedestrian hit by vehicle from right
	2007	18:00	OI (B)	142	Bicycle struck by vehicle exiting parking space
At Swan Street and Cremorne Street	2007	18:00	SI	112	Left far
	2007	06:45	SI (P)	102	Pedestrian hit by vehicle from the left
	2009	15:00	SI (M)	174	Out of control
On Swan Street between Cremorne Street and Stewart Street	2010	08:30	SI (B)	163	Bicycle strikes door of parked car
	2008	01:00	SI (P)	100	Pedestrian hit from right
	2010	21:00	OI	130	Rear end
	2009	02:00	OI (P)	103	Pedestrian hit hailing taxi
	2011	13:50	OI (M)	134	Lane change right
At Swan Street and Kipling Street	2008	15:40	SI (B)	163	Bicycle strikes door of stationary vehicle
	2009	19:30	OI (B)	163	Bicycle strikes door of stationary vehicle
On Swan Street between Kipling Street and Byron Street	2008	10:10	OI	160	Vehicle collides with parked vehicle on the left
At Swan Street and Byron Street	2011	08:55	SI (B)	120	Head on
	2008	15:50	OI (P)	100	Pedestrian struck by vehicle from the right
At Swan Street and Green Street	2009	16:20	OI (P)	100	Pedestrian struck by vehicle from the right
On Swan Street between Clifton Street and Waverley Street	2009	23:13	OI	130	Rear end
At Swan Street and Royal Place	2009	04:55	OI (P)	109	Pedestrian attempting to enter vehicle as vehicle drives away
	2007	12:15	OI (P)	102	Pedestrian hit by vehicle from the left

Location	Year	Time	Severity	Type (DCA code)	Type of Crash
	2009	10:30	OI (B)	163	Bicycle strikes door of parked vehicle
	2008	07:30	OI (B)	137	Left turn side swipe
	2008	13:45	OI	132	Right near
	2011	18:48	OI (M)	133	Lane side swipe
On Swan Street between Docker Street and Dickmann Street	2007	17:30	SI (B)	120	Head on
	2010	08:30	OI (B)	143	Bicycle struck by vehicle entering parking
	2010	17:30	OI (B)	163	Bicycle strikes door of parked vehicle
On Swan Street between Dickmann Street and Church Street	2007	01:00	SI (P)	100	Pedestrian hit by vehicle from the right
	2007	18:00	OI	130	Rear end
	2009	14:20	OI (P)	100	Pedestrian hit by vehicle from the right
Swan Street and Church Street	2010	14:00	OI (P)	100	Pedestrian hit by vehicle from the right
	2011	16:20	OI (B)	121	Right through
	2009	05:45	SI	110	Cross traffic
	2008	19:15	OI (B)	163	Bicycle strikes door of parked vehicle
	2010	13:00	SI (B)	121	Right through
	2008	02:35	SI (P)	100	Pedestrian hit by vehicle from the right
	2007	18:45	OI (P)	100	Pedestrian hit by vehicle from the right
	2008	11:22	OI	190	Passenger fell from Tram
	2008	09:30	OI (B)	171	Left on carriageway into parked vehicle
	2008	05:45	SI (B)	121	Right through
	2011	21:25	OI (P)	109	Pedestrian hit by vehicle
	2009	10:30	OI	139	Same direction manoeuvre
	2009	11:30	OI (B)	137	Left turn side swipe
	2008	17:30	OI	121	Right through
	2009	09:30	OI	110	Cross traffic

Location	Year	Time	Severity	Type (DCA code)	Type of Crash
At Swan Street and Brighton Street	2010	20:45	OI (P)	102	Pedestrian hit by vehicle from the left
On Swan Street between Brighton Street and Charles Street	2008	00:20	OI	150	Head on
At Swan Street and Charles Street	2008	09:10	SI	139	Same direction manoeuvre
At Swan Street and Harvey Street	2008	17:20	SI (M)	121	Right through
	2007	08:00	OI (B)	174	Out of control
Church Street					
On Church Street between Swan Street and Lesney Street	2010	13:00	OI	147	Vehicle strikes another while emerging from driveway
	2007	21:10	SI (M)	174	Out of control on carriageway
	2010	01:50	OI (P)	109	Pedestrian struck by vehicle
At Church Street and Lesney Street	2010	10:45	OI (M)	113	Right near
At Church Street and Chapel Street	2007	16:30	SI (M)	121	Right through
At Church Street and Hutchings Street	2009	19:30	OI (B)	121	Right through
At Church Street and William Street	2011	13:00	SI (B)	174	Out of control
	2009	17:37	SI (M)	121	Right through
	2007	13:00	SI (B)	137	Left turn side swipe
On Church Street between William Street and Gibbons Street	2009	12:00	OI	130	Rear end
	2007	13:00	OI (B)	135	Lane change left
At Church Street and Adelaide Street	2008	15:30	SI	147	Vehicle strikes another while emerging from driveway
On Church Street between Adelaide Street and Hotham Place	2008	16:37	SI (B)	121	Right through
	2011	13:06	OI (B)	142	Vehicle strikes bicycle while leaving parking
At Church Street and Hotham Place	2008	12:30	OI (M)	140	U-turn
	2011	16:40	OI (B)	174	Out of control on carriageway
At Church Street and Northcote Street	2008	07:40	OI (B)	137	Left turn side swipe
At Church Street and Balmain Street	2009	08:20	SI (B)	121	Right through
	2009	19:09	OI (B)	116	Left near
	2010	15:30	SI (M)	137	Left turn side swipe
	2007	08:30	OI (B)	133	Lane side swipe
	2011	08:30	SI (M)	110	Cross traffic

Location	Year	Time	Severity	Type (DCA code)	Type of Crash
	2011	17:30	OI (B)	163	Bicycle strikes door of parked vehicle
	2009	07:00	OI (B)	121	Right through
On Church Street between Balmain Street and Amsterdam Street	2007	15:00	SI (M)	160	Vehicle collided with parked car on the left
	2010	09:15	OI	130	Rear end
At Church Street and Amsterdam Street	2007	17:59	SI (B)	110	Cross Traffic
	2009	11:00	OI (M)	174	Out of control
	2008	10:30	OI (P)	107	Pedestrian on footpath struck by vehicle exiting property
	2011	18:30	OI (B)	132	Right Rear
At Church Street and Yorkshire Street	2007	17:45	OI (B)	163	Bicycle strikes door of stationary vehicle
At Church Street and Yarra Street	2009	07:21	OI (B)	148	Bicycle off footpath strikes vehicle
	2010	09:45	OI (M)	174	Out of control
On Church Street between Yarra Street and Dale Street	2011	16:50	OI	160	Vehicle collides with parked vehicle on the left
At Church Street and Dale Street	2009	08:30	OI (B)	121	Right through
At Church Street and Howard Street	2009	07:00	OI (B)	142	Leaving parking
	2008	13:00	OI (M)	174	Out of control
At Church Street and Citylink off ramp	2010	12:38	OI	149	Other manoeuvre

LEGEND:

OI: Other Injury

SI: Serious Injury

F: Fatality

(B): Bicyclist

(M): Motorcyclist

(P): Pedestrian

(C): Bus/Coach

(RT): Rigid Truck

(ST): Semi-trailer

APPENDIX C

INITIAL COMMUNITY QUESTIONNAIRE CIRCULAR

TRAFFIC STUDY

LOCAL AREA 20: BALMAIN PRECINCT, CREMORNE

Yarra City Council is undertaking a Local Area Traffic Management (LATM) study of your local area as part of its ongoing LATM program.

Council has been undertaking LATMs in selected precincts within the municipality in order to improve conditions for pedestrians, cyclists, and to reduce car traffic.

The study area is identified as Local Area 20: Balmain Precinct, under Council's LATM program and is bound by Swan Street, Mary Street, Yarra River and Punt Road, Cremorne.

A map of the study area is provided below. If you live or work in this area, we invite you to attend a **Public Meeting** to be held on:

Thursday, 26th July, 2012 at 6:30pm

Richmond Town Hall

Meeting Room 1

333 Bridge Road, Richmond

The purpose of this public meeting is to outline the study process and timelines, give the local community an opportunity to discuss any local traffic and parking issues and to select community representatives to form the Traffic Study Group. Ward Councillors will also be in attendance.

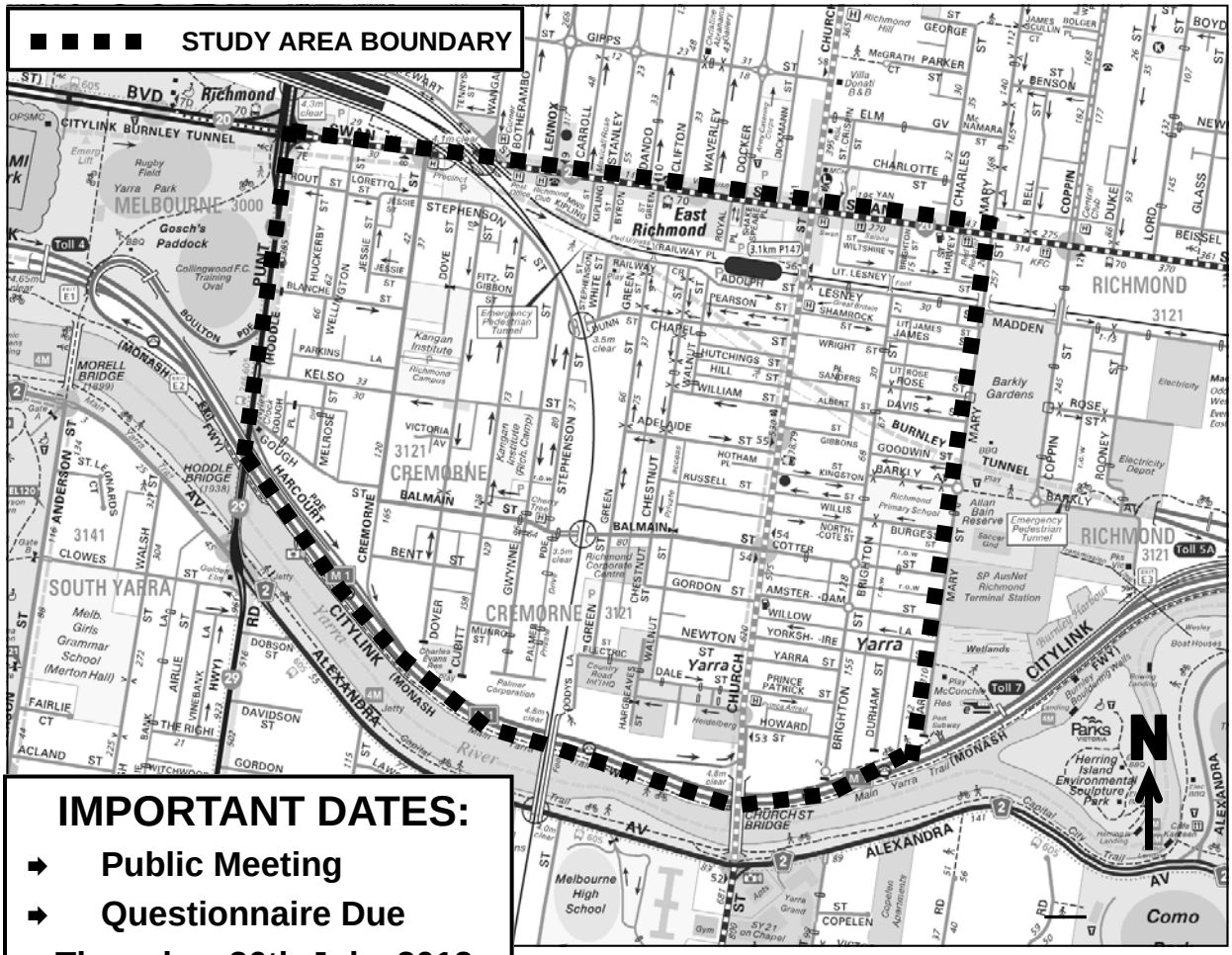
A **Questionnaire Survey** on traffic and parking issues in your local area is attached. The information you provide will help to identify problem areas and assist the Traffic Study Group develop appropriate traffic and parking management solutions for this area. Alternatively, you can respond to the survey online at:

www.yarracity.vic.gov.au/LATMS-20-Balmain-/

The closing date for survey responses (both reply-paid and online) will be Thursday, 26th July, 2012. You may also bring the completed survey along with you to the Public Meeting.

To assist with this study, Council has engaged Traffix Group Pty Ltd, a specialist traffic engineering and transport planning consultancy.

STUDY AREA



IMPORTANT DATES:

- **Public Meeting**
- **Questionnaire Due**

Thursday, 26th July, 2012

LOCAL AREA TRAFFIC MANAGEMENT PROCESS

Local Area Traffic Management (LATM) is a study process which:

- investigates traffic conditions in local streets and areas,
- involves the community in identifying issues and developing solutions,
- considers the impacts of traffic management on an area-wide basis, and
- aims to improve the residential environment.

LATM recognises that streets serve many functions, such as:

- providing for vehicle and pedestrian access to properties,
- providing for the movement of vehicles within and through an area,
- providing space for social interaction within a neighbourhood, and
- providing access for emergency and service vehicles.

It is noted that the LATM study process is an approach to traffic planning that looks at the total effect of traffic management proposals in a local area rather than isolated locations.

Through the study process, a draft Traffic Management Plan will be prepared for community comment.

The draft Traffic Management Plan will set out recommended solutions to traffic issues identified by the community and the consultant's engineering investigations. This plan will be circulated in a questionnaire to all properties in the study area for community comment in October, 2012.

The community response to the draft plan will be reviewed by the **Traffic Study Group**, prior to presenting the Recommended Traffic Management Plan in a report to Council.

PARKING MANAGEMENT PROCESS

In conjunction with the LATM study, City of Yarra Parking Services Team will undertake a **Parking Study for the Balmain Precinct**, investigating the parking issues raised by the local community in this questionnaire circular.

The main purpose of the parking study will be to investigate issues relating to restrictions, availability and enforcement of parking. **Any parking issues that impact traffic safety will be dealt with in this Local Area Traffic Management Study on traffic issues.**

Council officers will develop proposals and form a Draft Parking Management Plan. This plan will be circulated to the study area for community comment. If Council receives sufficient support for the proposals, implementation of the proposed changes can then occur.

TRAFFIC STUDY GROUP

The Study includes an extensive community consultation process, which aims to develop a Traffic Management Plan that reflects the desires, expectations and requirements of the local community.

The community consultation process will include the formation of a **Traffic Study Group** comprising community representatives, Ward Councillors, Council officers and consultants from Traffix Group.

The role of community representatives will be to represent residents and businesses in the study area, act as a contact for the local community and to assist in the development of a Traffic Management Plan for the area.

It is expected that the Traffic Study Group will meet on three occasions on a weekday evening, with the first meeting to be held in early August, 2012 on a date to be advised.

Residents or business operators interested in acting as representatives on the Traffic Study Group are encouraged to attend the public meeting and **nominate** themselves. Nominations can also be made via the attached survey or online at:

www.yarracity.vic.gov.au/LATMS-20-Balmain-/

Approximately 10-12 representatives will be selected from a number of different streets to ensure the entire local area is well represented.

CONTACT DETAILS

If you require any further information or assistance with this survey, please contact:

Brent Hodges at **Traffix Group**
phone: 9822-2888
email: brent@traffixgroup.com.au

or

Noel Wootten at **Yarra City Council**
phone: 9205 5742
email: Noel.Wootten@yarracity.vic.gov.au

TRAFFIC STUDY – QUESTIONNAIRE SURVEY

Balmain Precinct Local Area 20 Traffic Management Study

Please complete and return this questionnaire to Council by **Thursday, 26th July, 2012**. This survey form converts into a **reply-paid** envelope when folded and stapled as marked on the reverse side (ie. no stamp required).

1. What are your contact details? (optional, but helps to identify and clarify issues)

Street Name: _____ House No. _____

Name: _____ Phone No. _____

Email: _____

2. Do you wish to nominate as a community representative on the Traffic Study Group? *(Please tick (✓) and ensure that your contact details are provided above)*

Yes ☐ No ☐

3. Traffic Problems in Your Street

(a) What are the traffic problems in your street?
(Please tick (✓) one square along each line)

Problem	No Problem	Minor Problem	Major Problem
Traffic Speed			
Traffic Volume			
Heavy Vehicles			
Pedestrian Facilities			
Bicycle Facilities			
Street Lighting			
Irresponsible Driving			
Other (specify)			

(b) Do any of these problems occur at a particular time or day?
(Please tick (✓) one square along each line)

Problem	All Times	Day-time	Peak Hours	Night-time
Traffic Speed				
Traffic Volume				
Heavy Vehicles				
Pedestrian Facilities				
Bicycle Facilities				
Irresponsible Driving				
Other (specify)				

4. Traffic Problems in the Whole Study Area

What are the worst three traffic problems in any part of the Study Area? List the location and nature of the problem. Consider problems you encounter when walking, cycling, as well as driving.

1. _____
_____
_____
2. _____
_____
_____
3. _____
_____
_____(Additional space is provided overleaf)

5. Suggestions to Solve the Traffic Problems

Do you have any suggestions to overcome the traffic problems?

(a) In Your Street?

_____
_____
_____

(b) In the Whole Study Area?

_____
_____
_____

6. Parking Problems in Your Street *(Please tick (✓) one square along each line)*

(a) What are the parking problems in your street?

Problem	No Problem	Minor Problem	Major Problem
Parking Restrictions			
Parking Availability			
Parking Enforcement			

(b) Do any of these problems occur at a particular time or day?

Problem	All Times	Day-time	Peak Hours	Night-time
Parking Restrictions				
Parking Availability				
Parking Enforcement				

7. Suggestions to Solve Parking Problems in Your Street

_____
_____

No stamp required
if posted in Australia

Delivery Address:
PO Box 168
RICHMOND VIC 3121

City of Yarra
Reply Paid 168
RICHMOND VIC 3121

Fold along this line

Local Area 20: Balmain Precinct - Local Area Traffic Management

(GRP14494)

Staple here once only

Fold along this line

Please provide comments to support your opinions below.

_____

_____

_____

_____

_____

_____

_____

_____

[Yarra City Council values your comments about these issues. The information you provide is confidential in keeping with the INFORMATION PRIVACY ACT 2000 (Vic). For a copy of Yarra City Council's Privacy Policy please contact Ivan Gilbert Privacy Officer on 9205 5110 or email ivan.gilbert@yarracity.vic.gov.au*.*

The personal information requested on this form is being collected by Council to assist with the development of the Balmain Precinct Local Area Traffic Management Study, and will be used solely by Council for the primary purpose or directly related purposes. The respondent understands that the personal information provided is for Balmain Precinct Local Area Traffic Management Study and they may apply to Council for access and/or amendment of the information.

APPENDIX D

AGENDA & MINUTES OF TRAFFIC STUDY GROUP MEETINGS

PART A

PUBLIC MEETING

AGENDA

Public Meeting
Thursday, 26th July, 2012

1.	**Welcome – City of Yarra**	**6:30**
2.	**The Study Area**	**6:40**
3.	**What is a Local Area Traffic Management?** **Ross Thomson – Traffix Group**	**6:45**
4.	**The LATM Study Process**	**6:55**
5.	**Parking Management** **Damien Patterson – Manager Parking Systems, City of Yarra**	**7:05**
6.	**Discussion of Key Traffic Issues & Questions**	**7:15**
7.	**Traffic Study Group Representatives**	**7:50**
8.	**Close of Meeting**	**8:00**

If you require any further information or assistance, please contact:

Brent Hodges at **Traffix Group**
phone: 9822 2888
email: brent@traffixgroup.com.au

or **Noel Wootten** at **Yarra City Council**
phone: 9205 5742
email: noel.wootten@yarracity.vic.gov.au

MINUTES OF PUBLIC MEETING – THURSDAY, 26TH JULY, 2012
CITY OF YARRA
BALMAIN PRECINCT NO. 20 LOCAL AREA TRAFFIC MANAGEMENT STUDY

1. ATTENDEES

Cr Alison Clarke – Councillor	City of Yarra
Richard Young – Manager Engineering Infrastructure & Special Projects	City of Yarra
Dennis Cheng – Acting Traffic Coordinator	City of Yarra
Noel Wootten – Traffic Engineer	City of Yarra
Damien Patterson – Manager Parking Systems	City of Yarra
Ross Thomson – Associate	Traffix Group
Brent Hodges – Traffic Engineer	Traffix Group

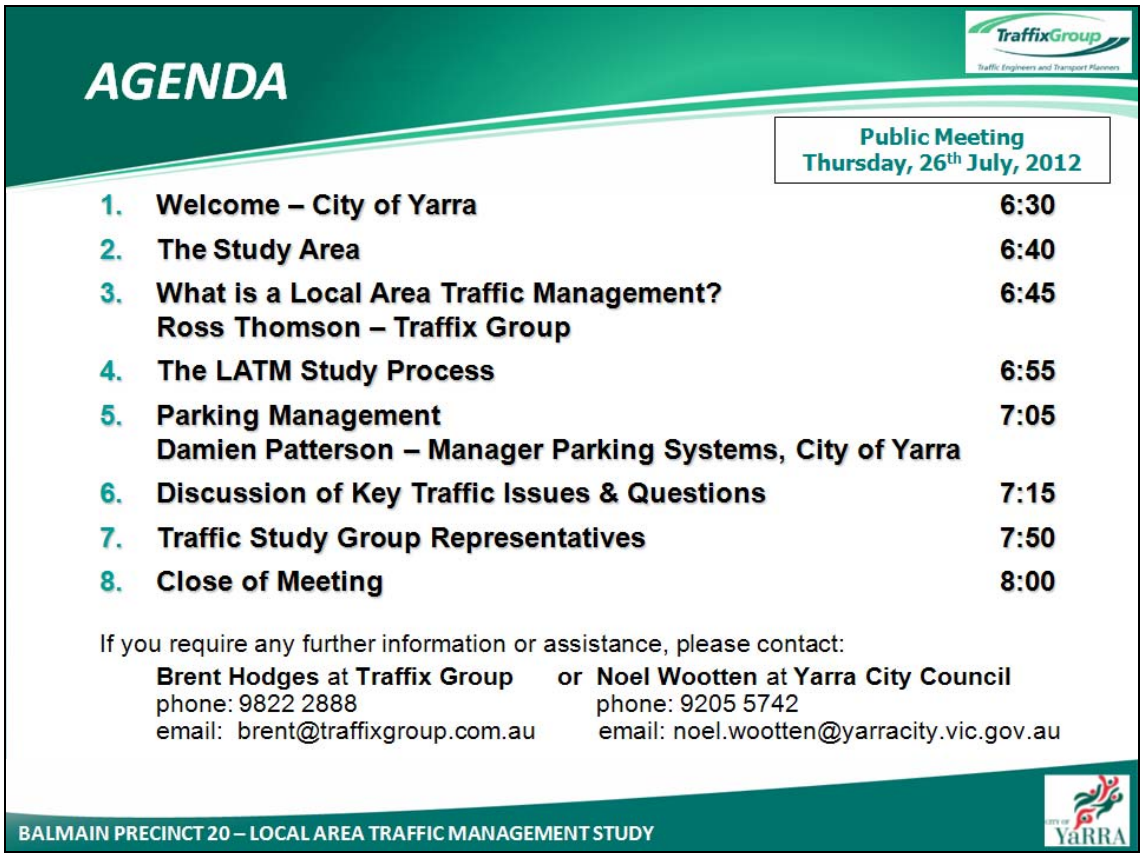
[redacted]	Amsterdam Street
[redacted]	Balmain Street
[redacted]	Barkly Avenue
[redacted]	Barkly Avenue
[redacted]	Barkly Avenue
[redacted]	Brighton Street
[redacted]	Brighton Street
[redacted]	Brighton Street
[redacted]	Brighton Street
[redacted]	Richmond Primary School
[redacted]	C/- Rossella Complex (Urbis)
[redacted]	C/- Rossella Complex
[redacted]	Cremorne Street
[redacted]	Cubbit Street
[redacted]	Gordon Street
[redacted]	Green Street
[redacted]	Green Street
[redacted]	Gwynne Street
[redacted]	Kelso Street
[redacted]	Mary Street
[redacted]	Mary Street
[redacted]	Melrose Street
[redacted]	Melrose Street
[redacted]	Rosella Complex
[redacted]	Rosella Complex
[redacted]	Wellington Street
[redacted]	Wellington Street

Apologies:
Councillor Funder
Councillor Smedley

2. INTRODUCTION

The meeting was opened by Richard Young at 6:35pm. Richard introduced Cr Clarke, Council officers, and the Traffix Group team to the meeting. Richard explained that a Local Area Traffic Management Study (LATM) has commenced for the area. Richard highlighted that one of the purposes of this traffic management study and public meeting is Council's desire to address the concerns of the local community, and to do this in a collaborative process. Richard explained that as part of the process a Traffic Study Group would be formed comprising members of the local community.

Richard then handed over to Ross Thomson of Traffix Group to outline the LATM process. Ross provided a brief description of Traffix Group and their involvement and explained what a LATM study is and the process involved. Ross outlined the agenda as follows:



AGENDA

Public Meeting
Thursday, 26th July, 2012

1.	Welcome – City of Yarra	6:30
2.	The Study Area	6:40
3.	What is a Local Area Traffic Management? Ross Thomson – Traffix Group	6:45
4.	The LATM Study Process	6:55
5.	Parking Management Damien Patterson – Manager Parking Systems, City of Yarra	7:05
6.	Discussion of Key Traffic Issues & Questions	7:15
7.	Traffic Study Group Representatives	7:50
8.	Close of Meeting	8:00

If you require any further information or assistance, please contact:

Brent Hodges at **Traffix Group** or **Noel Wootten** at **Yarra City Council**
phone: 9822 2888 phone: 9205 5742
email: brent@traffixgroup.com.au email: noel.wootten@yarracity.vic.gov.au

BALMAIN PRECINCT 20 – LOCAL AREA TRAFFIC MANAGEMENT STUDY

3. STUDY AREA

Ross described the study area as being the area bound by Swan Street, Mary Street, Yarra River and Punt Road. Ross emphasised the fact that the primary intention of this study is to investigate traffic problems within the study area. Ross noted that the study area will include all Council managed roads. Any issues raised outside of the study area will be referred to City of Yarra.

4. WHAT IS LOCAL AREA TRAFFIC MANAGEMENT

Ross then explained the aims of Local Area Traffic Management, including the following key points:

Local Area Traffic Management (LATM) is a study process which:

- investigates traffic conditions in local streets and areas,
- involves the community in identifying issues and developing solutions,
- considers the impacts of traffic management on an area-wide basis,
- aims to improve the residential environment, and
- identifies locations to refer to police for enforcement (e.g. speeding and turn bans).

5. FUNCTION OF STREETS

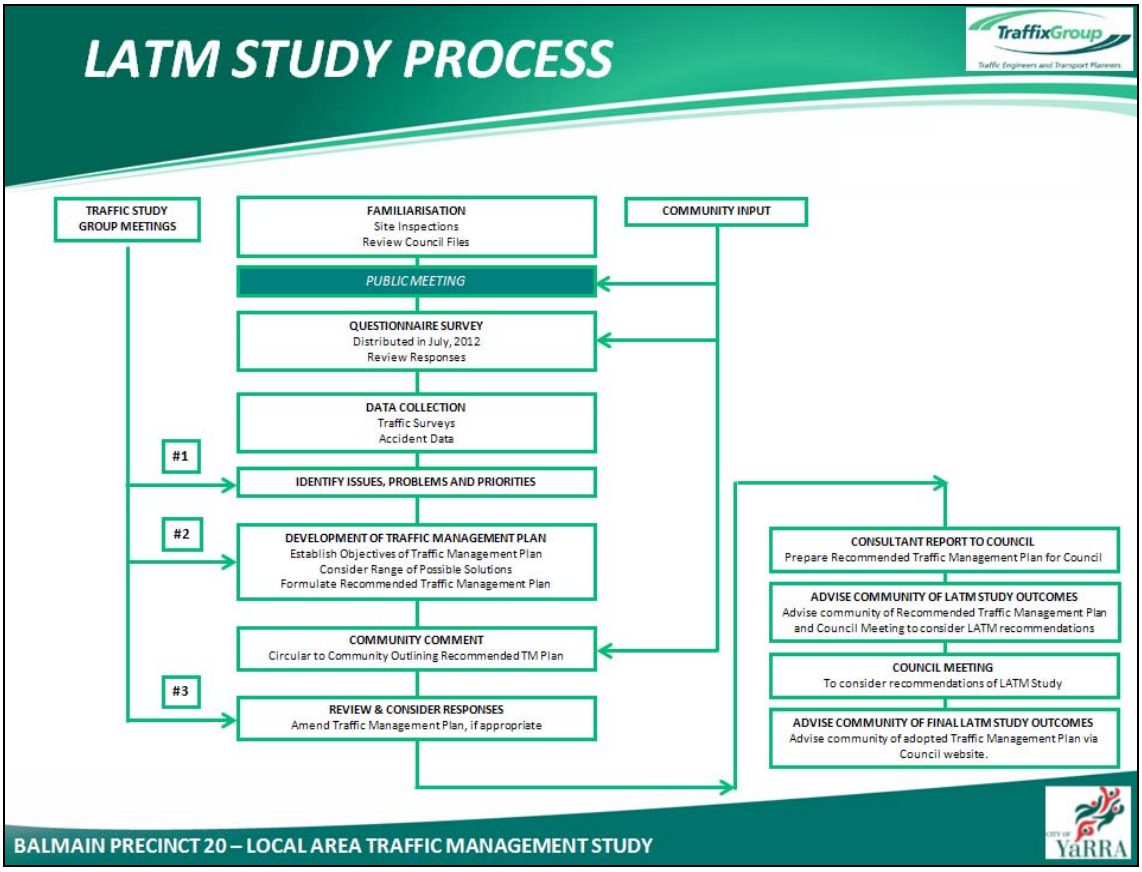
Ross explained that the LATM process recognises that streets serve many functions:

- provide for vehicle and pedestrian access to properties,
- provide for the movement of vehicles within and through an area,
- provide space for on-street parking,
- provide space for social interaction within a neighbourhood,
- serve as a play area, and
- provide access for emergency and service vehicles.

Ross explained that the LATM study would review parking issues raised by the local community in terms of how parking interacts with access along local streets and influences safety issues. However, this study would not be dealing with issues of parking restrictions or provision of parking for new developments.

6. STUDY PROCESS

Ross discussed the adopted study process as shown below and emphasised the community involvement in the process.



- Familiarisation: Traffix Group has commenced site inspections and has reviewed existing traffic count data. A detailed review of past traffic issues supplied by Council has also been undertaken.
- Public Meeting: The purpose of the public meeting is to further identify residents' traffic issues and to take nomination for the Traffic Study Group.

  Questionnaire Survey: Responses are due today (26th July, 2012), however late responses will be accepted for about a week after this date. Traffix Group has received approximately 170 responses to date.
- Data Collection: Council has undertaken traffic counts in a number of streets within the area. New data will also be collected to accurately address other issues that become apparent from the community questionnaire survey. The traffic data provides vehicle volumes both daily and hourly, classifies vehicle types and identifies the direction of traffic flow.

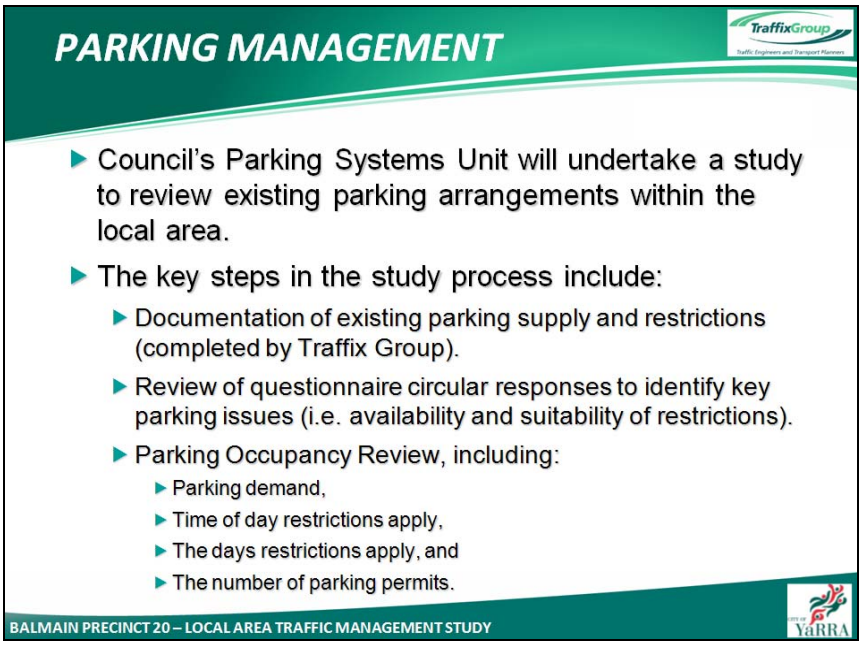
  Casualty crash data from the latest 5 years of reporting has been collated. It should be noted that this data records only those crashes where there has been an injury. The crash data does not list every single accident which may have occurred at a particular site (i.e. including property damage only crashes). Local residents may be able to provide an indication as to the nature of non-injury accidents that may have occurred at specific locations within the area.
- Traffic Study Group Meetings: Three meetings will take place over the coming months. The first committee meeting will be held in late August and the second in September, with the third in early December. These meetings will be attended by the Traffic Study Group.

- Report to Council: Ross explained that the result of the process is to provide a set of recommendations in a report to Council. Ross then explained that the report is then forwarded to Council to determine whether or not to adopt the recommended Traffic Management Plan. If the recommendations are adopted, Council will then prioritise the works and schedule them through their works program.

Ross then asked if there were any questions regarding the study process. A resident enquired as to how long the study process takes. Ross explained that the process is as streamlined as possible and that final recommendations from Traffix Group would be provided to Council in December, 2012.

7. PARKING MANAGEMENT

Damien Patterson, Manager of Council's Parking Services Unit provided a short explanation of the parking study to be run in parallel to the Local Area Traffic Management Study, through the following slides:



8. DISCUSSION OF KEY TRAFFIC ISSUES – COMMUNITY INPUT

Ross Thomson then facilitated a discussion on community issues. The following issues were identified by the members of the local community present at the meeting.

Location	Issue	Comments	Action
Balmain Street	Through Traffic and Traffic Speed	A number of residents raised concerns with regard to the level of through traffic utilising Balmain Street to avoid the intersection of Church Street and Swan Street.	Traffix Group to investigate.
	Chicane/raised intersection in the vicinity of the Cherry Tree Hotel	A resident noted that when the existing chicane was installed that traffic speeds noticeably dropped. However the chicane was subsequently modified and vehicles now drive faster through the chicane.	Traffix Group to investigate.
	Footpath on southern side in the vicinity of Gwynne Street	A resident indicated that the footpath in this region is narrow and as the footpath level is the same as the road surface, there is potential for vehicles to mount the footpath.	Traffix Group to investigate.
	Width due to on-street parking	On-street parking along both sides of Balmain Street causes one-lane, two-way operation. A number of drivers believe that two vehicles can pass, however this can result in vehicles mirrors being clipped.	Traffix Group to investigate.
Richmond Primary School	Pedestrian safety on Mary Street	A representative of Richmond Primary School indicated that the size of the school had dramatically increased over the past few years. The key concern related to pedestrian safety as children regularly crossed Mary Street to access the reserve on the eastern side of the road for sporting activities. The representative indicated that the school would like to see Mary Street closed to traffic.	Traffix Group to investigate.

Location	Issue	Comments	Action
	Barkly Avenue Pedestrian Crossing	A resident raised concern in relation to parents parking on the school crossing in Barkly Avenue. They indicated that it caused safety issues for children using the crossing and caused traffic congestion in the local area. They indicated that enforcement would be the most suitable solution. A representative of the Richmond Primary School indicated that the school regularly tried to educate parents and enforcement may provide a solution. However in the past the problem has only been solved for a month or so and then parents revert back to parking on the school crossing.	Traffix Group to investigate.
Mary Street	Right turn from Mary Street into Swan Street	A resident indicated that the right turn movement into Swan Street is very difficult due to the volume of vehicles on Swan Street. He questioned the safety of this manoeuvre. The resident indicated a preference to have the existing 'No Right Turn' ban at Madden Grove removed to allow right turns to occur at Coppin Street at the traffic signals.	Traffix Group to investigate.
	Through Traffic	A resident indicated that Mary Street is used as a Rat Run.	Traffix Group to investigate.
	SP Ausnet Upgrade Works	A resident of the area indicated that upgrades of the existing electricity sub-station are proposed to occur over the next 5 years. They indicated that a TMP has been produced to identify the routes that will be used to assess the area for heavy vehicles.	Traffix Group to review TMP and consider when developing the LATM Traffic Management Plan
Study Area	Bicycle Facilities	A resident noted that cyclist facilities are discontinuous through the area. One resident noted that a number of bluestone treatments through the area made it quite difficult to cycle around.	Traffix Group to investigate.
	Parking during MCG and AAMI Park events	A number of residents noted that parking occupancies were high when events were staged at the MCG and AAMI Park. A resident requested that any investigation of parking issues should take into account these events.	Damien Patterson to consider in Council's review of parking issues.

Location	Issue	Comments	Action
Kelso Street	Traffic Speeds	A resident indicated that traffic speeds in Kelso Street are high. They noted that people test driving cars from local dealerships often speed through the street.	Traffix Group to investigate.
Davis Street	Traffic Speeds	A resident noted that high traffic speeds occur through Davis Street.	Traffix Group to investigate.
Gough Street	Traffic Safety and accessibility	A resident indicated that vehicles had very limited sight distance exiting the laneway between Melrose Street and Cremorne Street, principally due to the bend in Gough Street. This was exacerbated by the volume and speed of vehicles using Gough Street.	Traffix Group to investigate.
Balmain Street / Cremorne Street / Gough Street	Sight Distance	A resident indicated that the intersection of Balmain Street/Cremorne Street and Gough Street/Cremorne Street had poor sight distance. It was noted that a significant number of vehicles utilise Gough Street to access Cremorne Street and Balmain Street.	Traffix Group to investigate.
Chapel Street / Dunn Street	Through Traffic and Traffic Speed	Significant level of through traffic as Chapel Street/Dunn Street provides one of only two underpasses beneath the railway line.	Traffix Group to investigate.
	Drivers ignoring stop signs	A resident indicated that drivers frequently ignore the stop signs along Chapel Street causing many near misses.	Traffix Group to investigate.
	U-turning vehicles	A resident indicated that a significant number of property damage incidents had occurred in the vicinity of the unnamed lane between Chestnut Street and Green Street as vehicles attempted to U-turn.	Traffix Group to investigate.
Mary Street / Madden Grove	Lack of Enforcement of existing 'No Right Turn'	A number of local residents indicated that the existing 'No Right Turn' restrictions are not enforced.	Noted.
Brighton Street	Traffic Speed and Through Traffic	A resident indicated that there were traffic speed and through traffic issues in Brighton Street. This also caused a level of noise for residents.	Traffix Group to investigate.

Location	Issue	Comments	Action
Cremorne Street / Swan Street	Intersection Capacity	A number of residents noted that the capacity of the Cremorne Street approach to the intersection with Swan Street is poor. Of particular concern was the length of the left turn lane (restricted due to parking) and the delays caused by pedestrians crossing the Swan Street approach. A resident indicated that the pedestrian crossing should be relocated to the eastern side of the intersection.	Traffix Group to investigate.
Swan Street	Bicycle Facilities	A resident indicated that there are no bicycle facilities between Cremorne Street and Punt Road on the south side of the road and the carriageway width reduces which causes a 'squeeze point'	Traffix Group to investigate.

9. TRAFFIC STUDY GROUP

Ross Thomson explained that the Traffic Study Group will comprise community representatives (12 people), plus Councillors, Council officers and traffic engineers from Traffix Group. Ross also outlined the role of community representatives and provided an outline of future meetings as follows:

- Attend 3 Meetings of the Traffic Study Group,
- To provide local information to assist with the identification of key traffic issues,
- To provide feedback regarding the traffic management plans and proposals prepared by the Consultant,
- To represent residents and businesses of their sub area, and
- Act as a contact person for residents and businesses in your sub-area.

The three study group meetings were described as follows:

Meeting 1 (22nd August 2012)

- Present an Issues Paper.
- Identify & Prioritise Key Issues.

Meeting 2 (19th September 2012)

- Development of Traffic Management Options.
- Formulate a Recommended Plan for Community Comment.

Meeting 3 (Early December 2012)

- Review community responses to Proposed Traffic Management Plan.

Ross explained the purpose of the sub-areas is to get an even distribution of residents/businesses on the Traffic Study Group. It is intended that the Traffic Study Group members will consider all traffic issues on an area-wide basis.

10. NOMINATION OF COMMUNITY REPRESENTATIVES

Ross Thomson explained that the study area has been broken into 3 sub-areas for the sole purpose of electing representatives for the Traffic Study Group.

It was explained that desirably, there should be 4 representatives from each sub-area, although the group will equally consider issues in the whole study area.

The nominations for the Study Group from the public meeting and the circular responses are presented in Table 1.

Table 1: Study Group Nominations

Name	Street	Sub-Area
[redacted]	Cremorne Street	1
[redacted]	Balmain Street	1
[redacted]	Gwynne Street	1

Name	Street	Sub-Area
[redacted]	Kelso Street	1
	Melrose Street	1
	Rosella Complex - Palmer Parade	1
	Balmain Street	1
	Balmain Street	1
	Balmain Street	1
	Cremorne Street	1
	Cubitt Street	1
	Cubitt Street	1
	Cubitt Street	1
	Dover Street	1
	Dover Street	1
	Gwynne Street	1
	Huckerby Street	1
	Stephenson Street	1
	Wellington Street	1
	Wellington Street	1
	Wellington Street	1
	Gordon Street	2
	Green Street	2
	Gordon Street	2
	Gordon Street	2
	Green Street	2
	Green Street	2
	Kipling Street	2
	Kipling Street	2
	Pearson Street	2
	Amsterdam Street	3
	Barkly Avenue	3
	Brighton Street	3
	Brighton Street	3
	Richmond Primary School - Mary Street	3
	Mary Street	3
	Brighton Street	3
	Brighton Street	3
	Durham Street	3

Name	Street	Sub-Area
[redacted]	Howard Street	3
[redacted]	Mary Street	3
[redacted]	Unknown	3

11. CLOSE OF MEETING

Ross Thomson closed the meeting at 8:00pm.

PART B

TRAFFIC STUDY GROUP MEETING #1

AGENDA

TSG, Meeting #1
Wednesday, 22nd August, 2012

1.	**Introduction**	**6:30**
2.	**Overview of Study Process**	**6:35**
3.	**Role of the Traffic Study Group**	**6:40**
4.	**Parking Management – Grant Kelly, City of Yarra**	**6:45**
5.	**Existing Conditions**	**6:55**
6.	**Questionnaire Survey Results**	**7:05**
7.	**Summary of Key Issues**	**7:10**
8.	**Questions/Discussion**	**7:40**
9.	**Next Meeting**	**7:55**
10.	**Close of Meeting**	**8:00**

If you require any further information or assistance, please contact:

Brent Hodges at **Traffix Group**
phone: 9822 2888
email: brent@traffixgroup.com.au

or **Noel Wootten** at **Yarra City Council**
phone: 9205 5742
email: noel.wootten@yarracity.vic.gov.au

MINUTES OF TRAFFIC STUDY GROUP MEETING #1 – WEDNESDAY, 22ND AUGUST, 2012
CITY OF YARRA
BALMAIN PRECINCT NO. 20 LOCAL AREA TRAFFIC MANAGEMENT STUDY

1. ATTENDEES

Richard Young – Manager Engineering Infrastructure & Special Projects	City of Yarra
Ross Evans – Traffic Coordinator	City of Yarra
Noel Wootten – Traffic Engineer	City of Yarra
Grant Kelly – Team Leader Parking Services	City of Yarra
Will de Waard – Director	Traffix Group
Brent Hodges – Traffic Engineer	Traffix Group
[redacted]	
	Melrose Street
	Balmain Street
	Gwynne Street
	Rosella Complex
	Green Street
	Pearson Street
	Brighton Street
	Howard Street
	Gordon Street
	Chapel Street
	SP Ausnet
	SP Ausnet

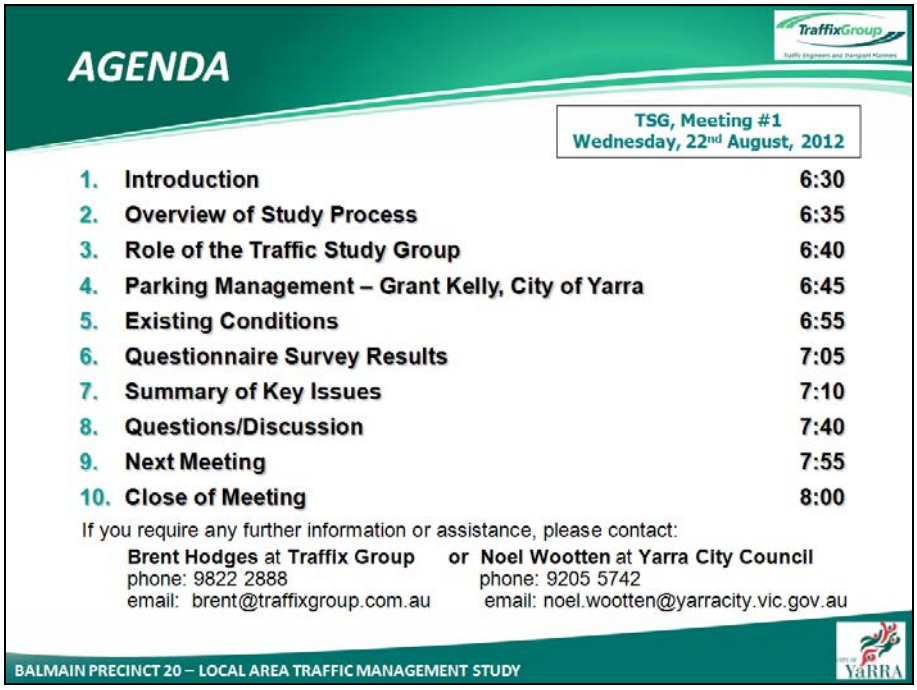
Apologies:

Councillor Clarke	City of Yarra
Councillor Funder	City of Yarra
Councillor Smedley	City of Yarra
[redacted]	Wellington Street
	Mary Street
	Richmond Primary School

2. INTRODUCTION

The meeting was opened by Ross Evans of City of Yarra at 6.35pm by introducing the City of Yarra Council Officers and the Traffix Group team. This was followed by an introduction of each of the members of the Traffic Study Group around the table. Ross handed over to Will de Waard to commence the presentation.

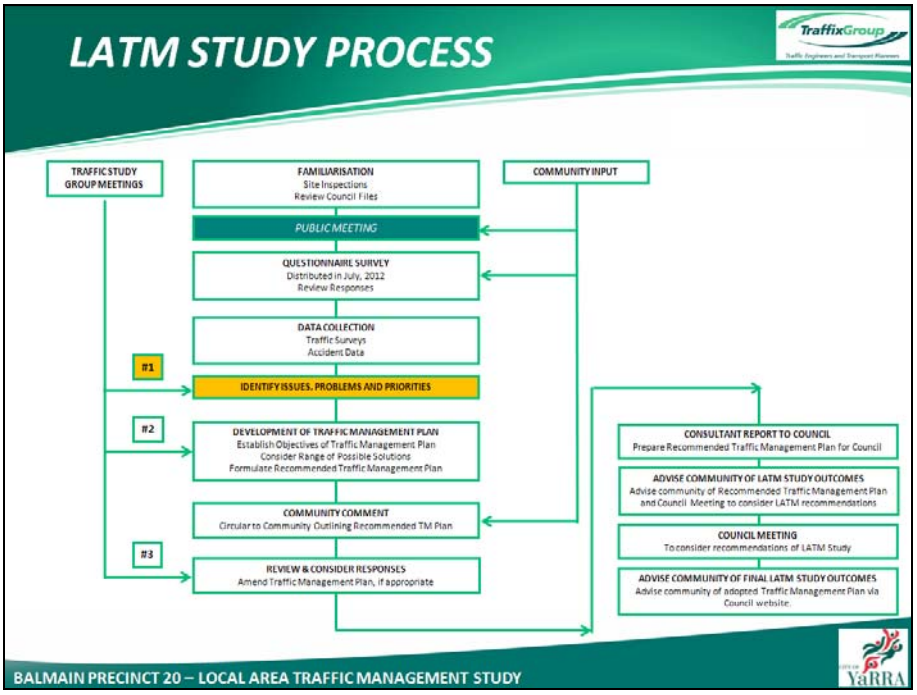
Will de Waard of Traffix Group outlined the meeting agenda as follows:



3. STUDY PROCESS

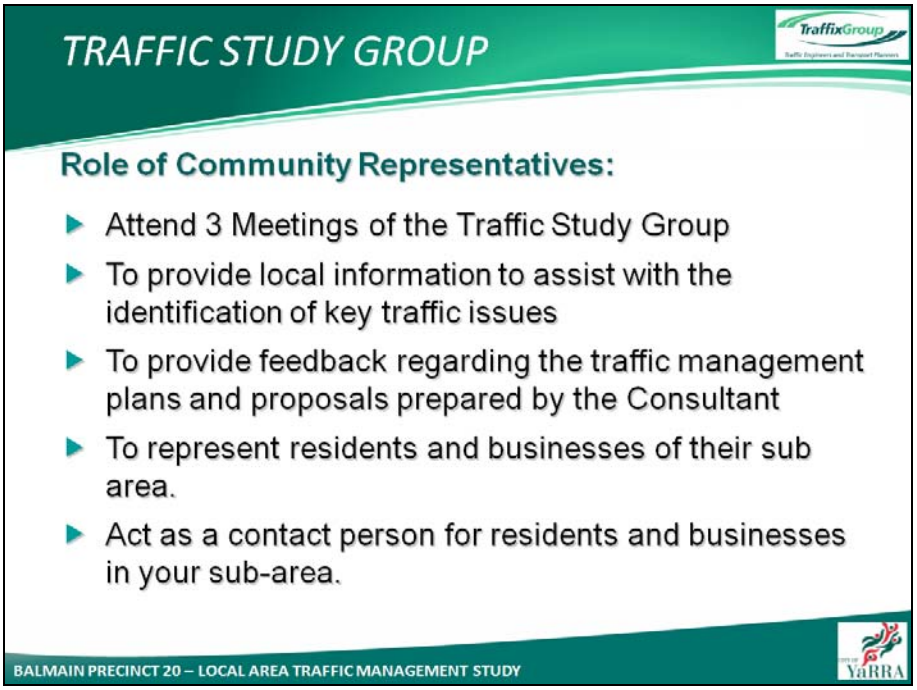
Will de Waard identified the study area and emphasised the fact that the primary intention of this study is to investigate traffic problems within the study area, as well as access to the study area from the arterial roads.

Will de Waard discussed the study process by way of the following slide. The LATM study is currently at the stage of identifying and clarifying the traffic safety issues and problems and setting priorities for the development of proposals.



4. ROLE OF THE TRAFFIC STUDY GROUP

Will de Waard highlighted the role of the Traffic Study Group members in the LATM study. Will indicated the key roles of the Traffic Study Group by way of the slide below, as well as referring the Traffic Study Group members to the Traffic Study Group Charter.



5. PARKING MANAGEMENT

Grant Kelly of Council's Parking Services Unit provided a short explanation of how the City of Yarra is undertaking a parking management study in parallel to the LATM study, as follows:-

- Council is reviewing the questionnaire responses related to parking collected as part of the LATM study,
- Council officers will review the parking inventory and conduct parking surveys in streets where problems have been identified,
- A Parking Management Plan will be developed for the whole area to respond to the identified parking issues,
- A letter drop of the proposed Parking Management Plan to all properties in the study area will be undertaken to gauge the community support for the proposals,
- There needs to be a clear majority (approximately 70% support or greater) in order for parking restriction changes to be implemented,
- If required, changes to the proposed plan may be required based on community feedback, with further consultation required on a street by street basis.

6. EXISTING CONDITIONS

Will de Waard then presented a number of plans which identify the existing conditions in the local area, namely:-

- Land Use,
- Functional Road Hierarchy,
- Public Transport Routes,
- Existing Traffic Management,
- Traffic Survey Information, and
- Casualty Crash History (January 2007 to December 2011).

7. QUESTIONNAIRE SURVEY RESPONSE

Will de Waard advised that approximately 2,300 questionnaire surveys were delivered to the local area. Of these surveys, 221 responses were received, representing a response rate of 9.6%. This response rate is typical for a 'Key issues' self completion survey for Metropolitan Melbourne.

The highest numbers of responses were received from:

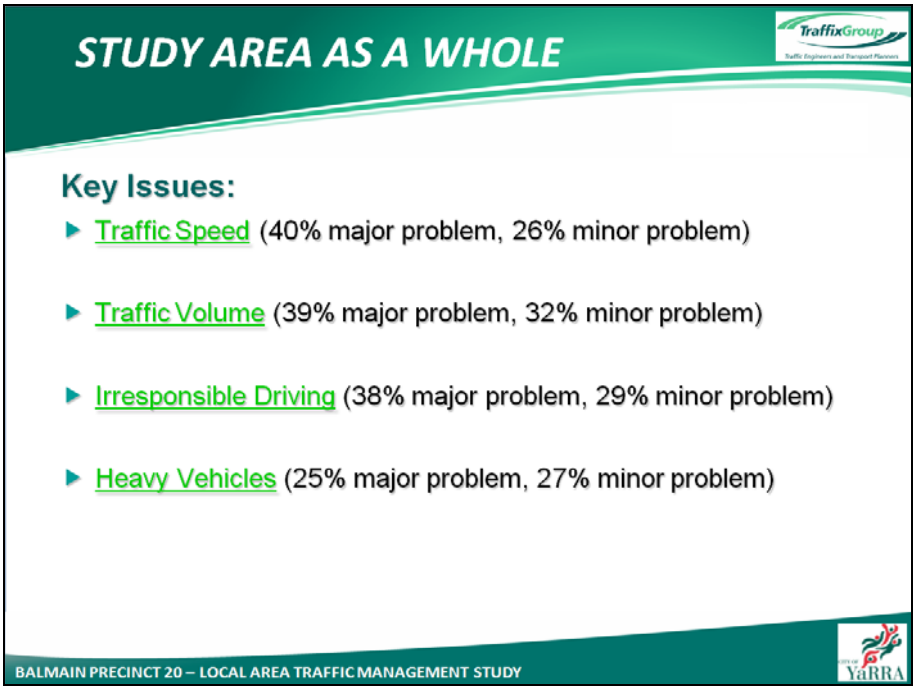
- Brighton Street (22 responses) 12.2% *of street responding*
- Balmain Street (16 responses) 24.2% *of street responding*
- Dover Street (12 responses) 10.2% of street responding
- Cubitt Street (12 responses) 7.9% *of street responding*
- Cremorne Street (12 responses) 6.5% *of street responding*
- Green Street (11 responses) 11.1% *of street responding*
- Wellington Street (10 responses) 11.2% *of street responding*
- Chestnut Street (10 responses) 9.6% *of street responding*

The highest percentage of responses were received from:

- Huckerby Street (3 responses) 100% *of street responding*
- Pearson Street (6 responses) 50.0% *of street responding*
- Gwynne Street (8 responses) 34.8% *of street responding*
- Newton Street (2 responses) 33.3% *of street responding*
- Rose Street (4 responses) 30.8% *of street responding*
- Willis Street (2 responses) 25.0% *of street responding*
- Balmain Street (16 responses) 24.2% *of street responding*
- Hill Street (3 responses) 23.1% *of street responding*
- Barkly Avenue (2 responses) 22.2% *of street responding*
- Dove Street (2 responses) 22.2% *of street responding*
- Chapel Street (3 responses) 20.0% *of street responding*

- William Street (2 responses) 20.0% *of street responding*
- Walnut Street (1 responses) 20.0% *of street responding*

Will de Waard then presented the overall survey results by way of the following slide:



8. DISCUSSION OF KEY TRAFFIC ISSUES

Will de Waard then handed over to Brent Hodges of Traffix Group to continue the presentation.

Brent Hodges presented a number of slides detailing the key issues identified within the Balmain Precinct. The key issues within the local area generally related to:

- Traffic speed,
- Traffic Volume / Through Traffic,
- Heavy Vehicles,
- Irresponsible driving, and
- Other traffic safety concerns.

The following streets were then discussed in more detail:

- Brighton Street,
- Balmain Street,
- Cremorne Street,
- Mary Street,
- Wellington Street,
- Gwynne Street,
- Stephenson Street,
- Chestnut Street,

- Kelso Street,
- Chapel Street,
- Gordon Street,
- Howard Street / Amsterdam Street, and
- James Street / Rose Street / Davis Street.

Safety concerns within the study area were discussed:

- Punt Road and Kelso Street (reduced sight distance due to parked cars),
- Gough Street and ROW (reduced sight distance due to bend in road),
- Gough Street and Cremorne Street (reduced sight distance),
- Cremorne Street and Balmain Street (reduced sight distance),
- Balmain Street (reduced sight distance exiting Gwynne Street and traffic speed through existing traffic management device),
- Balmain Street and Church Street (intersection safety),
- Church Street and Gordon Street (intersection safety),
- Punt Road and Rout Street (intersection safety),
- Richmond Primary School (pedestrian safety crossing Mary Street), and
- Walnut Street (Pedestrian safety between Balmain Street and Newton Street).

Operational concerns within the study area were also discussed:

- Swan Street and Cremorne Street (reduced intersection capacity due to pedestrians and parked cars),
- Stephenson Street and Cremorne Street (difficult to turn right from Stephenson Street into Cremorne Street due to traffic queues),
- Swan Street and Mary Street (vehicles ignoring existing 'No Left Turn' restriction),
- Mary Street and Madden Grove (vehicle ignoring existing 'No Right Turn' restriction), and
- Richmond Primary School (congestion at school pick-up/drop-off times).

9. DISCUSSION OF KEY TRAFFIC ISSUES – COMMUNITY INPUT

Traffic Study Group members were asked to identify specific issues or any additional issues which they believe should be investigated as part of this study. The following table lists the additional concerns raised by members of the Traffic Study Group.

Location	Issue	Comments	Action
Balmain Street	Raised intersection in the vicinity of Cherry Tree Hotel	The existing raised intersection is not severe enough to effectively slow vehicles down.	Traffix Group to investigate
	On Street parking between Cremorne Street and Cubitt Street	On-street parking between Cremorne Street and Cubitt Street causes the road to narrow to one-lane operation. Often results in a 'stand off' between vehicles in opposing directions. Clearways in peak periods suggested as a solution.	
		Due to the congestion caused by on-street parking it is difficult for drivers to exit Cubitt Street and Dover Street. 'Keep Clear' linemarking at the intersections suggested as a possible solution.	
Cremorne Street	Irresponsible Driving	A number of car yards in the area test drive vehicles down Cremorne Street at high speed.	Noted
Mary Street	Compliance to existing 'No Right Turn' into Madden Grove	A number of members of the Traffic Study Group indicated that there was poor compliance to the existing 'No Right Turn' restriction at Madden Grove. A member of the group asked who is responsible for enforcement of the 'No Right Turn'. Brent Hodges indicated that it is Victoria Polices' responsibility and Council refers identified issues for enforcement. However, the final decision to enforce the restriction lies with Victoria Police.	Traffix Group to investigate
Parkins Lane	Through Traffic	Through traffic utilising Parkins Lane and Wellington Street to bypass the congested intersection of Swan Street and Cremorne Street.	Traffix Group to investigate

Location	Issue	Comments	Action
Gwynne Street	Heavy vehicles prior to 7am	Heavy vehicles utilising Gwynne Street south of Balmain Street at early hours of the morning (before 7am). Trucks are utilising Gwynne Street to access the Rosella Complex. Full closure of Gwynne Street south of Munro Street was suggested as a possible solution.	Traffix Group to investigate
	Parking	The existing 2P parking restrictions are not enforced, with many vehicles overstaying the limit. Reducing the restrictions to 1P was suggested as a solution.	Refer to Council's Parking Services Team for review
Stephenson Street	Footpath widths	Footpath widths are too narrow.	Traffix Group to investigate
Chapel Street	Road width	Very narrow road width results in vehicles speeds that 'feel' faster than those indicated in the traffic survey results. Footpaths are very close to the road carriageway. The width in the two-way section is also not wide enough for simultaneous two-way flow when vehicles are parked on both sides of the road.	Traffix Group to investigate
	Volume of vehicles travelling against 'One-way' restriction	A member of the Traffic Study Group indicated that a number of vehicles do not adhere to the one-way restriction.	
	Traffic Survey data in two-way section	A member of the group noted that the traffic survey information was taken in the one-way section and it would be good to review the speed and volume in the two-way section	Noted
Gordon Street	Heavy Vehicles	A member of the Traffic Study Group indicated that heavy vehicles regularly utilise Gordon Street. Due to the constrained carriageway width and kerbside parking on both sides of the road, trucks often 'clip' vehicles causing property damage.	Traffix Group to investigate

Location	Issue	Comments	Action
	Traffic Speed / Through Traffic	It was noted that a number of vehicles utilise Gordon Street and Chestnut Street to avoid the congested intersection of Balmain Street and Church Street. Vehicle speeds are often very fast.	Traffix Group to investigate
	Parking	2P parking restrictions are not being enforced with many vehicles overstaying the time restriction.	Refer to Council's Parking Services Team for review
Swan Street	Bicycle facilities	A number of members of the traffic study group indicated that the conditions for cyclists on Swan Street are poor. Brent Hodges indicated that both pedestrians and cyclists were overrepresented in the crash statistics for Swan Street. Ross Evans indicated that Council had an existing bicycle strategy that has identified strategic bicycle routes and priorities.	Traffix Group to provide feedback on Swan Street bicycle crash statistics for Council's review.
Study Area	Waste Collection	A member of the Traffic Study Group indicated that Council should do more at the planning application stage to ensure that waste collection vehicles have appropriate routes to and from developments and therefore won't have to rely on local residential streets for access. Another member of the traffic study group indicated that commercial properties are subject to a significant level of planning associated with traffic and parking by Council at the planning permit stage.	Noted
	Land Use Zoning	A member of the group indicated that the majority of the study area is zoned for commercial purposes. They indicated that allowances for heavy vehicles to access these properties needs to be maintained	Noted

Location	Issue	Comments	Action
Richmond Terminal Station	Upgrade works over the next 5 years	Representatives from SP Ausnet indicated that the Richmond Terminal Station will be upgraded over the next 5 years. As a result of this upgrade, heavy vehicles will be required to access the site. SP Ausnet has submitted Traffic Management Plans indicating the preferred route for this heavy vehicle access. The key routes include Mary Street and Rooney Street.	Council to provide Traffix Group with Traffic Management Plans for review prior to development of traffic management proposals.
Adolph Street	Road width	A member of the Traffic Study Group indicated that Adolph Street has a very narrow carriageway width which is further reduced by on-street parking. Another member of the group indicated that Adolph Street would be reconfigured under redevelopment of East Richmond Railway Station.	Traffix Group to investigate
Pearson Street	Heavy Vehicles	A member of the Traffic Study Group indicated that a number of heavy vehicles turn into Pearson Street and cannot exit at Walnut Street and then try to reverse out of the street. As a result the concrete road narrowing in the street has been broken.	Traffix Group to investigate
Green Street	Through Traffic	A number of members of the Traffic Study Group indicated that through traffic volumes utilise Green Street and Adolf Street / Chapel Street to avoid the congested intersection of Balmain Street and Church Street.	Traffix Group to investigate

10. NEXT MEETING

It was noted that the next meeting of the Traffic Study Group will be held on Wednesday. 19th September, 2012.

11. CLOSE OF MEETING

Brent Hodges closed the meeting at 8:10pm.

PART C

TRAFFIC STUDY GROUP MEETING #2

AGENDA

TSG, Meeting #2
Thursday, 22nd November, 2012

1.	**Introduction**	**6:30**
2.	**Results of Recent Traffic Surveys**	**6:35**
3.	**Parking Update**	**6:40**
4.	**Key Issues and Recommended Objectives of the Plan**	**6:45**
5.	**Traffic Management Options**	**6:55**
6.	**Discussion on Proposed Traffic Management Plan**	**7:10**
7.	**Next Steps**	**8:20**
8.	**Next Meeting**	**8:25**
9.	**Close of Meeting**	**8:30**

If you require any further information or assistance, please contact:

Brent Hodges at **Traffix Group**
phone: 9822 2888
email: brent@traffixgroup.com.au

or **Noel Wootten** at **Yarra City Council**
phone: 9205 5742
email: noel.wootten@yarracity.vic.gov.au

MINUTES OF TRAFFIC STUDY GROUP MEETING #2 – THURSDAY, 22ND NOVEMBER, 2012
CITY OF YARRA
BALMAIN PRECINCT NO. 20, LOCAL AREA TRAFFIC MANAGEMENT STUDY

1. ATTENDEES

Cr Phillip Vlahogiannis – City of Yarra	City of Yarra
Cr Misha Coleman – City of Yarra	City of Yarra
Guy Wilson-Browne – Director Infrastructure Services	City of Yarra
Richard Young – Manager Engineering Infrastructure & Special Projects	City of Yarra
Ross Evans – Traffic Coordinator	City of Yarra
Noel Wootten – Traffic Engineer	City of Yarra
Grant Kelly – Parking Services Coordinator	City of Yarra
Will de Waard – Director	Traffix Group
Brent Hodges – Traffic Engineer	Traffix Group
Andrew Liang – Traffic Engineer	Traffix Group

[redacted]

Green Street
Chapel Street
Rosella Complex
Melrose Street
Howard Street
Gordon Street
Gwynne Street
Balmain Street
Richmond Primary School
SP AusNet

Apologies:

Cr Simon Huggins City of Yarra

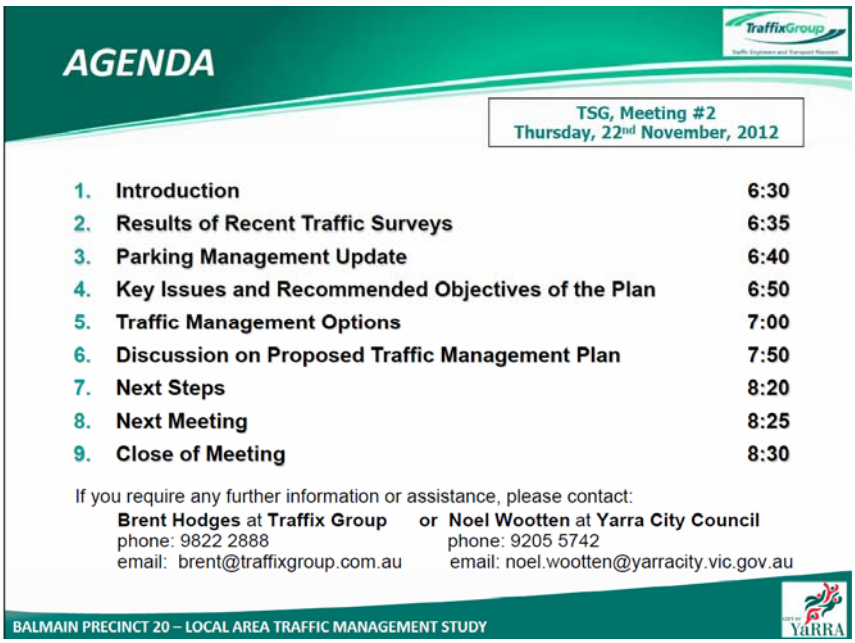
[redacted]

Wellington Street
Kipling Street
Pearson Street
Mary Street
Brighton Street

2. INTRODUCTION

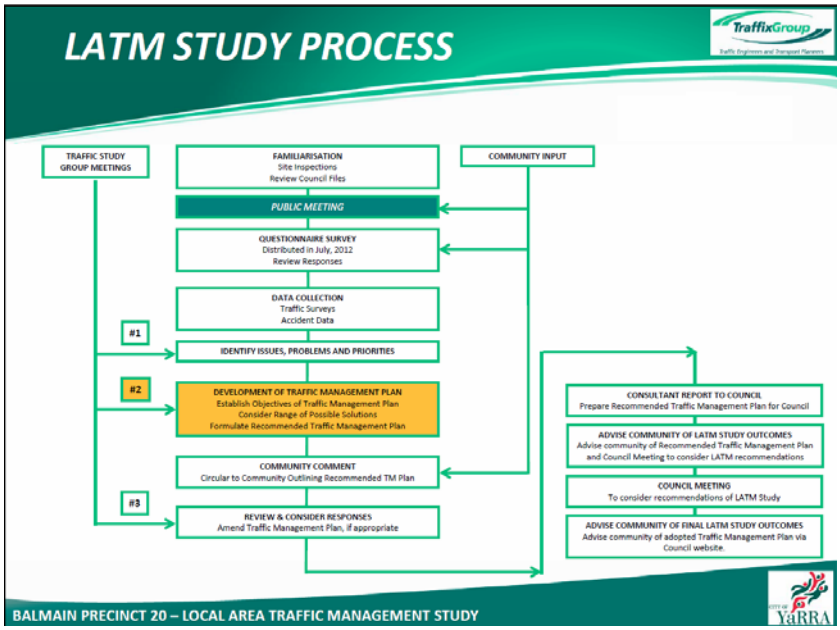
The meeting was opened by Will de Waard at 6:30pm. All attendees introduced themselves, including Cr Vlahogiannis, Cr Coleman, City of Yarra Council Officers, members of the Traffic Study Group, and the Traffix Group team.

Will de Waard of Traffix Group then outlined the meeting agenda as follows:



Will de Waard then advised that the proposed Traffic Management Plan will primarily address traffic issues on local streets within the study area.

Will discussed the study process by way of the following slide. The Local Area Traffic Management Study is currently at the stage of developing the proposed Traffic Management Plan for community consultation.

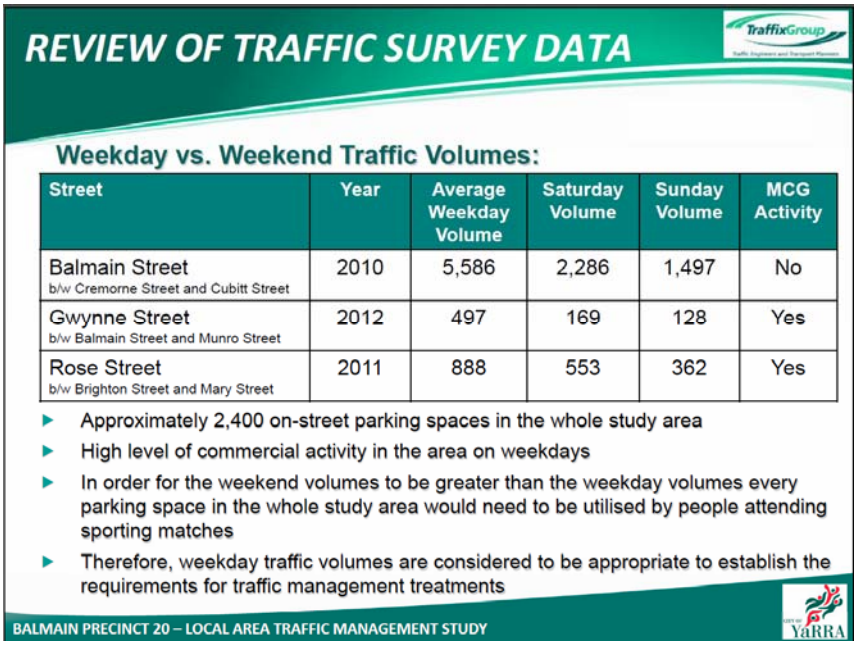


3. INVESTIGATIONS

Will de Waard indicated that Traffix Group have undertaken investigations of traffic issues including a review of traffic survey and crash data, site inspections at various times throughout the week, discussions with relevant authorities and a detailed review of community issues.

Will then presented a summary of key issues in the study area, as had been outlined at the first Traffic Study Group meeting. Will explained that all issues had been investigated, though some resulted in 'no action' due to low traffic volumes, low speeds and the need to prioritise funding to treat the locations which would result in the greatest potential gain in traffic safety.

Will presented a slide to respond to questions outlined at the first Traffic Study Group meeting regarding weekend traffic volumes. Whilst data on weekends is limited, it clearly indicates that the weekday traffic volumes are significantly higher than the weekend volumes as presented in the slide below.



REVIEW OF TRAFFIC SURVEY DATA

Weekday vs. Weekend Traffic Volumes:

Street	Year	Average Weekday Volume	Saturday Volume	Sunday Volume	MCG Activity
Balmain Street b/w Cremorne Street and Cubitt Street	2010	5,586	2,286	1,497	No
Gwynne Street b/w Balmain Street and Munro Street	2012	497	169	128	Yes
Rose Street b/w Brighton Street and Mary Street	2011	888	553	362	Yes

- Approximately 2,400 on-street parking spaces in the whole study area
- High level of commercial activity in the area on weekdays
- In order for the weekend volumes to be greater than the weekday volumes every parking space in the whole study area would need to be utilised by people attending sporting matches
- Therefore, weekday traffic volumes are considered to be appropriate to establish the requirements for traffic management treatments

BALMAIN PRECINCT 20 – LOCAL AREA TRAFFIC MANAGEMENT STUDY

4. PARKING MANAGEMENT UPDATE

Will de Waard handed over the presentation to Grant Kelly (Parking Services Coordinator, City of Yarra). Grant Kelly highlighted that the AFL football season presented the main parking issues in the area. Grant Kelly stated that Council officers have considered this in preparation of the Parking Management Plan. Cr Vlahogiannis raised a concern about the reliability of parking data obtained. Members of the Traffic Study Group then raised issues regarding parking time restrictions and Council enforcement, noting that a number of vehicles were illegally parked for longer than allowed. Grant Kelly responded by stating that due to the range of opinions, parking time restrictions and levels of enforcement are contentious issues, however Council will take the concerns on board.

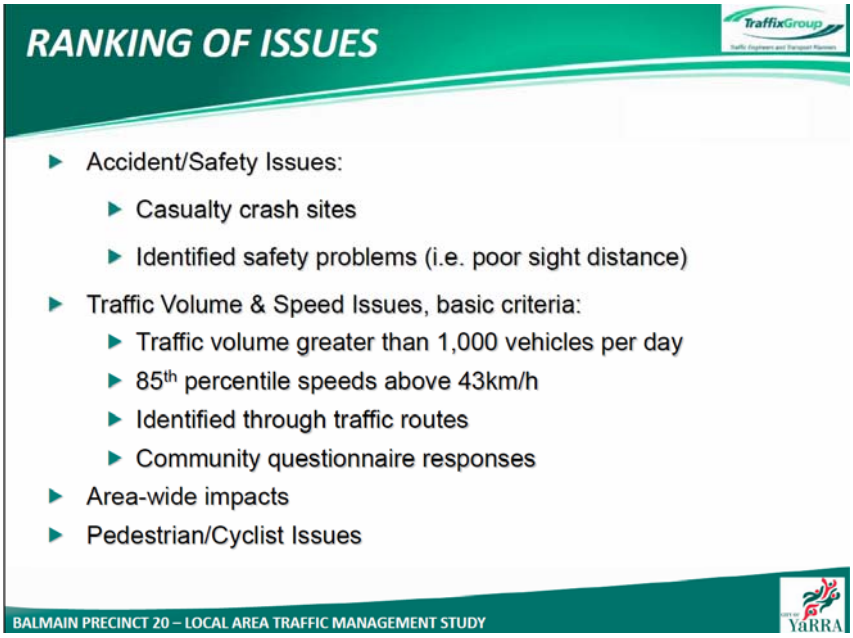
Prior to any further consultation with the public the Ward Councillors are desirous of discussing the matter with the Manager Parking. Any proposed parking changes will be subject to separate public consultation. If Council receives sufficient support for the proposals, implementation of the proposed changes can then occur.

5. TRAFFIC MANAGEMENT OPTIONS - OBJECTIVES

Will de Waard then continued by presenting the objectives of the Traffic Management Plan using the following slide.

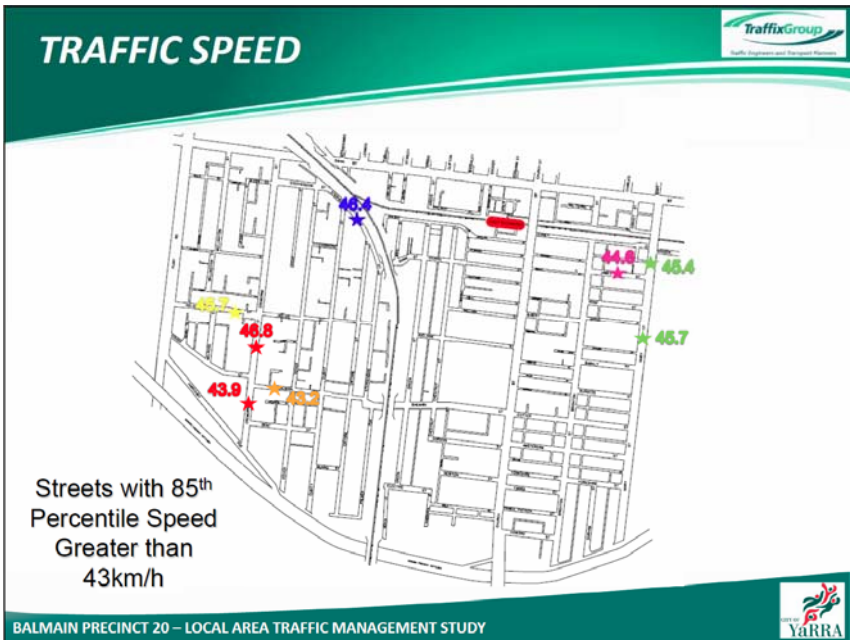
6. RANKING OF ISSUES

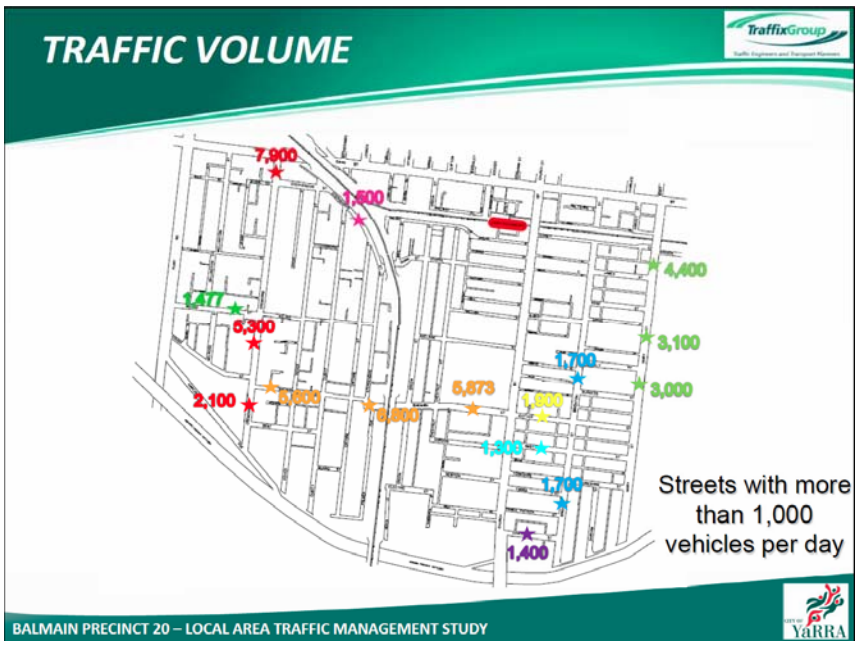
Will de Waard explained that streets within the study area have been ranked based on a number of key criteria as shown on the following slide.

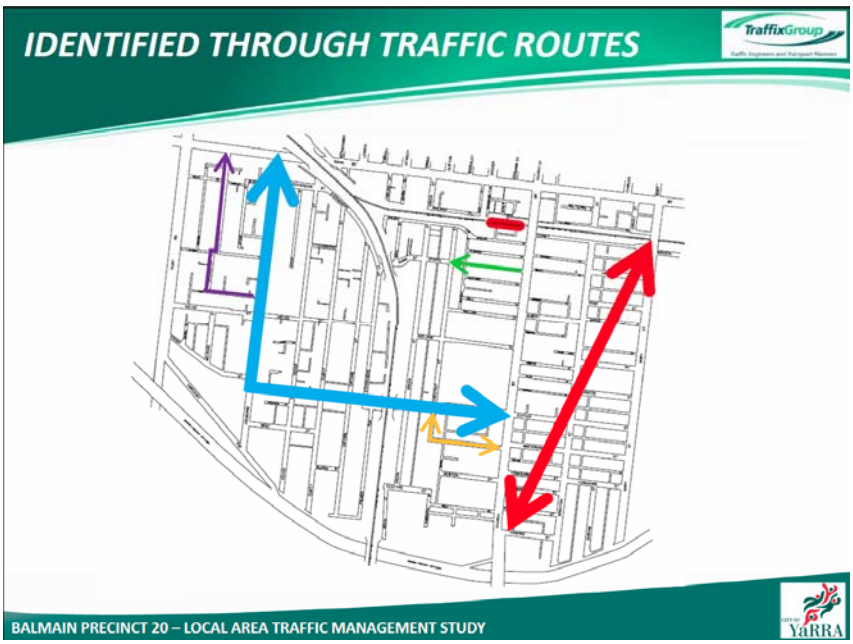


7. TRAFFIC SPEEDS, TRAFFIC VOLUMES AND THROUGH TRAFFIC

Will de Waard explained the traffic speeds, traffic volumes and through traffic identified through the automatic tube counts conducted in the area, through the following slides.






IDENTIFIED THROUGH TRAFFIC ROUTES
BALMAIN PRECINCT 20 – LOCAL AREA TRAFFIC MANAGEMENT STUDY

8. PROPOSED TRAFFIC MANAGEMENT PLAN

Will de Waard then handed the presentation over to Brent Hodges who presented the components of the proposed Traffic Management Plan. The plan addresses the significant issues identified in the recent investigations of traffic issues. A range of possible traffic management solutions for the area were presented and discussed by the Traffic Study Group.

Location	Proposal	Traffic Study Group Comments
Cremorne Street	▪ Raised intersection at Kelso Street. ▪ Road humps outside: ▪ #14-18 and #9-11 Cremorne Street ▪ #42 and #43 Cremorne Street ▪ #69 and #70 Cremorne Street ▪ #121 and #122 Cremorne Street ▪ #154 and #155 Cremorne Street	A number of members of the Traffic Study Group were not in favour of road humps, and in particular, the raised intersection as a treatment option. In particular there were concerns regarding the limited sight distance at the intersection of Cremorne Street and Kelso Street. Brent Hodges stated that raised intersections have been proven to slow down traffic at all approaches and therefore improve intersection safety. A member of the Traffic Study Group asked if there were any other treatments available. Brent Hodges indicated that at intersections raised intersections and roundabouts provided the only practical solutions and at the Kelso Street intersection there is insufficient space to accommodate a roundabout. Will de Waard noted that there are alternatives to road humps, such as slow point treatments, however installation of these devices is difficult due to the location and number of driveways and the need to minimise the loss of on-street parking spaces. Richard Young from City of Yarra stated that appropriate road hump dimensions and grades will be implemented for the proposed treatment options to ensure that they are effective in reducing traffic speeds. The Traffic Study Group noted that the road humps adjacent to the Great Britain Hotel on Lesney Street were effective, and agreed that speed humps with appropriate dimensions and grades will provide for a satisfactory outcome. The Traffic Study Group believed that making the Cremorne precinct unattractive for non-local traffic was the correct strategy. A member of the Traffic Study Group also noted that in the City of Yarra, Cremorne had the highest levels of car ownership and percentage of people commuting by car.

Location	Proposal	Traffic Study Group Comments
		A member of the Traffic Study Group also identified sight distance issues at the corner of Cremorne Street and Balmain Street due to the existing plants provided within the rain gardens. Council to investigate and request trimming of overgrown plants. A member of the Traffic Study Group highlighted the access to Kelso Street, west of Cremorne Street as exclusively residential, and that reducing non-local traffic should be considered. Brent Hodges stated that there had been a lack of responses in the initial questionnaire in relation to through traffic in this area. A member of the Traffic Study Group raised concerns about southbound vehicles on Punt Road turning left into Gough Street, or turning left out from Gough Street onto Punt Road. The member stressed that discouraging drivers from accessing Punt Road via Gough Street should be considered. In general, the proposed treatments on Cremorne Street were supported by the Traffic Study Group.

Balmain Street	▪ Road humps:
	  ▪ Outside #13 and #16 Balmain Street
	  ▪ Outside #36 Balmain Street and #128 Cubitt Street
	  ▪ Between Gwynne Street and Palmer Parade
	  ▪ Outside #112 Balmain Street
	▪ Raised intersections:
	  ▪ At Green Street and Chestnut Street
	▪ Re-grade approach ramps to existing raised intersection at Gwynne Street/Stephenson Street/Palmer Parade
	▪ Replace Give-Way with Stop sign at Cremorne Street / Balmain Street
		A member of the Traffic Study Group informed the group of a Planning Application for a multi-storey development next to #13 Balmain Street with a proposed crossover onto Balmain Street. Brent Hodges indicated that discussions will be undertaken with Council's planning department to determine the location of the proposed crossover and therefore any implications with the proposed road hump at #13.
		
		A member of the Traffic Study Group stated that the raised pavement outside Cherry Tree Hotel only needs its ramp grades adjusted at the approaches on Balmain Street, not on Gwynne Street. Will de Waard indicated that this was the intention of the proposal.
		
		A member of the Traffic Study Group raised the possibility of re-routing traffic from Balmain Street to Stephenson Street (past only business frontages) and including a 'No Right Turn' at the western end of Cremorne Street. Other members of the Traffic Study Group were concerned with the loss of accessibility for properties on the western side of Cremorne Street.
		
		In general, the proposed treatments on Balmain Street were supported by the Traffic Study Group.

Location	Proposal	Traffic Study Group Comments
Balmain Street	▪ Retain on-street parking spaces ▪ Introduce part time 'No Stopping' restrictions to limit the times that vehicles can park in these locations ▪ Remove on-street parking spaces	The Traffic Study Group discussed that the loss of on-street parking may not be suitable on Balmain Street, due to loss of parking opportunities for adjacent residents and the ability of on-street parking spaces to slow down traffic. The idea of a clearway zone at certain times of the day as a compromise for loss of parking was also discussed. Will de Waard concluded the discussion of the Balmain Street parking opportunities by stating that the two options for on-street parking were to either retain or remove parking (without considering time restrictions or clearway zones). These options would be put the wider community as a part of Circular #2.

Mary Street	▪ Raised Intersections:
	  ▪ At James Street
	▪ Road Humps:
	  ▪ Outside #242 Mary Street (new street light)
	  ▪ Outside #276 Mary Street (new street light)
	▪ Through Traffic:
	  ▪ Install median at Madden Grove to alter access arrangements to Left In / Left Out only
	  ▪ Enforcement of existing 'No Left Turn' from Swan Street into Mary Street
		The Traffic Study Group supported the proposed road humps on Mary Street, however voiced concern regarding the proposed configuration of the median at Madden Grove. In particular, the main concern was the additional time it would take to travel from the Richmond Primary School for parents who reside to the east of Mary Street.
		In response to members of the Traffic Study Group questioning the necessity of the proposed median at Madden Grove, Brent Hodges and Will de Waard reiterated that the proposed solution aims to reduce through traffic volumes heading through the eastern portion of the local area and eliminate the high number of current illegal right-turns into Madden Grove from Mary Street.
		A member of the Traffic Study Group voiced concern that the proposed median arrangement would only relocate traffic problems to Swan Street, and was not an appropriate solution when considering the future of the area. Will de Waard responded by stating that the purpose of the LATM study was to address current issues on the local road network. He indicated that the function of Swan Street and other arterial roads is to carry through traffic volumes.
		A number of potential treatment options to address the increased flow of traffic onto Swan Street as a result of the proposed median arrangement at Madden Grove were discussed. These included a 'Keep Clear' area to allow vehicles an opportunity to turn right onto Swan Street, or a signalised intersection. Brent Hodges indicated that traffic signals at Mary

Location	Proposal	Traffic Study Group Comments
		Street and Swan Street would further increase the through traffic problems by making Mary Street a more attractive route. Will de Waard stated that there is the potential for a 'Keep Clear' restriction, however this proposal would require approval from VicRoads. Another member of the Traffic Study Group was concerned that westbound vehicles would not be able to turn right at Mary Street to enter Lesney Street. Richard Young indicated that the proposed could be re-designed to allow right turns out of Madden Grove. Whilst the Traffic Study Group was supportive of the road hump proposal, there was not any consensus on the proposed median arrangement at Madden Grove.
Mary Street	▪ Mary Street Road Closure	Representatives from Richmond Primary School indicated that the school would like to see a road closure on Mary Street between Barkly Street and Burgess Street. Will de Waard indicated that Traffix Group has previously conducted a detailed review of the impact of a road closure on Mary Street that identified significant traffic impacts would occur in Brighton Street and James Street. Furthermore, Will indicated that as a part of the this LATM study, further investigations had been undertaken that indicated that the existing crossing facility operated well, with crossing supervisors at the AM drop off and PM pick up times. The representative of Richmond Primary School clarified that the school was most concerned by the period between 9am-4pm, when the school utilises the oval on the other side of Mary Street. They indicated that they were prepared to accept that a full time closure would be too restrictive, however they would still like to pursue the option of a part-time road closure. It was agreed to continue discussions between City of Yarra, Richmond Primary School and Traffix Group in relation to potential partial closures of Mary Street and facilitating the movement of students to the reserve opposite the school.
Brighton Street	▪ Road Hump outside #76 and #79 Brighton Street	The proposal was generally supported by the Traffic Study Group.

Location	Proposal	Traffic Study Group Comments
Stephenson Street	▪ Road Humps: ▪ East of Dover Street (adjacent to #7 Dover Street), ▪ East of Cubitt Street (outside #1 Cubitt Street), and ▪ East of Gwynne Street (adjacent to #36 Gwynne Street).	A member of the Traffic Study Group questioned why road humps are required in this location given the lack of adjacent residential properties. Brent Hodges indicated that the intent of the plan is to reduce traffic speeds in the local area to improve safety for all road users. This is particularly important, given the proposed alternative bicycle route on Stephenson Street. The proposals were generally supported by the Traffic Study Group.
Kelso Street	▪ Road Hump: ▪ Outside #25 and #18 Kelso Street. ▪ Outside #8 and #11 Kelso Street	The proposals were generally supported by the Traffic Study Group.
Chapel Street	▪ Reconfigure intersection of Chapel Street / Chestnut Street to include kerb extensions to guide vehicles from west to south	A member of the Traffic Study Group highlighted that traffic speed was an issue between Chestnut Street and Church Street, and requested a road hump at this location. Will de Waard responded by stating that the 85th percentile speed was slightly lower than 43km/h at this location, however Traffix Group will review the potential for road humps in this location following a review of the road conditions. A member of the Traffic Study Group highlighted that vehicles do not observe the 'Stop' sign at the intersection of Chapel Street and Green Street. Traffix Group to investigate. A member of the Traffic Study Group suggested that a right turn ban into Dunn Street be implemented for northbound vehicles on Stephenson Street. Once again, a number of members of the Traffic Study Group were concerned by the loss of accessibility for residents. The proposal was generally supported by the Traffic Study Group.
James Street	▪ Road Hump at #11 and #12 James Street	The proposal was generally supported by the Traffic Study Group.
Howard Street	▪ One-way westbound (i.e. Brighton Street to Church Street), subject to VicRoads approval	The proposal was generally supported by the Traffic Study Group.

Location	Proposal	Traffic Study Group Comments
Gordon Street	▪ One-Way eastbound (i.e. Walnut Street to Church Street) , subject to VicRoads approval	A member of the Traffic Study Group who resides in Gordon Street indicated that they supported the one-way treatment, however they would prefer the arrangement from east to west (Church Street to Walnut Street). Will de Waard indicated that the direction was selected based on the accessibility to off-street carparks located on Gordon Street, however, Traffix Group will review the potential to reverse the one-way direction.

Location	Proposal	Traffic Study Group Comments
Gwynne Street	▪ Enforcement of existing Council Local Law that prohibits collection of waste before 7am ▪ Consideration of night time 'Truck Ban' along Gwynne Street	The Gwynne Street member of the Traffic Study Group voiced discontent with the number of heavy vehicles on Gwynne Street. The member stated that the problem was 24 hours a day, and that the Rosella Complex has had a negative impact for local residents in terms of accessibility. The member stated that trucks can use the unrestricted access (Palmer Parade) to Balmain Street and that Council have an obligation to provide amenity to the residents. Will de Waard stated that the Planning Scheme zoning map shows that Gwynne Street is not a purely residential street, with the land use zoning running down the middle of the street (residential on the western side and Business Zone on the eastern side). While there is limited existing access to the Business Zone directly to Gwynne Street, the zoning suggests that it is reasonable for trucks to access the Rosella Complex via Gwynne Street. Will de Waard agreed with the member of the Traffic Study Group that a level of amenity should be provided for residents of Gwynne Street. This amenity protection is currently provided by a Council Local Law that prohibits waste collection generally between 8pm and 7am. The member of the Traffic Study Group indicated that there are consistent breaches of the Local Law and that a more permanent solution is required. Noel Wootten of City of Yarra responded by stating that the area has been under video surveillance since September 2012. Council Officers have been in contact with the waste operators of vehicles that were recorded to breach the Local Law and informed them of their obligations. This approach has been very successful with possibly only one breach of the Local Law being recorded since early October, 2012 (on the morning of the meeting (22/11/12) at 6:55am). A representative of the Rosella Complex stated that the Rosella Complex is willing to work with residents to arrive at a solution. In particular, Rosella Complex has allowed Council to place video equipment on their property to identify any offending vehicles. Furthermore, the Rosella Complex is in the process of rationalising the number of waste collection companies servicing the complex and considered longer term solutions such as the installation of a waste

Location	Proposal	Traffic Study Group Comments
		compactor. The member of the Traffic Study Group indicated that it is not reasonable for heavy vehicles to be using Gwynne Street at any time of the day given the residential properties and children who reside in the street. Will de Waard indicated that given the mixed zoning of Gwynne Street (as specifically indicated in the Planning Scheme land use zoning) the level of truck activity observed during business hours is reasonable. The member of the Traffic Study Group then indicated that the Rosella Complex should only have access to Balmain Street via Palmer Parade. Will de Waard indicated that this approach is not reasonable from the perspective of the Rosella Complex operations, with an independent Road Safety Audit indicating that trucks reversing within the site would be a safety hazard. Finally the member of the Traffic Study Group indicated that Council had committed to making a 'Truck Ban' application for Gwynne Street. Will de Waard indicated that his advice to Council was that a truck ban would be inappropriate given that the Rosella Complex is a local destination for trucks and as such would be legally exempt from the truck ban. Richard Young also indicated that there is also a credibility issue for Council applying for such a ban, given the low level of night time truck activity recorded and the lack of effectiveness of the truck ban. Overall, Will de Waard summed up that the current Council Local Law that prohibits collection of waste before 7am was appropriate and adequate to address residents' concerns. The Gwynne Street member of the Traffic Study Group reiterated that this was not a satisfactory response.
Walnut Street	▪ Introduce 'Shared Zone' on Walnut Street between Balmain Street and Newton Street, requires VicRoads consent.	Noel Wootten of City of Yarra stated that with the potential of a future shared zone, the speed zone would be reduced to 10kmph. Proposal generally supported by the Traffic Study Group.

Location	Proposal	Traffic Study Group Comments
Swan Street/Cremorne Street	▪ Further restrict parking on the western side of Cremorne Street near the intersection with Swan Street ▪ Request VicRoads review of signal phasing and timing	A member of the Traffic Study Group asked if there was the potential to relocate the pedestrian cross-walk against the right turning vehicles. Ross Evans indicated that the matter had been referred to Council's Sustainable Transport Team, who have indicated initial concerns for pedestrian safety. Ross Evans indicated that pedestrian safety would take preference over the general intersection capacity. The Traffic Study Group stated that taxis parking at 'No Standing' zones and queuing around corners on Saturday nights was a major issue that should be investigated. Will de Waard stated that the issue can be referred to Council's parking services team for investigation.
Other Issues		A member of the Traffic Study Group brought up the issue of southbound drivers on Punt Road turning left into Swan Street, doing a U-turn at the clearway area at Wellington Street, or turning into Wellington Street doing a three point turn or U-turn at Rout Street. Noel Wootten indicated that this matter was under investigation outside of the LATM study. A member of the Traffic Study Group raised the issue of cyclist safety at the exit/entry onto Church Street from Chapel Street. The safety issue is in relation to cyclists crossing tram lines. Noel Wootten of City of Yarra stated that the proposed alternative bicycle route were provided by Council Sustainable Transport Team and they were only preliminary. This issue would be considered at a more detailed planning stage. A number of members of the Traffic Study Group brought up the issue of traffic congestion and parking overflow during the AFL football season. In particular, one member stated that the City of Melbourne bans on-street parking on the west side of Punt Road within their local government area, and that the City of Yarra should consider banning on-street parking on Punt Road within their local government area, south of Swan Street. A member of the Traffic Study Group raised a concern regarding inaccurate speed data recorded by the tube counts. Will de Waard responded by stating that traffic data collected are generally used as a guide in conjunction with reasonable judgment. A member of the Traffic Study Group asked why

Location	Proposal	Traffic Study Group Comments
		devices should be positioned under street lights. Will de Waard responded by stating that traffic management guidelines recommend that devices be placed in areas where lighting is sufficient. A member of the Traffic Study Group raised a concern regarding noise from road humps. Will de Waard acknowledged that noise from devices such as speed humps will be created, and stated that consideration has been made to locate devices in or near commercial business areas. A member of the Traffic Study Group highlighted the problem of vehicles driving the wrong way on Blanche Street to reach Wellington Street, and also noted the poor condition of Parkins Lane.

Based on the discussions of the Traffic Study Group, the following items were identified that Traffix Group and Council officers would review and amend the Proposed Traffic Management Plan as required:

1. Balmain Street – Investigate planning applications that may affect the location of proposed road hump at #13 Balmain Street,
2. Mary Street – Review the proposed median configuration to allow right turns onto Mary Street for westbound vehicles on Madden Grove,
3. Mary Street/Swan Street – Review the possibility of a 'Keep Clear' area to allow opportunities for vehicles to turn right onto Swan Street from Mary Street,
4. Richmond Primary School – Discuss potential closure issues further with the relevant stakeholders,
5. Chapel Street – Look at the possibility of introducing road humps between Church Street and Chestnut Street,
6. Swan Street – Review location of tram stops near Cremorne Street,
7. Punt Road – Review parking on Punt Road on east side between Swan Street and the Yarra River.

It was agreed that the Proposed Traffic Management Plan would be circulated to the Traffic Study Group via email following the amendments made as a result of the further investigations.

9. NEXT STEP

A survey questionnaire will be distributed to the community seeking their opinion on the plan. These responses to the circular will be analysed and the Traffic Study Group will meet a third time to discuss the community's response to the plan.

10. CLOSE OF MEETING

Will de Waard closed the meeting at 9:30pm.

PART D

TRAFFIC STUDY GROUP MEETING #3

Agenda

TSG, Meeting #3
Thursday, 28th February, 2013

1.	**Introduction**	**6:30**
2.	**Response to Community Circular**	
a.	**Response Rate**	**6:35**
b.	**Supported Treatments**	**6:45**
c.	**Treatments with Mixed Support**	**6:55**
3.	**Discussion of Other Issues**	**7:55**
4.	**Next Steps**	**8:25**
5.	**Close of Meeting**	**8:30**

If you require any further information or assistance, please contact:

Brent Hodges at **Traffix Group**
phone: 9822 2888
email: brent@traffixgroup.com.au

or **Noel Wootten** at **Yarra City Council**
phone: 9205 5742
email: noel.wootten@yarracity.vic.gov.au

MINUTES OF TRAFFIC STUDY GROUP MEETING #3 – THURSDAY, 28TH FEBRUARY, 2013
CITY OF YARRA
BALMAIN PRECINCT NO. 20, LOCAL AREA TRAFFIC MANAGEMENT STUDY

1. ATTENDEES

Cr Phillip Vlahogiannis – City of Yarra	City of Yarra
Cr Misha Coleman – City of Yarra	City of Yarra
Cr Simon Huggins – City of Yarra	City of Yarra
Richard Young – Manager Engineering Infrastructure & Special Projects	City of Yarra
Dennis Cheng – Acting Traffic Coordinator	City of Yarra
Noel Wootten – Traffic Engineer	City of Yarra
Will de Waard – Director	Traffix Group
Brent Hodges – Traffic Engineer	Traffix Group

[redacted]

Brighton Street
Green Street
Rosella Complex
Melrose Street
Gordon Street
Gwynne Street
Kipling Street
Balmain Street
SP AusNet

Apologies:

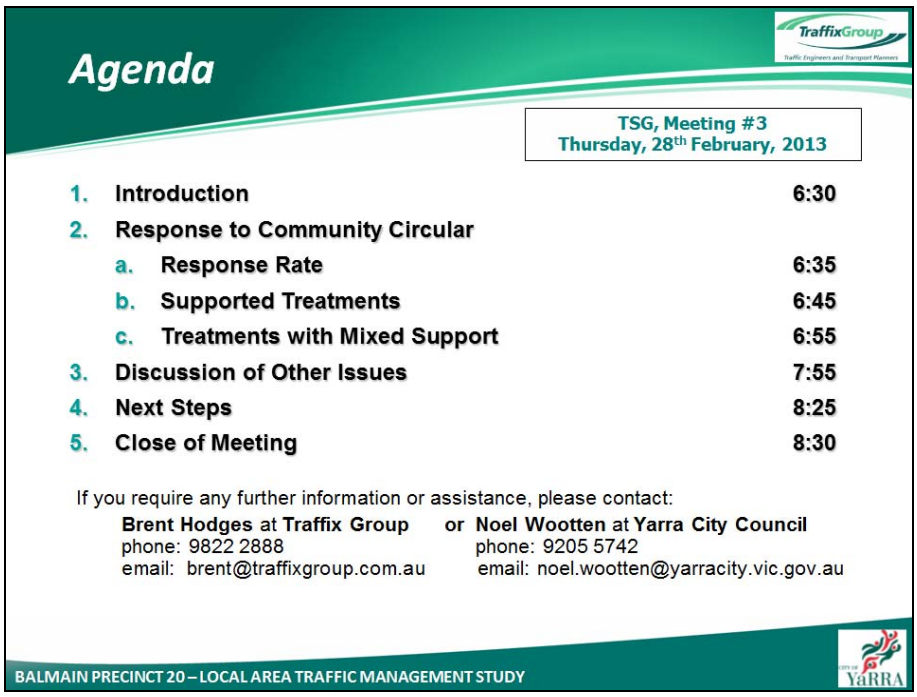
[redacted]

Wellington Street
Pearson Street
Mary Street
Chapel Street
Howard Street
Richmond Primary School

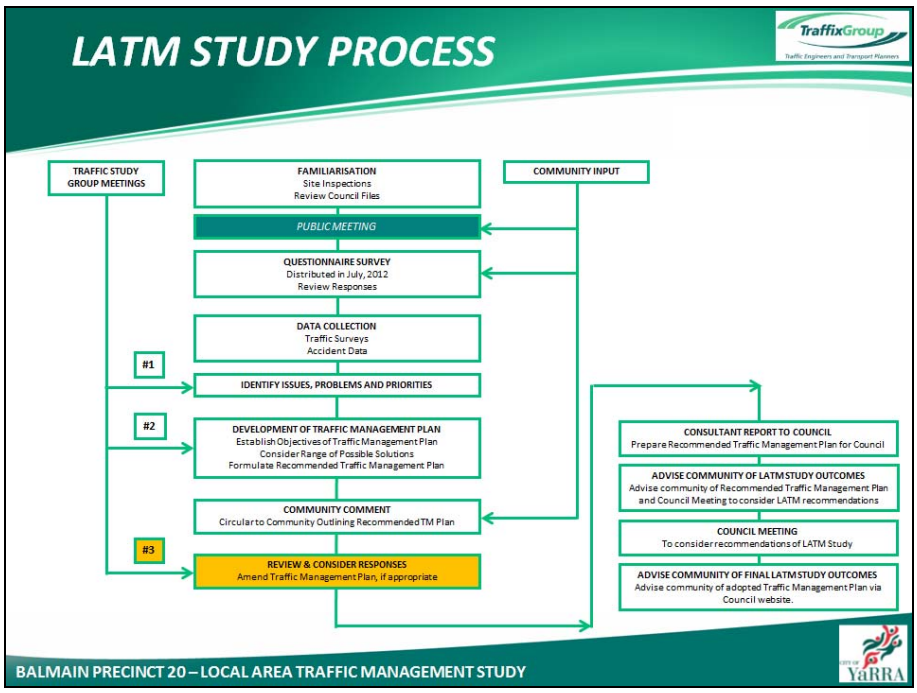
2. INTRODUCTION

The meeting was opened by Will de Waard at 6:30pm.

Will de Waard of Traffix Group then outlined the meeting agenda as follows:



Will de Waard discussed the study process by way of the following slide. The LATM Study is currently at the stage of reviewing and considering the responses from the community to the proposed Traffic Management Plan.



3. RESPONSES TO THE FINAL COMMUNITY CIRCULAR

Will de Waard indicated that the second community circular/questionnaire was distributed on Monday, 21st January, 2013.

Approximately 2,300 circulars were distributed to all properties and businesses within the area. A total of 390 responses were received (a response rate of 17.0%). It was noted that this is considerably more than the 221 responses received to the initial questionnaire on traffic issues.

The results show that the community support for the proposed treatments is generally mixed, with:

- 18% of respondents[1] in full support,
- 61% partly support[1] the proposed Traffic Management Plan, and
- 21% did not support[1] the proposed Traffic Management Plan.

Although the response rate only provides a sample of the general community response to the plan, in our experience, people who oppose traffic management proposals (all or part) are more likely to respond than people who favour the proposals.

Will de Waard indicated that the response rate was excellent, with previous community circulars for LATM studies in the City of Yarra having a response rate of 10-15%.

Some members of the Traffic Study Group indicated that they did not consider the response rate to be high. Noel Wootten noted that the response rate received is by far the best of all of the previous LATM studies undertaken in the City of Yarra, with multiple options available for return of questionnaires including both mail and on-line.

Will de Waard presented a slide that indicated that support for each device has been considered on a case by case basis, over three levels including:

- Overall Study Area,
- Properties in street where device is proposed, and
- Properties directly adjacent to the proposed device.

Will de Waard handed over to Brent Hodges to continue the presentation.

4. SUPPORTED TREATMENTS

Brent Hodges explained that a review of the community responses had resulted in a number of 'supported treatments' whereby the level of community support was sufficient to proceed.

Brent Hodges presented the following 2 slides that outlined the 'supported treatments' including the level of overall support (i.e. level of support from all responses to the circular) and the street support (i.e. level of support from properties within the street with the proposed device).

[1] Respondents who stated a preference only.

Supported Treatments

The following treatments were supported by the local community and are recommended to proceed to the Recommended Traffic Management Plan:

Street	Treatment	Overall Support	Street Support
Cremorne Street	Raised Intersection at Kelso Street	71%	74%
Balmain Street	Stop sign at Cremorne Street	79%	90%
	Raised Intersection at Green Street	62%	88%
	Raised Intersection at Chestnut Street	60%	74%
	Regrade existing raised intersection ramps	64%	83%
	Flat Top Road Hump at #112	50%	83%
	Retain On-street Parking	68%	79%
Mary Street	Raised Intersection at James Street	59%	54%

BALMAIN PRECINCT 20 – LOCAL AREA TRAFFIC MANAGEMENT STUDY

Supported Treatments

Street	Treatment	Overall Support	Street Support
Stephenson Street	Flat Top Road Hump at #7 Stephenson Street	54%	100%
	Flat Top Road Hump at #1 Cubitt Street	57%	100%
	Flat Top Road Hump at #36 Stephenson Street	56%	100%
Kelso Street	Flat Top Road Hump at #8/#11 Kelso Street	53%	86%
	Flat Top Road Hump at #18/#25 Kelso Street	52%	86%
James Street	Flat Top Road Hump at #11/#12 James Street	50%	63%
Gordon Street	One-way (westbound)	63%	83%
Chapel Street	Reconfigure Chestnut Street intersection	60%	92%
Walnut Street	Shared Zone	60%	-
Church Street	Parking Changes to suit open space reconfiguration (no loss of parking spaces)	60%	83%

BALMAIN PRECINCT 20 – LOCAL AREA TRAFFIC MANAGEMENT STUDY

No comments were received from the Traffic Study Group in relation to the 'supported treatments'.

5. REVIEW AND CONSIDERATION OF TREATMENTS WITH MIXED SUPPORT

Brent Hodges presented slides for each of the proposals that received mixed support from the community responses. The slides included the community response for each treatment, any alternative proposals that were investigated and Traffix Group suggested recommendation.

The Traffic Study Group discussed and reviewed community responses, as summarised below:

Street	Treatment	Support		Suggested Recommendation	Alternative Proposals	Comments
		Overall	Street			
Cremorne Street	Road Hump at #14-18 and #9-11	51%	42%	Abandon	Raised intersection at Blanche Street (To be included in TMP)	Cr Vlahogiannis indicated concern at adding the raised intersection to the plan after community consultation. Brent Hodges indicated that a final plan will be sent to the community prior to the Council meeting to present any changes to the Traffic Management Plan. A member of the Traffic Study Group questioned if a raised intersection north of Kelso Street would be effective, noting that the key concern in the area relates to intersection capacity at Cremorne Street and Swan Street. Brent Hodges indicated that traffic survey data indicates that traffic speed is an issue on Cremorne Street and that the circular responses have shown a preference for raised intersections rather than road humps. He also noted that a recommendation to review the operation of the Cremorne Street / Swan Street intersection is proposed (refer to Section 6 below).
	Road Hump at #42 and #43	55%	46%	Abandon		
	Road Hump at #69 and #70	53%	42%	Abandon		
	Road Hump at #121 and #122	55%	46%	Abandon		
	Road Hump at #154 and #155	53%	42%	Abandon		
Balmain Street	Road Hump at #13 and #16	48%	68%	Abandon	N/A	Brent Hodges indicated that there was insufficient support from the overall community (less than 50%) for the proposed road humps. Given that the retention of the on-street parking between Cremorne Street and Cubitt Street and the regrading of the ramps associated with the raised intersection between Gwynne St and Palmer Pde were supported treatments, it is appropriate to abandon the proposals. A member of the Traffic Study Group raised concerns with the sight distance available at the intersection of Cremorne Street and Balmain
	Road Hump at #36 and #128	48%	78%	Abandon		
	Road Hump on existing raised intersection	47%	68%	Abandon		

Street	Treatment	Support		Suggested Recommendation	Alternative Proposals	Comments
		Overall	Street			
						Street due to street trees. Noel Wootten indicated that these trees have recently been pruned and will go onto a regular maintenance list. A member of the Traffic Study Group raised concerns with the proposed raised intersection at Green Street and the potential for vehicles to approach the device at speed, loose control and strike the rail bridge abutment. Brent Hodges indicated that there is a raised intersection and road hump proposed prior to this device and therefore there is a low chance that vehicles can approach this device at speed. Will de Waard noted that these issues will be further considered at the detailed design stage. A member of the Traffic Study Group raised concern with the effectiveness of the proposed treatments. Richard Young indicated that Council is committed to building traffic management devices with appropriate grades that will therefore be effective.
Mary Street	Road Hump at #242	54%	53%	Proceed	N/A	Brent Hodges indicated that the permanent right turn ban into Madden Grove received a very low level of support and produced a significant level of community objection. On this basis it is recommended to abandon the proposal. Brent also indicated that as this treatment will be removed, there is likely to be little change in through traffic volumes. On this basis, it is considered appropriate to add additional treatments to manage the speed of any through traffic. A member of the Traffic Study Group questioned the need for the proposed road humps on Mary Street. Brent Hodges indicated that the traffic survey results indicated that the existing traffic speeds in Mary Street ranked high in the overall area. Will de Waard reiterated that the road humps will serve 2 purposes, to manage through traffic speeds and reduce speeds through
	Road Hump at #276	54%	50%	Proceed		
	Permanent right turn ban into Madden Grove	25%	41%	Abandon	Road hump in Rose Street.[2] (To be included in TMP) Splitter Island in Cotter Street at Mary Street (To be included in TMP)	

[2] It is noted that the proposal for road humps in Rose Street will include 2 humps rather than 1 given the existing configuration of the kerb outstands in Rose Street.

Street	Treatment	Support		Suggested Recommendation	Alternative Proposals	Comments
		Overall	Street			
						the primary school area. Will de Waard indicated that he had had discussions with Chris McNeil (representative of Richmond Primary School) prior to the Traffic Study Group Meeting. Chris indicated that the school is support of the proposed wombat crossing adjacent to the school on Mary Street and the proposed road humps / raised intersections along Mary Street. However, Chris indicated that the school is not supportive of the proposed full time right turn ban into Madden Grove due to the accessibility restrictions that this will cause for school parents. David Grant from SP Ausnet indicated that they supported the proposed treatments along Mary Street subject to the bollard spacing at the proposed wombat crossing outside the school maintain the existing road width.
Brighton Street	Road Hump at #68-76 and #79	51%	52%	Proceed	N/A	No Comments
Howard Street	One-way Westbound	60%	30%	Abandon	N/A	Brent Hodges indicated that one-way proposals are typically reviewed on the support from the street, given the large impact the treatment can have on the adjacent properties. Given that there was only 30% support from Howard Street, it was recommended to abandon the proposal. Brent also noted that he had reviewed the comments from the Howard Street responses to see if there was any support for a one-way proposal eastbound, however, only a limited number of responses indicated this preference.
Chapel Street	Road Hump at #11 and #12	60%	50%	Abandon	N/A	Brent Hodges indicated that only 2 responses were received from Chapel Street, with one response supporting the device and the other response (adjacent to the proposal) not supporting the device. On this basis it was recommended to abandon the proposal. A member of the Traffic Study Group asked if any other road hump locations would be suitable in Chapel Street. Brent Hodges indicated that Chapel Street contains a number of

Street	Treatment	Support		Suggested Recommendation	Alternative Proposals	Comments
		Overall	Street			
						property access points and there are no other potential locations. Another member of the Traffic Study Group questioned if any other treatments could be incorporated. Will de Waard indicated that other devices such as slow points require a significant length and therefore result in a loss of parking or can be difficult to locate due to property access points. Will de Waard indicated that the proposal to modify the intersection at Chapel Street and Chestnut Street could be produced at the detailed design stage to reduce traffic speeds on Chapel Street.

6. OTHER ISSUES / SUGGESTIONS

Other issues / suggestions were then discussed by the Traffic Study Group, as summarised below:

Street Name	Community Issue/Request/Suggestion	Traffic Study Group Comments
Gordon Street	Issues with vehicles parking all day in 2hr parking zones and vehicles parking in accessible parking spaces without the appropriate permits.	Will de Waard indicated that the comments would be passed to Councils Parking Systems Team.
Dimmey's Redevelopment	Concerns regarding parking in the vicinity of the Dimmey's redevelopment site, with construction workers parking both sides of narrow streets, blocking access in some cases.	Will de Waard indicated that the comments would be passed to Councils Parking Systems Team.
Gough Street	Parking issues associated with the recently relocated Carsales at the corner of Punt Road and Gough Street	Will de Waard indicated that the comments would be passed to Councils Parking Systems Team.
Alternative Bicycle Routes.	What do the alternative bicycle routes consist of?	Brent Hodges indicated that the proposed bicycle routes have been included on the plan through consultation with Council's Strategic Transport Team. At this stage the proposal are preliminary route, with further development work required to determine the most appropriate bicycle treatment for each road.
Swan Street / Cremorne Street	Capacity and congestion issues at the intersection of Swan Street and Cremorne Street	Brent Hodges indicated that there had been a number of responses to the community questionnaire that raised issues with the intersection of Swan Street and Cremorne Street. On this basis Traffix Group will recommend that Council review parking on Cremorne Street in the vicinity of the intersection and undertake discussions with stakeholders (VicRoads, Yarra Trams, etc.) with a view to improving intersection capacity and pedestrian safety.

Street Name	Community Issue/Request/Suggestion	Traffic Study Group Comments
Gwynne Street	Truck activity in Gwynne Street with requests for the road to be closed to the Rosella Complex to the south of Munro Street.	A member of the Traffic Study Group raised concerns that truck usage issues (associated with the Rosella Complex) in Gwynne Street had not been addressed. The key concerns related to: • Overall volume of vehicles in Gwynne Street (approximately 500 vehicles per day) versus the number of properties in Gwynne Street (suggested traffic generation of 90 vehicles per day), • The level of truck usage in Gwynne Street (approximately 30 vehicles per day), • Truck usage during the night period, which is difficult to enforce with the existing Council local law • A number of Gwynne Street residents have responded to the questionnaire indicating traffic speed and volume issues (higher response rate than the majority of other streets in the area) The member of the Traffic Study Group suggested the following treatments to resolve the issue: • Close access from the Rosella Complex to Gwynne Street, • Apply a truck ban to Gwynne Street. Will de Waard responded by indicating that a significant level of investigation had occurred to review these issues. In summary, Traffix Group's investigations have concluded the following: • According to the Yarra Planning Scheme Gwynne Street contains a mixed zoning of residential on the western side of the street and business/commercial zoning on the eastern side of the street. On this basis, a level of truck activity can be expected and access to the Rosella Complex • The traffic speeds recorded on Gwynne Street are well within acceptable limits, • The daily traffic volume on Gwynne Street (500 vehicles per day) is well within the acceptable limits for a local street which can be up to 2,000 vehicles per day • An existing Local Law that prohibits commercial waste collection is in place to ensure appropriate night time amenity, • Given the low truck volumes recorded, it would be inappropriate to make a submission to the Truck Operations Group for a truck ban in Gwynne Street (either part time or full time). There was a significant level of discussion around the above points, however a resolution could not be reached. It was agreed that further consultation was required outside the LATM process.

7. SUMMARY

Based on the community consultation, the following changes to the Traffic Management Plan will be made prior to the final community consultation:

Items to be removed:

1) Road Hump outside #14-18 and #9-11 Cremorne Street,
2) Road Hump outside #42 and #43 Cremorne Street,
3) Road Hump outside #69 and #70 Cremorne Street,
4) Road Hump outside #121 and #122 Cremorne Street,
5) Road Hump outside #154 and #155 Cremorne Street,
6) Road Hump outside #13 and #16 Balmain Street,
7) Road Hump outside #36 Balmain Street,
8) Road Hump outside on existing raised intersection between Palmer Parade and Gwynne Street,
9) Permanent right turn ban from Mary Street into Madden Grove,
10) 'One-way' westbound in Howard Street between Church Street and Bryant Street,
11) Road Hump outside #11 and #12 Chapel Street, and
12) Mary Street / Swan Street investigate 'Keep Clear' linemarking.

Items to be included:

1) Cremorne Street: Install raised intersection at Blanche Street,
2) Rose Street: Install 2 flat top road humps between the existing kerb outstands,
3) Cotter Street: Install splitter island at the intersection with Mary Street,
4) Council review parking on Cremorne Street on the approach to Swan Street, with a view to improving intersection capacity, and
5) Council contact VicRoads to seek an investigation and review of signal phasing and timing at the intersections of Swan Street / Cremorne Street, with a view to improving capacity and pedestrian safety.

8. NEXT STEP

A final copy of the Recommended Traffic Management Plan will be circulated to all properties in the area with a detailed summary of the changes since the previous community consultation. The final circular will include the details of the Council meeting where the LATM recommendations will be considered by Council.

Traffix Group will prepare a final report detailing the findings of this study for Council. The final report will be reviewed by Council Officers before being submitted for consideration at a Council Meeting.

If funding is approved by Council, then the works will be staged with most important treatments being constructed first. At the design stage Council will liaise with those residents directly affected by the proposed treatments.

Council will continue to monitor and assess traffic conditions in the local area, including traffic surveys to determine the success of the Traffic Management Plan.

9. CLOSE OF MEETING

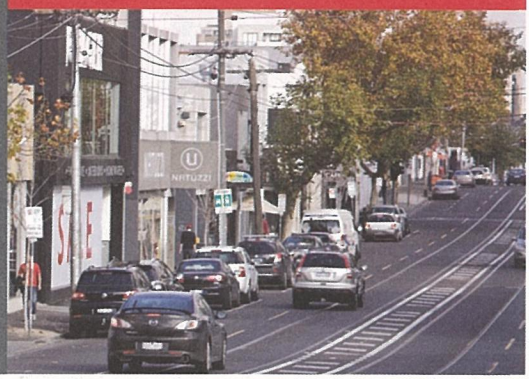
Will de Waard closed the meeting at 8:35pm.

APPENDIX E

FINAL COMMUNITY QUESTIONNAIRE CIRCULAR

Local Area Traffic Management Study – Balmain Precinct

Update and Community Survey
January 2013



Yarra City Council is undertaking a Local Area Traffic Management Study (LATMS) in Cremorne's Balmain Precinct, in the area bounded by Swan Street, Mary Street, the Yarra River and Punt Road.

For the purposes of this study, this area is referred to as LATMS 20.

The traffic study aims to address traffic issues in the area including:

- traffic speed and volume
- through-traffic in local streets
- heavy vehicles in local streets
- traffic safety at intersections
- pedestrian safety

Traffix Group Pty Ltd, a traffic engineering and transport planning consultancy, has been engaged by Council to assist with the study.

Proposed Traffic Management Plan

Council has developed a proposed Traffic Management Plan that suggests possible traffic solutions in the area.

This plan was developed in response to issues identified by the community in a survey distributed to local properties in July 2012.

The Traffic Study Group, comprising local representatives, ward councillors, council officers and consultants from Traffix Group also contributed to the development of the plan.

The plan has been developed on an area–wide basis to minimise any impact proposed traffic treatments may cause on nearby streets.

The objectives of the plan are to:

- reduce the incidence and potential for vehicle and pedestrian crashes in the area
- improve the safety of local streets by reducing traffic speeds
- discourage through-traffic from using the local area
- develop proposals that address traffic concerns raised by the community, while maintaining adequate levels of accessibility for local residents, local businesses and emergency services, and
- maximise the safety benefits of available funding (with priority given to reported crash locations and those streets with the greatest level of community concerns).

Specific details of the plan are explained in further detail within this newsletter.

Parking issues

Council received a significant number of responses relating to parking restrictions, enforcement and parking availability in its survey distributed in July 2012.

This specific traffic study only deals with parking issues that impact upon traffic safety. Council is however undertaking a separate parking study in the Balmain Precinct and will use the responses from the survey to develop a proposed plan to address parking issues in the area.

The proposed Parking Management Plan will be distributed to residents for feedback.

HAVE YOUR SAY

Council is seeking your feedback on the proposed traffic management plan.

You can have your say on the proposed plan completing the survey included in this newsletter. The survey folds into a reply-paid envelope which can be returned to Council. The survey can also be completed online at **www.yarracity.vic.gov.au/latms-20-balmain**

For further comments or feedback, please contact:

Noel Wootten,
Traffic Engineer – Yarra City Council
9205 5742
Noel.Wootten@yarracity.vic.gov.au
or
Brent Hodges,
Traffic Engineer – Traffix Group
9822 2888
brent@traffixgroup.com.au

The closing date for the survey is 4 February 2013.

Based on your feedback, the Traffic Study Group will develop a recommended Traffic Management Plan that will be considered for adoption by Council.

This plan will be distributed to local properties, along with details of the Council meeting where the plan will be considered. You are welcome to attend this meeting and speak about your views on the plan before Council decides on whether to adopt some or all of the recommendations.

Residents directly affected by the proposed traffic treatments will be further consulted before the treatments are implemented.

Local Area Traffic Management Study – Balmain Precinct

Update and Community Survey | January 2013

Features of the proposed traffic management plan

Council conducted 22 traffic surveys as part of this study to gather data on traffic speed, volume and vehicle type information on an hourly basis. These surveys were in addition to 16 surveys previously completed in the area.

The analysis of the survey data indicated issues with traffic speed and through-traffic in Cremorne Street, Balmain Street and Mary Street.

Traffic issues were also identified in Stephenson Street, Kelso Street, Chapel Street, Brighton Street, James Street, Gordon Street and Howard Street.

Recommended traffic treatments for the Balmain Precinct are confined to the above streets where speed, volume and safety issues are the greatest.

All other streets within the study area are within acceptable limits for traffic speed and traffic volume.

1. CREMORNE STREET

Cremorne Street is a collector road that serves a function of providing access to the local area.

Recent traffic surveys showed that Cremorne Street carries in the order of 8,000 vehicles per day in the vicinity of Swan Street, and in the order of 2,000 vehicles per day south of Balmain Street.

Significantly, around 2,500 vehicles per day exceeded the 40km/h speed limit in the vicinity of Kelso Street and 680 vehicles per day exceeded the 40km/h speed limit in the vicinity of Bent Street.

The following traffic management treatments are proposed for Cremorne Street to reduce the traffic speeds:

- Replace 'Give-Way' with stop control at Cremore Street / Balmain Street intersection.
- Install a raised intersection platform at the intersection of Cremorne Street and Kelso Street.
- Install road humps at the following locations:
  - > Outside #14–18 and #9–11 Cremorne Street,
  - > Outside #42 and #43 Cremorne Street,
  - > Outside #70 and #69 Cremorne Street,
  - > Outside #122 and #121 Cremorne Street, and
  - > Outside #154 and #155 Cremorne Street.

2. BALMAIN STREET

Balmain Street is a collector road that serves a function of providing access to the local area. Balmain Street provides one of only two underpasses of the railway line in the study area.

Recent traffic surveys showed that Balmain Street carries in the order of 6,750 vehicles per day in the vicinity of Gwynne Street, and in the order of 5,850 vehicles per day in the vicinity of Church Street.

Approximately 1,600 vehicles per day exceeded the 40km/h speed limit in the vicinity of Church Street and 1,500 vehicles per day exceeded the speed limit in the vicinity of Gwynne Street.

The following traffic management measures are proposed for Balmain Street:

- Re-grade existing raised intersection ramp between Gwynne Street and Palmer Parade
- Install raised intersection platforms at the intersection of Balmain Street with Green Street and Chestnut Street.
- Install road humps at the following locations:
  - > Outside #13 and #16 Balmain Street,
  - > Outside #36 Balmain Street,
  - > On the existing raised intersection between Gwynne Street and Palmer Parade, and
  - > Outside #112 Balmain Street.

The following parking management options are also proposed for Balmain Street between Cremorne Street and Cubitt Street:

- Retain on–street parking, or
- Remove on–street parking.

3. MARY STREET

Mary Street is a local street that extends north–south along the eastern boundary of the local area.

Recent traffic surveys indicate that through traffic is utilising Mary Street to avoid Church Street and the congested arterial road network on the boundaries of the local area.

Furthermore, the recent traffic survey data indicates that approximately 1,685 vehicles per day exceeded the 40km/h speed limit in the vicinity of Madden Grove and 1,450 vehicles per day exceeded the 40km/h speed limit in the vicinity of Goodwin Street.

The local community identified pedestrian safety in the vicinity of Richmond Primary School as a key issue. Recent traffic survey data indicates that traffic speeds are very low between Barkly Avenue and Burgess Street.

The following traffic management measures are proposed to control traffic speeds and reduce through traffic volumes on Mary Street:

- Install road humps at the following locations:
  - > Outside #242 Mary Street, and
  - > Outside #276 Mary Street.
- Install a raised intersection platform at the intersection of Mary Street and James Street,
- Introduce a full-time Right Turn Ban into Madden Grove from Mary Street, and
- Investigate 'Keep Clear' line marking for turning vehicles from Mary Street to Swan Street
- Improve the pedestrian crossing to Richmond Primary School.

4. STEPHENSON STREET

Stephenson Street is a local street located adjacent to the railway line in the western half of the local area. Notably, Stephenson Street connects with Dunn Street / Chapel Street to form the only alternative east–west route to Balmain Street through the local area.

Recent traffic survey data indicates that Stephenson Street carries in the order of 1,500 vehicles per day between Gwynne Street and Cubitt Street. Traffic speeds in Stephenson Street were above acceptable limits with approximately 600 vehicles per day exceeding the 40 km/h speed limit.

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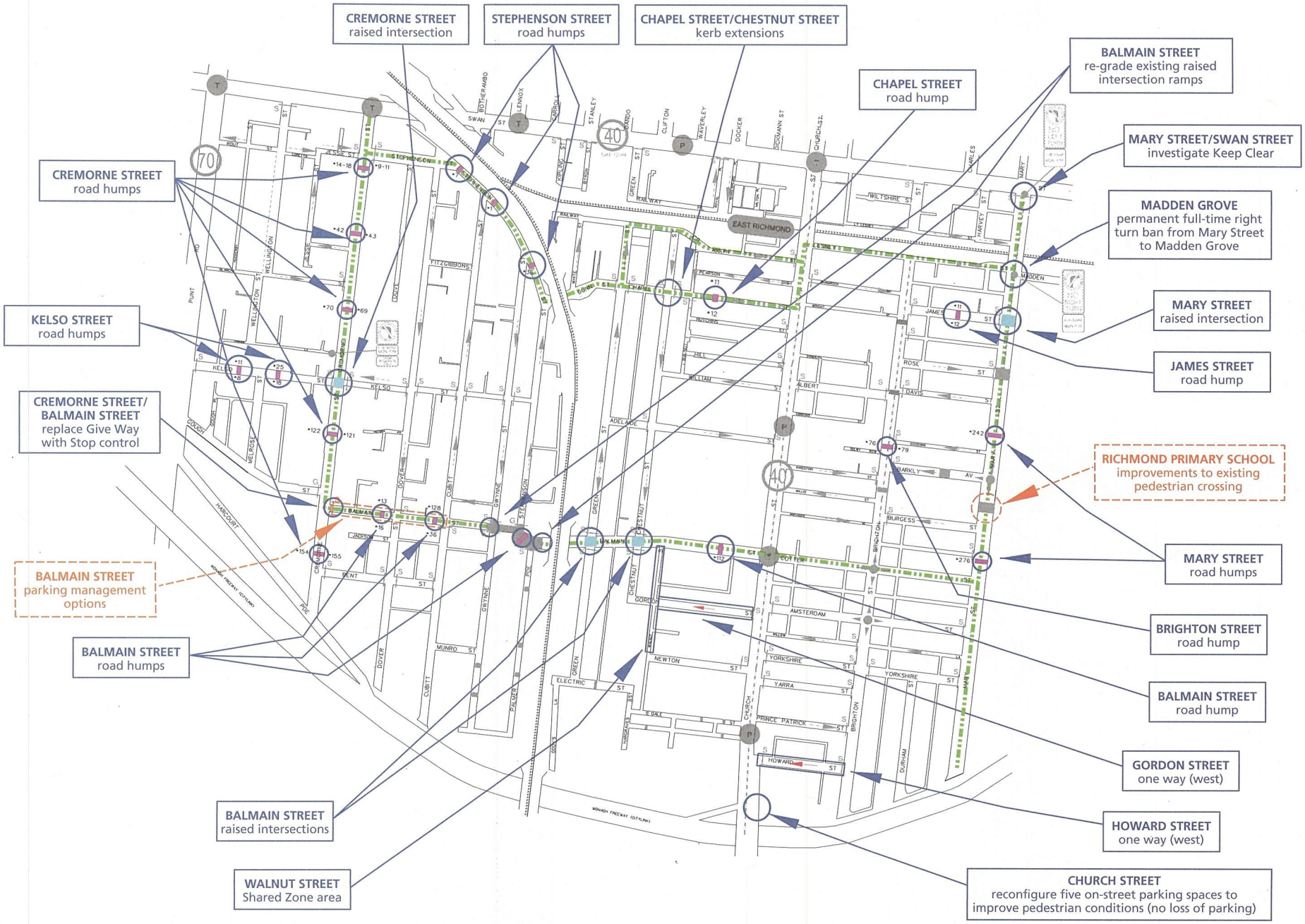
PROPOSED TRAFFIC MANAGMENT PLAN



Local Area Traffic Management Study – Balmain Precinct

Update and Community Survey | January 2013

In order to reduce traffic speeds in the section between Dover Street and Dunn Street, it is proposed to install a series of three (3) road humps at intervals of approximately 100m.

It is noted that a bicycle route is proposed on Stephenson Street (see further details below under Other Treatments) and therefore the proposed road humps will help to provide a safer environment for cyclists.

In summary the following traffic management treatments are proposed on Stephenson Street:

- Install road humps at the following locations on Stephenson Street:
  - >Outside #7 Stephenson Street,
  - >Outside #1 Cubitt Street, and
  - >Outside #36 Stephenson Street.

5. KELSO STREET, BRIGHTON STREET AND JAMES STREET

Kelso Street, Brighton Street, and James Street are all local streets.

Recent traffic survey data indicates that traffic speeds within these streets are above acceptable limits, with the following number of vehicles exceeding the 40km/h speed limit per day in each street:

- Kelso Street: 644 vehicles per day over 40km/h
- Brighton Street: 389 vehicles per day over 40km/h
- James Street: 362 vehicles per day over 40km/h

In view of the above, road humps are proposed in each street to reduce traffic speeds below the posted speed limit.

In James Street only a single road hump is required due to the short length between intersections, while in Brighton Street a single location was identified in the vicinity of Goodwin Street where the existing traffic management treatment spacing exceeded 100m.

In summary the following treatments are proposed:

- Road hump outside #8 and #11 Kelso Street
- Road hump outside #18 and #25 Kelso Street
- Road hump outside #76 and #79 Brighton Street, and
- Road hump outside #11 and #12 James Street.

6. GORDON STREET AND HOWARD STREET

Gordon Street and Howard Street are local streets at the southern end of the local area that directly access Church Street.

Recent traffic surveys indicate the traffic speeds and traffic volumes are within acceptable limits. However, given their locations within the road network, these streets are being utilised by through traffic during peak periods.

In order to reduce the level of through traffic, the following treatments are proposed:

- Gordon Street - One-way (Westbound only), and
- Howard Street - One-way (Westbound only).

7. OTHER TREATMENTS

Chapel Street was identified by the local community as a location where a number of vehicles are driving against the existing one-way restriction. In addition, speed was highlighted to be an issue between Chestnut Street and Church Street. To address these concerns it is proposed to:

- Reconfigure the intersection of Chapel Street and Chestnut Street to guide vehicles from the west to south, and
- Install a road hump outside #11 and #12 Chapel Street.

Bicycle Routes within the study area were identified by the local community as a key issue. In particular, a number of community members were concerned by the lack of cycling facilities on Swan Street. Two alternative east–west bicycle routes are proposed through the study area utilising the following streets:

- Cremorne Street, Balmain Street, Cotter Street and Mary Street, and
- Stephenson Street, Dunn Street, Chapel Street, Adolph Street and Lesney Street.

Walnut Street

- Introduce a shared zone area between Balmain Street and Newton Street.

Church Street

- Reconfigure five on–street parking spaces (no loss of parking).

CONTACTS

For further comments or feedback, please contact:

Noel Wootten, Traffic Engineer – Yarra City Council, tel. 9205 5742 or email Noel.Wootten@yarracity.vic.gov.au

or

Brent Hodges, Traffic Engineer –Traffix Group, tel. 9822 2888 or email brent@traffixgroup.com.au

IF YOU WOULD LIKE TO KNOW MORE ABOUT THE INFORMATION IN THIS DOCUMENT AND YOUR LANGUAGE IS NOT LISTED BELOW, YOU CAN CONTACT AN INTERPRETER ON **9280 1940**

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Community Survey

LATMS 20 Proposed Traffic Management Plan – Balmain Precinct

CITY OF YaRRA

Please complete the survey below to provide your feedback on the proposed Traffic Management Plan for Cremorne's Balmain Precinct. Responses are due by **4 February 2013**.

For assistance or further information, please contact Noel Wootten, Traffic Engineer – Yarra City Council, on 9205 5742 or Noel.Wootten@yarracity.vic.gov.au

Contact Information

Name _____

Address _____

Email _____

Overall, do you support the proposed Traffic Managment Plan?

☐ Support in full ☐ Support in part ☐ Do not support

Treatments

Please indicate if you support (yes) or do not support (no) the following treatments.

Cremorne Street

Install a raised intersection platform at Cremorne Street and Kelso Street	☐ Yes	☐ No
Install road humps outside #14–18 and #9–11 Cremorne Street	☐ Yes	☐ No
Install road humps outside #42 and #43 Cremorne Street	☐ Yes	☐ No
Install road humps outside #70 and #69 Cremorne Street	☐ Yes	☐ No
Install road humps outside #122 and #121 Cremorne Street	☐ Yes	☐ No
Install road humps outside #154 and #155 Cremorne Street	☐ Yes	☐ No
Replace 'Give Way' with stop control at Cremore Street and Balmain Street	☐ Yes	☐ No

Balmain Street

Install raised intersection platforms at the Balmain/Green Street intersection	☐ Yes	☐ No
Install raised intersection platforms at the Balmain/Chestnut Street intersection	☐ Yes	☐ No
Re-grade existing raised intersection ramps between Gwynne St and Palmer Parade	☐ Yes	☐ No
Install road humps outside #13 and #16 Balmain Street	☐ Yes	☐ No
Install road humps outside #36 Balmain Street	☐ Yes	☐ No
Install road humps on the existing raised intersection between Gwynne Street and Palmer Parade	☐ Yes	☐ No
Install road humps outside #112 Balmain Street	☐ Yes	☐ No
Retain on-street parking between Cremorne Street and Cubitt Street	☐ Yes	☐ No

Mary Street

Install road humps outside #242 Mary St	☐ Yes	☐ No
Install road humps outside #276 Mary St	☐ Yes	☐ No
Install raised intersection platform at Mary Street and James Street	☐ Yes	☐ No
Introduce a full-time Right Turn Ban into Madden Grove from Mary Street	☐ Yes	☐ No

Stephenson Street

Install road humps outside #7 Stephenson St	☐ Yes	☐ No
Install road humps outside #1 Cubitt St	☐ Yes	☐ No
Install road humps outside #36 Stephenson St	☐ Yes	☐ No

Kelso Street, Brighton Street and James Street

Install road humps outside #8 and #11 Kelso Street	☐ Yes	☐ No
Install road humps outside #18 and #25 Kelso Street	☐ Yes	☐ No
Install road humps outside #76 and #79 Brighton Street	☐ Yes	☐ No
Install road humps outside #11 and #12 James Street	☐ Yes	☐ No

Gordon Street and Howard Street

Reconfigure Gordon Street to one-way (westbound only)	☐ Yes	☐ No
Reconfigure Howard Street to one-way (westbound only)	☐ Yes	☐ No

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Other Treatments

Install a road hump outside #11 and #12 Chapel Street ☐ Yes ☐ No

Reconfigure the intersection of Chapel Street and Chestnut Street ☐ Yes ☐ No

Shared zone area on Walnut Street between Balmain St and Newton St ☐ Yes ☐ No

Reconfigure five on–street parking spaces on Church Street ☐ Yes ☐ No

Please use the space below to provide additional comments about the proposed Traffic Management Plan.

Thankyou for your time.

Fold along dotted lines, then staple or secure with tape to make Reply Paid envelope.

BALMAIN PRECINCT LOCAL AREA TRAFFIC MANAGEMENT STUDY

Delivery Address:
PO Box 168
RICHMOND VIC 3121

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if posted in Australia

City of Yarra
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RICHMOND VIC 3121

APPENDIX F

DETAILED SUMMARY OF RESPONSES TO FINAL COMMUNITY QUESTIONNAIRE CIRCULAR

BALMAIN PRECINCT LOCAL AREA, TRAFFIC MANAGEMENT STUDY

STREET BY STREET OVERALL RESPONSE

				Support from Properties in Street with Proposed Treatment					Support from Properties Directly Adjacent to Proposed Treatment		Support from Overall Study Area				
Treatment #	**Description**	**Street**	**Number Responding**	**Y**	**N**	**X**	**Number Preference Stated (Y+N)**	**Percentage Support for Treatment (Y ÷ Number Preference Stated)**	**Y**	**N**	**Y**	**N**	**X**	**Number Preference Stated (Y+N)**	**Percentage Support for Treatment (Y ÷ Number Preference Stated)**
5	Raised Intersection	Kelso Street	7	6	1	0	7	**86%**	-	-	226	93	73	319	**71%**
		Cremorne Street	26	17	7	2	24	**71%**	1	1					
6	Road Hump	Cremorne Street		10	14	2	24	**42%**	1	0	162	156	74	318	**51%**
7	Road Hump	Cremorne Street		11	13	2	24	**46%**	0	1	175	144	73	319	**55%**
8	Road Hump	Cremorne Street		10	14	2	24	**42%**	0	0	168	153	71	321	**52%**
9	Road Hump	Cremorne Street		11	13	2	24	**46%**	1	1	176	145	71	321	**55%**
10	Road Hump	Cremorne Street		10	14	2	24	**42%**	5	5	168	150	74	318	**53%**
11	Stop Sign	Cremorne Street		24	1	1	25	**96%**	9	1	256	67	69	323	**79%**
		Balmain Street	19	14	3	2	17	**82%**	0	0					
12	Raised Intersection	Balmain Street		14	2	3	16	**88%**	1	1	199	120	73	319	**62%**
		Green Street	9	7	1	1	8	**88%**	0	0					
13	Raised Intersection	Balmain Street	19	15	2	2	17	**88%**	0	0	191	126	75	317	**60%**
		Chestnut Street	12	5	5	2	10	**50%**	0	0					
14	Regrade Raised Intersection	Balmain Street	19	15	3	1	18	**83%**	0	0	203	114	75	317	**64%**
15	Road Hump	Balmain Street		13	6	0	19	**68%**	0	2	154	166	72	320	**48%**
16	Road Hump	Balmain Street		14	4	1	18	**78%**	2	0	149	165	78	314	**47%**
17	Road Hump	Balmain Street		13	6	0	19	**68%**	0	0	148	168	76	316	**47%**
18	Road Hump	Balmain Street		15	3	1	18	**83%**	0	0	157	155	80	312	**50%**
19	Retain On-Street Parking	Balmain Street		15	4	0	19	**79%**	14	5	218	104	70	322	**68%**
20	Road Hump	Mary Street	17	9	8	0	17	**53%**	0	0	177	153	62	330	**54%**
21	Road Hump	Mary Street		8	8	1	16	**50%**	0	0	176	153	63	329	**53%**
22	Raised Intersection	Mary Street		7	10	0	17	**41%**	0	0	195	136	61	331	**59%**
		James Street	9	6	1	2	7	**86%**	2	0					
23	Right Turn Ban	Mary Street	17	7	10	0	17	**41%**	1	1	85	257	50	342	**25%**
24	Road Hump	Stephenson Street	4	3	0	1	3	**100%**	0	0	167	142	83	309	**54%**
25	Road Hump	Stephenson Street		3	0	1	3	**100%**	1	0	178	133	81	311	**57%**
26	Road Hump	Stephenson Street		3	0	1	3	**100%**	0	0	174	136	82	310	**56%**
27	Road Hump	Kelso Street	7	6	1	0	7	**86%**	0	1	164	144	84	308	**53%**
28	Road Hump	Kelso Street		6	1	0	7	**86%**	4	0	160	148	84	308	**52%**
29	Road Hump	Brighton Street	30	14	13	3	27	**52%**	2	0	157	154	81	311	**50%**
30	Road Hump	James Street	9	5	3	1	8	**63%**	0	2	155	158	79	313	**50%**
31	One-Way	Gordon Street	6	5	1	0	6	**83%**	-	-	190	112	90	302	**63%**
32	One-Way	Howard Street	10	3	7	0	10	**30%**	-	-	186	123	83	309	**60%**
33	Road Hump	Chapel Street	2	1	1	0	2	**50%**	0	1	151	146	95	297	**60%**
34	Reconfigure Intersection	Chapel Street		2	0	0	2	**100%**	0	0	197	96	99	293	**60%**
		Chestnut Street	12	9	1	2	10	**90%**	1	0					
35	Shared Zone	Walnut Street	-	-	-	-	-	**-**	-	-	211	83	98	294	**60%**
36	Parking Changes	Church Street	16	10	2	4	12	**83%**	-	-	232	70	90	302	**60%**

Note: N = Do Not Support, Y = Support, X = No Preference Stated

APPENDIX G

CONSULTATION WITH EMERGENCY SERVICES

TraffixGroup
Traffic Engineers and Transport Planners

Traffix Group Pty Ltd
ABN 32 100 481 570

Address
Suite 8, 431 Burke Road
Glen Iris Victoria 3146

Contact
Telephone 03 9822 2888
Facsimile 03 9822 7444
admin@traffixgroup.com.au
www.traffixgroup.com.au

Our Ref: G14494

23rd January, 2013

Richmond Police Station
217 Church Street
RICHMOND VIC 3121

Attention: Officer in Charge – Traffic Management Unit

Dear Sir/Madam,

BALMAIN PRECINCT LOCAL AREA TRAFFIC MANAGEMENT STUDY
PROPOSED TRAFFIC MANAGEMENT PLAN

Traffix Group has been engaged by City of Yarra to undertake a Local Area Traffic Management study for the local area identified as the 'Balmain Precinct'. This area is bound by Swan Street to the north, Church Street to the east, Citylink to the south and Punt Road to the west.

Please find enclosed a copy of the circular distributed to residents and businesses in the area, which details the traffic management proposals recommended for the study area.

We would be pleased to receive your written comments on these proposals by Wednesday, 4th February, 2013.

Please do not hesitate to contact either Brent Hodges at Traffix Group on 9822 2888 or Noel Wootten at City of Yarra on 9205 5742 if you have any questions.

Yours faithfully,
TRAFFIX GROUP PTY LTD

WILL DE WAARD
DIRECTOR

TraffixGroup
Traffic Engineers and Transport Planners

Traffix Group Pty Ltd
ABN 32 100 481 570

Address
Suite 8, 431 Burke Road
Glen Iris Victoria 3146

Contact
Telephone 03 9822 2888
Facsimile 03 9822 7444
admin@traffixgroup.com.au
www.traffixgroup.com.au

Our Ref: G14494

23rd January, 2013

The Manager
Metropolitan Fire Brigade
PO Box 151
EAST MELBOURNE VIC 3002

Dear Sir/Madam,

BALMAIN PRECINCT LOCAL AREA TRAFFIC MANAGEMENT STUDY
PROPOSED TRAFFIC MANAGEMENT PLAN

Traffix Group has been engaged by City of Yarra to undertake a Local Area Traffic Management study for the local area identified as the 'Balmain Precinct'. This area is bound by Swan Street to the north, Mary Street to the east, Citylink to the south and Punt Road to the west.

Please find enclosed a copy of the circular distributed to residents and businesses in the area, which details the traffic management proposals recommended for the study area.

We would be pleased to receive your written comments on these proposals by Wednesday, 4th February, 2013.

Please do not hesitate to contact either Brent Hodges at Traffix Group on 9822 2888 or Noel Wootten at City of Yarra on 9205 5742 if you have any questions.

Yours faithfully,
TRAFFIX GROUP PTY LTD

WILL DE WAARD
DIRECTOR

TraffixGroup
Traffic Engineers and Transport Planners

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Glen Iris Victoria 3146

Contact
Telephone 03 9822 2888
Facsimile 03 9822 7444
admin@traffixgroup.com.au
www.traffixgroup.com.au

Our Ref: G14494

23rd January, 2013

The Manager
Ambulance Victoria
PO Box 2000
DONCASTER VIC 3108

Dear Sir/Madam,

BALMAIN PRECINCT LOCAL AREA TRAFFIC MANAGEMENT STUDY
PROPOSED TRAFFIC MANAGEMENT PLAN

Traffix Group has been engaged by City of Yarra to undertake a Local Area Traffic Management study for the local area identified as the 'Balmain Precinct'. This area is bound by Swan Street to the north, Mary Street to the east, Citylink to the south and Punt Road to the west.

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DIRECTOR