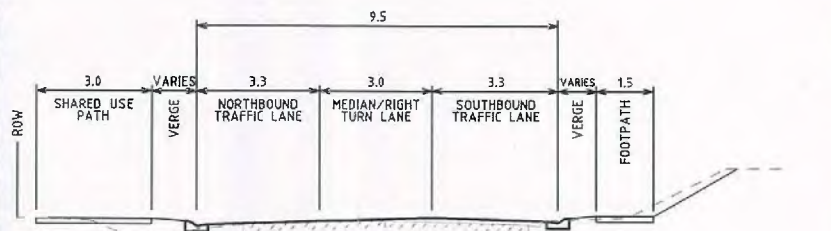
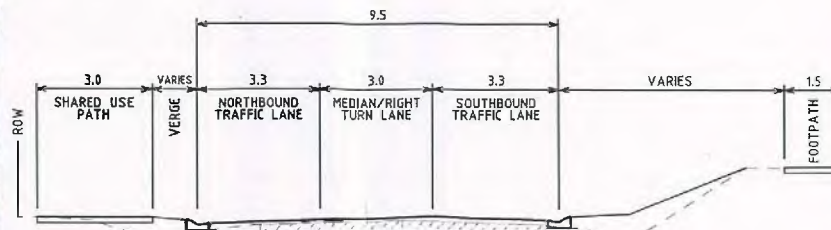




INTERSECTION OF BOLTON STREET AND MAIN ROAD



TYPICAL CROSS SECTION
NORTH OF ELY STREET



TYPICAL CROSS SECTION
NORTH OF ELY STREET




INTERSECTION OF BOLTON STREET, SHERBOURNE ROAD AND BRIDGE STREET

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GENERAL NOTES


 Safe System Solutions Pty Ltd
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 Brunswick VIC 3056
 Phone: (03) 9381 2222
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DESIGNED
 J. ROBERTSON
 NOVEMBER 2015
 APPROVED

ROAD SAFETY - AUDITING - ENGINEERING - PROJECT DEVELOPMENT

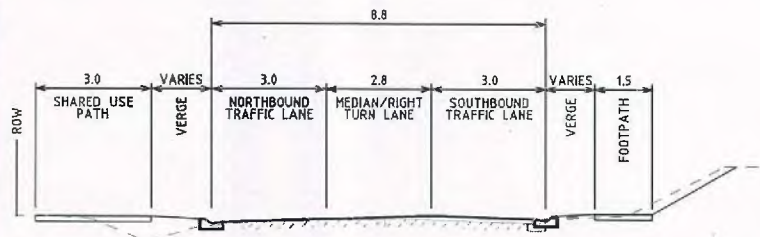
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 MAIN ROAD TO BRIDGE STREET
 SHIRES OF BANYULE AND NILLUMBIK
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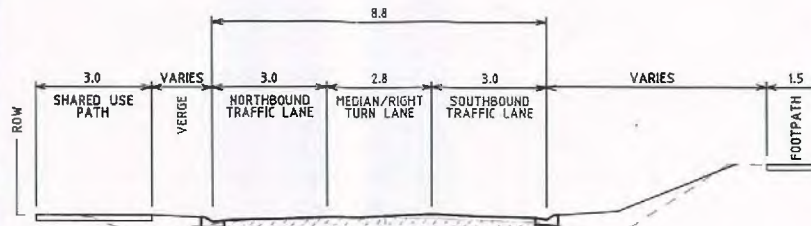
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INTERSECTION OF BOLTON STREET AND MAIN ROAD



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INTERSECTION OF BOLTON STREET, SHERBOURNE ROAD AND BRIDGE STREET

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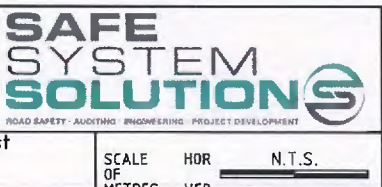
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GENERAL NOTES



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NOVEMBER 2015
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CLIENT: VicRoads Metro North West
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BOLTON STREET UPGRADE MAIN ROAD TO BRIDGE STREET SHIRES OF BANYULE AND NILLUMBIK OPTION 2 CONCEPT DESIGN				
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Bolton Street upgrade

Community feedback report

June 2016

Bolton Street upgrade

Community feedback report – June 2016



Foreword

On behalf of VicRoads, we would like to thank everybody who has been involved in the discussions so far on the Bolton Street upgrade, particularly those who attended the community meeting at Eltham Leisure Centre on June 14.

There has been widespread interest in the community about this project and we have listened closely to your concerns.

Please take time to read the following report which includes all of the feedback we have received to date on the proposed options to improve the safety and accessibility of Bolton Street.

Yours sincerely,

Vince Punaro
Regional Director Metro North West, VicRoads

Bolton Street upgrade

Community feedback report – June 2016



Project background

VicRoads, on behalf of the Victorian Government, are upgrading Bolton Street in Eltham between Main Road and Bridge Street with a \$10.5 million project to improve traffic flow, safety, amenity and accessibility.

Bolton Street currently carries over 19,000 cars per day and this upgrade will improve connectivity, safety and amenity for drivers, cyclists and pedestrians.

Two different options are being considered with both options including improvements along the length of Bolton Street such as a truck ban, a permanent 50km/h speed limit, a continuous median strip, low profile speed humps on side streets and a three-metre wide shared path on the western side of Bolton Street.

What we heard

In November 2015, VicRoads held two community consultation sessions in Eltham to gain a better understanding of how people use Bolton Street and the current challenges both on Bolton Street and the surrounding road network.

Overall, the feedback we received supported the view that Bolton Street requires an upgrade.

A number of key themes emerged including:

- Congestion and traffic flow issues caused by the wider road network
- Major queuing and traffic flow issues along Bolton Street
- Need for additional right turning lanes to improve access into side streets
- Difficulty turning onto Bolton Street and Grand Boulevard during peak periods
- Support for speed limit reductions and traffic calming solutions
- Support for full time truck bans, or a reduction in truck volumes
- Addressing current pedestrian safety and access issues

Upgrade options

Based on community feedback, VicRoads developed two proposed options for the Bolton Street upgrade.

Along the length of Bolton Street

- Installation of a continuous median/right turn lane
- 50km/hr speed limit
- Permanent truck ban
- Indented parking where appropriate
- Improved street lighting
- Safety platforms (low profile speed humps)
- Kerb and channel and improved drainage
- Three-metre wide shared path on the western side of Bolton Street, and a 1.5m footpath on the other side of Bolton Street

Option 1

Key features:

- Pedestrian operated signals near Grand Boulevard
- Left out-left in and left and right-in vehicle access at Bolton Street/Grand Boulevard intersection

Bolton Street upgrade

Community feedback report – June 2016



- Improved access to Sherbourne Road by extending two lanes further south on Bolton Street at Sherbourne Road/Bridge Street intersection
- Adding an additional signalised left-turn slip lane from Bolton Street onto Main Road

Option 2

Key features:

- Replacing the roundabout with signalised t-intersection at Sherbourne Road/Bridge Street/Bolton Street intersection
- Removing the dedicated left-turn slip lane at the Main Road/Bolton Street intersection
- Reduce traffic onto Bolton Street by removing one right-turn lane from Main Road.



Safety and accessibility on Bolton Street (pictured) are among the major concerns for local residents.

Community consultation

Following the announcement of funding for the project in the 2016-17 Victorian State Budget, VicRoads returned to the community on June 14 at for an information session at the Eltham Leisure Centre where the two proposed options were presented to more than 100 people.

Objectives:

- To acknowledge community concerns regarding safety, accessibility and traffic flow on Bolton Street
- To keep the community and stakeholders informed about the progress of the project.
- To proactively engage with the community and the local MP to get their feedback on the proposed options for the Bolton Street upgrade.

Bolton Street upgrade

Community feedback report – June 2016



Your feedback

Those who attended the session were asked to complete a feedback form in which they were asked their preferred option for the upgrade (i.e Option 1 or Option 2). Fifty-nine feedback forms were returned with the following results:

Support for Option 1 – 27 respondents

Support for Option 2 – 16 respondents

Neither option – 12 respondents

Support for both options – 4 respondents

Declined to vote: 4 respondents

Option 1

What we heard:

Traffic flow

- It will improve flow and aesthetics
- Banning right turns from Grand Boulevard is too extreme
- Two left turn lanes at the southern end and the current roundabout at northern end of Bolton Street will assist traffic flow
- More entry and exit lanes to Bolton Street should result in traffic moving faster. Sherbourne Road needs to be double lanes all the way from Bolton to Karingal Drive.
- We need more slip lanes and increase to four lanes at Main Road and Bridge Street intersections
- Traffic lights at roundabout will cause serious delays. The roundabout at the Bridge Street/Sherbourne Road intersection works well
- It will restrict traffic on Bolton Street but cause congestion on surrounding streets.
- The roundabout at Bridge Street keeps traffic flowing and better than traffic lights.
- Right hand turning lanes are a big plus as are two left turning lanes at Main Road/Bolton Street intersection.
- It would increase traffic and congestion on Bolton Street.

Safety

- It's great to hear trucks will be banned
- The reduced speed limit is a great idea and banning trucks is fantastic
- This option recognises current use of Bolton Street while giving more generous lanes and provision for pedestrians
- It addresses some safety issues
- Would prefer pedestrian signals at Grand Boulevard intersection instead of traffic lights at Bridge Street roundabout
- This doesn't address our main issues around the safety of residents getting in and out of side streets
- We need to retain roundabout near McDonalds for drivers doing u-turns to go back onto Bolton Street.
- There should be more than one right turning lane from Lower Plenty Road.

Option 2

What we heard:

Traffic flow

- It goes some way to discourage unwanted traffic from Bolton Street

Bolton Street upgrade

Community feedback report – June 2016



- More likely than Option 1 of reducing traffic on Bolton Street
- Hopefully this option will divert the majority of Bolton Street traffic onto Main Road and Para Road

Traffic flow (cont.)

- Reduces traffic flow onto Bolton Street

Safety

- Retain roundabout at Bridge Street intersection. Increasing safety is more important than simply reducing traffic volumes.
- Option 1 only increases the likelihood of pedestrians getting injured on Bolton Street.
- Safer option for pedestrians at McDonalds end of Bolton Street

Other issues on Bolton Street:

Pedestrian crossings

- Concerned parent of three young children who will attend Eltham High School in the coming years says she wants them to be able to safely cross Bolton Street. An overpass pedestrian crossing would put her mind at ease.
- Safe pedestrian crossings needed at bus stops on both sides of Sherbourne Road near Hungry Jacks
- Disabled access needed so pedestrians can cross Bolton Street near Bridge Street/Sherbourne Road intersection

Grand Boulevard intersection

- Consider traffic lights at Grand Boulevard instead of right-hand turning lane
- Ban right turns at Grand Boulevard except 10am-2pm and no right turns into medical clinic - heavy congestion
- Illegal turns into McDonalds and doctors surgery opposite Grand Boulevard are a major cause of congestion on Bolton Street
- Ban right hand turn out of Grand Boulevard at certain times

Traffic congestion

- Neither option helps bottlenecks at either end of Bolton Street
- Both options band-aid approaches to the problem of excess traffic on Bolton Street. We should consider banning vehicles over a certain weight.
- Traffic lights outside Bunnings a major congestion problem
- Throughput is vital even though people want less traffic on Bolton Street

Widening Bolton Street

- Widen Bolton Street to two lanes either side further down on the approach to the Bridge Street intersection
- Widen Bolton Street on both sides between Pedersen Way and Bridge Street
- Make Bolton Street two lanes in each direction from Main Road into Bolton Street

50km/h speed limit on Bolton Street

- Install speed humps on Bolton Street
- Concern that reduce traffic on Bolton Street may clog up side streets
- Fears the 50km/h zone will be difficult to enforce

Bolton Street upgrade

Community feedback report – June 2016



Three-metre shared path

- Three-metre shared path not required due to lack of cyclists in the area
- Three metre shared path is too wide - this should be a turning lane
- Install safety barriers along the shared path
- Separate cyclists and pedestrians
- Very few cyclists will use Bolton St as its very steep, better to use three-metre shared path space to increase road safety
- Three metre shared path is a waste of time

Access to and from Bolton Street

- Turning into and out of side streets a major problem
- Create a dedicated left turn lane from Main Road into Bolton Street
- Concern about right turns from Bolton Street into medical centre
- Make Withers Way a one way only road
- Open 'No Through Roads' on side streets to create more connections
- Do we need the double turning lanes from Bolton into Main Road
- Install a roundabout at Brougham Street

Feedback from those who supported neither option

- Some people believe no upgrade of Bolton Street is required
- Option 1 too extreme banning right turns from Grand Boulevard, Option 2 is too extreme in removing the second right hand turning lane from Main Road
- Neither option addresses the core problem - Bolton Street carries too much traffic.
- Traffic volumes have increased to the point where some people are held up in traffic for more than 15 minutes on Bolton Street each morning
- There will still be a bottleneck if traffic lights are installed at the Bridge Street intersection unless Main Road and Fitzsimons Lane are fixed

Broader road network issues:

- Congestion on Fitzsimons Lane needs to be addressed to improve traffic flow. Removing bus lane and building North-East Link will solve most of the problems as most of the traffic using Bolton Street is not local.
- Fitzsimons Lane is a more significant problem than Bolton Street as is providing a connection from Yan Yean/Doreen area to get to eastern suburbs.
- The bus lane on Fitzsimons Lane has greatly impacted through traffic on Bolton Street and needs to be converted back to a traffic lane
- Need for additional bridges over the Yarra River
- Make Sherbourne Road two lanes from Bolton Street to rail bridge
- North East Link still the only realistic option with an argument that Bolton Street was not designed for current traffic volumes
- Bolton Street is a major thoroughfare which will need additional lanes as the population grows beyond Mernda/Doreen
- Traffic flow needs to be improved along Sherbourne Road and Main Road
- More enforcement of truck curfews/ban

Bolton Street upgrade

Community feedback report – June 2016



Summary

Overall, the feedback received from the community indicated overwhelming support for Option 1, which attracted support from almost half of those who returned feedback forms.

Option 2 was endorsed by around a quarter of respondents, while a quarter said they were not supportive of either option.

With Option 1, some respondents were concerned that while improving traffic flow and safety on Bolton Street, it would lead to congestion on surrounding roads, however, many felt, Option 2 would be the only way to reduce traffic volumes and congestion on Bolton Street.

There was widespread support for the reduced 50km/h speed limit and the truck ban, however, many believed the three-metre shared path was unnecessary because few cyclists travelled along Bolton Street.

Our steps to improve pedestrian safety on Bolton Street was seen as a positive, however, there were still concerns about the Grand Boulevard intersection and a significant number of people suggested installing traffic lights and pedestrian signals would benefit the situation.

Across the broader road network, there was a commonly held view the current traffic bottlenecks on Bolton Street was largely due to heavy congestion on surrounding roads such Fitzsimons Lane and Main Road. Many also believed congestion on Bolton Street and across the region would be alleviated by building North East Link.

Next steps

Community feedback will be used by to help shape the project and ensure Bolton Street is safer and more connected and accessible.

We will continue to provide the community with regular updates on the progress of the project and expect to be in a position to start works in late 2017 and be completed by mid-2018.



Declaration Review

Bolton Street, Montmorency

Prepared for
VicRoads Metropolitan North West Region

July, 2016
G20335R-01A.docx

Declaration Review

Bolton Street, Montmorency

Document Control

Issue No.	Type	Date	Prepared By	Approved By
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Appendix A VicRoads Declaration Guidelines

Declaration Review

Bolton Street, Montmorency

1 Introduction

Traffix Group has been engaged by VicRoads Metropolitan North West Region to undertake an Origin-Destination (OD) study to assess the role Bolton Street, Montmorency, performs in the road network and consider whether it should become a declared arterial road.

2 Background

Prior to being elected, the Victorian Government proposed to upgrade Bolton Street between Main Road, Montmorency and Bridge Street in Eltham. Subsequently, in May 2015 funding was committed to the planning and development of a business case exploring options for the upgrade of Bolton Street. As part of this planning, the declaration of Bolton Street as an arterial road is being considered.

This report considers whether declaration would be appropriate, or whether the road should remain under the control of Banyule City and Nillumbik Shire Councils (who share a municipal boundary along Bolton Street).

This is not the first time that the possible declaration of Bolton Street has been considered. In 2007 the function of Bolton Street was considered as part of the North East Integrated Transport Study (NEITS). The study included an origin-destination survey undertaken in October 2006 that sampled approximately 30% of traffic. It included analysis of the proportion of traffic from various originating locations to a number of destinations, but did not report on the proportion of through traffic on Bolton Street or provide a direct comparison between competing routes.

The NEITS study concluded that:

“Bolton Street provides a more direct link to the Fitzsimons Lane bridge over the Yarra River from the Greensborough area, than following the existing arterial road network via Para Road or Bridge Street to Main Road. However, it has lesser functionality than Main Road due to its existing condition and more hilly vertical alignment. Currently, Bolton Street does not support public transport services, is not part of a strategic freight route, is not part of the Principal Bicycle Network, and does not have a demonstrated high casualty crash history relative to other locations within NEITS.”

Bolton Street was not subsequently declared an arterial road following the NEITS study.

Declaration Review

Bolton Street, Montmorency

3 Study Methodology

This study incorporated the following key stages:

1. A video origin-destination survey for the area capturing all vehicles over a 12 hour duration across one typical weekday day;
2. Analysis of the processed data to determine the vehicle movement patterns within the area;
3. Preparation of a declaration assessment utilising '*VicRoads Guidelines for Declaration of Arterial Roads Under the Road Management Act 2004*'; and
4. Provision of a recommendation as to whether Bolton Street should become a declared arterial road.

4 Existing Conditions

4.1 Location

Bolton Street is located within Montmorency and Eltham and connects Sherbourne Road/Bridge Street, Eltham in the north and Main Road, Lower Plenty in the south. Bolton Street and the surrounding road network is shown in Figure 1 and the wider network shown in Figure 2.

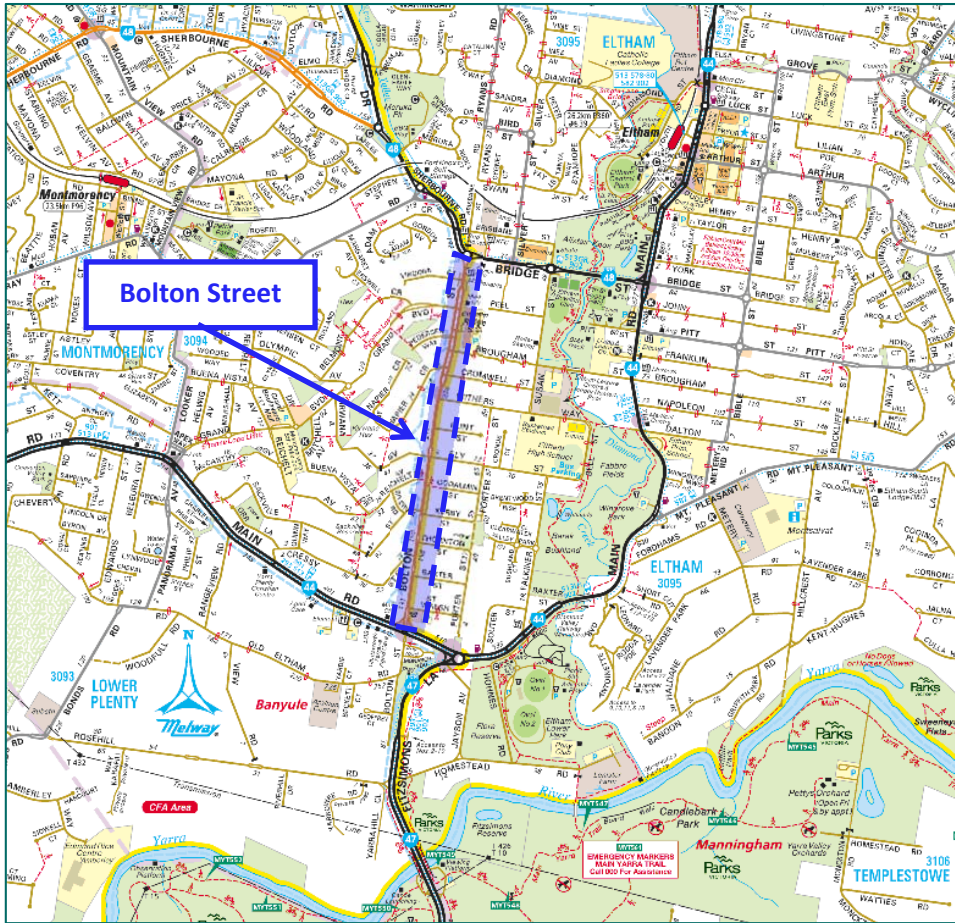


Figure 1: Location of Bolton Street

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Declaration Review

Bolton Street, Montmorency

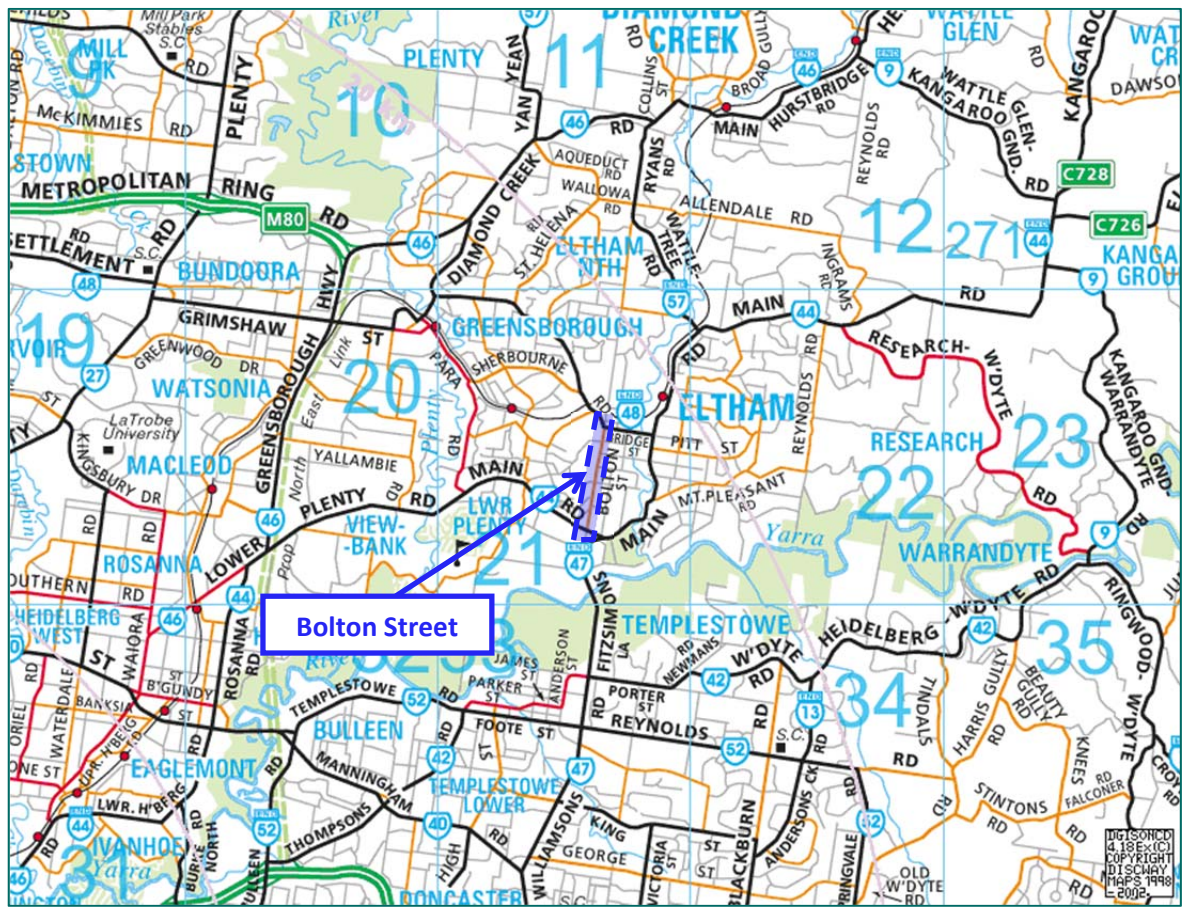


Figure 2: Wider Road Network (existing arterial roads in black and red)

4.2 Road Network

The key arterial and local roads within the area are as follows:

Bolton Street is a two-lane, two-way road in Eltham and Montmorency, jointly managed by Nillumbik Shire Council and Banyule City Council, and forms a border between the two councils. It is orientated north-south and extends from a signalised intersection with Main Road in the south to a roundabout controlled intersection with Sherbourne Road and Bridge Street in the north. It is classified as a sub-arterial road in the Banyule Road Register.

Bolton Street crosses rolling terrain and has many uncontrolled side road intersections. As a number of the side roads have no turning lanes and there are no parking lanes or sealed shoulders, this can often lead to congestion. Due to the topography, a number of the intersections have visibility restrictions. It is understood that Bolton Street carries approximately 19,000 vehicles per day. It has a signed 60 km/h speed limit.

It is also noted that truck curfews (10pm to 6am) were implemented along Bolton Street in October and November 2015 as part of the North-East Truck Curfew Trial.

Main Road is a VicRoads controlled declared arterial road. It provides two traffic lanes in each direction with a central median to the west of Fitzsimons Lane and through Eltham Activity Centre.

Declaration Review

Bolton Street, Montmorency

To the west of Fitzsimons Lane it has a posted 70km/hr speed limit, while elsewhere it has a 60km/h limit.

Between Bridge Street and Fitzsimons Lane it is predominantly a two-lane, two-way undivided road with a windy horizontal alignment but with right turn lanes provided at most intersections. There is no parking lane or sealed shoulder and through most of this section the edge of seal is delineated by a mountable kerb. It is understood that the traffic volume through this section of Main Road is approximately 24,000 vehicles per day.

Bridge Street is a VicRoads controlled declared arterial road orientated east to west between a signalised intersection with Main Road in the east and a roundabout intersection with Bolton Street in the west. It is a two-lane two way road with a daily traffic volume of approximately 5,500 vehicles per day.

Sherbourne Road is a VicRoads controlled declared arterial road extending west from its intersection with Bolton Street and Bridge Street. It has a daily traffic volume of approximately 26,000 vehicles per day and is a two-lane, two-way road. It continues as Karingal Drive further west.

Fitzsimons Lane is a VicRoads declared arterial road orientated north to south, providing for two lanes of traffic in each direction. Its northern end connects to a roundabout at Main Road to the east of the Main Road/Bolton Street intersection. It has a daily traffic volume of approximately 50,000 vehicles per day.

Para Road is also a VicRoads declared arterial road that is orientated north to south and runs from Main Road to the Greensborough Activity Centre. It is located to the west of Bolton Street, and like Bolton Street it provides a connection between Fitzsimons Lane and Diamond Creek Road.

4.3 Strategic Function

The topography of the study area and surrounds includes a number of natural and constructed barriers, including the hilly terrain, Plenty River, Diamond Creek and Hurstbridge railway line. This has resulted in a somewhat indirect arterial road network and some locations where traffic is channelled through, for example the Fitzsimons Lane crossing of the Yarra River. This is the only river crossing between Heidelberg (5.5km to the west) and Warrandyte (7.7km to the east).

The existing north-south arterial road network in the area includes Main Road to the east of Bolton Street and Para Road to the west. Approximately 5 km west of Bolton Street, Greensborough Highway provides a key north-south arterial link.

Within the local area, the Eltham Activity Centre is a designated Major Activity Centre (MAC) and the Greensborough Activity Centre a Principal Activity Centre (PAC). There is also a light industrial area in Eltham at the northern end of Bolton Street.

When accessing the area from the south (such as from the eastern suburbs) it is necessary to use Fitzsimons Lane. From this location when accessing the Eltham MAC the route via Main Road is the most direct, and towards the Greensborough PAC the combinations of Main Road and Para Road or Bolton Road and Sherbourne Road have similar levels of directness.

Declaration Review

Bolton Street, Montmorency

For destinations to the immediate north of Fitzsimons Lane, Bolton Street provides a more direct link via Sherbourne Road and Karingal Road. Like Para Road this route can also be used to travel between the eastern suburbs and the M80 Ring Road.

4.4 Public Transport

The on-road public transport services within the area are predominantly located along existing arterial roads as shown in Figure 3. Currently Bolton Street does not cater to any bus services. Given the lack of parking lanes or sealed shoulders, infrastructure works would be required to facilitate the introduction of bus stops to serve a bus service. Several of the routes (513, 902) turn around at Eltham.

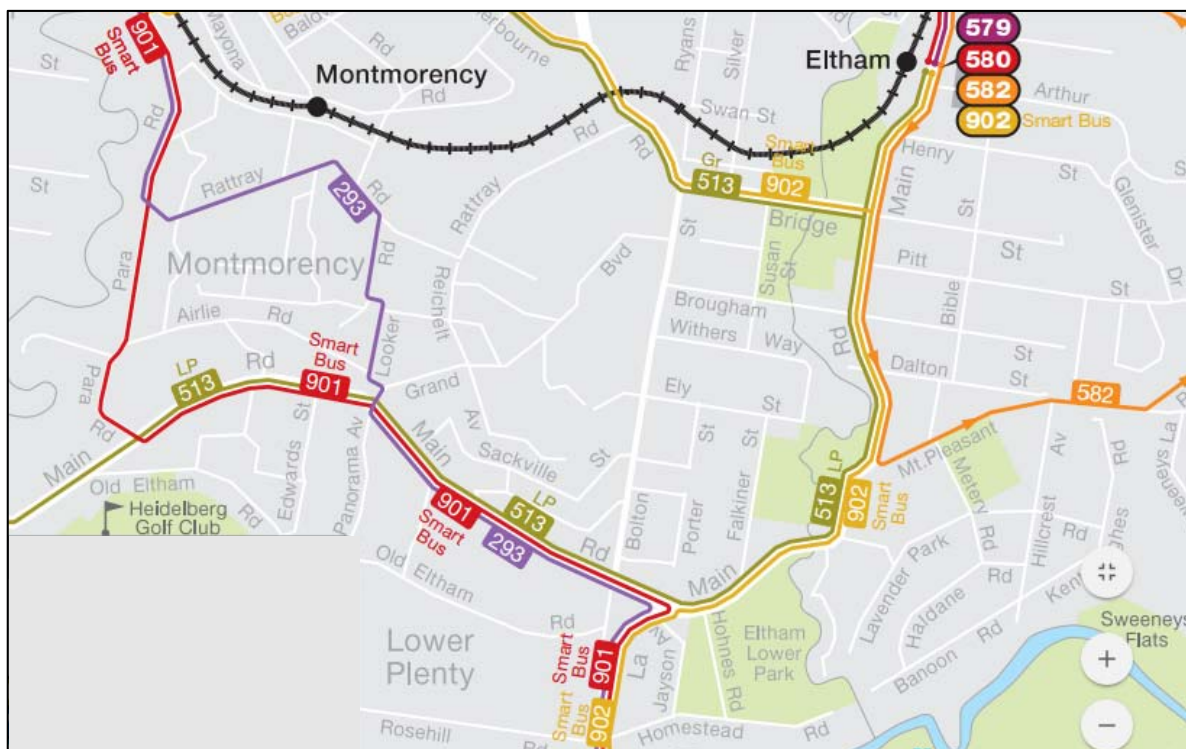


Figure 3: Public Transport Services in the Vicinity of Bolton Street

Source: PTV

Declaration Review

Bolton Street, Montmorency

5 Origin-Destination Survey

5.1 Purpose

A key function of an arterial road is to provide for movement through areas and across cities and regions, rather than providing for access to adjoining streets or localities. Origin-destination surveys can produce a multitude of information about travel patterns, including both through and local access functions.

In relation to the possible Bolton Street declaration, the key aim of the origin-destination survey was to determine whether Bolton Street has a significant movement function. Put another way, the study should determine whether a significant proportion of traffic use it for travelling through the area.

5.2 Process

Matrix Traffic and Transport Data Pty Ltd was commissioned by Traffix Group to undertake an origin-destination survey to provide information for the declaration review. The survey utilised video capture to record number plates at nine locations surrounding Bolton Street as shown in Figure 4.

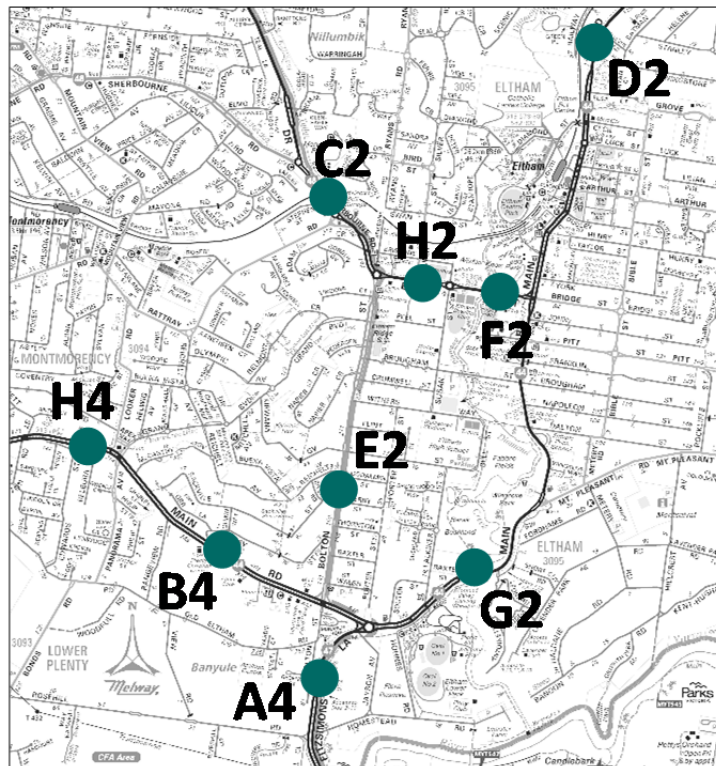
The survey was undertaken on Wednesday 4th May 2016 between 7:00am and 7:00pm and recorded traffic in both directions, yielding two traffic streams at each camera location.

Following the survey, the videos from each of the locations were reviewed. The number plates, time of observation and vehicle class (light or heavy) were recorded for each vehicle that passed the location.

One challenge of video surveys is that occasionally one or more numberplate characters were obscured to the point of not being identifiable with certainty. While these vehicles are recorded, the details are incomplete. Thus the data provided by Matrix includes factoring up the complete observations to take account of the incomplete observations.

For each route, a travel time cut-off was also applied to exclude trips occurring as part of a trip-chain. This occurs when drivers have an intermediate destination within the study area that they stop at before continuing elsewhere.

Declaration Review
Bolton Street, Montmorency



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Figure 4: Origin-Destination Video Station Locations

5.3 Results

5.3.1 Traffic Movement

One of the distinguishing characteristics of declared roads is that they facilitate travel between different areas of cities. To understand the extent of such movement through the study area, the volumes of traffic travelling between external Origin-Destination (OD) stations (A4, H4, C2 and D2) was analysed.

Figures 5 to 8 show the traffic volumes (12 hour, all vehicles) and proportions of traffic that travel from each of the external stations to other external stations (travelling through the area) and to local destinations (e.g. to Eltham Activity Centre).

The analysis shows that of the four arterials the maximum percentage of traffic travelling through the study area from an external station is 33%, which occurs at Fitzsimons Lane (A4). The analysis also shows that the predominant movements through the study area are between Fitzsimons Lane (A4) and Main Road west of Looker Road (H4) and between Fitzsimons Lane (A4) and Sherbourne Road (C2). These two origin-destination combinations have a similar demand (15% and 14% of Fitzsimons Lane traffic entering the study area respectively).

Declaration Review
Bolton Street, Montmorency

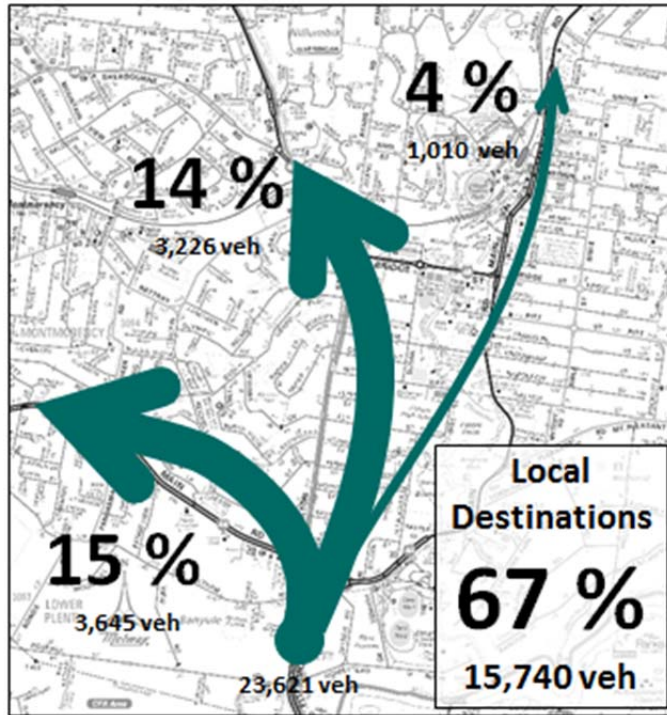


Figure 5: Traffic originating from Fitzsimons Lane (12 hr volumes)

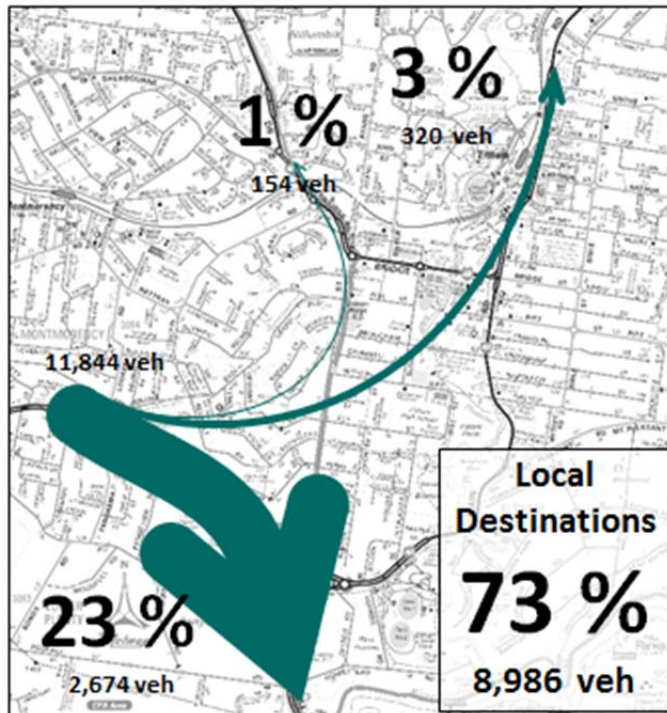


Figure 6: Traffic originating from Main Road west of Looker Road (12 hr volumes)

Declaration Review
Bolton Street, Montmorency

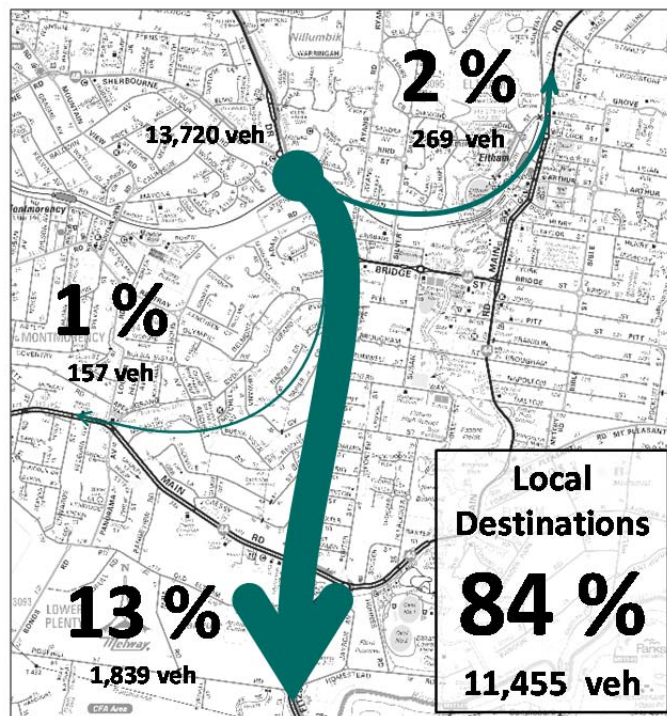


Figure 7: Traffic originating from Sherbourne Rd (12 hr volumes)

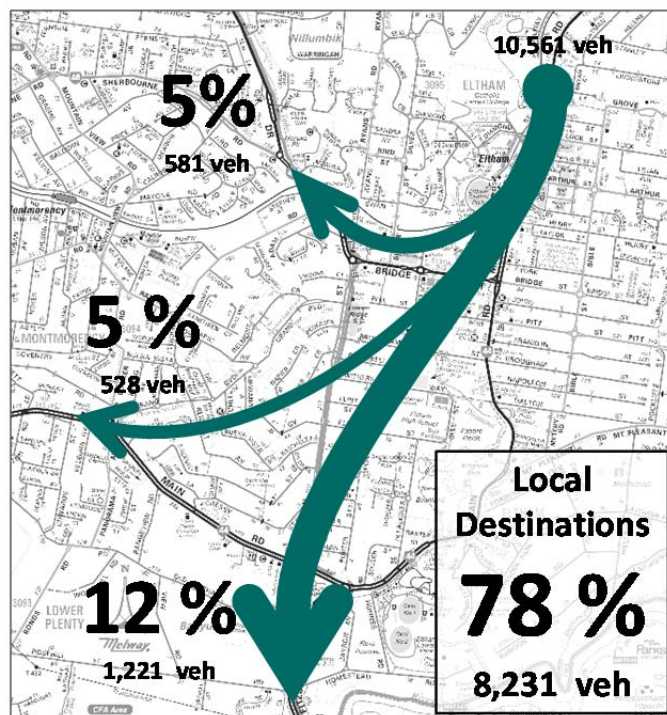


Figure 8: Traffic originating from Main Road north of Eltham MAC (12 hr volumes)

As noted above there are two predominant movements through the study area. One of these movements is between Fitzsimons Lane and Sherbourne Road, where the most direct route for drivers is via Bolton Street. An alternative (less direct) arterial only route through the area is via Main Road and Bridge Street.

Declaration Review

Bolton Street, Montmorency

By analysing the chain of O-D stations that a driver passes through when travelling between Sherbourne Road (C2) and Fitzsimons Lane (A4), the route preferred by users can be determined.

As shown in Figure 9 the majority of traffic (96%) travelling between Fitzsimons Lane and Sherbourne Road takes the more direct Bolton Street route (via E2) rather than remain on the current arterial road network (via G2,F2 and H2)).

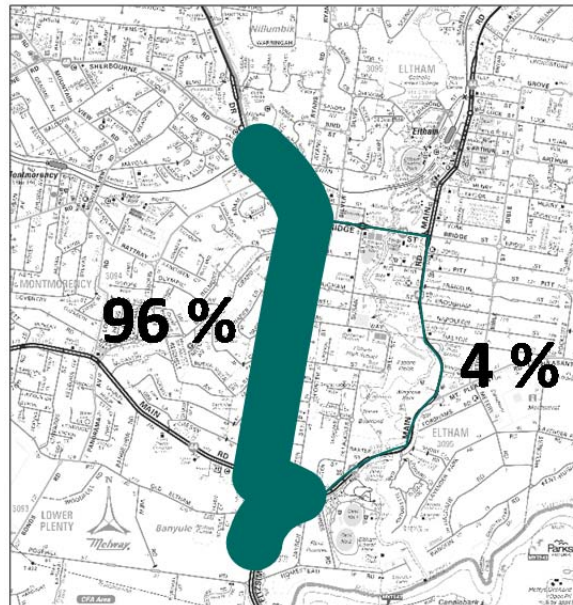


Figure 9: Route choice between Fitzsimons Lane and Sherbourne Road

The percentage of traffic on Bolton Street (E2) and Main Road east of Fitzsimons Lane (G2) travelling through the study area can be calculated¹. Figure 10 shows that Bolton Street is carrying a higher percentage of through traffic than Main Road (east of Fitzsimons Lane).

¹ Routes through the study area are: A4-C2, A4-D2, A4-H4, C2-D2, C2-H4, and D2-H4.

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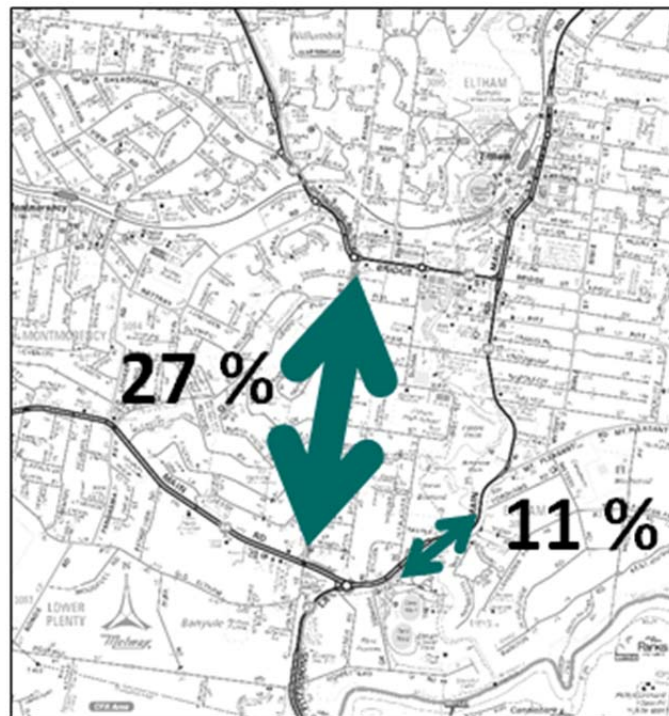


Figure 10: Percentage of traffic on Bolton Street and on Main Road east of Fitzsimons Lane that is travelling through the study area

5.4 End-to-End Traffic

In addition to traffic utilising Bolton Street for journeys through the study area, Bolton Street also has a local through traffic function where traffic may not enter and/or exit the study area, but may travel from one end of Bolton Street to the other. Utilising a combination of the internal and external video stations (A4, B4, C2, E2, G2, and H2), the volume of traffic travelling from one end of Bolton Street to the other can be estimated.

This analysis found that 31% of traffic on Bolton Street travelled from one end to the other.

6 Declaration Review

6.1 Principles in Declaring an Arterial Road

The key principles that must be considered when assessing whether a road could be declared as an arterial road are outlined in VicRoads 'Guidelines for Declaration of Arterial Roads Under the Road Management Act 2004'. The Guidelines state that a road that may be suitable for declaration if it:

- a) *provides a principal route for the movement of people and goods—*
 - i) *between major regions of the State; or*
 - ii) *between major centres of population or between major metropolitan activity centres; or*
 - iii) *to major transport terminals; or*
 - iv) *across or around cities; or*
- b) *is a major route for public transport services; or*
- c) *has State-wide economic or tourism significance; or*
- d) *provides necessary connections between arterial roads.*

The full VicRoads guidelines are contained within Appendix A of this report.

6.2 Characteristics of Arterial Roads

VicRoads 'Guidelines for Declaration of Arterial Roads Under the Road Management Act 2004' also give guidance on the interpretation of the general principles set out above by providing a description of the functional characteristics of those roads that may be considered for declaration. These characteristics and whether these are considered to apply to Bolton Street are summarised in Table 1.

Table 1: Assessment of Bolton Street Arterial Road Characteristics

Characteristic	Applicable	Comment
(a) Principal route for the movement of people and goods		
Provide a continuous and regularly spaced network of major circumferential and radial routes in the metropolitan area for the efficient and orderly movement of road users and road freight	No	The origin-destination survey shows Bolton Street provides a convenient interconnecting link between Fitzsimons Lane and Sherbourne Road. However, it does not form part of any continuous network, nor would it be regularly spaced in relation to other arterials. As a connecting link it does not provide any additional or greater functionality than the existing arterial network.
Link rural arterial roads to key metropolitan freight areas, such as the ports, road and rail freight centres and intermodal terminals, activity centres, manufacturing and distribution centres, and major markets.	No	Not a rural road.

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Bolton Street, Montmorency

Characteristic	Applicable	Comment
Link airports to manufacturing and distribution centres, and major markets.	No	Not a road providing an airport connection.
Carry significant commercial and heavy vehicle volumes	No	The origin-destination survey revealed that only 3.2% of vehicles travelling along Bolton Street during the survey period were heavy vehicles. It is therefore considered that Bolton Street does not currently carry significant heavy vehicle volumes. Given the established land uses within the wider area it is unlikely that this will change significantly in the future.
Form part of an identified future network of principal routes that either provide for the transport needs within Melbourne's developing growth areas, or provide links to the existing major metropolitan road network	No	Does not link unconnected new or existing areas to the metropolitan road network.
Provide a bypass function for Melbourne's activity centres	No	The existing arterial road network linking Fitzsimons Lane to Diamond Creek Road via Para Road runs adjacent to the periphery of the Greensborough PAC, bypassing the centre. Bolton Street (in combination with Sherbourne Road and Karingal Drive) provides a similar connection while completely avoiding the Greensborough PAC. However, it is considered that the Bolton Street route would have similar journey times and thus does not provide any additional bypass function in comparison to the Para Road route.
As a general indication, meets one or more of the above characteristics and is likely to carry in the order of 15,000 or more vehicles per day	No	Bolton Street is understood to carry approximately 19,000 vehicles per day (16,100 vehicles in the 12 hr survey period). However, it does not meet one or more of the above characteristics.
(b) Major route for public transport services		
Support Melbourne's Principal Public Transport network	No	No current public transport services utilise Bolton Street.
Serve as major corridors for on-road public transport in the Melbourne urban area to achieve improved reliability and flow of on-road public transport.	No	No current public transport services utilise Bolton Street.
Serve as major corridors for on-road public transport in rural Victoria's major regional centres	No	Not a rural or regional centre.

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Bolton Street, Montmorency

Characteristic	Applicable	Comment
(c) State-wide economic or tourism significance		
Assist activities which substantially enhance Victoria's economic development and provide for the efficient and safe movement of road freight.	No	Bolton Street currently has a minor function in terms of heavy vehicle usage with the origin destination survey revealing only 3.2% of total traffic are heavy vehicles.
Provide access to areas of high tourist or recreational significance (e.g. National, State or Regional)	No	Does not provide access to areas of high tourist or recreational significance.
Roads carrying significant tourist and/or total traffic volumes.	No	Not a major tourist route or a road with high total traffic volumes.
(d) Necessary connections between arterial roads:		
Complete the major road network across the Melbourne urban area and carry significant through traffic and/or commercial and heavy vehicle volumes.	No	As noted above, it is not considered that designating Bolton Street as an arterial would not provide any additional or missing network functionality. The origin-destination survey shows that 27 % of traffic on Bolton Street is between the arterial roads at the extents of the survey area. This is not considered high given its current designation as a sub-arterial road. Bolton Street also carries low volumes of heavy vehicles.
Form part of a regularly spaced and connected network (for both motor vehicles and on-road public transport) to support the major network of circumferential and radial routes across the Melbourne urban area or within rural Victoria's major regional centres.	No	As noted above, it is not considered that designating Bolton Street as an arterial would provide any additional or missing network functionality. Bolton Street does not form part of a preferred public transport route and currently has no services operating along it.
Link arterial roads to rural townships or important centres (e.g. with a resident population of more than 500 people, and/or employment generators of more than 500 people).	No	Bolton Street does not link any centres without an existing arterial road connection.
Provide supplementary links between major regions of the State and districts within regions, and links to more remote rural area townships.	No	Not a regional link.

Declaration Review

Bolton Street, Montmorency

6.3 Appropriateness of Declaration

Before deciding to declare a road as an arterial road based on its characteristics (Section 6.2), there are also a number of other factors to be given consideration. The VicRoads Guidelines state these are:

- *the existing freeway and arterial road network;*
- *Government and VicRoads policies and strategies (including AusLink corridor strategies)*
- *previous decisions and commitments;*
- *local, regional and strategic issues;*
- *road standards and operating characteristics;*
- *condition of the road assets (roadway, roadside, road-related infrastructure);*
- *traffic volumes and vehicle composition;*
- *access control and surrounding land use;*
- *road improvement needs and proposals;*
- *adequacy of the width and alignment of the road reservation; and*
- *budgetary constraints.*

The existing standard of Bolton Street's road layout and configuration is below that which would be generally considered acceptable for an urban arterial road.

In particular, vehicles turning into side roads and private properties can cause delay to vehicles travelling along the road. There are a number of reasons for this such as the lack of right turn lanes at all side road intersections, and the insufficient width available (such as sealed shoulders) for traffic to pass turning vehicles (turning left and right). There are also safety deficiencies such as roadside culverts and sight distance restrictions associated with topographical constraints. Pedestrians and cyclists are also poorly catered for along the road.

While it is understood that the State Government has committed to developing a business case for upgrading Bolton Street to address many of the deficiencies, even if many of the existing deficiencies are addressed the topography is such that it is unlikely that the upgraded road would meet the standards and public expectations for a declared urban arterial road. In particular, arterial roads generally are required to be suitable for use by B-double trucks, which would be difficult to achieve.

Declaration Review

Bolton Street, Montmorency

7 Conclusion

This report reviewed whether Bolton Street, Montmorency was suitable to become a declared arterial road. As a result of this review, it was concluded that Bolton Street:

- Is an important connecting road for drivers travelling between Fitzsimons Lane and Sherbourne Road and provides an important connection between arterial roads.
- Carries a significant number of vehicles (understood to be 19,000 vehicles per day).

However, it is not recommended that VicRoads declare Bolton Street as an arterial road for the following reasons:

- It does not provide any additional functionality not already provided by the existing arterial network.
- The existing heavy vehicle volumes are low, and due to established land uses in the area and the topography of Bolton Street, are likely to remain low.
- Bolton Street is not part of a preferred public transport route and there are currently no services operating along it.
- The current configuration of Bolton Street is not compatible with declaration as an arterial, and even when upgraded, the topography is unlikely to result in the road meeting the expectations and standards of an urban arterial.

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Bolton Street, Montmorency

Appendix A VicRoads Declaration Guidelines

Guidelines for Declaration of Arterial Roads

Under the Road Management Act 2004

1. Introduction -

These Guidelines have been developed to provide practical guidance in the interpretation of the general principles as set out in section 14(3) of the *Road Management Act 2004* (the Act) when VicRoads considers which roads will be included in the declared arterial road network within Victoria. These Guidelines may be used when assessing individual road proposals or when undertaking broad road network reviews.

While these Guidelines have been specifically developed to assess arterial road declaration proposals, the general principles as set out in section 14(3) of the Act apply equally to freeways.

2. Road Management Act 2004 -

The Act, which seeks to establish a coordinated management system that will promote safe and efficient State and local public road networks, provides that VicRoads may declare a road to be a freeway or an arterial road where the function of that road meets the general principles as set out in the Act.

The existing network of roads directly managed by VicRoads, being freeways and arterial roads¹, totals about 22,300 km in length, while municipal councils in Victoria manage approximately 134,000 km of municipal roads.

Note: ¹ **Arterial roads**, in general, comprise the former State Highways, Tourists' Roads, Forest Roads and Main Roads under the Transport Act 1983.

3. Principles -

Section 14(3) of the Act requires VicRoads to consider the following principles in assessing whether a road is to be declared as an arterial road, or the declaration of an arterial road is to be revoked.

VicRoads must consider if the road—

- (a) provides a principal route for the movement of people and goods—
 - (i) between major regions of the State; or
 - (ii) between major centres of population or between major metropolitan activity centres; or
 - (iii) to major transport terminals; or
 - (iv) across or around cities; or
- (b) is a major route for public transport services; or
- (c) has State-wide economic or tourism significance; or
- (d) provides necessary connections between arterial roads.

4. Key Aims -

The key aims of these Guidelines are to:

- provide practical guidance when considering which roads will be included in the declared arterial road network in accordance with the Act;
- achieve a key objective of the Act which is to establish a safe and efficient State public road network; and
- assist VicRoads in establishing an arterial road network that supports economic development, achieves efficient and orderly movement of road users and road freight, and improves road safety.

5. What are the characteristics of an Arterial Road? -

This section of the Guidelines provides some further practical guidance in the interpretation of the general principles as set out in section 14(3) of the Act by providing a more detailed description of the functional characteristics of those roads that may be considered for declaration as arterial roads.

(a) Principal route for the movement of people and goods:

Melbourne Urban Area:

- provide a continuous and regularly spaced network of major circumferential and radial routes in the metropolitan area for the efficient and orderly movement of road users and road freight.
- link rural arterial roads to key metropolitan freight areas, such as the ports, road and rail freight centres and intermodal terminals, activity centres, manufacturing and distribution centres, and major markets.
- link airports to manufacturing and distribution centres, and major markets.
- carry significant commercial and heavy vehicle volumes.
- form part of an identified future network of principal routes that either provide for the transport needs within Melbourne's developing growth areas, or provide links to the existing major metropolitan road network.
- provide a bypass function for Melbourne's activity centres.
- as a general indication, meets one or more of the above characteristics and is likely to carry in the order of 15,000 or more vehicles per day.

Major Regional Centres in Rural Victoria:

- provide the principal routes for the movement of goods and people between rural regions.
- link rural arterial roads to the key regional freight areas, ports, manufacturing and distribution centres, and major markets.
- provide a continuous network in the major regional centres.
- complete the major road network across or around the major regional centres and carry significant through traffic and/or commercial and heavy vehicle volumes.
- as a general indication, meets one or more of the above characteristics and is likely to carry in the order of 10,000 or more vehicles per day.

Rural Areas and Townships:

- form the principal routes for the movement of goods and people by providing a continuous and regularly spaced network for long distance rural travel.
- link capital cities or urban areas with key townships (eg with a resident population of over 5000 people).
- link key townships which have significant economic and/or social interaction.
- link major rural regions of the State.
- link rural arterial roads to rail freight centres.
- provide a bypass function for a township.
- as a general indication, meets one or more of the above characteristics and is likely to carry in the order of 2,000 or more vehicles per day.

(b) Major route for public transport services:

- support Melbourne's Principal Public Transport network.
- serve as major corridors for on-road public transport in the Melbourne urban area to achieve improved reliability and flow of on-road public transport.
- serve as major corridors for on-road public transport in rural Victoria's major regional centres.

(c) State-wide economic or tourism significance:

- assist activities which substantially enhance Victoria's economic development and provide for the efficient and safe movement of road freight.
- provide access to areas of high tourist or recreational significance (eg National, State or Regional)
- roads carrying significant tourist and/or total traffic volumes.

(d) Necessary connections between arterial roads:

- complete the major road network across the Melbourne urban area and carry significant through traffic and/or commercial and heavy vehicle volumes.
- form part of a regularly spaced and connected network (for both motor vehicles and on-road public transport) to support the major network of circumferential and radial routes across the Melbourne urban area or within rural Victoria's major regional centres.
- link arterial roads to rural townships or important centres (eg with a resident population of more than 500 people, and/or employment generators of more than 500 people).
- provide supplementary links between major regions of the State and districts within regions, and links to more remote rural area townships.

6. Evaluation of Arterial Road Declaration Proposals -

General

While many roads exhibit some characteristics of arterial function, it is not possible or appropriate to declare each and every one as an arterial road. Roads that are to be considered by VicRoads for declaration as arterial roads must demonstrate strong compliance with one or more of the principles and functional characteristics as described above in the section “*What are the characteristics of an Arterial Road?*”.

When reviewing **arterial road** declaration proposals (on either an individual road or network basis), consideration will also be given to the following factors:

- the existing freeway and arterial road network;
- Government and VicRoads policies and strategies (including AusLink corridor strategies)
- previous decisions and commitments;
- local, regional and strategic issues;
- road standards and operating characteristics;
- condition of the road assets (roadway, roadside, road-related infrastructure);
- traffic volumes and vehicle composition;
- access control and surrounding land use;
- road improvement needs and proposals;
- adequacy of the width and alignment of the road reservation; and
- budgetary constraints.

The outcome of any assessment of a proposal may, or may not, result in the declaration of a road (or roads) as an arterial road(s), but may also result in the revocation of an existing arterial road declaration if that arterial road (or roads) is considered to no longer perform an arterial function.

Timing of Declaration

Prior to the declaration of any road as an arterial road, VicRoads will normally require the road to be:

Road function:

- already functioning as an arterial road (ie exhibits the general principles and functional characteristics as set out above) and will significantly contribute to the existing Victorian arterial road network that:
 - supports economic development;
 - improves accessibility and reduces travel costs;
 - achieves efficient and orderly movement of road users (including on-road public transport) and road freight; and
 - improves road safety.

Road standard / condition:

- already constructed and maintained to a standard that is acceptable to VicRoads, and is consistent with the performance, condition and quality of travel on Victoria’s arterial road network (eg road width, shoulder width, roughness, pavement condition, delineation and signage, access control, driver expectations, road reservation width, provision/protection for future road needs); or

- proposed to be upgraded / constructed to an acceptable standard by VicRoads to enable the road to function as an arterial road.

Future Roads in Metropolitan Growth Areas / Urban Fringe Municipalities²:

The identification of arterial roads in metropolitan growth areas and urban fringe municipalities will involve a two stage process comprising:

- an ‘interim’ stage to accommodate immediate needs based on the road already functioning as an arterial road (but may require upgrading by the council to a standard acceptable to VicRoads before declaration as an arterial road); or
- the ‘ultimate’ stage to accommodate longer term arterial road needs once the growth area or urban fringe area has been developed (eg an existing road that currently does not perform an arterial function or comply with acceptable arterial standards, but which is planned to be, or is capable of being, upgraded to acceptable arterial standards as urban growth proceeds).

The identification of a road, or a proposed road, as a future arterial road within a metropolitan growth area must:

- be in accordance with the Growth Area Framework Plan as incorporated into the Planning Schemes; or
- be identified for future inclusion in the Framework Plan as part of an ‘agreed’ arterial road network (eg prepared under a “protocol for the development of arterial road network plans for growth areas”, or developed as a result of an agreed precinct structure planning process); and
- have sufficient road reservation width (or additional land set aside/protected) to accommodate future arterial road needs / standards (eg ultimate duplication, access control).

Note:² These guidelines, as they relate to future arterial roads in metropolitan growth areas and urban fringe municipalities, may also be considered for application in major regional centre growth areas.

7. Responsibility for Arterial Roads -

In accordance with the Act:

- VicRoads is the coordinating road authority for arterial roads (refer section 36 of the Act); and
- VicRoads and the municipal council perform the operational functions of a responsible road authority for different parts or elements of the road reserve of an arterial road as determined by the Act (refer section 37) and the Code of Practice for Operational Responsibility for Public Roads.

8. Implementation of Reviews -

VicRoads proposes to undertake regular reviews (on a 4 – 6 year cycle) of the declared freeway and arterial road network within Victoria in consultation with local government.

These Guidelines are intended to assist in both this ongoing review process and in the assessment of any individual proposals for changes to the declared road network. Road declaration changes resulting from the review process will be implemented progressively as agreement at a local municipal council level is reached. Implementation of any declaration changes will be undertaken in accordance with the statutory requirements as set out in section 14 of the Act.

9. Administration -

The conduct of any review of arterial road declarations will:

- take into consideration Government strategies and commitments, the overall availability of funds and resources, the extent of the existing arterial road network, and competing road priorities across the State. Except for the identification of future arterial roads in metropolitan growth areas and urban fringe municipalities, changes to arterial road declarations should, where practicable, be considered on the basis of a possible 'exchange of roads' within a municipality (ie some new road declarations in exchange for the rescission of some declarations where those roads are no longer considered worthy of inclusion in the arterial road network).
- consult with the relevant local municipal council.
- implement any declaration changes progressively on a 'municipality by municipality' basis upon VicRoads and the relevant municipal council reaching agreement on the actions arising out of the review.
- comply with the statutory requirements and process as set out in section 14 of the Act when declaring or revoking the declaration of a freeway or arterial road.
- review existing road / route names or numbers where a new arterial road is declared (or an existing arterial road declaration is revoked) in accordance with relevant legislation, the *Guide to Road Naming in Victoria*, and VicRoads / local government road naming protocols.
- result, upon implementation of any declaration changes, in the relevant coordinating road authorities amending their Registers of Public Roads to reflect the declaration changes.

10. Next Steps -

Finalisation of these Guidelines will follow consultation with the Municipal Association of Victoria.

The statewide review of the declared arterial road network is to be undertaken in discussions between Councils and VicRoads Regional Managers. This review is proposed to be conducted during 2007.

VicRoads will undertake the statutory declaration process to implement agreed declaration changes (on a 'municipality by municipality' basis) resulting from the statewide review.

11. Arterial Road Declaration Examples -

- Two rural roads connect major centres.** The longer route has half the traffic of the shorter route. The shorter route is the principal connection between the two centres and performs an arterial function. The shorter route should be considered for declaration as an **arterial road**.
- A rural municipal road** provides access to the abutting agricultural land but is not a direct link between key townships or major centres. The traffic is mainly related to the abutting land use. The road does not function as an arterial and should remain a **municipal road**.
- Two roads connect two key townships in rural Victoria.** The shorter route carries a significant volume of commercial vehicles. The longer route provides access to several major centres but carries a lesser volume of commercial vehicles. Both roads perform an important arterial function and should be considered for declaration as **arterial roads**.

- iv) **Several roads run parallel in a developed urban area.** Each carries heavy traffic and performs an arterial function to varying degrees. The roads can be ranked according to continuity, network spacing, commercial usage, abutting development and public transport use and some should be considered for declaration as **arterial roads**.
- v) **Narrow two-lane two-way municipal road located within an identified metropolitan growth area.** The existing road currently does not perform an arterial function or comply with appropriate arterial standards, but is planned to be upgraded to provide a connection to the metropolitan arterial road network as traffic demand generated by urban growth warrants. The road, which does not currently function as an arterial, should remain a **municipal road** until such time as growth area generated traffic volumes increase to an agreed level by which time the road should have been developed to an acceptable standard – at this stage, declaration as an **arterial road** should then be considered.