

# Traffix Group

## Road Safety Study

Clifton Hill and North Abbotsford Corridor

Prepared for  
Yarra City Council

# Road Safety Study

## Clifton Hill and North Abbotsford Corridor

### Document Control

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## Executive Summary

Traffix Group has been engaged by Yarra City Council to undertake a Road Safety Study for the Clifton Hill and North Abbotsford Corridor. The Trenerry Crescent corridor, which includes Trenerry Crescent, Gray Street and Yambla Street from Gray Street to Ramsden Street, is a major link between Clifton Hill and North Abbotsford. The broader Road Safety Study boundary includes the area bounded by Heidelberg Road, Hoddle Street, Johnston Street and the Yarra River.

The Road Safety study involved a review of the available traffic, pedestrian and collision data and consultation with the local community conducted in late 2021 to identify local road safety issues and develop engineering solutions through the production of a Road Safety Plan.

Key issues identified in the study included:

- Heidelberg Rd / Fenwick St – Collision history
- Yambla St / Ramsden St – Collision history
- Yambla St (Midblock) – Concerns around bicycle safety due to the width of the street
- Yambla St / Roseneath St / Gray St – Concerns with pedestrian crossing safety
- Trenerry Cres / Gray St / Noone St - High traffic volumes and pedestrian crossing safety
- Trenerry Cres under Eastern Fwy - High traffic volumes and bicycle safety
- Trenerry Cres Bend at Maugie St - Poor road alignment
- Pedestrian Overpass of Eastern Fwy - Pedestrian / bicycle conflict
- Abbott St / Trenerry Cres - Vehicle / pedestrian and cyclist conflicts
- Trenerry Cres Pedestrian Crossing at Bath St - Pedestrian / vehicle conflict
- Turner St / Trenerry Cres - Vehicle / pedestrian and cyclist conflicts
- Turner Street – Vehicle speeds
- Johnston Street / Trenerry Cres –Collision history
- Johnston St / Lulie St - Pedestrian / vehicle conflict
- Johnston St / Rich St - Pedestrian / vehicle conflict
- Roseneath St / Field St - Pedestrian crossing safety

The Road Safety Plan, which incorporates concept level treatments at the above locations, were then developed to address the issues identified, and were provided to the community for consultation. A second stage of community consultation was conducted by Council between 10 June 2022 and 11 July 2022, with feedback received online and in person.

Whilst the community was generally supportive of the Road Safety Plan and most of its treatments, strong opposition to the proposed treatment on Yamba Street (Location 3) was received. The proposal sought to change the direction of the one-way traffic flow arrangement on Yambla Street, which raised significant concern that traffic volumes would increase on Field Street and other roads.

Minor updates were made to a selection of other treatments following Stage 2 of community consultation, and included:

- A 'do nothing' option for Yambla Street, and
- A review of Field Street following the implementation of other treatments.

With the exception of the above, we broadly recommend that Council proceed with the Road Safety Plan to improve road safety in the local area.

The final Road Safety Plans are provided at Appendix F of this report.



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Appendix E Stage 2 Community Consultation Summary

Appendix F Concept Treatment Plans (Stage 3)

# 1. Introduction

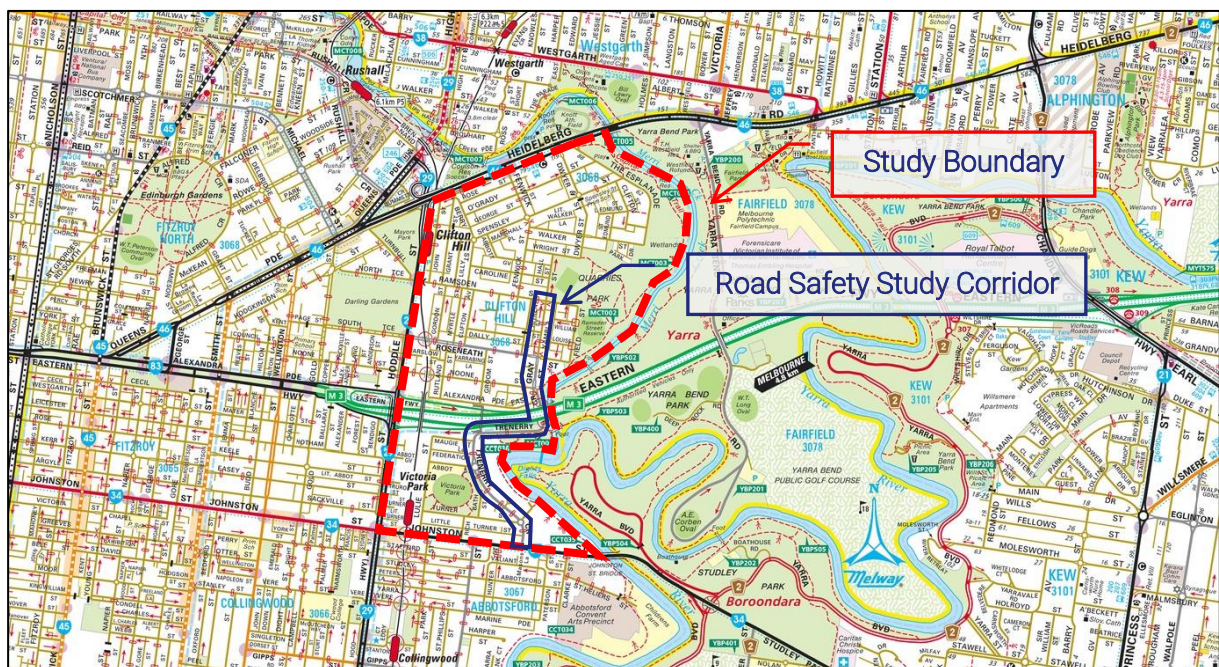
Traffic Group has been engaged by Yarra City Council to undertake a Road Safety Study for the Clifton Hill and North Abbotsford Corridor. The Trenerry Crescent corridor, which includes Trenerry Crescent, Gray Street and Yambla Street from Gray Street to Ramsden Street, is a major link between Clifton Hill and North Abbotsford. The broader Road Safety Study boundary includes the area bounded by Heidelberg Road, Hoddle Street, Johnston Street and the Yarra River.

This report details the existing conditions along the corridor and within the local area, the various road safety investigations undertaken, key issues and the development of concept level treatments developed to address key safety issues.

# 2. Clifton Hill and North Abbotsford Corridor

The Road Safety Study Corridor and its broader study boundary is located approximately 4km north-east of Melbourne's Central Business District. The Trenerry Crescent corridor, which includes Trenerry Crescent, Gray Street and Yambla Street from Gray Street to Ramsden Street, is a major link between Clifton Hill and North Abbotsford. The broader Road Safety Study boundary includes the area bounded by Heidelberg Road, Hoddle Street, Johnston Street and the Yarra River and includes Clifton Hill and parts of Abbotsford, north of Johnston Street.

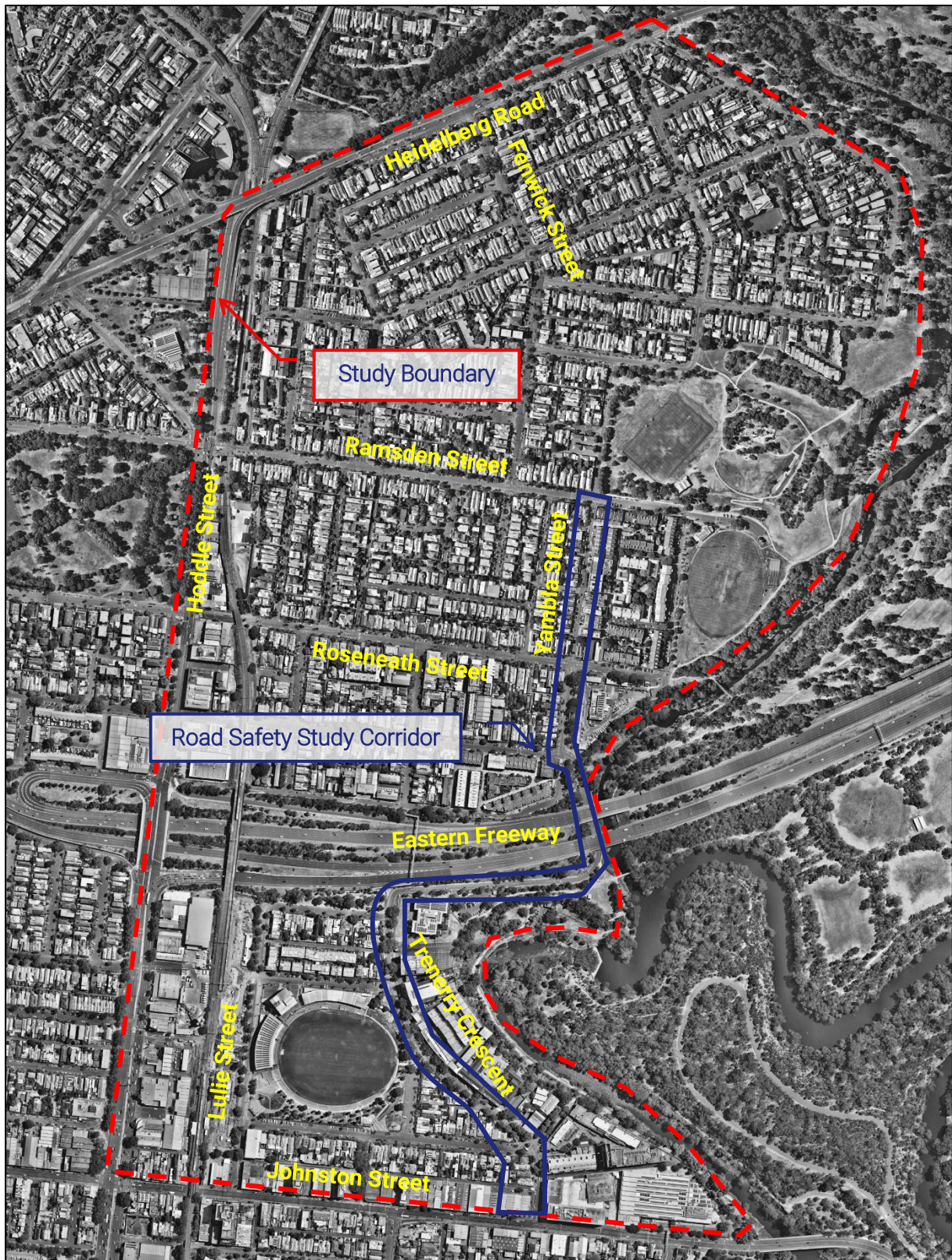
A locality plan and aerial photograph of the study area are provided in Figure 1 and Figure 2, respectively.



Source: Melways

Figure 1: Locality Plan





Source: Nearmap

Figure 2: Study Area - Aerial Photograph



## 3. Background Information

### 3.1. Moving Forward – Yarra’s Transport Strategy 2022

In July 2022, Yarra City Council adopted the City of Yarra’s first ever Transport Strategy, setting out the future of transport in the municipality. The strategy seeks to create safer road options for all road users, including pedestrians and cyclists.

The strategy identifies four (4) main outcomes to deliver on its vision, as follows:

- Increased use of space efficient and environmentally sustainable forms of transport in Yarra.
- Enhanced places for people on Yarra’s streets.
- Increased independent mobility for vulnerable road users in Yarra.
- Reduced car use for trips within or through Yarra.

The strategy is a 10 year multi modal strategy that seeks to achieve Yarra’s 2050 transport vision.

### 3.2. Current / Recent Projects

#### 3.2.1. Streamlining Hoddle Street

The Streamlining Hoddle Street project was completed in September 2019, and included numerous intersection upgrades and other works along Hoddle Street between the Eastern Freeway and Swan Street.

At the intersection of Johnston Street and Hoddle Street, new P-turn arrangements were added with improved pedestrian and public transport facilities. Changes were also made to a number of other intersections along the corridor.

Upgrades at the intersection of the Eastern Freeway and Hoddle Street included additional traffic lanes, a dedicated bus lane and new shared paths on both sides of Hoddle Street.

It is noted that the Streamlining Hoddle Street project addressed numerous road safety issues along the corridor, including significant crash patterns at intersections such as Hoddle Street / Abbott Grove.

#### 3.2.2. Roseneath Street / Hoddle Street / South Terrace Intersection

Council has recently submitted a Federal Blackspot application for the intersection of Hoddle Street / Roseneath Street / South Terrace in Clifton Hill to address the existing crash pattern and other issues at the intersection.

The project includes the following changes to the intersection:

- Implementation of a partially controlled right turn on the north and south approaches to address the crash pattern at the intersection,
- Extension of the right turn lane on the south approach to support the implementation of a partially controlled right turn,

- Installation of bicycle lanterns to provide an early start for cyclists for improved visibility at the intersection, and
- Changes to the traffic lane arrangements on the east approach to improve cyclist safety.

In view of the above, the intersection of Roseneath Street / Hoddle Street has not been included in the road safety study given the recent works undertaken.

## 4. Existing Conditions

The following sections provide a summary of available data used to establish the existing road safety, 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 over recent years. In addition, a summary of community complaints on road safety issues and other relevant information collected by Council has been provided.

The existing conditions data will provide the basis for identifying and quantifying, where possible, road safety issues along the road safety study corridor and within the boundary area and prioritising areas or locations for treatment.

### 4.1. Road Network

The Trenerry Crescent corridor, which includes Trenerry Crescent, Gray Street and Yambla Street from Gray Street to Ramsden Street, is a major link between Clifton Hill and North Abbotsford and provides a direct link to local destinations such as the Merri Creek / Yarra Bend / Dights Falls parklands, Victoria Park, Ramsden Oval and Quarries Park for all users, including pedestrians, cyclists and motorists.

Together with Ramsden Street and Roseneath Street, the Trenerry Crescent corridor forms a link between arterial roads Hoddle Street and Johnston Street, and as such accommodates a level of commuters travelling between outside locations.

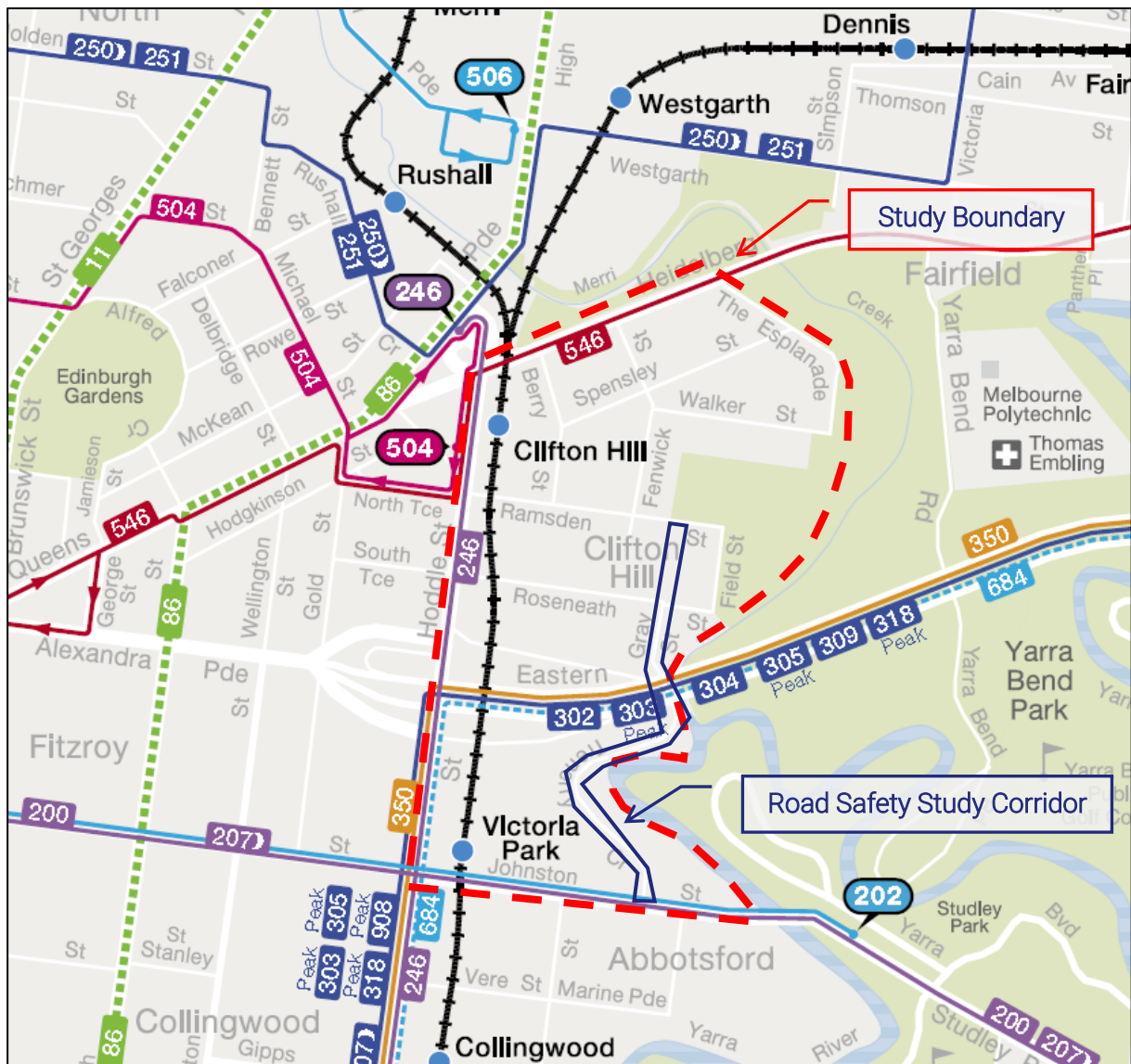
With exception to the above, most other local roads within the broader area accommodate the movement of people to a level more consistent for a 'neighbourhood'.

### 4.2. Public Transport

The Hurstbridge and Mernda Railway lines extend in a north south orientation to the west of the Road Safety Study corridor, with the Clifton Hill and Victoria Park Railway stations located in the north-western and south-western corners of the broader study boundary area respectively.

Numerous bus services operate along Hoddle Street, Heidelberg Road and Johnston Street, as shown in Figure 3. No bus services operate along the Trenerry Crescent corridor, though bus routes 200 and 207 pick up and set down passengers adjacent to the Trenerry Crescent / Johnston Street intersection.





Source: PTV

Figure 3: Yarra City PTV Local Area Map

### 4.3. Existing Pedestrian and Cyclist Facilities

A summary of the pedestrian and cyclist facilities is provided in the City of Yarra's travel smart map at Figure 4. Facilities along the Road Safety Study Corridor include:

- A contraflow bicycle lane on Yambla Street, to allow cyclists to travel southbound on Yambla Street,
- Bicycle Lanes on Gray Street in both directions,
- Bicycle lanes in both directions along Trenerry Crescent, noting that sections of the bicycle lanes are too narrow / faded to comfortably accommodate cyclists between Maugie Street and Noone Street.

- A pedestrian crossing (zebra) on Trenerry Crescent, adjacent Bath Street,
- Footpaths provided on both sides of Yambra Street and Trenerry Crescent between Maugie Street and Johnston Street,
- Footpaths provided on one side of the road on Gray Street and Trenerry Crescent between Gray Street and Maugie Street.

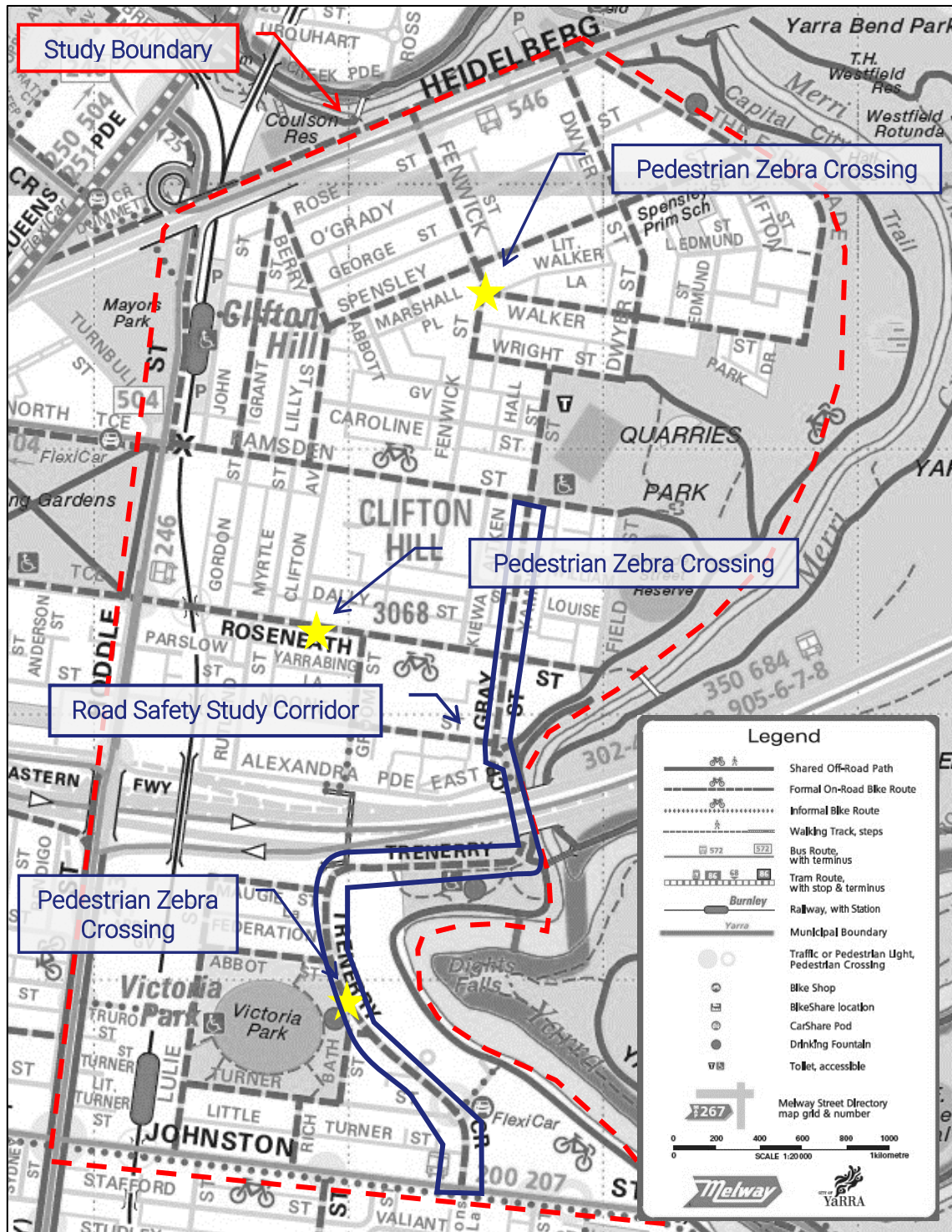


Figure 4: City of Yarra Travel Smart Map

### 4.4. Existing Traffic Management

Existing traffic management has been implemented in the broader 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. All local roads with the study area are subject to an area wide 40km/h posted speed limit.

Key traffic management treatments in the area are summarised in Figure 5.

The road safety study corridor already includes the following traffic management devices:

- A one-way (northbound) traffic direction restriction on Yambla Street,
- A stop sign on the east approach to the intersection of Gray Street / Trenerry Crescent / Noone Street,
- Roundabouts at the intersections of Trenerry Crescent / Abbott Street and Trenerry Crescent / Turner Street,
- Road Humps on Trenerry Crescent between Gray Street and Johnston Street, and
- A left turn ban at the intersection of Johnston Street / Trenerry Crescent between 4:30pm and 6:30pm Monday – Friday.

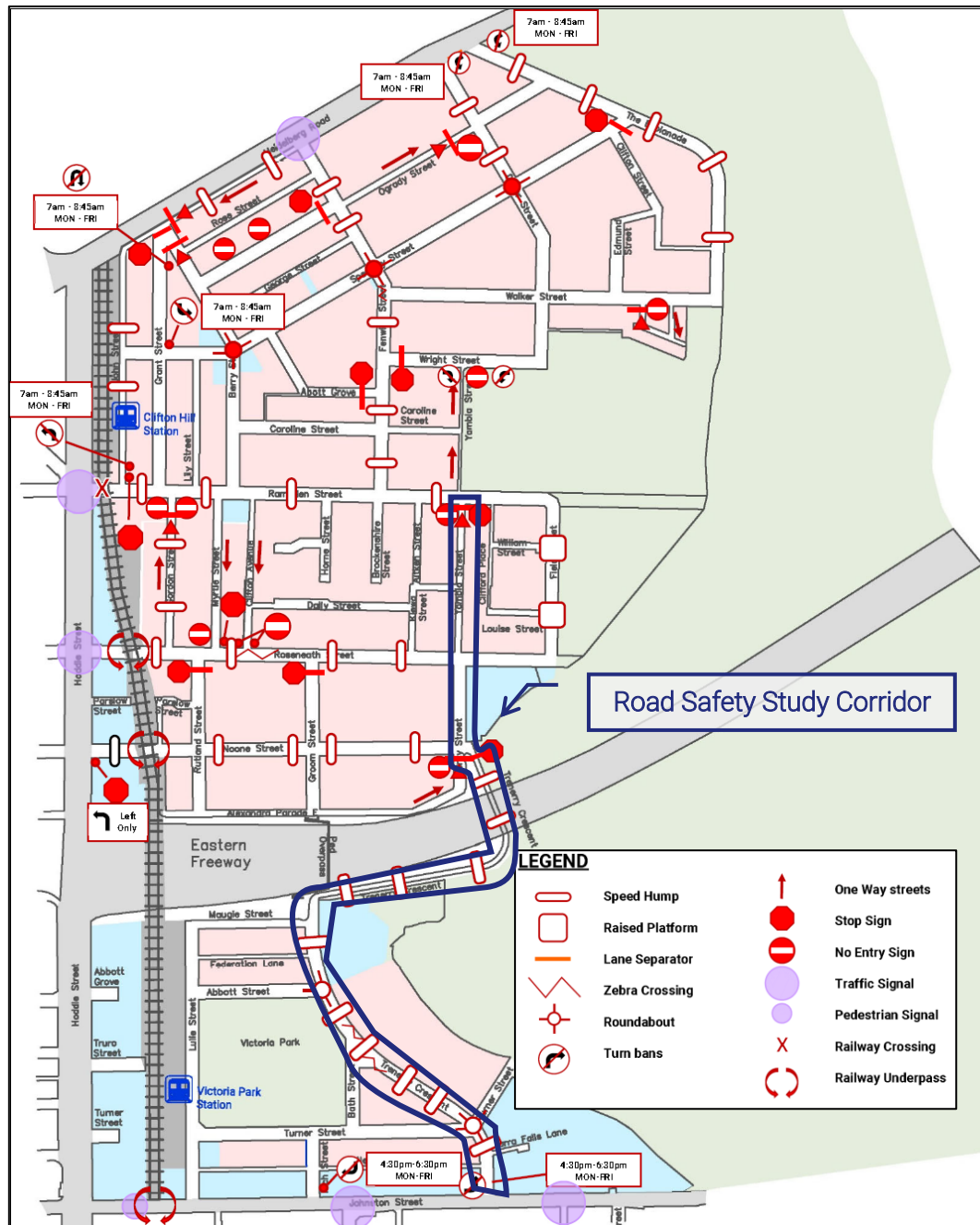


Figure 5: Existing Traffic Management

## 4.5. Traffic Conditions

A number of traffic volume, pedestrian and cyclist movement and turning movement surveys were conducted in late 2021 and early 2022 to inform the Clifton Hill and North Abbotsford Corridor Road Safety Study. The surveys were conducted in consideration of the above, and review of Stage 1 of the community consultation, which is detailed in Section 5 of this report.



### 4.5.1. Traffic Volumes

Figure 6 provides an overview of the daily traffic volumes and 85<sup>th</sup> percentile speeds recorded along the Road Safety Study corridor, as well as the broader local area, including traffic surveys that were focused solely on cyclist movements only.

Daily traffic volumes assist in determining the level of movement that a particular road is accommodating and the broader picture of movement along the corridor and broader local area. The 85<sup>th</sup> percentile speed is a key road safety metric and 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 85<sup>th</sup> percentile speed. Locations where the recorded 85<sup>th</sup> percentile speed is in excess of the posted speed limit are typically of concern.

Detailed traffic survey information is provided at Appendix A.



#### 4.5.2. Intersection Turning Movement Counts

Intersection turning movement counts were undertaken for the intersections of Trenerry Crescent / Johnston Street and Lulie Street / Johnston Street on Tuesday, 2<sup>nd</sup> March 2022 between 7-10am and 4-7pm. An analysis of the turning movement data indicates that the AM and PM peak hours at the intersection are 8:00am to 9:00am and 5:15pm to 6:15pm, respectively.

The turning movement volumes for the AM and PM peak hours at the intersection of Trenerry Crescent / Johnston Street and Lulie Street / Johnston Street are shown below in Figure 7 and Figure 8 respectively.

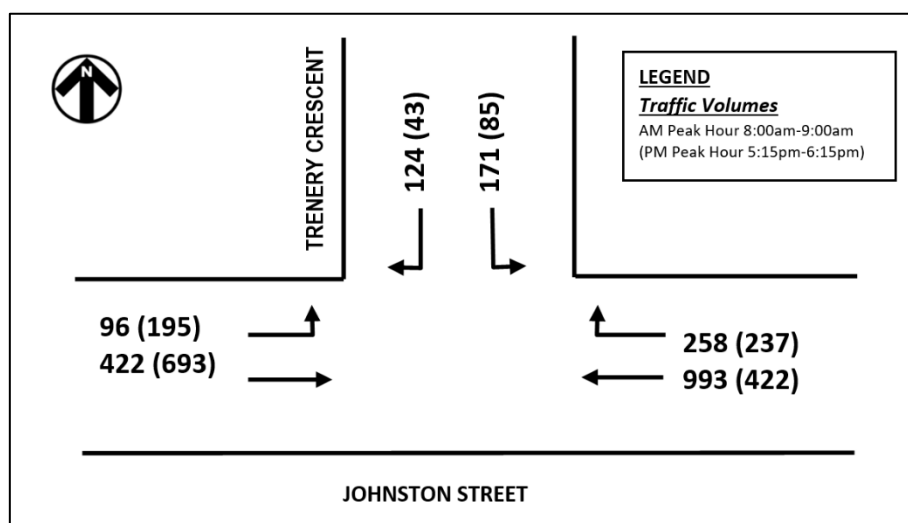


Figure 7: Turning Movement Volumes – Johnston Street / Trenerry Crescent



Figure 8: Turning Movement Volumes – Johnston Street / Lulie Street

#### 4.5.3. Pedestrian and Cyclists Movement Counts

Pedestrian and cyclist movement counts were undertaken on Friday, 4<sup>th</sup> March 2022 between 7-10am and 4-7pm at the following locations:



- The intersection of Trenerry Crescent / Noone Street / Gray Street,
- The pedestrian overpass on the Eastern Freeway, in the vicinity of Trenerry Crescent / Maugie Street,
- The intersection of Roseneath Street / Gray Street / Yambla, and
- The Eastern Freeway underpass including cyclists on road (Trenerry Crescent) and both pedestrian and cyclist movements on the footpath.

The crossing movements recorded at each location for the respective peak hours are summarised in Figure 9 to Figure 12.

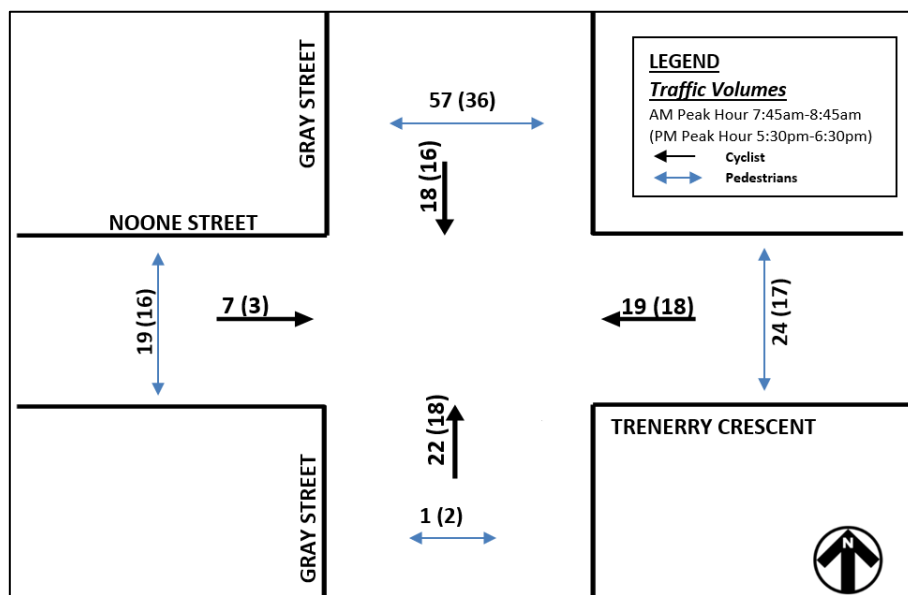


Figure 9: Pedestrian and Cyclist Movement Counts - Noone Street / Gray Street / Trenerry Crescent

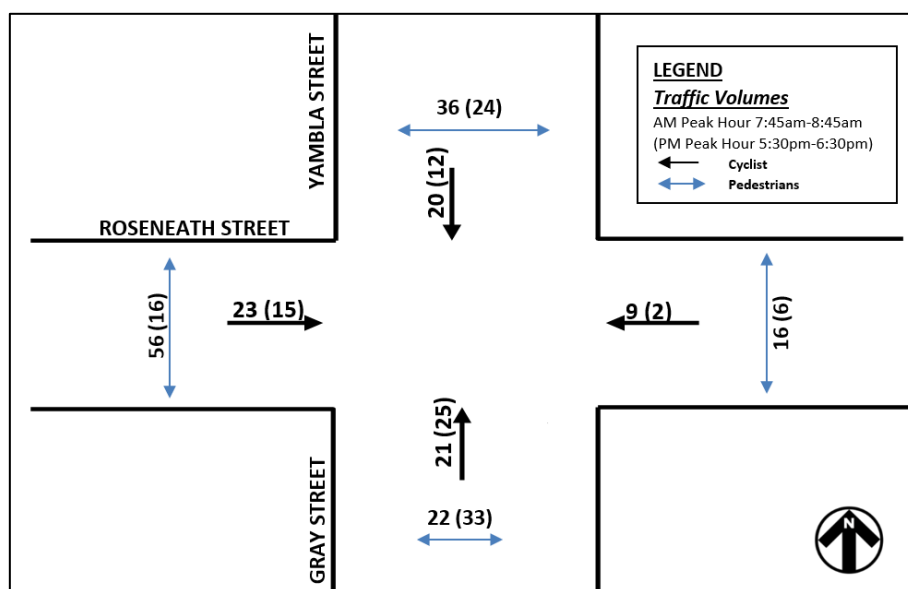


Figure 10: Pedestrian and Cyclist Count - Roseneath Street / Yambla Street / Gray Street

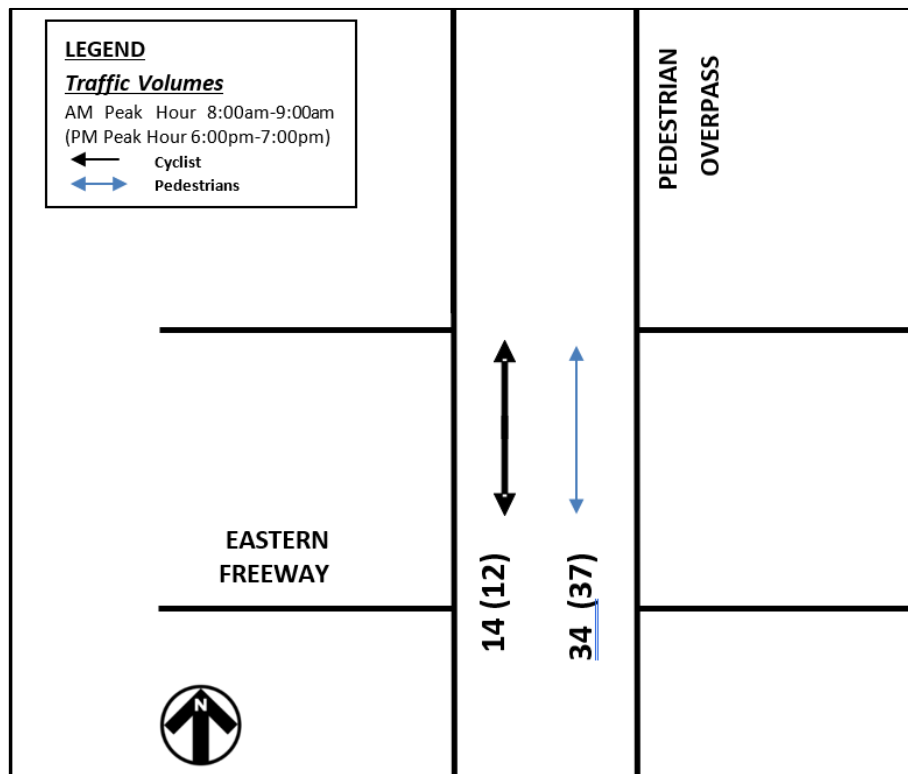


Figure 11: Pedestrian and Cyclist Movement Counts – Eastern Freeway Pedestrian Overpass

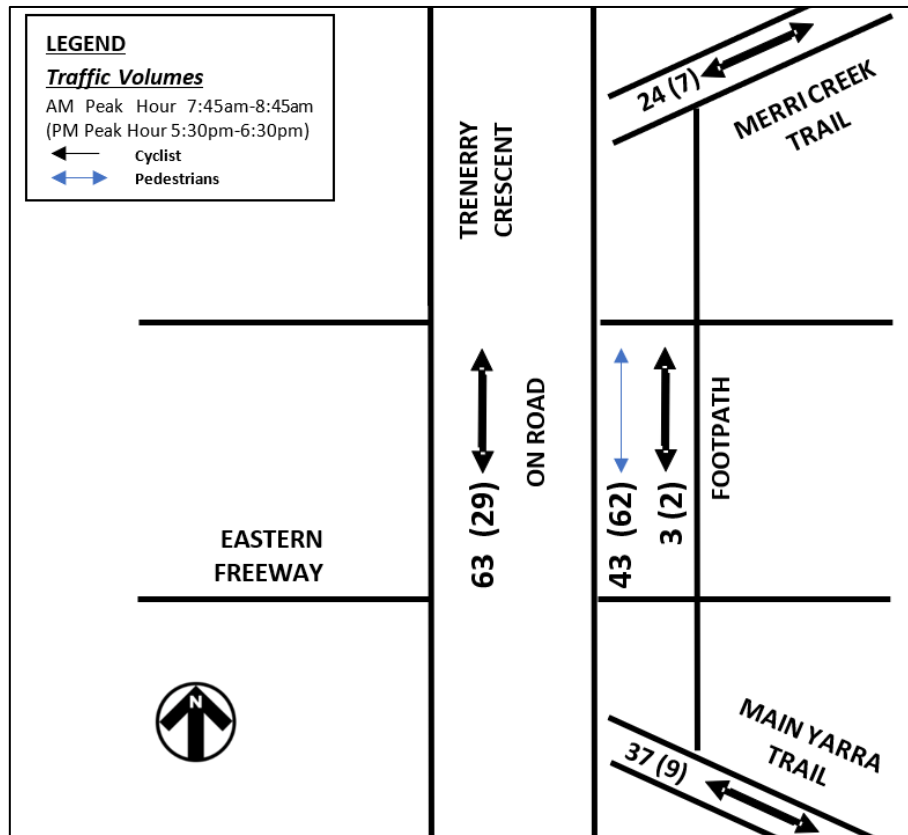


Figure 12: Pedestrian and Cyclist Movement Counts – Eastern Freeway Underpass (Trenerry Crescent)

## 4.6. Road Safety Review – Crash History

An assessment of the crash history for the study area was undertaken by analysing crash data for the most recent five-year period (July 2016 – December 2021) sourced from CrashStats (the Victorian accident statistics dataset managed by VicRoads). CrashStats 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 (DCAs) are used to describe crash type by indicating the initial movement of vehicles (and/or pedestrians) involved in a crash.

Figure 13 highlights the location of crashes and indicates the total number of crashes and the most severe at each site in the study area.

In the five-year period between July 2016 and December 2021, a total of 71 casualty crashes were reported in the study area, of which one (1) resulted in a 'fatal' outcome, 11 resulted in 'serious injury' and the remaining 59 were 'other injury' crashes. A breakdown of the crashes is as follows:

- 49 casualty crashes occurred on the boundary arterial roads (Johnston Street, Hoddle Street and Heidelberg Road),
- 16 crashes occurred on the internal local road network,
- 14 crashes involved a pedestrian,
- 20 crashes involved a cyclist, and
- 10 crashes involved a motorcyclist.

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

Part 1 – DCA (Definitions for Classifying Accidents) Chart; and

Part 2 – Tabulated Summary of Crash History by location, detailing the date, time, severity, and type of accident (DCA code).

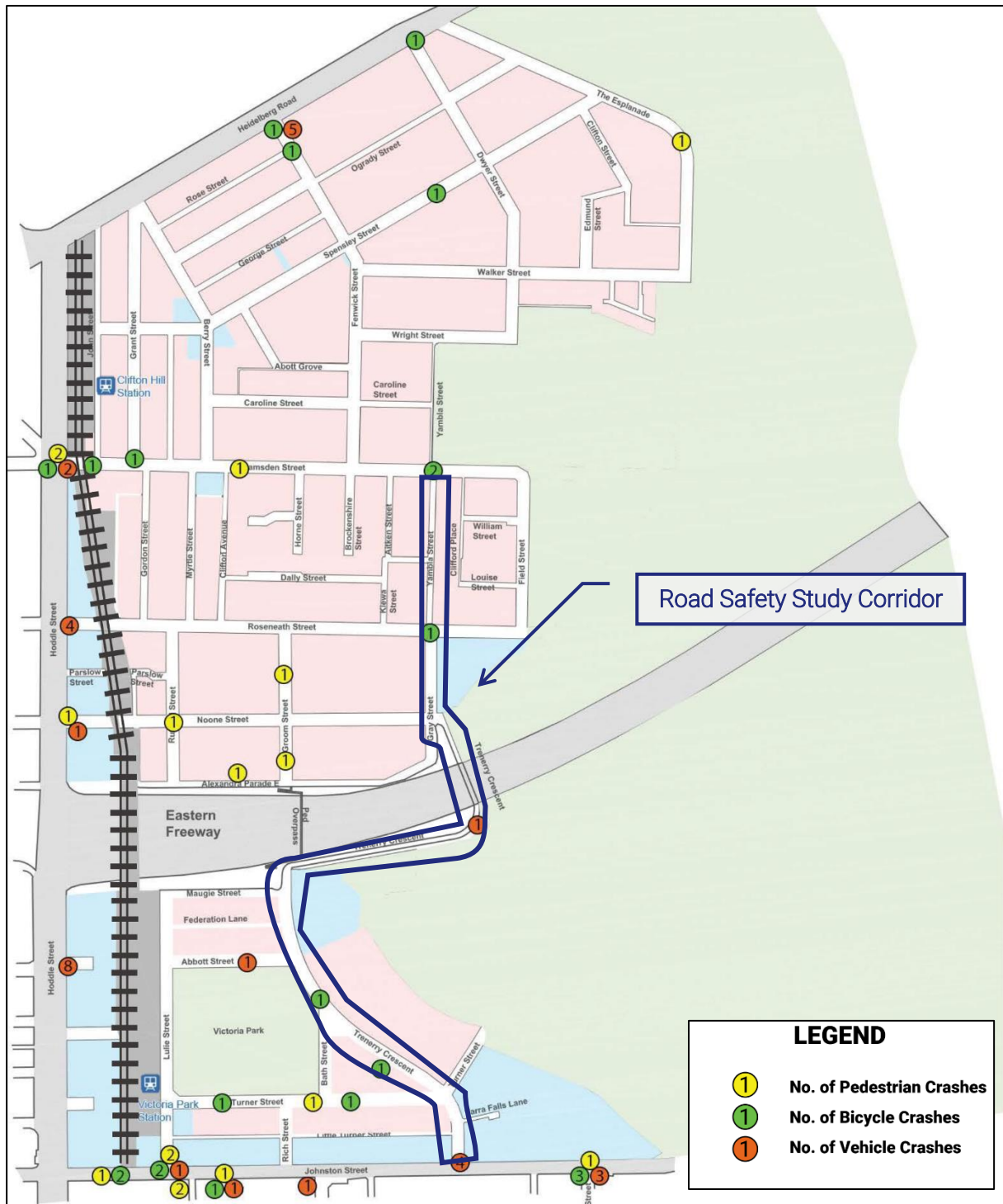


Figure 13: Collision Locations – Last Five (5) Years of Available Data

## 5. Community Consultation – Stage 1

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

### 5.1. Initial Community Survey

In November/December 2021, Council conducted community consultation for the Clifton Hill and North Abbotsford Road Safety Study, by directing people to Council's 'Your Say' webpage at:

<https://yoursayyarra.com.au/cliftonhillabbotsford>

This website provided users with the opportunity to provide both survey contributions and map board contributions. The survey component largely focussed on how respondents travel through / use the 'Trenerry Crescent Corridor', as well as their connection to the local area. Around 80% of the 312 responses received were from people who live in Clifton Hill or Abbotsford with the balance of respondents working or visiting the area. A small minority of respondents (1%) travel through the area solely as part of a longer journey.

406 contributions to the map board were received under the following categories:

- Motorists
- Cyclists
- Other Safety Issues
- Pedestrian Safety

These contributions were able to be placed on the map in the relevant location, accompanied by a brief comment, with an overview provided in Figure 14.

A summary of the issues identified by the community is provided in Appendix C. It is noted that not all comments provided relate to road safety. Locations with less than three (3) contributions were excluded from the summary provided in Figure 14, however were considered as part of the Road Safety Study.



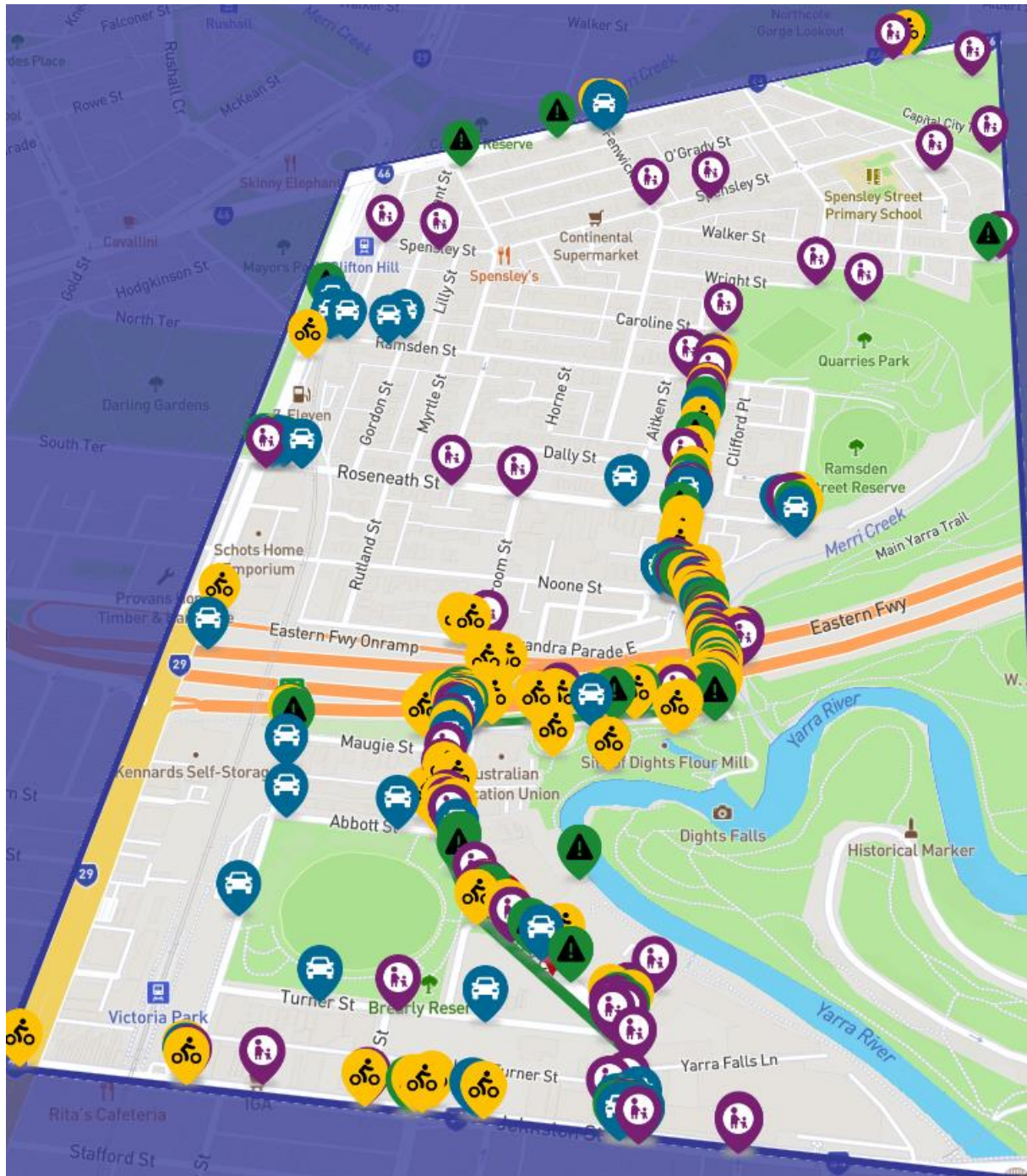


Figure 14: Map Board Contributions

## 6. Summary of Key Issues Identified in Stage 1

To identify the key issues along the Road Safety Study Corridor, the following was conducted:

- A review of the road safety issues identified by the community,
- A review of the data available, with a specific focus on crash histories, vehicle speeds and traffic volume,
- Site investigations and observations during key time periods, and
- Discussions / consultation with Council officers.

The above resulted in identification of 16 key issues / locations along the road safety study corridor and the broader study boundary that require further investigation and treatment, with the locations and key issues identified as follows:

*Table 1: Summary of Key Issues - Stage 1*

Location		Key Issue
1	Heidelberg Rd / Fenwick St	Collision History
2	Yambla St / Ramsden St	Collision History
3	Yambla St (Midblock)	Bicycle Safety due to Cross Section
4	Yambla St / Roseneath St / Gray St	Pedestrian Crossing Safety
5	Trenerry Cres / Gray St / Noone St	High Traffic Volumes and Pedestrian Crossing Safety
6	Trenerry Cres under Eastern Fwy	High Traffic Volumes and Bicycle Safety
7	Trenerry Cres Bend at Maugie St	Poor Road Alignment
8	Pedestrian Overpass of Eastern Fwy	Pedestrian / Bicycle Conflict
9	Abbott St / Trenerry Cres	Vehicle / Pedestrian and Cyclist Conflicts
10	Trenerry Cres Pedestrian Crossing at Bath St	Pedestrian / Vehicle Conflict
11	Turner St / Trenerry Cres	Vehicle / Pedestrian and Cyclist Conflicts
12	Turner Street	Vehicle Speeds
13	Johnston Street / Trenerry Cres	Collision History
14	Johnston St / Lulie St	Pedestrian / Vehicle Conflict
15	Johnston St / Rich St	Pedestrian / Vehicle Conflict
16	Roseneath St / Field St	Pedestrian Crossing Safety



A more detailed presentation of the key issues identified in Stage 1 is provided at Appendix D.

## 7. Development of Concept Treatments for Community Consultation - Stage 2

Following the identification of the key issues in Stage 1, supporting safety treatments were developed to address the issues as discussed in the following sections of this report. The treatment proposals were developed in collaboration with Council officers, and draft concept level plans were prepared for consultation with the community. The community consultation and feedback on the draft road safety plans were then used to inform the development of the final road safety plan and proposed treatments (Stage 3)

Each location and treatment considered for Stage 2 is outlined in the following sections, with an overview map provided at Figure 15.

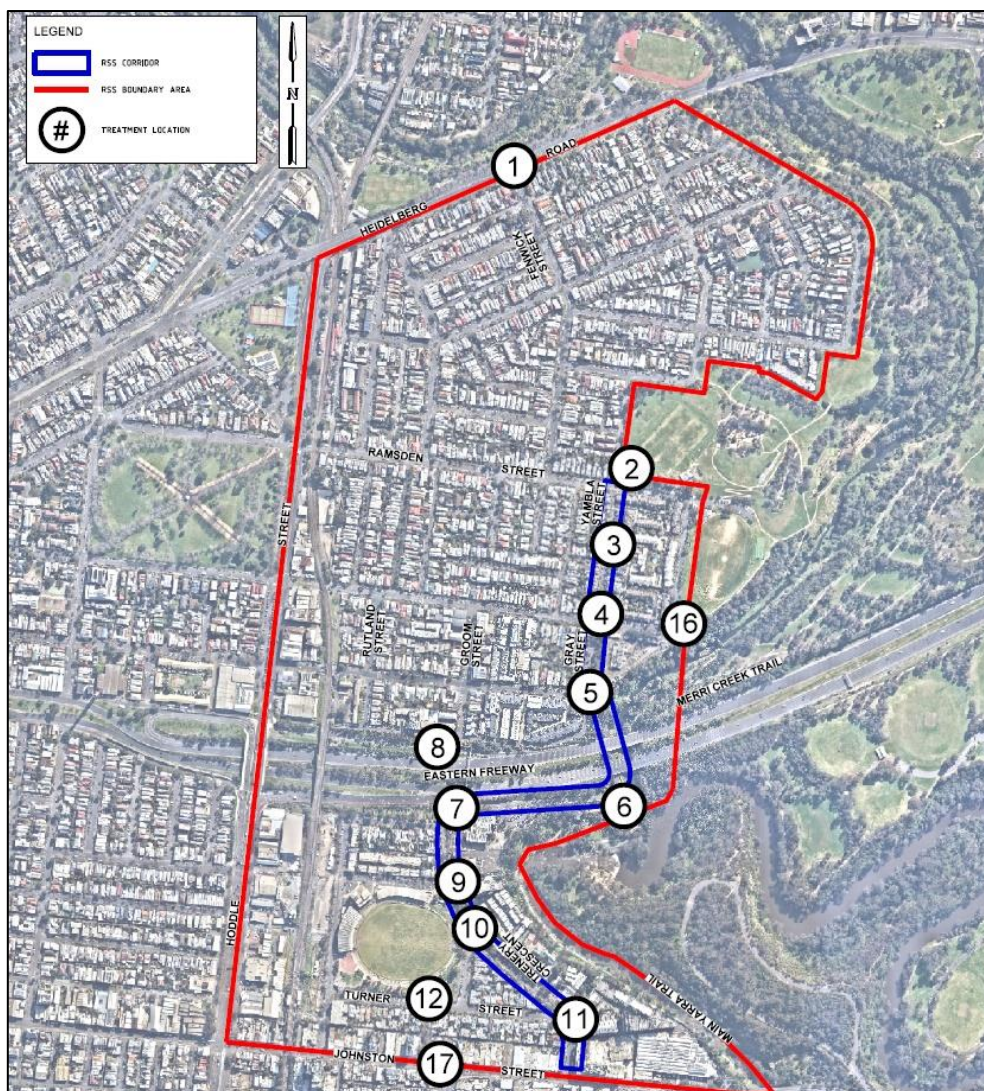


Figure 15: Draft Road Safety Plan



A key feature of the road safety plan has been to provide consistent treatments and messaging along the corridor, where possible.

### 7.1. Location 1 – Heidelberg Road / Fenwick Street

The intersection of Heidelberg Road (arterial road) and Fenwick Street (local road) is a signalised intersection at the northern extent of the boundary area as shown in the aerial photograph provided at Figure 16. The intersection is a key access point to Heidelberg Road for the Clifton Hill local area.



Source: Nearmap

Figure 16: Heidelberg Road / Fenwick Street - Aerial Photograph

#### 7.1.1. Summary of Key Issues and Constraints

The key issue for Location 1 is the crash history and clear crash pattern of collisions between vehicles turning right into Fenwick Street from Heidelberg Road, with three (3) of this type of collision recorded in the five (5) year reference period. One (1) of these collisions involved a westbound cyclist and resulted in serious injuries, whilst the other two (2) collisions resulted in other injuries. It is noted that right turning traffic is not controlled by a right turn arrow, and hence are required at all times to filter through traffic and select an appropriate gap. It is clear from the crash history above that inappropriate gaps are chosen on occasion that led to collisions.

Three (3) other collisions were recorded at this location, however there is no clear pattern between them.

Community feedback was also received that the popup bicycle trial, which reduces the length of the left turn lane, has led to increased traffic congestion. Site observations undertaken at peak

periods indicated that most vehicles exiting Fenwick Street were able to do so within one (1) cycle of the traffic signals, with no significant delays experienced.

#### **7.1.2. Draft Treatment Proposal – For Community Consultation**

In order to reduce the potential for right / through collisions to occur, a partial or fully controlled right turn is proposed for right turn movements from Heidelberg Road into Fenwick Street. This would involve the modification of the existing lanterns to provide right turn arrows, with right turn movements controlled by red, amber and green arrows on a time based (partially) or 24/7 (fully) basis.

##### **Evaluation**

The proposed treatment would require approval from the Department of Transport (DoT), given they are the road authority for Heidelberg Road and manage traffic signals throughout the state.

It is likely that additional traffic modelling will be required to determine how the changes to signal phasing would best be implemented, and the potential delays to all motorists travelling through the intersection. It is possible that extended queues for the right turn movement may occur, and care must be taken to ensure that the queue does not regularly extend outside of the right turn lane provided.

A fully controlled right turn would be most effective at preventing future right / through collisions, given that the crash history shows that collisions can occur across the day and is not limited to the peak hours.

We recommend that Council consult with DoT to determine if funding is available through the federal blackspot program or other DoT avenues, confirming that DoT is the road authority for Heidelberg Road.

#### **7.2. Location 2 – Ramsden Street / Yambla Street**

The intersection of Ramsden Street (local road) and Yambla Street (local road) is an unsignalised cross intersection at the northern end of the road safety study corridor as shown in the aerial photograph provided at Figure 17.





Source: Nearmap

*Figure 17: Ramsden Street / Yambla Street - Aerial Photograph*

### 7.2.1. Summary of Key Issues and Constraints

The key issue for Location 2 is the clear crash pattern of collisions between northbound vehicles continuing through on Yambla Street and eastbound cyclists on Ramsden Street, with two (2) collisions recorded in the five (5) year reference period.

Community feedback also indicated that northbound motorists do not give way to cyclists on Ramsden Street, and indicate that drivers are generally in a 'rush' heading north. Feedback was also received around pedestrian crossing safety on Ramsden Street.

### 7.2.2. Draft Treatment Proposal – For Community Consultation

In order to reduce the risk of a collision between northbound motorists and cyclists on Ramsden Street, the traffic island on the southern leg of the intersection could be expanded to more effectively slow northbound vehicles. The island's shape would slow vehicles by preventing them from travelling straight through the intersection and needing to deviate around the island.

The expanded island would be semi mountable to allow for waste collection and other large vehicles to turn right at the intersection.

Green paint would be provided within the eastbound bicycle lane to highlight the presence of bicycles to motorists, with pram ramps and a road hump constructed to the east to provide for pedestrians crossing. A low height garden bed would be provided to maintain sight distance within the existing no parking area. The proposed road hump to the immediate east of the intersection would also slow traffic on the approach, aiding decision making.

### Evaluation

The proposed treatment would reduce the likelihood of a bicycle / vehicle collision occurring, primarily by slowing northbound vehicles, giving them more time to judge an appropriate gap in traffic and spotting cyclists travelling eastbound or westbound. The green painted bicycle lane will further emphasise the presence of cyclists at the intersection.

The proposal will also facilitate pedestrian crossing movements of Ramsden Street, with a road hump to reduce vehicle speeds and improve crossing safety. In the absence of data on pedestrian crossing volumes, pedestrian priority has not been provided at this intersection.

It is noted that the proposed treatment for Location 3 (as discussed following) would reduce cross traffic movements at this intersection (Location 2) and would further improve safety, however the treatment at this location (Location 2) can be implemented with or without changes to the adjacent Location 3.

### **7.3. Location 3 – Yambla Street, between Ramsden Street and Roseneath Street**

Yambla Street is a local Council road that extends between Roseneath Street and Wright Street, with traffic restricted to northbound only. Bicycle movements are catered for in either direction along Yambla Street, with a contraflow bicycle lane provided for southbound movements.

This section focuses on the section of Yambla Street between Ramsden Street and Roseneath Street, which forms the northern section of the Trenerry Crescent Road Corridor. An aerial photograph of the section of Yambla Street is provided at Figure 18.





Source: Nearmap

Figure 18: Yambla Street, between Ramsden Street and Roseneath Street - Aerial Photograph

### 7.3.1. Summary of Key Issues and Constraints

Yambla Street provides the following cross section, from west to east:

- 2.0m wide parking lane,
- 2.8m wide traffic lane,
- 0.5m wide painted buffer, and
- 1.5m wide contraflow bicycle lane.



Figure 19: Yambla Street

Cyclists are required to share the road with traffic in the northbound, uphill direction, whilst southbound cyclists are provided with a bicycle lane, separated from conflict traffic movements by a 0.5m wide painted buffer.

Feedback received from cyclists travelling northbound (uphill) is that sharing with traffic is uncomfortable as the steep gradient results in slow cyclist speeds, with impatient motorists seeking to overtake utilising the southbound bicycle lane. This in turn can lead to conflicts between southbound cyclists travelling at speed (due to the downhill gradient) and northbound motorists.

It is also noted that Yambla Street experiences relatively high traffic volumes (1,300vpd) for its character, given the narrow carriageway width and one-way traffic flow arrangement. It is evident that northbound vehicles, particularly in the PM peak, are using Yambla Street as part of the Trenerry Crescent road corridor, to travel through the local area (from North Abbotsford to Clifton Hill), leading to higher traffic volumes within the local area than otherwise desired.

### 7.3.2. Draft Treatment Proposal – For Community Consultation

It is noted that the cross section of Yambla Street is constrained, and there is limited ability to make alterations without losing parking or bicycle provisions.

To reduce the length at which northbound / uphill cyclists must share with traffic, it is proposed to change the direction of vehicular traffic on Yambla Street between Roseneath Street and Kiewa Street to **Southbound** only. A contraflow bicycle lane would be provided for northbound cyclists whilst southbound cyclists would share the road with traffic. It is noted that southbound cyclists, due to the gradient, are likely to maintain a speed consistent with vehicles.

No change to the arrangements on Yambla Street are proposed north of Kiewa Street, noting that the change in traffic direction to the south of Kiewa Street is likely to significantly reduce traffic volumes on Yambla Street, which also serves to reduce the interactions between cyclists and vehicles on Yambla Street.

Cyclists will still be permitted to travel in both directions along Yambla Street as a result of the proposal, whilst vehicles accessing Yambla Street would need to do so via Kiewa Street and Aitken Street.

### Evaluation

The proposal is expected to reduce traffic volumes along Yambla Street significantly, and improve cyclist safety as a result. The change to traffic flow arrangements effectively prevents vehicles from using Yambla Street as a 'shortcut' between Roseneath Street and Ramsden Street, and is expected to reduce the daily traffic volume from 1,300vpd to less than 300vpd.

It is expected that the resultant 'detouring' of traffic due to the proposal will result in an increase in traffic volumes on Field Street, given it is the most logical alternative route. The impacts to Field Street, as a result of the increased traffic volumes, would need to be carefully considered, noting that Field Street currently accommodates around 1,300vpd.

It is noted that Aitken Street / Kiewa Street will experience a small increase in traffic for local trips to / from Yambla Street. It is unlikely that a noticeable level of 'through' traffic will utilise Aitken Street / Kiewa Street / Yambla Street to travel between Ramsden Street and Roseneath Street given that Field Street represents a more straightforward route between the two.

We expect a small number of vehicles will choose to avoid the area or travel north via Hoddle Street as a result of Yambla Street being unavailable for northbound vehicles.

### **7.4. Location 4 – Roseneath Street / Yambla Street / Gray Street**

The intersection of Roseneath Street (local road), Gray Street (local road) and Yambla Street (local road) is an unsignalised cross intersection located along the Trenerry Crescent Corridor as shown in the aerial photograph provided at Figure 20.





Source: Nearmap

*Figure 20: Roseneath Street / Yambla Street / Gray Street - Aerial Photograph*

#### **7.4.1. Summary of Key Issues and Constraints**

The intersection of Roseneath Street / Yambla Street / Grey Street is a complex intersection with a number of conflict points given the range of movements. The intersection also experiences a high traffic demand, with Roseneath Street and Gray Street accommodating 3,500vpd and 4,800vpd respectively. In addition, a high volume of pedestrian crossing movements was recorded on Roseneath Street at the intersection, with a peak of 73 crossing movements in the AM peak.

Community concerns raised at the intersection related to the difficulty crossing the road due to the high volume of traffic.

In view of the above, we note that pedestrian crossing safety is a key issue at this location.

It is also noted that one (1) collision was recorded at the intersection in the last five years, involving a vehicle turning from Gray Street onto Roseneath Street colliding with a westbound cyclist.

#### **7.4.2. Draft Treatment Proposal – For Community Consultation**

To improve pedestrian safety, and given the high pedestrian crossing volumes recorded, a pedestrian (zebra) crossing is proposed on Roseneath Street to the immediate west of Gray Street. Speed humps would be installed on each approach, consistent with pedestrian crossings

further west on Roseneath Street. The median break to the east of Gray Street would be removed to encourage pedestrians to utilise the pedestrian (zebra) crossing.

A raised threshold would be constructed on the southern leg of the intersection (Gray Street) to slow vehicles and improve pedestrian crossing safety. One (1) parking space is proposed to be removed on the south east corner of the intersection, in order to improve sightlines for vehicles exiting Gray Street.

### Evaluation

The proposal is expected to improve the safety of pedestrians crossing Roseneath Street and Gray Street, and slow vehicles on approach to the intersection. The traffic calming measures and improved sightlines are expected to reduce the likelihood of a vehicle / cyclist collision occurring at the intersection.

The provision of pedestrian priority on Roseneath Street may result in minor delays to vehicular traffic.

It is noted that the proposed treatment for Location 3 would reduce cross traffic movements at this intersection (Location 4) and would further improve safety, however the proposed treatment at this location (Location 4) can be implemented with or without changes to the adjacent Location 3.

### **7.5. Location 5 – Noone Street / Gray Street / Trenerry Crescent**

The intersection of Gray Street (local road), Noone Street (local road), Alexandra Parade East and Trenerry Crescent (local road) is an unsignalised cross intersection located along the Trenerry Crescent Road Corridor as shown in the aerial photograph provided at Figure 21.



Source: Nearmap

*Figure 21: Noone Street / Gray Street / Trenerry Crescent - Aerial Photograph*

### 7.5.1. Summary of Key Issues and Constraints

The intersection of Noone Street / Gray Street / Trenerry Crescent experiences a high traffic demand, with both Trenerry Crescent and Gray Street accommodating over 4,500vpd each. In addition, a high volume of pedestrian crossing movements was recorded across all four (4) legs of the intersection, with a peak of 101 crossing movements in the AM peak (4 legs).

Community concerns raised at the intersection related to the difficulty crossing the road due to the high volume of traffic and driver confusion around intersection priority. Site inspections also confirmed poor compliance with the 'Stop' sign on the eastern approach to the intersection and the high volume of turning movements. Sight inspections also confirmed that the sight distance for a pedestrian attempting to cross from the south-east corner of the intersection to the north-east corner is very poor, as shown in Figure 22.





*Figure 22: Noone Street / Gray Street / Trenerry Crescent - Poor Pedestrian Crossing Sight Distance*

In view of the above, we note that pedestrian crossing safety is a key issue at this location. Intersection clarity is also an issue that has been considered.

### **7.5.2. Draft Treatment Proposal – For Community Consultation – Option A**

To improve pedestrian safety, raised pedestrian and cyclist priority crossing is proposed on Gray Street on the north leg of the intersection. A pedestrian and cyclist priority crossing will also be installed on the west approach with a road hump on the Noone Street approach to slow traffic. The pedestrian crossing on the eastern leg of the intersection is proposed to be removed, given the poor sight distance as highlighted in Figure 22.

A short section of shared path would be constructed to link the Merri Creek Trail with Gray Street and Noone Street, with multiple access points for on road cyclists provided. Improved bicycle lanes with green paint are also proposed through the intersection to improve cyclist safety.

The stop sign on Trenerry Crescent would be removed, with Trenerry Crescent / Noone Street considered as a continuing road with traffic exiting Gray Street or Alexandra Parade East required to give way. Vehicles turning right into Gray Street from Trenerry Crescent will need to give way to through traffic as indicated by the linemarking arrangements.

#### **Evaluation**

The proposal is expected to improve the safety of pedestrians crossing at the intersection by providing priority, noting this may lead to increased delays for motorists at the intersection.

The traffic calming measures (road humps and raised crossing) are expected to reduce vehicle speeds through the intersection, reduce the potential for a collision to occur and improve cyclist experience on road.



It is noted that the proposed pedestrian priority crossings are likely to result in small traffic delays, as vehicles would be required to wait for pedestrian to cross.

### 7.5.3. Draft Treatment Proposal – For Community Consultation – Option B

A secondary treatment option has been prepared for this location, with one (1) key difference to Option A. Option B proposes to reverse the one way traffic flow arrangement on Alexandra Parade East at the intersection, such that vehicles are permitted to only travel southbound.

This arrangement will reduce the number of approaches to the intersection, and still permit cyclists to travel in both directions.

## 7.6. Location 6 – Trenerry Crescent between Gray Street and Maugie Street

The subject section of Trenerry Crescent (Location 6) is between Gray Street and Maugie Street, with a focus on the underpass of the Eastern Freeway and the Dights Falls carpark access. Location 6 is located along the Trenerry Crescent Road Corridor, adjacent the Eastern Freeway, as shown in the aerial photograph provided at Figure 23.



Source: Nearmap

Figure 23: Trenerry Crescent between Gray Street and Maugie Street - Aerial Photograph

### 7.6.1. Summary of Key Issues and Constraints

Trenerry Crescent accommodates a high volume of traffic (4,500vpd), and it is evident that the corridor is used by a large volume of people to travel between Clifton Hill and North Abbotsford, potentially to avoid congestion and delays at other locations on the road network. The subject



section of Trenerry Crescent accommodates over 300 cyclist movements a day, however the road does not present as a 'safe cycle route' given the poor condition of bicycle lanes and narrow carriageway width at 7.5m.

Additionally, the pedestrian footpath on the east side of Trenerry Crescent that connects the Merri Creek Trail with the Main Yarra Trail is constrained (1.4m wide) and prohibits bicycles, as shown in Figure 24 and Figure 25.



Figure 24: Trenerry Crescent Underpass - View North



Figure 25: Trenerry Crescent Underpass - View South

Site inspections confirmed the existing speed cushions are ineffective at slowing vehicle speeds, particularly for larger cars.

## 7.6.2. Draft Treatment Proposal – For Community Consultation – Option A

Given that Trenerry Crescent has a limited carriageway width, it is proposed to provide cyclist with a 1.5m wide bicycle lane in the uphill direction only, when bicycle speeds are slowest. In the downhill direction, bicycle speeds would be higher and more consistent with traffic and thus cyclists would be able to more effectively share the road with vehicle traffic. This results in a transition of bicycle lane provision as Trenerry Crescent's gradient changes, with bicycle lanes provided in each direction at the point where bicycle speeds begin to slow. The existing speed cushions would be removed, and replaced with watts profile humps as they are more effective at slowing vehicles.

Additional signage would be installed to inform cyclists of an alternate off-road cycling route to Trenerry Crescent via the Main Yarra Trail / Dights Falls. This alternate route will connect to the Dights Falls Carpark, where it is proposed to extend the shared path to connect with Trenerry Crescent. A traffic island and watts profile road humps would be used to improve safety and access for cyclists transitioning to/from Trenerry Crescent and the alternate off-road cycle route.

### Evaluation

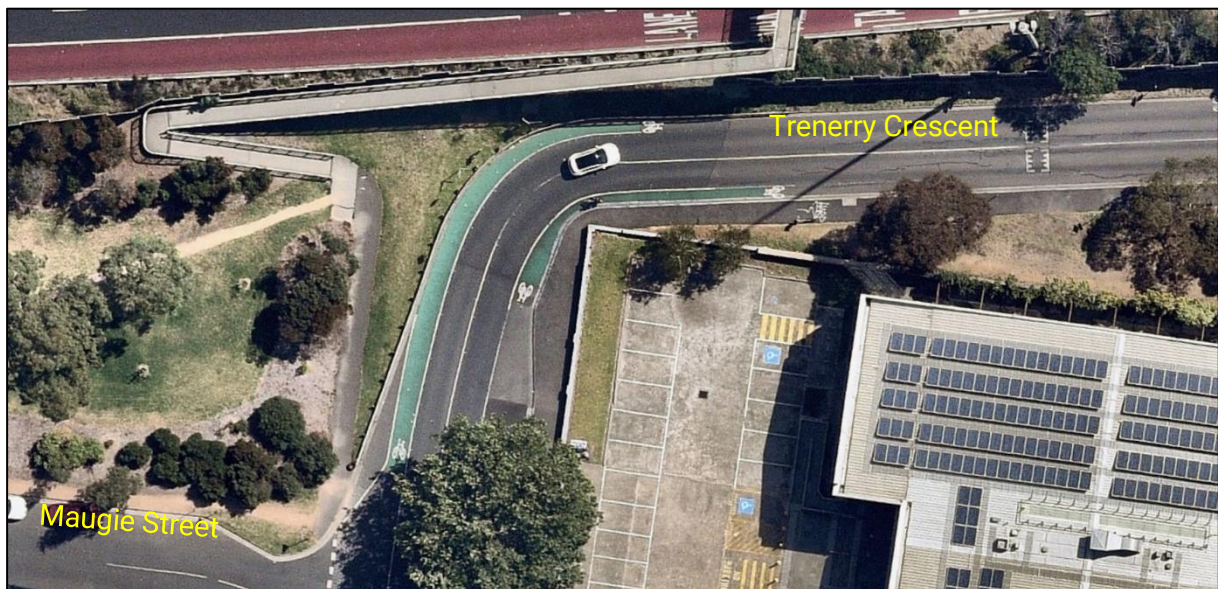
The proposal will improve safety for cyclists, both through the provision of safer cycling facilities, an alternate route and slower vehicle speeds. It is expected that the slower vehicle speeds will result in some delays to motorists, and the additional speed humps (in conjunction with the following proposals) may deter vehicles from using Trenerry Crescent as an alternate to Hoddle Street.

### 7.6.3. Draft Treatment Proposal – For Community Consultation – Option B

A secondary treatment option has been prepared for this location, with one (1) key different to Option A. Option B proposes to provide a shared path on the east side of Trenerry Crescent to connect the Merri Creek Trail with the Main Yarra Trail. Given this option would need to take the form of a cantilevered boardwalk and would be costly, Council will advocate for funding for the proposal to provide a shared path at this location with other levels of Government.

## 7.7. Location 7 – Trenerry Crescent at Maugie Street

Trenerry Crescent forms a sharp 90 degree bend adjacent Maugie Street and south of the Eastern Freeway as shown in the aerial photograph provided at Figure 26.



Source: Nearmap

Figure 26: Trenerry Crescent at Maugie Street - Aerial Photograph

### 7.7.1. Summary of Key Issues and Constraints

The tight geometry of Trenerry Crescent, as a result of the limited space between the Eastern Freeway and the adjacent property (#126 Trenerry Crescent), results in a poorly navigated corner of concern, given the high traffic volumes on Trenerry Crescent.

It is noted that the southbound bicycle lane is so narrow on the inside of the curve, that cyclists struggle to remain within the lane, whilst vehicles regularly 'cut the corner' and encroach into the bicycle lane.

Site inspections confirmed that a large number of vehicles negotiating the bend failed to remain within their lane, with southbound vehicles often yielding to northbound vehicles as they travel around the bend.

### **7.7.2. Draft Treatment Proposal – For Community Consultation**

Whilst the alignment of the bend in Trenerry Crescent is unable to be altered, road space would be relocated to provide for two (2) 3.5m wide traffic lanes with a painted 600mm separator. Physical traffic islands are proposed on the approaches to the bend to encourage vehicles to align themselves correctly within the lane and reduce the likelihood of vehicles encroaching into the opposing lane.

Cyclists would be encouraged to share the space with vehicles and position themselves such that vehicles do not attempt to overtake them around the corner, with road humps to slow traffic on approach so that this can occur more safely.

Signage indicating an alternate off road cycling is available would be provided on Maugie Street, noting that Maugie Street provides a connection to the Hoddle Street shared path that then connects to Alexandra Parade East.

#### **Evaluation**

The proposal will reduce the likelihood of a collision between vehicles as a result of a northbound vehicle encroaching into the southbound lane. Given that the southbound bicycle lane is too narrow for cyclists to remain in the lane, and vehicles were regularly encroaching into the bicycle lane, the proposal is expected to improve safety for cyclists traveling southbound.

Conversely, the removal of the northbound bicycle lane forces cyclists to share with traffic, when previously they were able to travel separate of traffic.

### **7.8. Location 8 – Pedestrian Overpass of Eastern Freeway**

A pedestrian overpass is provided over the Eastern Freeway adjacent Location 7, and provides a connect between Trenerry Crescent / Maugie Street and Alexandra Parade East, as shown in the aerial photograph provided at Figure 27.





Source: Nearmap

*Figure 27: Pedestrian Overpass of Eastern Freeway - Aerial Photograph*

### 7.8.1. Summary of Key Issues and Constraints

The pedestrian overpass is 1.9m wide and not signed as a shared path, however cyclists are regularly observed riding along the overpass, with surveys previously undertaken recording 62 cyclist movements and 169 pedestrian movements over six (6) hours. The conflict between pedestrians and cyclists at this narrow overpass is less than ideal, and community feedback was also received to that effect.

It is noted that cyclists over the age of 13 are not permitted to travel along a footpath unless signed as a shared path.

### 7.8.2. Draft Treatment Proposal – For Community Consultation

It is proposed to install signage to encourage cyclists to dismount and walk their bike, with warning signage indicating that the bridge is narrow.

It is noted that Council could advocate for Victoria Police to enforce the law in relation to cyclists using the footpath, should compliance remain an issue.

### Evaluation

The proposal is expected to encourage some cyclists to dismount and walk their bike along the overpass, however we expect that non compliance will continue to be an issue.

As noted, Council could advocate for enforcement action and we recommend that Council monitor compliance following implementation.

## 7.9. Location 9 – Trenerry Crescent / Abbott Street

The intersection of Abbott Street (local road) and Trenerry Crescent (local road) is a roundabout along the Trenerry Crescent Corridor as shown in the aerial photograph provided at Figure 28.



Source: Nearmap

Figure 28: Trenerry Crescent / Abbott Street – Aerial Photograph

### 7.9.1. Summary of Key Issues and Constraints

The roundabout of Trenerry Crescent / Abbott Street, in conjunction with the roundabout of Trenerry Crescent / Turner Street, were identified as key pinch points for cyclists due to the bicycle lane arrangements on the north and south approaches. The existing bicycle lane extends through to the roundabout give way lines, however does not continue through the roundabout. Due to the narrow circulating width, the bicycle lane arrangement misleads cyclists and motorists into believing there is sufficient space for motorists to pass cyclists in the roundabout rather than sharing the available space through the roundabout.



Additionally, the high volume of traffic along Trenerry Crescent makes it difficult for pedestrians to cross the road at the intersection, and the lack of a pedestrian facility on the north approach of the roundabout makes pedestrians vulnerable.

### **7.9.2. Draft Treatment Proposal – For Community Consultation**

The proposal seeks to encourage cyclists to share the space and take a dominant positioning through the roundabout by terminating the bicycle lane in advance of the approach. To encourage this to occur, signage and linemarking would be provided signifying this arrangement with speed humps on approach to slow vehicles.

Pedestrian (zebra) crossings are proposed on all approaches to provide for pedestrian priority, with the traffic island on the north approach to be reinstated.

#### **Evaluation**

The proposed arrangement to encourage cyclists and vehicles to share road space will reduce the cyclist / vehicle conflict at the roundabout and improve cyclist safety.

We note that the 'share the space' arrangement is subject to cyclists electing to position themselves such to claim the lane, and relies on motorists being patient for a short distance.

The proposed pedestrian (zebra) crossings will significantly improve the experience and safety of pedestrians crossing Abbot Street and Trenerry Crescent at the roundabout. We note that vehicles giving way to pedestrians will introduce small traffic delays when compared to the existing arrangement.

### **7.10. Location 10 – Trenerry Crescent Pedestrian Crossing adjacent Bath Street**

A pedestrian (zebra) crossing of Trenerry Crescent is provided adjacent Bath Street / Victoria Park, along the Trenerry Crescent Road Corridor, with an aerial photograph provided in Figure 29.



Source: Nearmap

Figure 29: Trenerly Crescent Pedestrian Crossing adjacent Bath Street - Aerial Crossing

#### 7.10.1. Summary of Key Issues and Constraints

Consistent community feedback was received that vehicles often do not give way to pedestrians, and approach the crossing at speed. Feedback was also received that pedestrian / cyclist movements conflict at the crossing with priority unclear.

Site inspections revealed that speed cushions have been improperly installed on the departure side of the crossing. Site observations also confirmed that all cyclists turning into Bath Street utilise the central turn lane provided, and do not use the hook turn arrangement on the northwest side of the road.



Figure 30: View from Bath Street to Trenerry Crescent



Figure 31: Trenerry Crescent - View East

### 7.10.2. Draft Treatment Proposal – For Community Consultation

Raising of the existing pedestrian (zebra) crossing is to be considered, with the speed cushions provided on the departure side of the crossing to be relocated to the approach side to effectively slow vehicles on approach to the crossing. The 'cut through' shared section that connects Trenerry Crescent with Bath Street is proposed to be widened to 3.0m to provide more space to be shared.

#### Evaluation

The relocation of the speed cushions to the correct side of the pedestrian (zebra) crossing will effectively slow vehicles on approach to the crossing and should improve driver compliance with the crossing.

### 7.11. Location 11 – Trenerry Crescent / Turner Street

The intersection of Abbott Street (local road) and Trenerry Crescent (local road) is a roundabout along the Trenerry Crescent Road Corridor as shown in the aerial photograph provided at Figure 32.





Source: Nearmap

*Figure 32: Trenerry Crescent / Turner Street - Aerial Photograph*

### 7.11.1. Summary of Key Issues and Constraints

The roundabout of Trenerry Crescent / Turner Street has been identified as a key pinch point for cyclists due to the bicycle lane arrangements on the north and south approaches. The existing bicycle lane extends through to the roundabout give way lines, however does not continue through the roundabout. Due to the narrow circulating width, the bicycle lane arrangement misleads cyclists and motorists into believing there is sufficient space for motorists to pass cyclists in the roundabout rather than sharing the available space through the roundabout.

Additionally, the high volume of traffic along Trenerry Crescent makes it difficult for pedestrians to cross the road at the intersection, with community feedback received confirming the poor pedestrian experience at the roundabout.

### 7.11.2. Draft Treatment Proposal – For Community Consultation

The proposal seeks to encourage cyclists to share the space and take a dominant positioning through the roundabout by terminating the bicycle lane in advance of the approach. To encourage this to occur, signage and linemarking would be provided signifying this arrangement with speed humps on approach to slow vehicles.

Pedestrian (zebra) crossings are proposed on all approaches to provide for pedestrian priority, with the traffic island on the north approach to be reinstated.



## Evaluation

The proposed arrangement to encourage cyclists and vehicles to share road space will reduce the pedestrian / vehicle conflict at the roundabout and improve cyclist safety.

We note that the 'share the space' arrangement is subject to cyclists electing to position themselves such to dominate the lane, and relies on motorists being patient for a short distance.

The proposed pedestrian (zebra) crossings will significantly improve the experience and safety of pedestrians crossing Turner Street and Trenerry Crescent at the roundabout. We note that vehicles giving way to pedestrians will introduce small traffic delays when compared to the existing arrangement.

### 7.12. Location 12 – Turner Street between Lulie Street to Trenerry Crescent

Turner Street is a local road that extends east west between Lulie Street in the west and Trenerry Crescent in the east. Turner Street is subject to a posted speed limit of 40km/h. An aerial of Turner Street is provided at Figure 33.



Source: Nearmap

Figure 33: Turner Street between Lulie Street and Trenerry Crescent - Aerial Photograph

#### 7.12.1. Summary of Key Issues and Constraints

Traffic surveys undertaken along Turner Street recorded an 85<sup>th</sup> percentile speed of 48.7km/h (in a 40km/h zone), which is a clear indication that vehicle speeds are an issue. Community feedback received also related to speeding vehicles along Turner Street.

It is noted that Turner Street provides a 13.9m wide carriageway, and the generous trafficable width may be a factor in the high vehicle speeds recorded.

### 7.12.2. Draft Treatment Proposal – For Community Consultation

To reduce vehicle speeds along Turner Street, Watts profile road humps are proposed with approximately 50-60m spacing to achieve a target operating speed of 30 to 40km/h. Additional line marking would be installed to clearly define the parking and traffic lanes on Turner Street between Lulie Street and Trenerry Crescent.

Between Bath Street and Trenerry Crescent, a 2.4m wide painted median would be provided to reduce the traffic lanes to 3.5m width. There is the potential of street tree planting in the central median, though this is subject to further investigation by Council.

#### Evaluation

Watts profile road humps are a very effective device at reducing vehicle speeds, and it is expected that the proposal will ensure vehicle speeds are reduced to a safer level along Turner Street.

We note that road humps will increase traffic noise along Turner Street to an extent.

The painted / tree median will also help moderate vehicle speeds along Turner Street and assist cyclists in sharing the road space and riding in a dominant position to do so.

### 7.13. Location 16 – Roseneath Street / Field Street

The bend in the road where Field Street meets Roseneath Street is located to the east of the Road Safety Study Corridor, and an aerial photograph is provided at Figure 34.



Source: Nearmap

Figure 34: Roseneath Street / Field Street – Aerial Photograph



### 7.13.1. Summary of Key Issues and Constraints

A pedestrian crossing at this location is located adjacent to a sharp, 90 degree bend in the road which provides poor sight lines for pedestrians to cross safely. Community feedback was also received confirming the difficulty for pedestrians crossing at this location and concerns around vehicle speeds.

### 7.13.2. Draft Treatment Proposal – For Community Consultation

Speed cushions are proposed on the approaches to the bend, to reduce vehicle speeds and improve pedestrian crossing safety.

#### Evaluation

The road humps will effectively slow vehicle speeds in the vicinity of the bend, and improve vehicle safety around the sharp bend in general. Furthermore the reduced vehicle speeds will improve pedestrian crossing safety, noting however that the pedestrian crossing sight lines are still less than desirable.

It is noted that the works proposed will result in the loss of one (1) on-street parking space.

## 7.14. Location 17 – Johnston Street – Lulie Street to Trenerry Crescent

Johnston Street is an arterial road at the southern extent of the Road Safety Study Corridor, with the subject section focussed between Lulie Street and Trenerry Crescent, as shown in the aerial photograph provided at Figure 35.



Source: Nearmap

Figure 35: Johnston Street between Lulie Street and Trenerry Crescent - Aerial Photograph

### 7.14.1. Summary of Key Issues and Constraints

Multiple issues were identified along the Johnston Street corridor, primarily at the intersections of:

- Lulie Street / Johnston Street,

- Rich Street / Johnston Street, and
- Trenerry Crescent / Johnston Street.

### **Lulie Street / Johnston Street**

The intersection of Lulie Street / Johnston Street is an unsignalised T intersection, with traffic exiting Lulie Street controlled by a 'give way' sign. A high volume of turning movements have been recorded at this intersection in the peak periods, and site observations confirm the high demand on turning movements exiting Lulie Street.

Pedestrians crossing Lulie Street at Johnston Street are exposed to turning movements, with a long crossing distance of approximately 13m. Community feedback received referred to the lack of protection for cyclists and pedestrians from the high number of vehicle movements at this intersection.

Three (3) crashes have been recorded at this intersection in the 5-year reference period, although it is noted there is not a clear and emerging pattern.

### **Rich Street / Johnston Street**

The intersection of Rich Street / Johnston Street is an unsignalised T intersection, with traffic exiting Lulie Street controlled by a 'stop' sign. A right turn ban from Rich Street to Johnston Street is in effect from 4:30pm to 6:30pm, Monday to Friday.

Community feedback received referred to the lack of protection for cyclists from vehicle movements at this intersection, and conflict between pedestrians and cyclists on the footpath.

One (1) crash has been recorded at this intersection in the 5-year reference period, involving a rear end collision between two (2) vehicles.

### **Trenerry Crescent / Johnston Street**

The intersection of Trenerry Crescent / Johnston Street is an unsignalised T intersection, with traffic exiting Trenerry Crescent controlled by a 'give way' sign. A high volume of turning movements have been recorded at this intersection in the peak periods, and site observations confirm the high demand on turning movements exiting and entering Trenerry Crescent Street.

Whilst a left turn ban into Trenerry Crescent is in effect in the PM peak, nearly 200 vehicles were recorded in one (1) hour disregarding the left turn ban.

Four (4) crashes have been recorded at this intersection in the 5-year reference period, with a clear crash pattern relating to right turn movements and poor gap selection.

Community feedback received referred to the lack of protection for cyclists and pedestrians from the high number of vehicle movements at this intersection, and the lack of a safe crossing facility to the bus stops adjacent the intersection on the south side of Johnston Street.

### **7.14.2. Draft Treatment Proposal – For Community Consultation**

Council will advocate to the Department of Transport (DoT) for a road safety review of the Johnston Street corridor. This will include advocacy for a safer intersection arrangement at Trenerry Crescent and safer pedestrian crossing outcomes at Rich Street and Lulie Street.



We recommend that Council consult with DoT to determine if funding is available through the Federal Blackspot Program or other DoT programs to conduct a road safety review focussed on Johnston Street, noting that DoT is the responsible road authority for Johnston Street.

## 8. Community Consultation - Stage 2

The City of Yarra conducted a second stage of Community Consultation between 10 June 2022 and 11 July 2022. The community consultation was informed by the concept treatments outlined above, with supporting plans prepared by Traffix Group, provided and available for viewing online.

Feedback received by Council including online submissions, email and in person consultation sessions held on Wednesday, 29<sup>th</sup> June and Thursday, 30<sup>th</sup> June 2022. The in-person consultation sessions were hosted by Council and attended by representatives of Traffix Group.

A summary of the feedback received is provided in Table 2.

Table 2: Community Consultation Summary – Stage 2

Location	Support	Opposition	Unsure	General Commentary
1	45%	34%	22%	Higher support for partially controlled right turn over fully controlled right turn
2	58%	31%	11%	Support for improved safety Concern for redistribution of traffic (relating more to Location 3)
3	27%	65%	8%	Strong opposition due to concerns about the redistribution of traffic – primarily to Field Street and Aitken Street Support primarily from pedestrian and cyclist user groups
4	50%	39%	11%	Confirmation of difficultly crossing road and support for proposal Opposition to loss of parking.
5	53%	24%	22%	Confirmation of difficultly crossing road for pedestrians and cyclists and support for proposal
6	59%	27%	14%	Very high support for Ultimate Option (Shared Path) Support for interim option Cyclists hold concerns around reclaiming the traffic lane
7	48%	31%	21%	Strong support for road widening Preference for bicycles to be separated from vehicles
8	45%	29%	27%	Concerns around lack of enforcement Requests to upgrade bridge
9	51%	27%	22%	Support for improved pedestrian crossing facilities

Location	Support	Opposition	Unsure	General Commentary
				Cyclists hold concerns around reclaiming the lane
10	53%	23%	25%	Preference for a raised crossing
11	50%	28%	23%	Support for improved pedestrian crossing facilities Cyclists hold concerns around reclaiming the lane
12	50%	28%	23%	Support for speed calming, planting and improvements at Lulie St / Turner St intersection
16	57%	30%	13%	Requests for formal pedestrian crossing Requests to consider Ramsden St / Field St bend
17	63%	15%	23%	High Support for Road Safety Review Opposition to loss of parking

A more detailed summary of the Stage 2 community consultation findings are provided at Appendix E.

## 9. Development of Final Concept Treatments - Stage 3

The feedback received from Stage 2 of Community Consultation was considered and in consultation and following workshops with Council officers, the final Road Safety Plan, including supporting concept treatment plans were prepared and are provided at Appendix F (Issue H).

An overview is provided at Figure 36.

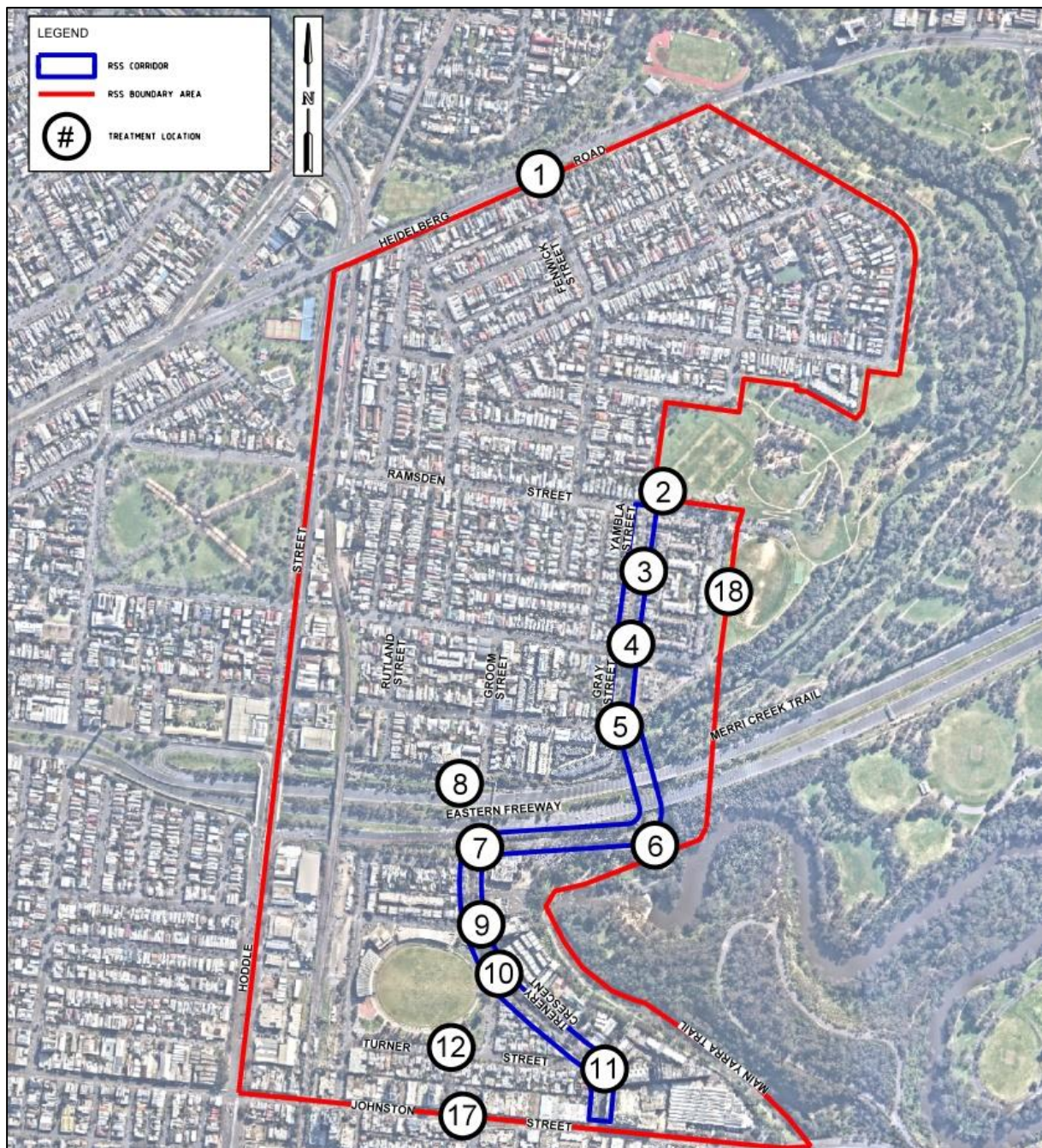


Figure 36: Final Road Safety Plan - Overview

A summary of the key changes to the proposals, as a result of the above, is provided in the following sections. Locations not listed below were not fundamentally altered between Stages 2 and 3, and include:

- Location 1 – Heidelberg Road / Fenwick Street (subject to DoT)
- Location 2 – Ramsden Street / Yambla Street
- Location 4 – Roseneath Street / Yambla Street / Gray Street



- Location 8 – Pedestrian Overpass of Eastern Freeway
- Location 17 – Johnston Street – Lulie Street to Trenerry Crescent

### 9.1. Location 3 – Yambla Street

The Stage 2 Community Consultation feedback indicated a strong opposition to the proposed treatment for Yambla Street and widespread community concern. The concept treatment plan set has been updated to include an Option B for Yambla Street. Option B retains the existing traffic arrangements along Yambla Street in connection with the treatments at Yambla Street / Ramsden Street (Location 2) and Yambla Street / Roseneath Street (Location 4) and is effectively a 'do nothing' approach.

We note that the proposed treatment for Location 3 does have merit in addressing road safety issues, primarily for cyclists, along Yambla Street despite the significant community opposition. On balance however, the additional traffic that may be displaced to Field Street may exacerbate issues at Location 18 and 'cancel out' the net benefit to road safety in the local area.

### 9.2. Location 5 – Noone Street / Gray Street / Trenerry Crescent

Following consultation with the community and Council, the Option B proposal for Location 5 has been **removed**. Option B proposed to change the direction of traffic on the south approach (Gray Street / Alexandra Parade East) to the intersection from its existing northbound only restriction to southbound only.

We note that the Option B proposal, to change the traffic direction on the south approach, has little Road Safety Merit given that the south approach is not a key contributor to the existing issues at the intersection.

Other changes to the proposal include a focus on encouraging cyclists to 'share the space' through the intersection, rather than divert cyclists off-road prior to the intersection to then re-enter the road on the departure side. The pedestrian priority crossing on the western leg of the intersection has also been removed from the proposal to address concerns around driver confusion.

### 9.3. Locations 6, 7, 9, 11 and 12

Noting that concerns are held by cyclists around reclaiming the lane as featured in a number of the proposals, additional messaging through signage and linemarking has been included around the sharing of road space between cyclists and motorists at these locations. Examples are provided at Figure 37 and Figure 38.



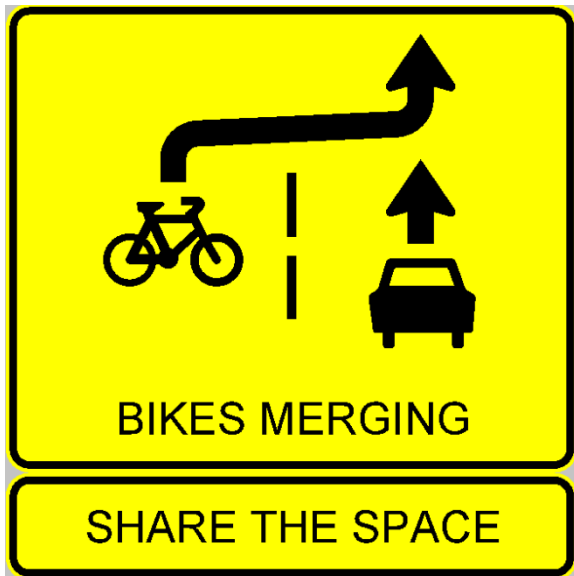


Figure 37: 'Share the Space' Signage

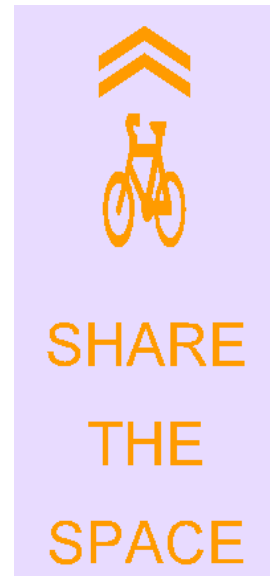


Figure 38: 'Share the Space' Linemarking

#### 9.4. Location 10 – Trenerry Crescent Pedestrian Crossing adjacent Bath Street

To improve the effectiveness of the proposed treatment, the pedestrian (zebra) crossing on Trenerry Crescent would be raised. This will more effectively slow vehicles on approach, improve visibility of crossing pedestrians and improve compliance with the zebra crossing. The raising of the crossing also directly responds to community feedback requesting such a change.

#### 9.5. Location 12 - Turner Street

In addition to the changes outlined in Section 9.3 above, a raised pedestrian crossing (zebra) has been included in the proposal, to primarily accommodate pedestrians at the southeastern entry / exit to Victoria Park. The number of road humps proposed along Turner Street has also been reduced, and the spacing of each hump increased as a result, noting that the raised pedestrian crossing will also reduce vehicle speeds along Turner Street.

#### 9.6. Location 16 – Roseneath Street / Field Street, now Location 18 - Field Street

Strong community feedback was received around the lack of a formal pedestrian crossing at this location, and the need to also consider the bend at Field Street / Ramsden Street. There was also considerable concern around the impacts of other proposed treatments on Field Street and the potential for an increase in traffic utilising Field Street.

In view of the above, Field Street, between Roseneath Street and Ramsden Street (now called Location 18), should now be the subject of its own road safety study following the implementation of other proposals. This would allow for any potential changes to traffic

conditions to be accounted for, following their implementation. The review will also consider pedestrian crossing safety at each location and potential treatments to improve safety.

## 10. Recommendations

We recommend that Council further develop the above proposals to a functional / detailed design stage and implement the treatments in order to improve road safety for all users throughout the study area. We note that Council will need time to develop each proposal and it is likely that implementation will need to be funded over a number of years.

Given that it is unlikely Council has the capacity to implement all treatments simultaneously, we recommend that the treatments are prioritised as follows:

### 10.1. High Priority

- Location 1 – Heidelberg Road / Fenwick Street (subject to DoT)
- Location 2 – Ramsden Street / Yambla Street
- Location 4 – Roseneath Street / Yambla Street / Gray Street
- Location 5 – Noone Street / Gray Street / Trenerry Crescent
- Location 6 – Trenerry Crescent between Gray Street and Maugie Street
- Location 7 – Trenerry Crescent at Maugie Street
- Location 17 – Johnston Street – Lulie Street to Trenerry Crescent

### 10.2. Medium Priority

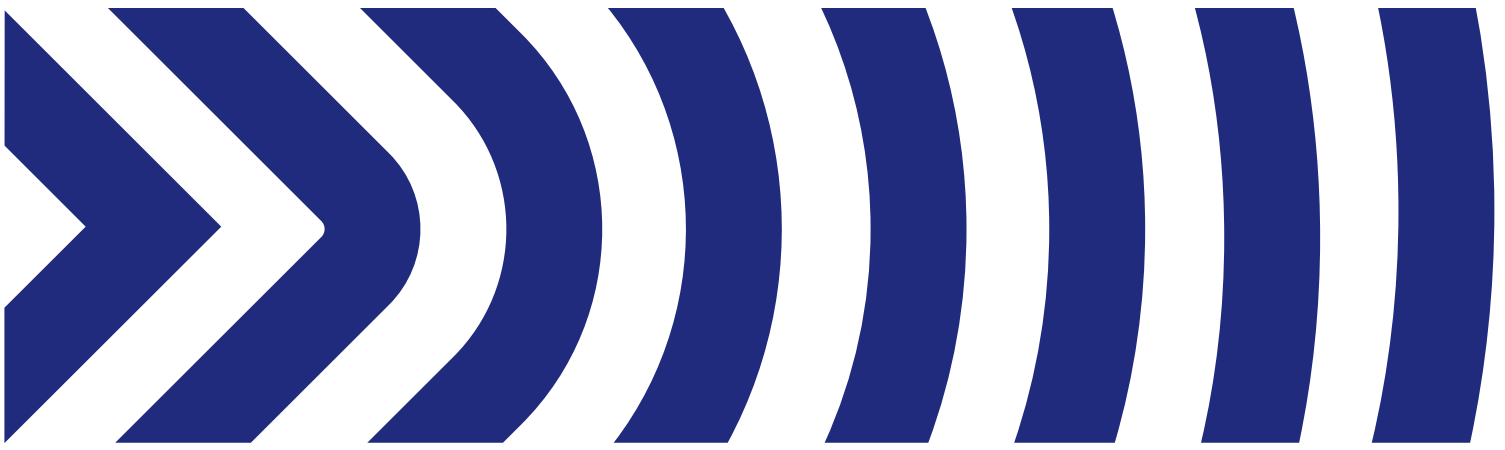
- Location 9 – Trenerry Crescent / Abbott Street
- Location 10 – Trenerry Crescent Pedestrian Crossing adjacent Bath Street
- Location 11 – Trenerry Crescent / Turner Street
- Location 12 – Turner Street between Lulie Street to Trenerry Crescent

### 10.3. Low Priority

- Location 18 – Field Street
- Location 8 – Pedestrian Overpass of Eastern Freeway

### 10.4. Not Recommended

Noting the significant community opposition and potential to redistribute traffic, we do not recommend Council implement the proposed treatment at Location 3 – Yambla Street at this time, as noted in Section 9.1.



# Appendix A

## Traffic Survey Results

Tube Count Analysis																						
Tube Counter No.1	Street	Date of Count Data (mm/yy)	Daily Volume (veh/day)			Average Speed (km/h)	85th %ile (km/h)	95th %ile (km/h)	Speed Limit	% Heavy Vehicles	AM Peak 8:00						PM Peak 17:00					
			N/E	S/W	Total						N/E	Ratio	S/W	Ratio	Combined	Ratio	N/E	Ratio	S/W	Ratio	Combined	Ratio
1	Yambla Street - b/w Ramsden Street and Caroline Street	12/21	1,024	85	1,109	35.0	42.8	47.2	40.0	5.9%	67	6.5%	18	21.2%	85	7.7%	130	12.7%	7	8.2%	137	12.4%
2	Ramsden Street - b/w Fenwick Street and Yambla Street	02/22	1,085	976	2,061	32.7	38.7	41.9	40.0	4.0%	138	12.7%	77	7.9%	215	10.4%	86	7.9%	95	9.7%	182	8.8%
3	Ramsden Street - b/w Yambla Street and Field Street	12/21	1,193	315	1,508	34.9	42.5	46.8	40.0	3.7%	123	10.3%	17	5.4%	139	9.2%	101	8.5%	23	7.3%	123	8.2%
4	Field Street - b/w William Street and Louise Street	12/21	278	1,090	1,368	32.4	38.9	42.9	40.0	4.9%	17	6.1%	126	11.6%	142	10.4%	24	8.6%	84	7.7%	108	7.9%
5	Yambla Street - b/w Kiewa Street and Ramsden Street	02/22	1,329	31	1,360	29.5	35.4	39.1	40.0	5.5%	112	8.4%	7	22.6%	119	8.8%	175	13.2%	2	6.5%	177	13.0%
6	Roseneath Street - b/w Kiewa Street and Gray Street	12/21	1,988	1,587	3,575	34.4	39.3	42.2	40.0	6.4%	233	11.7%	110	6.9%	342	9.6%	157	7.9%	177	11.2%	322	9.0%
7	Gray Street - b/w Roseneath Street and Noone Street	12/21	2,231	2,583	4,814	36.8	42.6	46.2	40.0	5.4%	312	14.0%	151	5.8%	463	9.6%	181	8.1%	352	13.6%	519	10.8%
8	Noone Street - b/w Groom Street and Gray Street	12/21	532	1,066	1,598	31.4	38.5	42.8	40.0	5.5%	45	8.5%	84	7.9%	130	8.1%	42	7.9%	125	11.7%	167	10.5%
9	Trenerry Crescent - Under Eastern Fwy	02/22	2,734	1,904	4,638	34.2	38.5	40.8	40.0	4.4%	235	8.6%	346	18.2%	581	12.5%	369	13.5%	111	5.8%	480	10.3%
10	Trenerry Crescent - East of Dights Fall Carpark - Bicycles	12/21	113	130	243	24.2	29.3	33.3	40.0	0.0%	19	16.8%	7	5.4%	25	10.3%	8	7.1%	21	16.2%	28	11.5%
11	Trenerry Crescent - East of Dights Fall Carpark	12/21	2,545	3,232	5,778	37.6	43.7	47.8	40.0	4.3%	348	13.7%	199	6.2%	546	9.4%	215	8.4%	450	13.9%	649	11.2%
12	Trenerry Crescent - b/w Federation Lane and Maugie Street	12/21	2,759	2,012	4,771	30.6	35.2	38.2	40.0	4.8%	171	6.2%	247	12.3%	418	8.8%	380	13.8%	170	8.4%	539	11.3%
13	Trenerry Crescent - b/w Federation Lane and Maugie Street - Bicycles	12/21	190	130	319	21.5	26.0	29.0	40.0	0.0%	11	5.8%	29	22.3%	41	12.9%	36	18.9%	8	6.2%	43	13.5%
14	Lulie Street - b/w Turner Street and Abott Street	12/21	1,071	1,038	2,109	32.5	41.8	46.5	40.0	11.4%	79	7.4%	132	12.7%	193	9.2%	96	9.0%	80	7.7%	176	8.3%
15	Turner Street - b/w Lulie Street and Rich Street	12/21	453	407	861	33.9	43.1	48.0	40.0	6.6%	40	8.8%	28	6.9%	68	7.9%	43	9.5%	44	10.8%	87	10.1%
16	Turner Street - b/w Bath Street and Trenerry Crescent	12/21	585	548	1,133	40.4	48.7	53.4	40.0	7.3%	31	5.3%	76	13.9%	107	9.4%	85	14.5%	59	10.8%	144	12.7%
17	Little Turner Street - b/w Rich Street and Trenerry Crescent	12/21	70	95	164	23.5	31.1	35.0	40.0	37.7%	7	10.0%	9	9.5%	15	9.1%	7	10.0%	11	11.6%	17	10.4%
18	Trenerry Crescent - b/w Johnston Street and Turner Street	12/21	3,118	2,567	5,685	28.9	34.9	37.9	40.0	6.8%	204	6.5%	264	10.3%	468	8.2%	351	11.3%	198	7.7%	523	9.2%
19	Abbott Street - b/w Trenerry Crescent and Lulie Street	3/22	635	643	1,278	28.3	37.6	44.3	40.0	4.8%	42	6.6%	125	19.5%	167	13.1%	110	17.3%	58	9.0%	168	13.1%
20	Dwyer Street - b/w Heidelberg Road and Ogrady Street	3/22	436	369	805	31.9	38.2	41.4	40.0	3.2%	47	10.8%	41	11.1%	88	10.9%	43	9.9%	27	7.3%	69	8.6%
21	Fenwick Street - b/w Rose Street and Ogrady Street	3/22	2,235	1,166	3,401	31.3	37.6	41.4	40.0	4.2%	194	8.7%	100	8.6%	294	8.6%	232	10.4%	111	9.6%	343	10.1%
22	Maugie Street - b/w Trenerry Crescent and Lulie Street	3/22	424	361	785	33.6	41.6	46.1	40.0	3.9%	23	5.4%	100	27.6%	122	15.6%	60	14.1%	20	5.5%	80	10.2%
23	Ramsden Street - b/w Lily Street and Berry Street	3/22	1,726	779	2,504	30.0	36.9	41.0	40.0	5.6%	162	9.4%	62	8.0%	225	9.0%	140	8.1%	58	7.4%	194	7.7%
24	Rich Street - b/w Johnston Street and Lt. Turner Street	3/22	705	572	1,277	22.7	28.6	32.8	40.0	10.8%	39	5.5%	94	16.5%	133	10.4%	105	14.9%	50	8.7%	155	12.1%
25	Roseneath Street - b/w Hoddle Street and Gordon Street	3/22	3,064	2,775	5,839	27.8	33.5	36.7	40.0	4.9%	277	9.0%	270	9.7%	547	9.4%	266	8.7%	277	10.0%	543	9.3%
26	The Esplanade - Heidelberg Road and Ogrady Street	3/22	594	634	1,228	31.1	36.2	39.1	40.0	3.5%	46	7.8%	70	11.0%	116	9.5%	67	11.3%	64	10.1%	131	10.7%





# Appendix B

## Crash Stats Data Summary

# DEFINITIONS FOR CLASSIFYING ACCIDENTS

Pedestrian on foot in toy/pram	Vehicles from adjacent directions (intersections only)	Vehicles from opposing directions	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	 HEAD ON (NOT OVERTAKING) 120	 VEHICLES IN SAME LANES REAR END 130	 U TURN 140	 HEAD ON (INCL SIDE SWIPE) 150	 PARKED 160	 OFF CARRIAGWAY TO LEFT 170	 OFF CARRIAGWAY RIGHT BEND 180	 FELL IN/FROM VEHICLE 190
 EMERGING 101	 RIGHT FAR 111	 RIGHT THRU 121	 LEFT REAR 131	 U TURN INTO FIXED OBJECT/PARKED VEHICLE 141	 OUT OF CONTROL 151	 DOUBLE PARKED 161	 LEFT OFF CARRIAGWAY INTO OBJECT/PARKED VEHICLE 171	 OFF RIGHT BEND INTO OBJECT/PARKED VEHICLE 181	 LOAD OR MISSILE STRUCK VEHICLE 191
 FAR SIDE 102	 LEFT FAR 112	 LEFT THRU 122	 RIGHT END 132	 LEAVING PARKING 142	 PULLING OUT 152	 ACCIDENT OR BROKEN DOWN 162	 OFF CARRIAGWAY TO RIGHT 172	 OFF CARRIAGWAY LEFT BEND 182	 STRUCK TRAIN 192
 Playing, working, lying, standing on carriageway 103	 RIGHT NEAR 113	 RIGHT LEFT 123	 VEHICLES IN PARRALLEL LANES LANE SIDE SWIPE 133	 ENTERING PARKING 143	 CUTTING IN 153	 VEHICLE DOOR 163	 RIGHT OFF CARRIAGWAY INTO OBJECT/PARKED VEHICLE 173	 OFF LEFT BEND INTO OBJECT/PARKED VEHICLE 183	 STRUCK RAILWAY CROSSING FURNITURE 193
 WALKING WITH TRAFFIC 104	 TWO RIGHT TURNING 114	 RIGHT RIGHT 124	 LANE CHANGE RIGHT (NOT OVERTAKING) 134	 PARKING VEHICLES ONLY 144	 PULLING OUT - REAR END 154	 PERMANENT OBSTRUCTION ON CARRIAGWAY 164	 OUT OF CONTROL ON CARRIAGWAY 174	 OUT OF CONTROL ON CARRIAGWAY 184	 PARKED CAR RUN AWAY 194
 FACING TRAFFIC 105	 RIGHT/LEFT FAR 115	 LEFT LEFT 125	 LANE CHANGE LEFT 135	 REVERSING 145		 TEMPORARY ROADWORKS 165	 OFF END OF ROAD/ T INTERSECTION 175		
 ON FOOTPATH/ MEDIAN 106	 LEFT NEAR 116		 X'n M/B RIGHT TURN SIDE SWIPE 136	 REVERSING INTO FIXED OBJECT/PARKED VEHICLE 146		 STRUCK OBJECT ON CARRIAGWAY 166			
 DRIVEWAY 107	 RIGHT/LEFT NEAR 117		 X'n M/B 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			 INC BIKES FROM FOOTWAY 148					 DELIBERATE TREE ON CAR OTHER 198
 BOARDING & STRUCK BY SAME THIS INCLUDES WORKING/ PUSHING VEHICLE OTHER PEDESTRIAN 109	 OTHER ADJACENT 119	 OTHER CROSSING 129	 OTHER SAME DIRECTION 139	 OTHER MANOEUVRING 149	 OTHER OVERTAKING 159	 HIT PARKED CAR OPPOSITE SIDE OF ROAD 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 EACH COLUMN AND THEN BY DIAGRAMATIC SUB-DIVISION
2. THE SUB-DIVISION CHOSEN SHOULD BE DESCRIBE THE GENERAL MOVEMENT OF VEHICLES INVOLVED IN THE INITIAL EVENT. IT DOES NOT ASSIGN A CAUSE TO THE ACCIDENT
3. SUPPLEMENTARY CODES HAVE BEEN DEFINED FOR MOST SUB-DIVISION. THESE CODES GIVE FURTHER DETAIL OF THE INITIAL EVENT.
4. THE NUMBER 1, 2 INDENTIFY 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 MOVEMENT (RUM) CODE.

	Accident No.	Location	Date (dd/mm/yyyy)	Day	Time	Severity	Type (DCA Code)	DCA Descriptions	Light	Weather	Surface	Pedestrian	Vehicle 1	Vehicle 2	Vehicle 3	Vehicle 4
Local/Local Intersections	T20190013979	Fenwick Street and Rose Street Intersection	19/08/2017	Saturday	5:30 PM	Other	121	Right Through	Dusk/Dawn	Clear	Unknown	-	SE	NE (B)		
	T20200015462	Spensley Street 77m W from Dwyer Street	20/08/2020	Thursday	12:00 PM	Other	142	Leaving Parking	Day	Clear	Dry	-				
	T20160023564	The Esplanade 145m SE from Spensley Street	31/10/2016	Monday	4:30 PM	Other	106	On Footpath Median	Day	Clear	Dry	-				
	T20200009065	Ramsden Street and Grant Street Intersection	27/04/2020	Monday	3:47 PM	Other	121	Right Through	Day	Clear	Dry	-				
	T20170014124	Ramsden Street 22m E from Clifton Avenue	21/07/2017	Friday	8:50 AM	Other	161	Double Parked	Day	Fog	Dry	Pedestrian	E	E	E	
	T20180018218	Ramsden Street and Yambla Street Intersection	25/09/2018	Tuesday	4:50 PM	Other	110	Cross Traffic	Unknown	Not known	Unknown	-	E (B)	N		
	T20170004765		9/03/2017	Thursday	8:10 AM	Other	110	Cross Traffic	Day	Clear	Dry	-	N	E (B)		
	T20200020747	Roseneath Street 8m E from Hoddle Street	21/11/2020	Saturday	8:50 PM	Other	110	Cross Traffic	Dark Street lights on	Clear	Dry	-				
		Roseneath Street and Gray Street Intersection	4/07/2018	Wednesday	4:30 PM	Other	110	Cross Traffic	Day	Clear	Dry	-	N	E (B)		
	T20190006363	Groom Street and Yarrabing Lane Intersection	4/04/2019	Thursday	9:01 AM	Other	102	Far Side	Day	Clear	Dry	Pedestrian	E			
	T20180012656	Noone Streete and Rutland Street Intersection	6/07/2018	Friday	11:00 AM	Serious	102	Far Side	Day	Clear	Dry	Pedestrian	W			
	T20180016166	Trenerry Crescent 68m S from Eastern Freeway	27/08/2018	Monday	9:00 AM	Other	120	Head on (not overtaking)	Day	Clear	Dry	Pedestrian	NE	SW		
	T20160014782	Trenerry Crescent 7m NW from Bath Street	6/07/2016	Wednesday	6:05 PM	Other	143	Entering Parking	Dark Street lights on	Clear	Wet	-	NW	NW (B)		
	T20190005284	Trenerry Crescent 59m NW from Turner Street	20/03/2019	Wednesday	8:40 AM	Other	121	Right Through	Day	Clear	Wet	-	S (B)	E		
Local/Arterial Intersections	T20190014085	Abbott Street 86m E from Trenerry Crescent	29/07/2019	Monday	9:15 AM	Other	171	Left off Carriageway into Object/Parked Vehicle	Day	Clear	Dry	-	W			
	T20160023167	Little Turner Street 71m E from Rich Street	26/10/2016	Wednesday	11:50 AM	Other	100	Near Side	Day	Clear	Dry	Pedestrian	E			
	T20190007330	Heidelberg Road and Dwyer Street Intersection	12/04/2019	Friday	7:00 PM	Other	135	Lane Change Left	Dusk/Dawn	Clear	Dry	-	SW	W (B)		
	T20200011535	Heidelberg Road and Fenwick Street Intersection	26/05/2020	Tuesday	7:20 PM	Other	130	Rear End - Vehicles in same lane	Dark Street lights on	Clear	Dry	-	NE	NE	NE	
	T20190024413		3/12/2019	Tuesday	2:00 PM	Other	111	Right Far	Day	Clear	Unknown	-	NE	N		
	T20180017248		4/09/2018	Tuesday	8:23 PM	Other	130	Rear End - Vehicles in same lane	Dark Street lights on	Clear	Dry	-	NE	NE		
	T20180016810		5/09/2018	Wednesday	2:45 PM	Serious	121	Right Through	Day	Clear	Dry	-	NE	SW		
	T20180009542		3/05/2018	Thursday	8:13 AM	Other	121	Right Through	Day	Clear	Dry	-	NE	SW (B)		
	T20160015159		12/07/2016	Tuesday	7:56 AM	Other	121	Right Through	Day	Clear	Dry	-	E	W		
	T20200010744	Hoddle Street and North Terrace (Ramsden) Intersection	4/06/2020	Thursday	6:55 AM	Serious	102	Far Side	Dusk/Dawn	Clear	Dry	Pedestrian	S			
	T20190026212		23/12/2019	Monday	1:15 PM	Other	121	Right Through	Day	Clear	Dry	-	S	W (B)		
	T20190016411		28/08/2019	Wednesday	6:16 PM	Other	102	Far Side	Dark Street lights on	Raining	Wet	Pedestrian	W			
	T20180005006		15/03/2018	Thursday	10:30 PM	Other	137	Left Turn Side Swipe	Dark Street lights on	Clear	Dry	-	S (M)	S		
	T20170001872	Hoddle Street and South Terrace (Roseneath) Intersection	21/09/2016	Wednesday	11:30 AM	Other	130	Rear End - Vehicles in same lane	Day	Not known	Unknown	-	N	N		
	T20200022158		9/12/2020	Wednesday	3:00 PM	Other	121	Right Through	Day	Clear	Dry	-				
	T20190007191		15/04/2019	Monday	8:11 PM	Fatal	121	Right Through	Dark Street lights on	Clear	Dry	-	S (M)	N	S (M)	N
	T20160016046	Hoddle Street and Noone Street Intersection	22/07/2016	Friday	6:50 PM	Other	121	Right Through	Day	Raining	Wet	-	S	N		
	T20210013149		13/06/2021	Sunday	5:00 PM	Other	112	Right Through	Dark Street lights on	Clear	Unknown	-				
	T20170019238		9/10/2017	Monday	3:00 PM	Other	101	Emerging	Day	Clear	Dry	Pedestrian	S			
	T20200014096		24/07/2020	Friday	6:30 AM	Other	179	Other Straight	Day	Clear	Dry	-				
	T20180006079		28/03/2018	Wednesday	8:00 PM	Serious	140	U Turn	Dark Street lights on	Clear	Dry	-	S (M)	N		
	T20170024301		20/12/2017	Wednesday	7:47 AM	Serious	121	Right Through	Day	Clear	Dry	-	N	S		
	T20170019263		10/10/2017	Tuesday	7:45 AM	Other	174	Out of Control on Carriageway	Day	Clear	Dry	-	S (M)	N		
	T20170014364		24/07/2017	Monday	5:25 PM	Other	130	Rear End - Vehicles in same lane	Dusk/Dawn	Clear	Dry	-	N	N		
	T20170014052		20/07/2017	Thursday	8:10 AM	Serious	121	Right Through	Day	Clear	Wet	-	S (M)	N		
	T20170013922		18/07/2017	Tuesday	8:08 AM	Serious	121	Right Through	Day	Clear	Dry	-	N	S (M)		
	T20170002633	Johnston Street and Abbot Grove	10/02/2017	Friday	7:25 AM	Serious	121	Right Through	Day	Clear	Dry	-	NE	S (M)		
	T20210005884		17/03/2021	Wednesday	7:20 AM	Other	140	U Turn	Day	Clear	Dry	-				
	T20190001104		18/01/2019	Friday	6:00 PM	Other	114	Two Right Turning	Day	Clear	Unknown	-	NK	W (B)		
	T20160027647		19/09/2016	Monday	9:30 PM	Other	132	Right End	Dark Street lights on	Clear	Dry	-	W	W (B)		
	T20180005395		22/03/2018	Thursday	9:30 AM	Other	130	Rear End - Vehicles in same lane	Day	Clear	Dry	-	E	E		
	T20180009975		26/05/2018	Saturday	6:28 PM	Other	113	Right Rear	Dark Street lights on	Clear	Dry	-	S	E (M)		
	T20170005135		10/03/2017	Friday	6:00 PM	Other	130	Rear End - Vehicles in same lane	Dusk/Dawn	Not known	Unknown	-	S (M)	S		
	T20160027218	Johnston Street and Rich Street Intersection	13/12/2016	Tuesday	7:45 AM	Other	113	Right Rear	Day	Clear	Dry	-	SW	SE		
Johnston Street Incidents	T20210007954	Johnston Street 45m E from Hoddle Street Intersection	9/04/2021	Friday	3:34 PM	Other	148	From Footway - Including Bikes	Day		Dry					
	T20190023338	Johnston Street 50m E from Hoddle Street Intersection	22/11/2019	Friday	9:40 AM	Other	102	Far Side. Ped Hit By Vehicle From The Left	Day		Dry	Pedestrian	NW			
	T20190017969	Johnston Street 65m E from Hoddle Street Intersection	6/09/2019	Friday	6:30 PM	Other	163	Vehicle Strikes Door Of Parked/Stationary Vehicle	Dark		Unknown	-	W (B)	W		
	T20180019966	Johnston Street 17m E from Lulie Street Intersection	24/10/2018	Wednesday	6:44 PM	Other	102	Far Side. Ped Hit By Vehicle From The Left	Day		Dry	Pedestrian	W	W		
	T20190018543	Johnston Street 6m W from Park Street Intersection	23/09/2019	Monday	9:15 AM	Other	101	Ped Emerges From In Front Of Parked Or Stationary V	Day		Wet	Pedestrian	W			
	T20210009255	Johnston Street and Park Street Intersection	23/04/2021	Friday	3:00 PM	Serious	100	Near Side	Day		Dry	Pedestrian				
	T20190020682		18/10/2019	Friday	9:15 AM	Other	113	Right Near (Intersections Only)	Day		Dry	-	NE	W		
	T20190023270	Johnston Street 19m E from Park Street Intersection	27/10/2019	Sunday	11:20 AM	Other	137	Left Turn Sideswipe	Day		Dry	Pedestrian	NW	NW (B)		
	T20200019672	Johnston Street 63m W from Rich Street Intersection	7/11/2020	Saturday	7:40 PM	Other	163	Vehicle Door	Dark		Unknown					
	T20190004466	Johnston Street and Nicholson Street Intersection	7/03/2019	Thursday	10:25 PM	Other	121	Right Through	Dark		Dry	-	E	W		
	T20210009687	Johnston Street and Clarke Street Intersection	30/04/2021	Friday	2:30 PM	Other	159	Other Overtaking	Day		Dry					
	T20190009908		27/05/2019	Monday	10:24 AM	Serious	113	Right Near	Day		Wet					
	T20190007076		14/04/2019	Sunday	9:30 AM	Other	121	Right Through	Day		Dry	-	E	W (B)		
	T20180022098		25/11/2018	Sunday	9:27 AM	Serious	132	Right Rear.	Day		Wet	-	E	E		
	T20180009178		20/03/2018	Tuesday	4:00 PM	Other	174	Out Of Control On Carriageway (On Straight)	Day		Dry	-	E (M)	N		
	T20170008800		4/05/2017	Thursday	9:47 AM	Other	100	Ped Near Side. Ped Hit By Vehicle From The Right.	Day		Dry	Pedestrian	N			
	T20170005326		27/02/2017	Monday	7:20 PM	Other	133	Lane Side Swipe (Vehicles In Parallel Lanes)	Dusk		Dry	-	E	E (B)	E (B)	

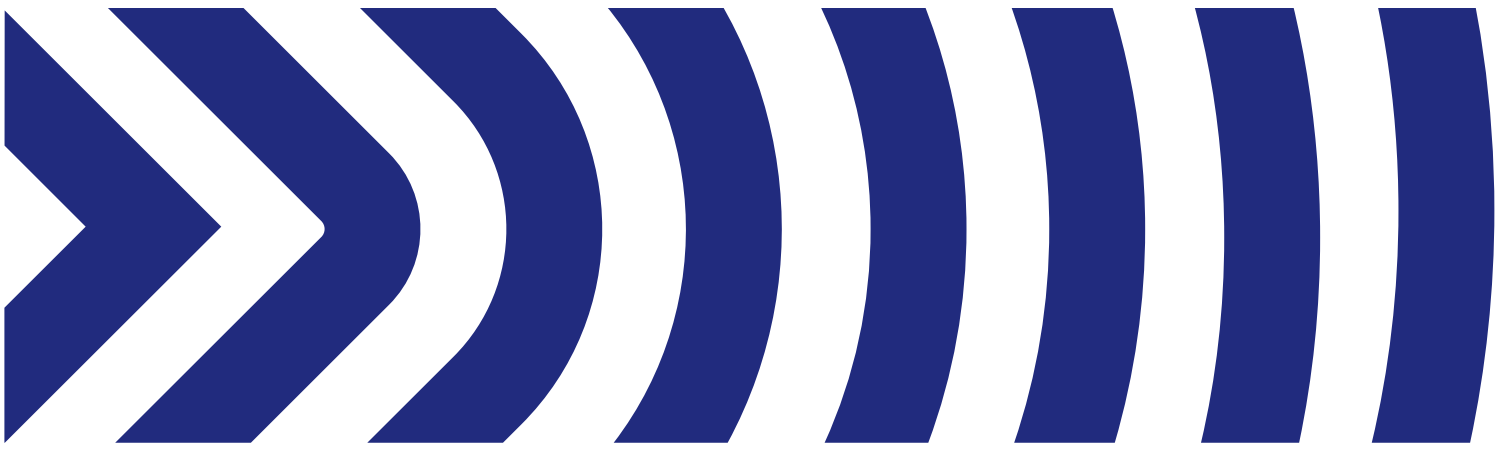


# Appendix C

## Community Consultation – Stage 1 Summary



Locations identified by community to have road safety issues	% Total Submissions	Summary of common responses for road safety issues
Trenerry Johnston intersection	8.1%	High number of conflicting vehicle movements, Crossing pedestrians poorly protected from high number of conflicting vehicle movements, Cyclists poorly protected from high number of conflicting vehicle movements, No safe pedestrian crossing of Johnston Street, No safe access or crossing facility to bus stops
Trenerry Johnston to Turner	0.5%	Traffic is a barrier for pedestrians to cross, Speeding vehicles
Trenerry Turner intersection	4.4%	Crossing pedestrians poorly protected from high number of conflicting vehicle movements, Lack of safe facilities for cyclists, Poor wayfinding to trail
Trenerry Turner to Bath	0.7%	Speeding vehicles and speeding cyclists
Trenerry at Victoria Park	3.7%	Vehicles do not stop at pedestrian crossing, Unclear pedestrian/cyclist priority between Trenerry and Bath, visibility / cycling access issue
Trenerry Victoria Park to Maugie	1%	Crossing pedestrians poorly protected from high number of conflicting vehicle movements at Abbott Street intersection, Visibility issues at Federation Place intersection, Lack of cycle facilities through Abbott Street intersection
Trenerry outside ATU building	16.0%	Lack of space for road users, poor lane management, poor visibility, Unsafe crossing to pedestrian overpass, Eastern Fwy noise barrier ineffective
Eastern Fwy overpass	2.0%	Insufficient width and too steep for cyclists, Insufficient space for walking and cycling, Possible alternative to Trenerry Crescent
Trenerry ATU building to Eastern Fwy underpass	3.2%	Cyclist conflicts with cars on narrow road, Poor lane management, vehicles overtake at speed, Poor lane management, vehicles overtake at speed
Eastern Fwy underpass	17.5%	Insufficient space for walking and cycling on path, Cyclist conflicts with cars on narrow road / lack of safe cycling facilities, Lack of accessible pedestrian facilities, Lack of safe access to trails, Lack of wayfinding
Trenerry Gray Noone intersection	6.9%	Unclear priority for conflicting vehicle movements, Crossing pedestrians poorly protected from high number of conflicting vehicle movements, Hard to see vehicles from south leg, Poor wayfinding to footbridge
Gray Noone to Roseneath	1%	Lack of safe facilities for cyclists
Gray Yambla Roseneath intersection	2.5%	Crossing pedestrians poorly protected from high number of conflicting vehicle movements, Cyclists poorly protected from high number of conflicting vehicle movements,
Yambla Roseneath to Ramsden	3.9%	Pedestrian and cyclist conflicts with cars on narrow road
Yambla Ramsden intersection	1.0%	Cyclists poorly protected from high number of conflicting vehicle movements, High number of conflicting vehicle movements.
Johnston Street General	4.7%	Pedestrian and cyclist conflict on footpath / cyclists poorly protected from vehicles (Johnston/Nicholson/Rich), Cyclists and pedestrians poorly protected from high number of conflicting vehicle movements (Johnston/Nicholson/Rich), Long pedestrian wait times (Johnston/Computershare), Cyclists and pedestrians poorly protected from high number of conflicting vehicle movements (Johnston/Lulie); Lack of safe cycle facilities and connections (General).
Turner Street General	1.2%	Speeding vehicles, Crossing pedestrians poorly protected from high number of conflicting vehicle movements at Rich Street, No pedestrian facilities towards Creek
Lulie Street General	1.5%	Speeding vehicles, Lack of wayfinding to alternative cycling facilities,
Roseneath Street General	4.7%	Congestion and safety issues due to trial (at Hoddle Street), Lack of pedestrian crossing (Gary to Groom), High number of conflicting vehicle movements (at Groom)
Hoddle Street General	0.7%	Lack of safe cycle facilities
Field Street General	1.5%	Visibility issues at corner intersections with Ramsden and Roseneath
Ramsden Street General	1.7%	Delays due to signal arrangement at level crossing (at Hoddle), non-compliance with turning bans (at Grant)
Spensley Street General	0.7%	Speeding vehicles, Crossing pedestrians poorly protected from high number of conflicting vehicle movements outside rail station
Heidelberg Street General	3.2%	Congestion and safety issues due to trial, Lack of pedestrian crossing (at Bill Lawry Oval), Cyclists and pedestrian conflict (at Merri Creek Bridge)
Trails General	3.4%	Lack of wayfinding (could be alternative to Trenerry), Insufficient space for walking and cycling on path (under Fwy east side), pedestrian and cyclists conflicts (at Field St), poor lighting/flooding/gravel tracks can be slippery



# Appendix D

## Stage 1 Summary Presentation

# Clifton Hill and North Abbotsford Road Safety Study

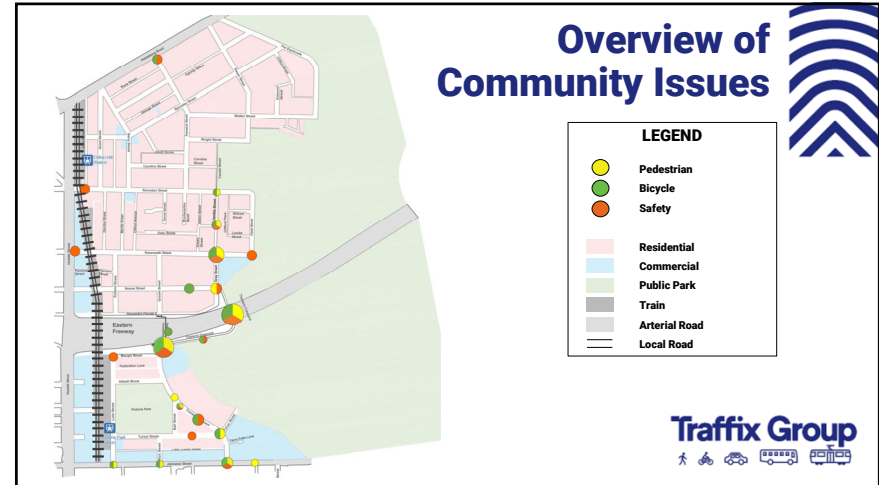
## Stage 1 – Summary of Key Issues

Will de Waard  
Andrew Montgomerie  
21<sup>st</sup> March 2022



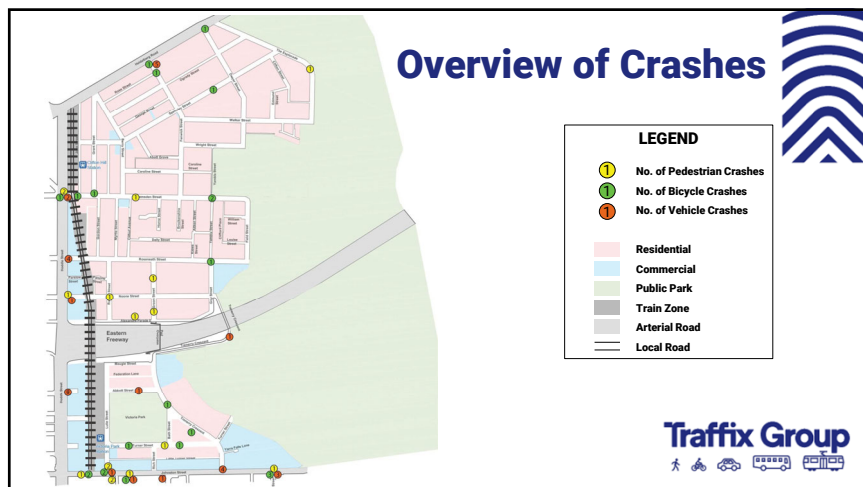
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## Overview of Community Issues



2

## Overview of Crashes



3

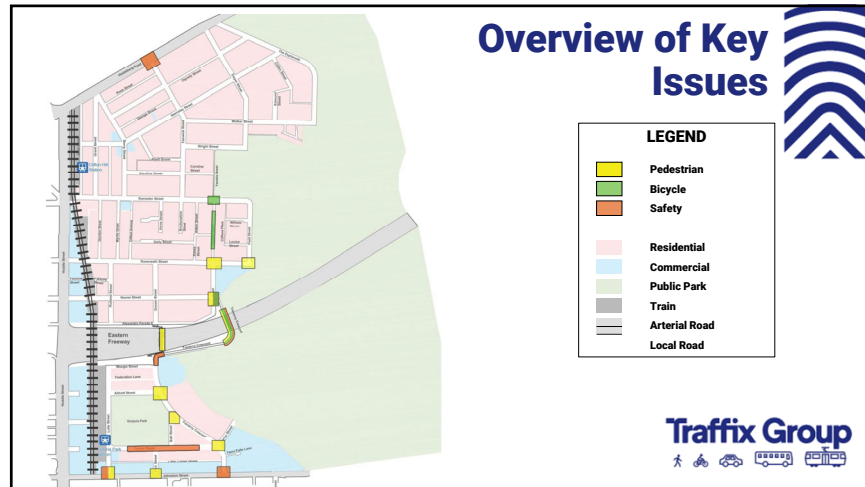
## Overview of Data

### List of Data Types

- Crash Data (7 Years)
  - 70 collisions in study area
  - Includes 39 vulnerable road users (pedestrians and cyclists)
  - 12 serious injury crashes and 1 fatal crash
- 7 day Automatic Traffic Counts
  - 24 sites in the study area
  - 85<sup>th</sup> %tile speeds range between 31km/h - 49km/h
  - Traffic volumes (daily, hourly and bi-directional)
- Pedestrian and Bicycle movement counts (3 hrs AM, 3hrs PM)
  - Noone St & Gray St intersection
  - Footbridge Overpass at Trenerry Crescent
  - Roseneath St & Gray Street intersection
  - Fwy Underpass Trenerry Crescent and Merri Creek Trail
- 7 day Automatic Bicycle Counts
  - Trenerry Crescent - east of Dight Falls, and south of Maugie Street
- Turning Movement Counts
  - Johnston Street and Trenerry Crescent
  - Johnston Street and Lulie Street



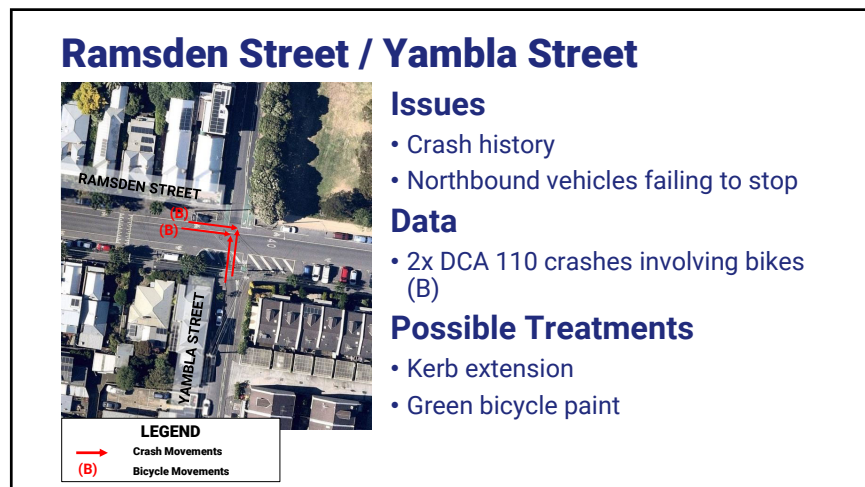
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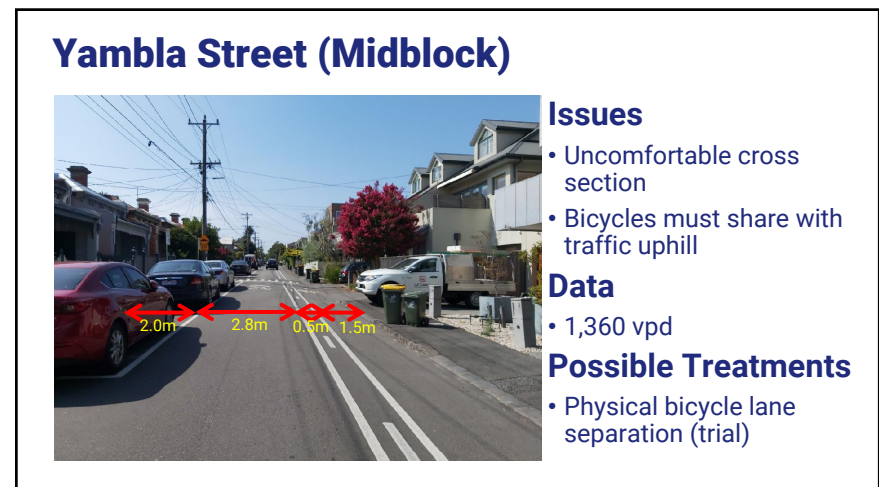
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6



7



8



## Yambla Street / Roseneath Street / Gray Street



### Issues

- Pedestrian crossing movements exposed
- High volume of right turns (west to south)

### Data

- 3,575 vpd – Roseneath St
- 4,814 vpd – Gray St
- 222 pedestrian crossing movements of Roseneath St (6hrs)

### Possible Treatments

- Raised platform on south approach
- Zebra on west approach
- Speed cushions
- Pram ramp on east approach (not currently provided)

9

## Trenerry Crescent / Gray Street / Noone Street



### Issues

- Pedestrian movements
- High traffic volumes
- Poor sight distance on eastern pedestrian crosswalk

### Data

- 4,814 vpd – Gray St
- 4,638 vpd – Trenerry Cres
- 387 pedestrian crossing movements (6hrs – 4 legs)
- 290 bicycle movements (6hrs – 4 legs)

### Possible Treatments

- Raised platform on east and west approaches
- Vegetation removal to improve sight distance
- Share path from Merri Creek Trail to Dights Falls (refer to next slide)

10

## Trenerry Crescent Underpass



### Issues

- High traffic and cyclist volumes
- Constrained footpath and carriageway
- Lack of defined bicycle lanes

### Data

- 4,638 vpd – Trenerry Cres
- 225 cyclists movements (6hrs)
- 225 pedestrian movements (6hrs)

### Possible Treatments

- Share path from Merri Creek Trail to Dights Falls
- Cantilever boardwalk

11

## Trenerry Crescent Bend at AEU



### Issues

- High traffic and cyclist volumes
- Tight road geometry
- Large number of vehicles 'cutting the corner'

### Data

- 4,638 vpd – Trenerry Cres

### Possible Treatments

- Corner splay (private property)
- Redesign curve
- Bicycle lane separation

12

## Pedestrian Overpass / Eastern Freeway



### Issues

- Pedestrian / cyclist conflict
- Width insufficient to support shared arrangement

### Data

- 169 pedestrian movements (6 hrs)
- 62 cyclist movements (6 hrs)

### Possible Treatments

- Ban bicycles on overpass

13

## Abbott Street / Trenerry Crescent



### Issues

- Pedestrian / vehicle conflict at crossing points
- Vehicle / cyclist conflict through roundabout
- High traffic volume on Trenerry Crescent
- No pedestrian refuge / island provided on north approach

### Data

- 4,771 vpd - Trenerry Cres
- 1,278 vpd - Abbott St
- 320 cyclist movements

### Possible Treatments

- Reinststate traffic island on north approach
- Terminate bicycle lanes early and provide sharrowes

14

## Zebra Crossing at Bath St / Trenerry Crescent



### Issues

- Non compliance with zebra crossing

### Data

- 4,700 – 5,000 vpd (estimated)
- 320 cyclist movements (estimated)

### Possible Treatments

- Speed cushions on approach to crossing

15

## Turner Street / Trenerry Crescent



### Issues

- Pedestrian / Vehicle Conflict at crossing points
- Vehicle / cyclist conflict through roundabout
- High traffic volume on Trenerry Crescent

### Data

- 5,685 vpd - Trenerry Cres
- 1,133 vpd - Turner St

### Possible Treatments

- Terminate bicycle lanes early and provide sharrowes

16



## Turner Street



### Issues

- Vehicle Speeds

### Data

- 48.7km/h 85<sup>th</sup> %ile speed (40km/h zone)

### Possible Treatments

- Watts profile road humps

17

## Johnston Street / Trenerry Crescent



### Issues

- High Traffic Volumes
- Conflicting right turn movements
- Crash pattern

### Data

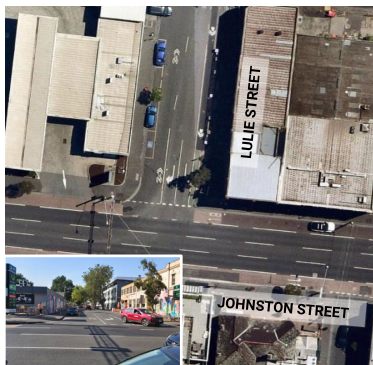
- 3hrs AM, 3 hrs PM
- Peak hr right turns:
  - Out (north to west) 125 movements
  - In (east to north) 258 movements
- 2x DCA 113, 1x DCA 114

### Possible Treatments

- Possible traffic signals
- POS with side road detector

18

## Johnston Street / Lulie Street



### Issues

- High traffic volumes
- Conflicting right turn movements
- Crash history (pattern unclear)
- Pedestrians crossing

### Data

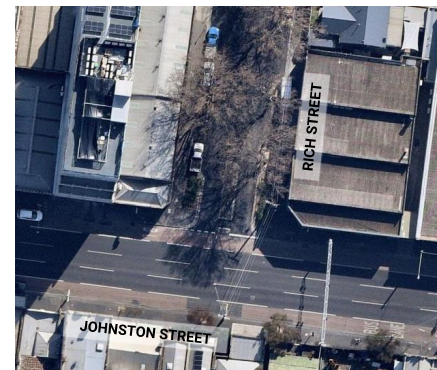
- 3hrs AM, 3 hrs PM
- Peak hr right turns:
  - Out (north to west) 44 movements
  - In (east to north) 45 movements

### Possible Treatments

- Raised platform

19

## Johnston Street / Rich Street



### Issues

- Pedestrian / vehicle conflict
- Bicycle / vehicle conflict

### Data

- 1,277 vpd

### Possible Treatments

- Raised platform

20

## Roseneath Street / Field Street



### Issues

- Pedestrian / vehicle conflict
- Small radius 90 degree bend

### Data

- 1,368 vpd

### Possible Treatments

- Relocate pedestrian crossing point
- Speed humps on approach

## Discussion

- Key Issues
- Proposals

21

22

## Advocacy Opportunities

### Funding

- Department of Transport (blackspot)
- TAC Grants Programs
- Property Redevelopment
  - (such as AEU)

## Next Steps

- Council to provide feedback on Stage 1 Findings
- Prepare draft road safety plan
- Prepare localised concept plans
- Community Consultations

23

24





# Appendix E

## Stage 2 Community Consultation Summary

Location	Treatment description	YSY Responses	Support	Opposed	Unsure	Demographic considerations	Feedback on support of treatment(s)	Feedback on opposition of treatment(s)
1 Heidelberg Road/ Fenwick Street intersection	Signalised control of right turn from Heidelberg Road to Fenwick Street	155	45%	34%	22%	Higher support for walkers and cyclists (55%-65%) Higher support for respondents over 60 (59%) Higher opposition for vehicle drivers (44%) Higher opposition for respondents under 35 (43%)	Experienced near misses with pedestrians and cyclists. Issue with eastbound vehicles on Heidelberg Road not stopping or slowing for red light. Higher support for peak hour only measures.	Concern relating to additional travel time and difficulty entering and exiting Clifton Hill. Have never experienced any issues at this location. Concern with DoT pop-up cycle lane.
2 Ramsden Street/ Yambla Street intersection	Additional speed hump on Ramsden Street to the east of the intersection. Widened bicycle cut-through exiting Yambla Street. Conversion of painted treatment to landscaped area	165	58%	31%	11%	Higher support for walkers and cyclists (73%-79%) Higher support for respondents over 60 (74%) Higher support for female respondents (65%) Higher opposition for vehicle drivers (42%-50%) Higher opposition for respondents under 35 (52%)	Would improve visibility and reduce vehicle speeds. Would improve overall safety.	Concerns about redistribution of traffic to other streets (associated with Yambla Street proposal). Opposed to additional road humps/cushions. No need for change.
3 Yambla Street	Change of direction of one-way traffic flow for the southern portion of Yambla Street, south of Kiewa Street. Change of traffic flow to one-way on the east-west section of Kiewa Street	176	27%	65%	8%	Higher support for walkers and cyclists (46%-56%) Higher opposition for vehicle drivers and respondents who regularly use all modes of transport (72%-78%) Higher opposition for respondents who identified as living on Aitken Street, Field Street and Roseneath Street.	Would improve the safety of intersections at each of Yambla Street. Experienced near misses at the intersections. Experienced poor driver behaviour on Yambla.	Concerned about redistribution of traffic to Field Street, the safety of park users, sports grounds, dogs, and entrance to recycling centre. Concern about visibility at Roseneath/Ramsden intersections with Field Street and ability to cross. Concern about redistribution of traffic to Aitken Street and potentially other narrow streets. Concerned about additional travel time. Concerned about the impact on house prices. Have never experienced any issues at this location. No need for change.
4 Roseneath Street/ Yambla Street/ Gray Street intersection	Additional speed humps on Roseneath Street approaching intersection. Zebra crossing of Roseneath Street, west of the intersection. Priority crossing of Gray Street, south of the intersection	171	50%	39%	11%	Higher support for walkers and cyclists (75%-77%) Higher support for respondents over 60 (63%) Higher opposition for vehicle drivers (53%) Higher opposition for respondents under 35 (54%)	Difficulty crossing the streets particularly with prams. Would improve visibility and reduce vehicle speeds. Would improve overall safety.	Concerns about redistribution of traffic to other streets (associated with Yambla Street proposal). Opposed to additional road humps/cushions, or loss of parking. No need for change.

Location	Treatment description	YSY Responses	Support	Opposed	Unsure	Demographic considerations	Feedback on support of treatment(s)	Feedback on opposition of treatment(s)
5 Gray Street/ Trenerry Crescent/ Noone Street intersection	Additional speed humps approaching the intersection. Removal of mid-intersection ‘stop’ entering from east, and addition of mid-intersection ‘give way’ treatment, departing to west. Upgraded median islands. Raised priority crossing on Gray Street north of the intersection. Priority crossing on Noone Street west of the intersection. Bike off-ramp and shared path extension joining southbound Gray Street to Merri Creek Trail.  Additional 5B option: Reversal of traffic flow direction on Alexandra Parade East / Gray Street south of the intersection	165	53%	24%	22%	Higher support for walkers and cyclists (75%-77%) Higher support for respondents over 60 (68%) Higher support for female respondents (60%) Higher opposition for respondents under 35 (52%) Higher opposition for vehicle drivers and respondents who regularly use all modes of transport (27%-28%)	Unclear priority at the intersection. Would improve overall safety. Crossing and movement issues for walkers and cyclists.	Changes are confusing. Opposed to additional road humps/cushions. No need for change.
6 Trenerry Crescent Underpass	Interim treatment: Upgraded and additional speed cushions in both directions. Painted bike lanes on downhill sections of Trenerry Crescent.  Ultimate treatment: As above, plus construction of an off-road shared path adjacent to Trenerry Crescent under the Easter Freeway	163	59%	27%	14%	Higher support for walkers and cyclists (60-65%) and respondents that use all modes of transport (60-63%) Higher opposition for vehicle drivers (40%-42%)	Very high support for boardwalk option. Interim on road option will be an improvement over existing.	Cyclists have good facilities elsewhere. Opposed to additional road humps/cushions. No need for change.
6 cont. Trenerry Crescent at Dights Falls car park	Upgraded and additional speed humps in both directions. Centre median islands on curves	159	50%	23%	27%	Higher support for walkers and cyclists (60-65%) Higher support for respondents aged 35 to 44 (63%) Higher opposition for vehicles drivers (34%-38%) Higher opposition for respondents under 35 (48%)	Supportive of turning lane for cyclists.	Concerns about reclaiming the lane for some cyclists.
7 Trenerry Crescent outside TEU building	Additional speed hump to north of intersection	155	48%	31%	21%	Higher support for respondents over 60 (88%) Higher opposition for respondents under 35 (52%)	Addresses issue of car cutting corner. Need a resolution to the existing situation for is poor for all road users. Also needs to consider crossing pedestrians. Support for widening the road.	Doesn’t address issue of sharp corner/streets needs widening. Concerns about reclaiming the lane for some cyclists. Bikes need to be fully separated from cars. Cyclists have good facilities elsewhere. Opposed to additional road humps/cushions. No need for change.
8 Eastern Freeway Overpass	Additional wayfinding and informational signage	157	45%	29%	27%	Higher support for vehicle drivers (59%-61%) Higher opposition for walkers and cyclists (35%)	Pedestrians should be prioritised. This is a better route for pedestrians and cyclists than Trenerry Crescent.	Unlikely to be enforced. Would cause conflict. No need for change. The bridge needs to be upgraded rather than sign posted.
9 Trenerry Crescent/ Abbott Street intersection	Additional speed cushions approaching roundabout. Zebra crossings on all legs of roundabout	147	51%	27%	22%	Higher support for walkers and cyclists (57%-58%) Higher support for respondents over 60 (80%) Higher opposition for vehicle drivers (32%-40%) Higher opposition for respondents under 35 (38%)	Support for better pedestrian crossing facilities. Slowing vehicles will help cyclists claim the lane.	Concerns about reclaiming the lane for some cyclists. Opposed to additional road humps/cushions. No need for change.

Location	Treatment description	YSY Responses	Support	Opposed	Unsure	Demographic considerations	Feedback on support of treatment(s)	Feedback on opposition of treatment(s)
10 Trenerry Crescent at Bath Street/ Victoria Park	Relocation of speed cushions. Widen cut-through	146	53%	23%	25%	Higher support for walkers and cyclists (53%-59%) Higher support for respondents over 60 (75%) Higher opposition for vehicle drivers (29%-32%) Higher opposition for respondents under 35 (39%)	There is a need to address vehicles that don't stop. Preference would be for a raised crossing.	Opposed to additional road humps/cushions. No need for change.
11 Trenerry Crescent/ Turner Street intersection	Zebra crossings on all legs of roundabout. New speed cushions on Trenerry Crescent approaches to roundabout. New speed up on Turner Street approaching roundabout.	141	50%	28%	23%	Higher support for walkers and cyclists (53%-59%) Higher support for respondents over 60 (75%) Higher opposition for vehicle drivers (29%-32%) Higher opposition for respondents under 35 (39%)	Support for better pedestrian crossing facilities. Slowing vehicles will help cyclists claim the lane.	Concerns about reclaiming the lane for some cyclists. Opposed to additional road humps/cushions. No need for change.
12 Turner Street	Additional 7 speed humps for length of Turner Street. Narrowed lanes and inclusion of median planting between Bath Street and Trenerry Crescent. Kerb extension and landscaping at corner of Turner Street and Lulie Street.	143	44%	25%	31%	Higher support for walkers and cyclists (67%) Higher support for respondents over 60 (75%) Higher support for respondents aged 35 to 44 (63%) Higher opposition for vehicle drivers (36%-39%) Higher opposition for respondents under 35 (65%)	Support for speed calming. Support for making Turner Street/Lulie Street clearer. Support for more planting.	Opposed to additional road humps/cushions. No need for change.
16 Field Street / Roseneath Street	New speed cushions approaching corner from both directions	171	57%	30%	13%	Higher support for walkers and cyclists (67%) Higher support for respondents over 60 (75%) Higher support for respondents aged 35 to 44 (63%) Higher opposition for vehicle drivers (36%-39%) Higher opposition for respondents under 35 (65%)	Helps with reducing speed and vehicles cutting the corner. Pedestrian crossings should also be considered. There is a requirement to also address the Ramsden Street and Field Street corner.	Concerns about redistribution of traffic to other streets (associated with Yambla Street proposal). Opposed to additional road humps/cushions, or loss of parking. No need for change.
17 Johnston Street	Road safety review of Johnston Street (a DoT road), between Hoddle Street and east of Trenerry Crescent, with particular consideration of: <ul style="list-style-type: none"> <li>• Pedestrian safety at Lulie Street</li> <li>• Pedestrian safety at Rich Street</li> <li>• Delivery of treatment proposed in LAPM13 at Nicholson Street</li> <li>• Pedestrian and cyclist safety at Trenerry Crescent</li> <li>• Removal of approximately 5 parking spaces on Johnston Street to the west of Trenerry Crescent</li> </ul>	151	63%	15%	23%	General support for improvements across all age groups and transport choices	Very high support for traffic signals. High support for better visibility. High support for a review of road safety on Johnston Street.	Opposed to the removal of parking on Johnston Street due to impact on businesses.





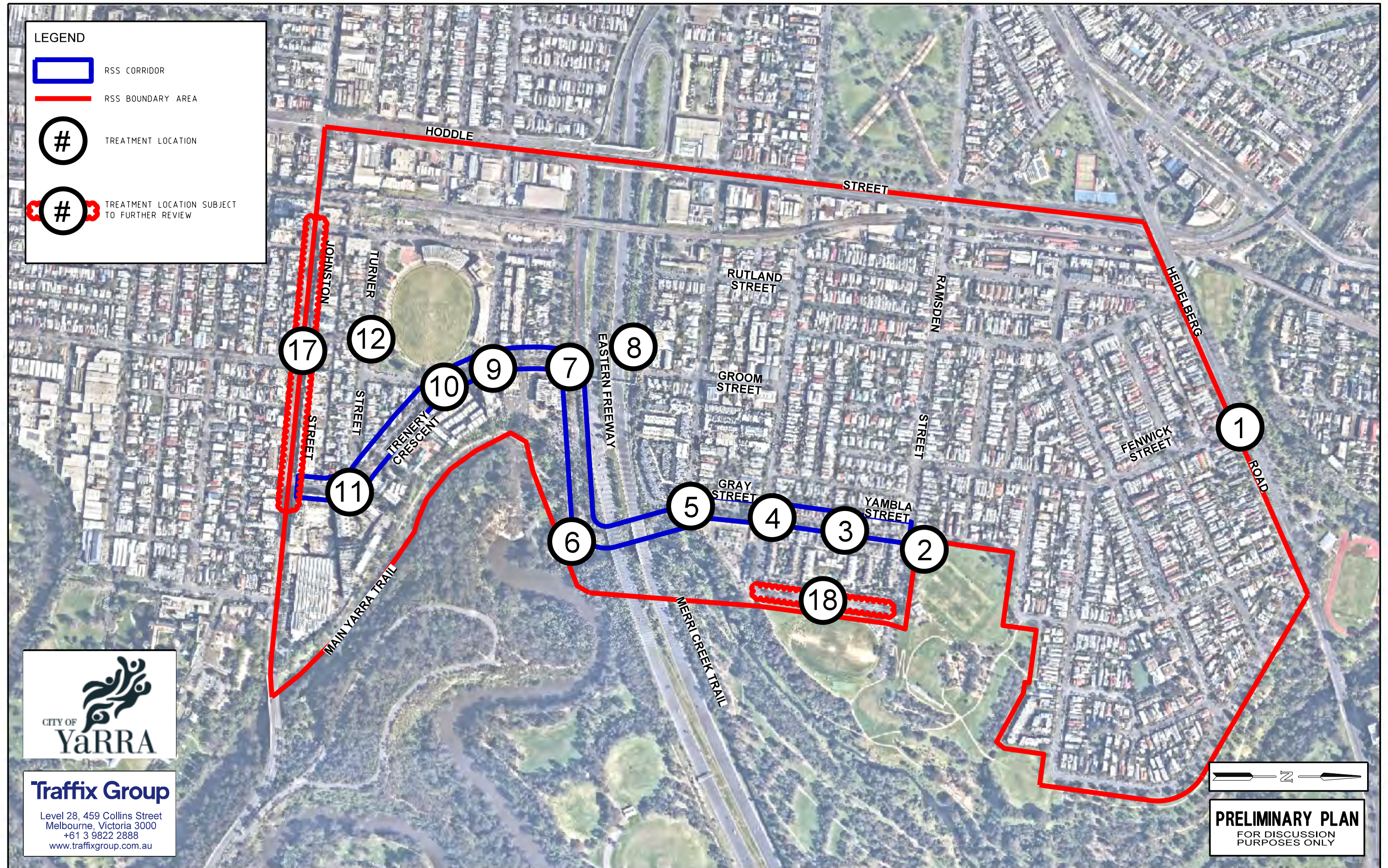
# Appendix F

## Concept Treatment Plans (Stage 3)



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## ROAD SAFETY PLAN - OVERVIEW



DATE: 9/11/2022  
 MODEL: I  
 FILE: I:\ssv02\group\Synergy\Projects\GRP3\GRP3121803-Drawings\G31218-01 Issue D.dgn

ISSUE	ISSUE DESCRIPTION	ISSUE DATE
I	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	09/11/22

CONCEPT PLAN

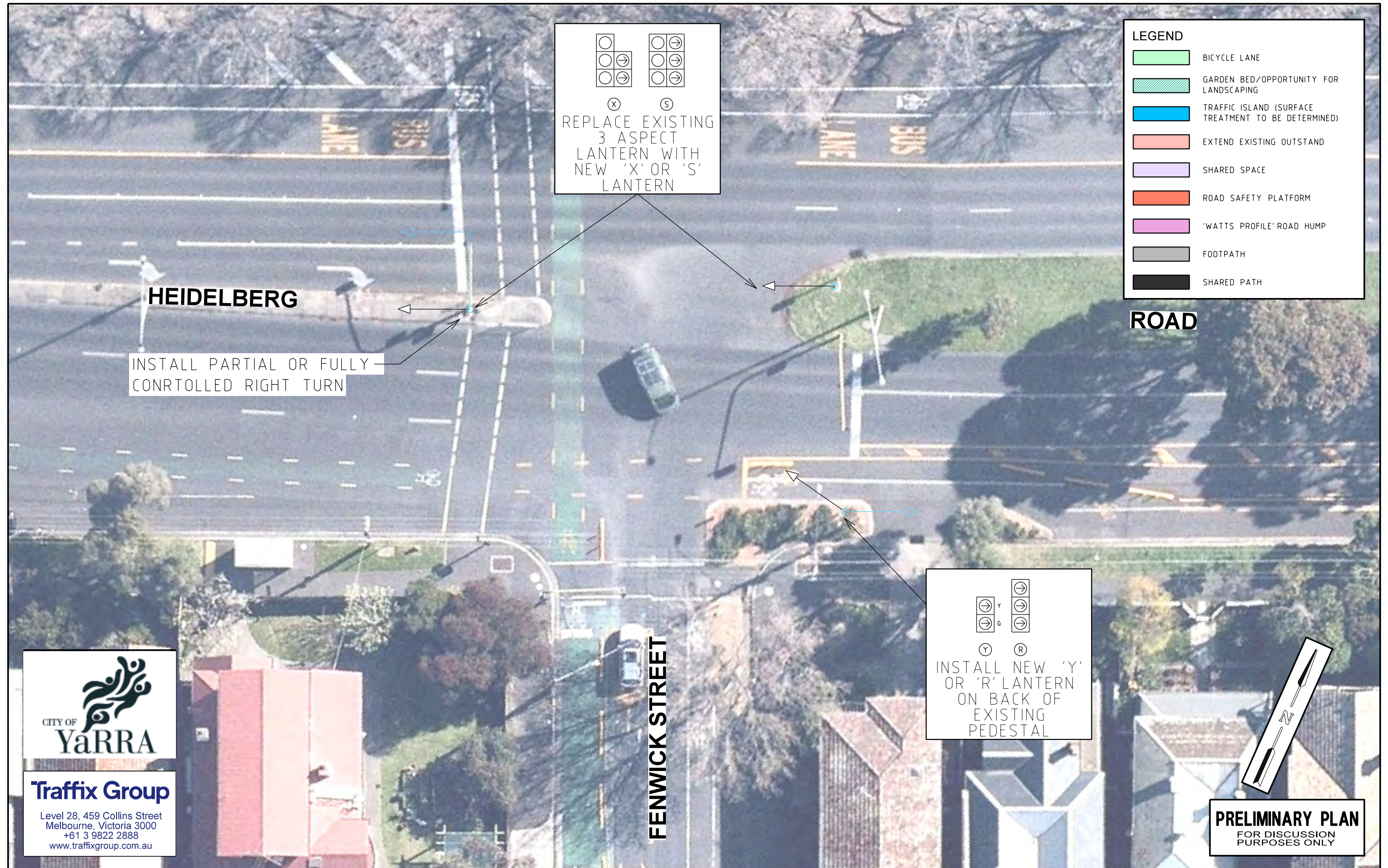
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SHEET NUMBER: 1



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## HEIDELBERG ROAD / FENWICK STREET (LOCATION 1)





# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## RAMSDEN STREET / YAMBLA STREET (LOCATION 2)



DATE: 28/10/2022  
MODEL: 3  
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE
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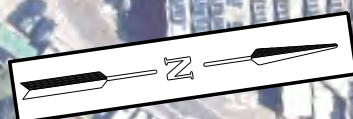
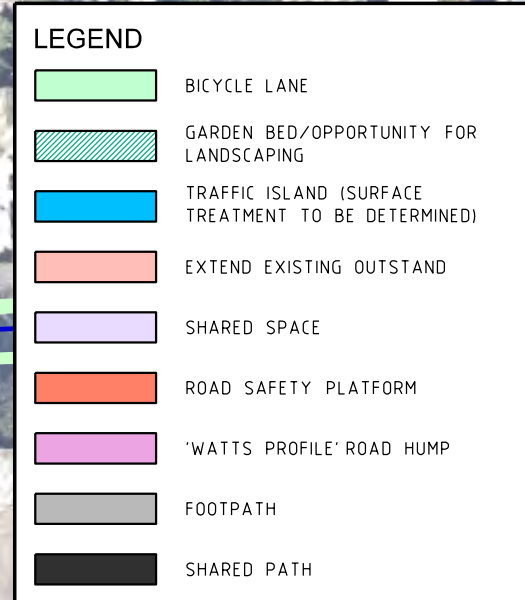
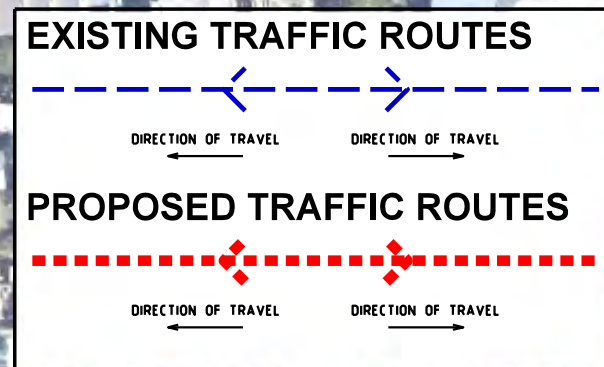
CONCEPT PLAN

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# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## YAMBLA STREET AT KIEWA STREET(LOCATION 3A)



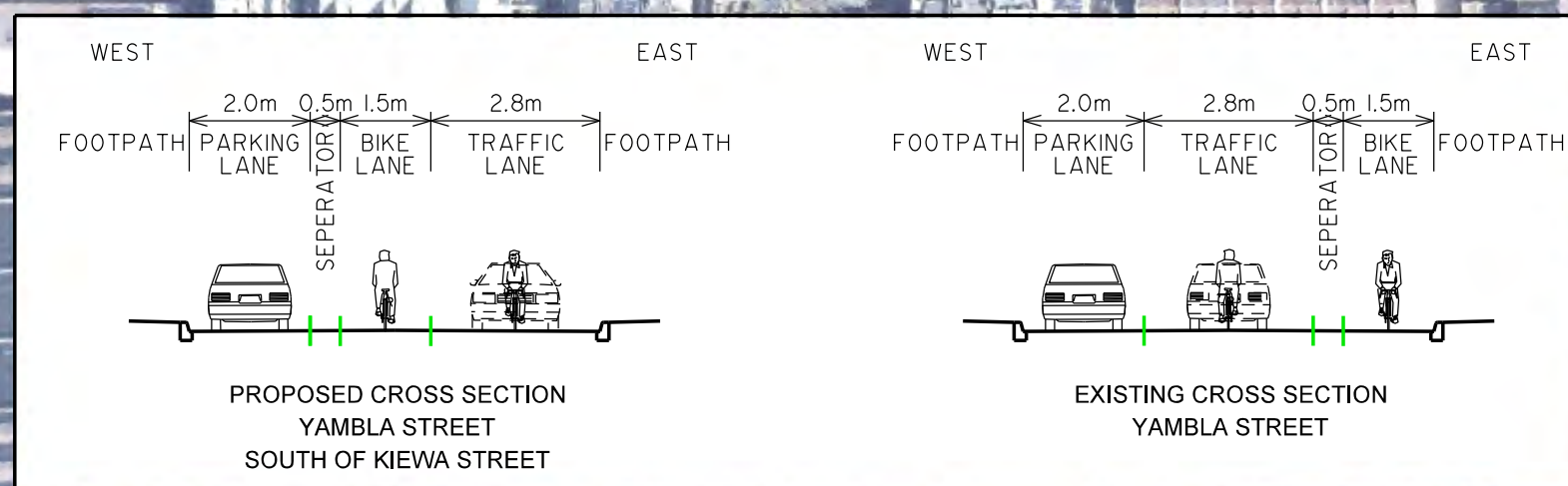
# PRELIMINARY PLAN

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# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## YAMBLA STREET AT KIEWA STREET (LOCATION 3B)



DATE: 28/10/2022

MODEL: 5

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CONCEPT PLAN

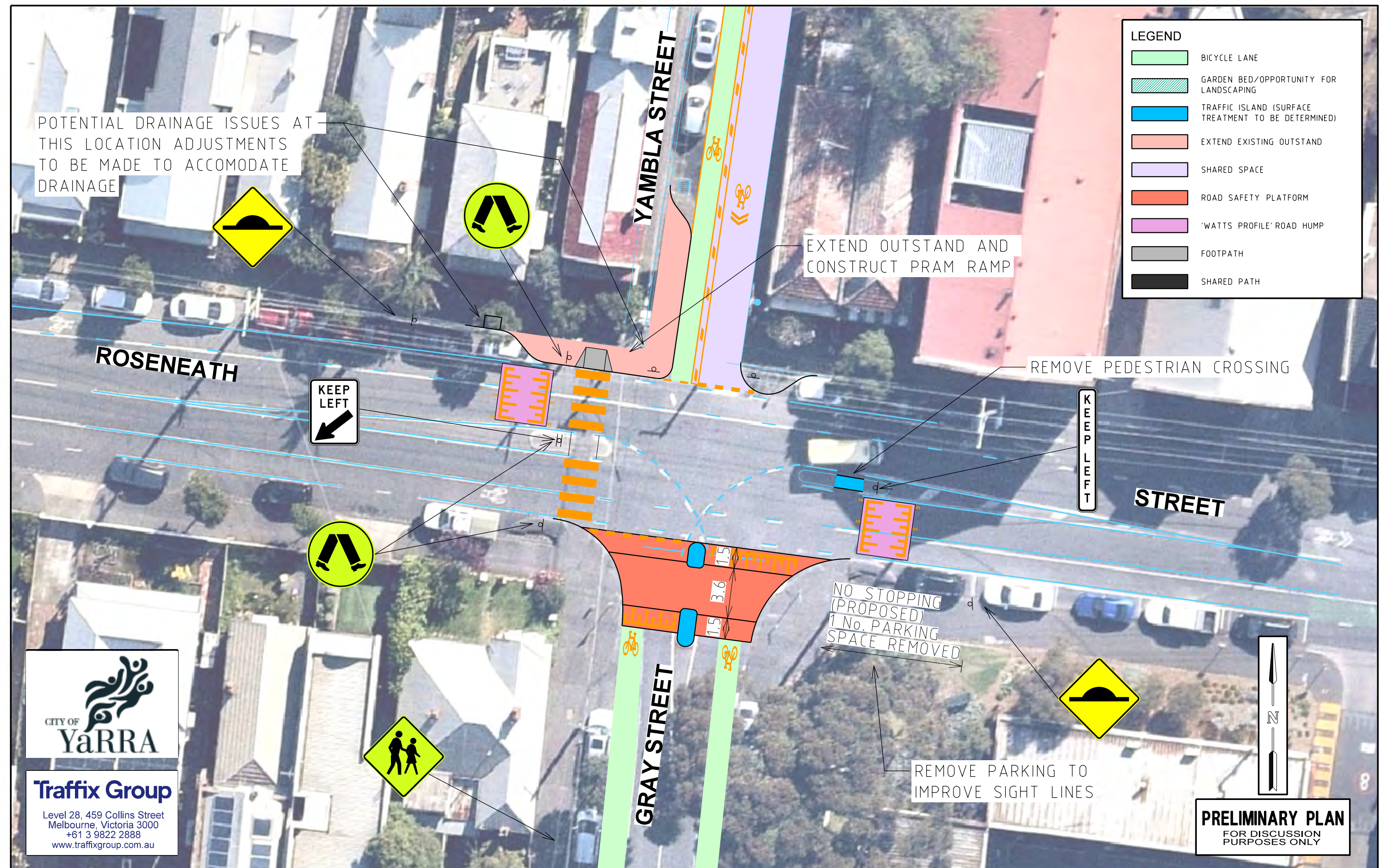
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SHEET NUMBER: 5



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## ROSENEATH STREET / YAMBLA STREET/GRAY STREET (LOCATION 4)



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MODEL: 6  
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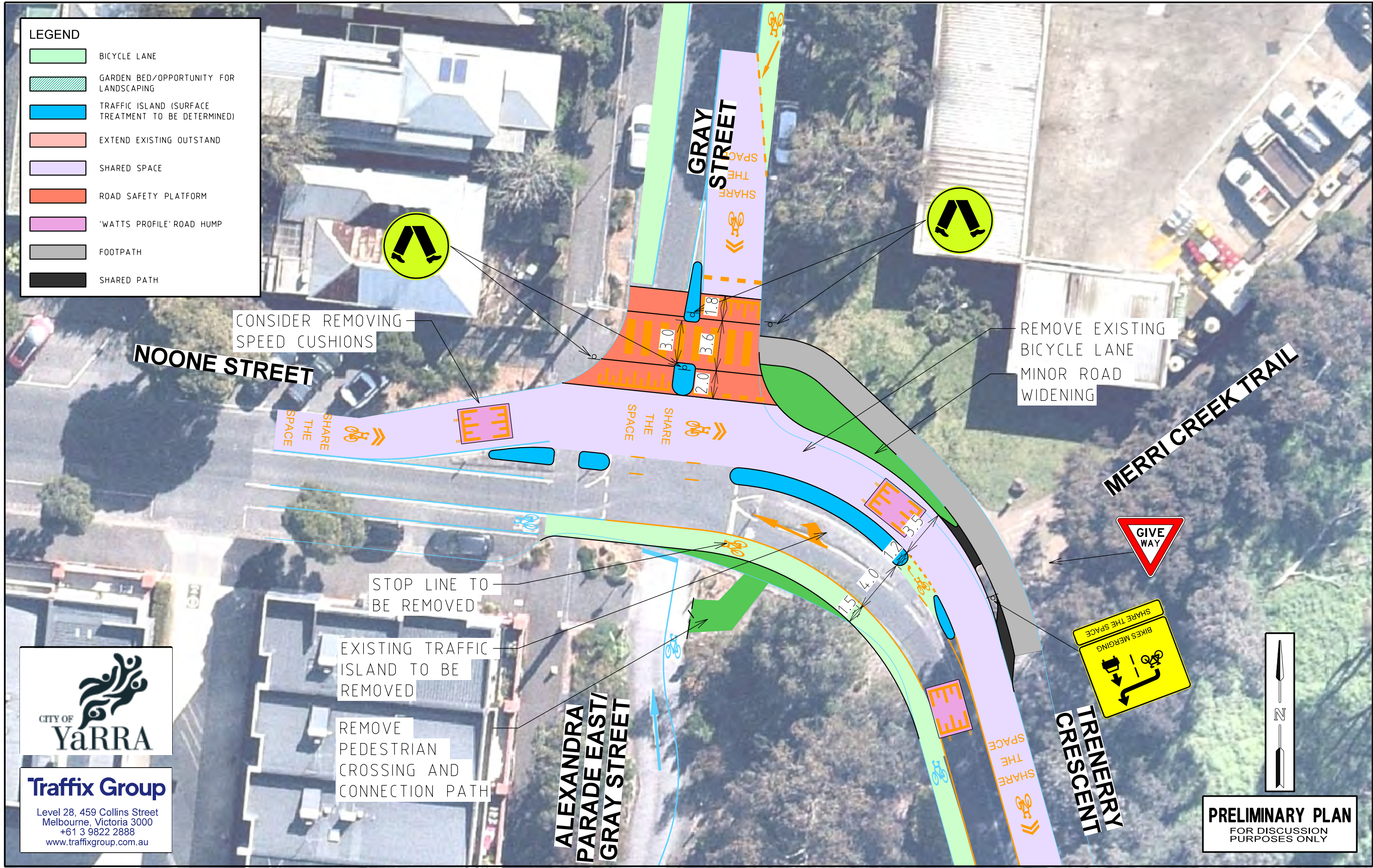
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CONCEPT PLAN



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## NOONE STREET/GRAY STREET/TRENERRY CRESCENT (LOCATION 5)



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DATE: 28/10/2022  
MODEL: \Users\02group\Synergy\Projects\GRP3\GRP31210\03-Drawings\G31218-01 Issue D.dgn  
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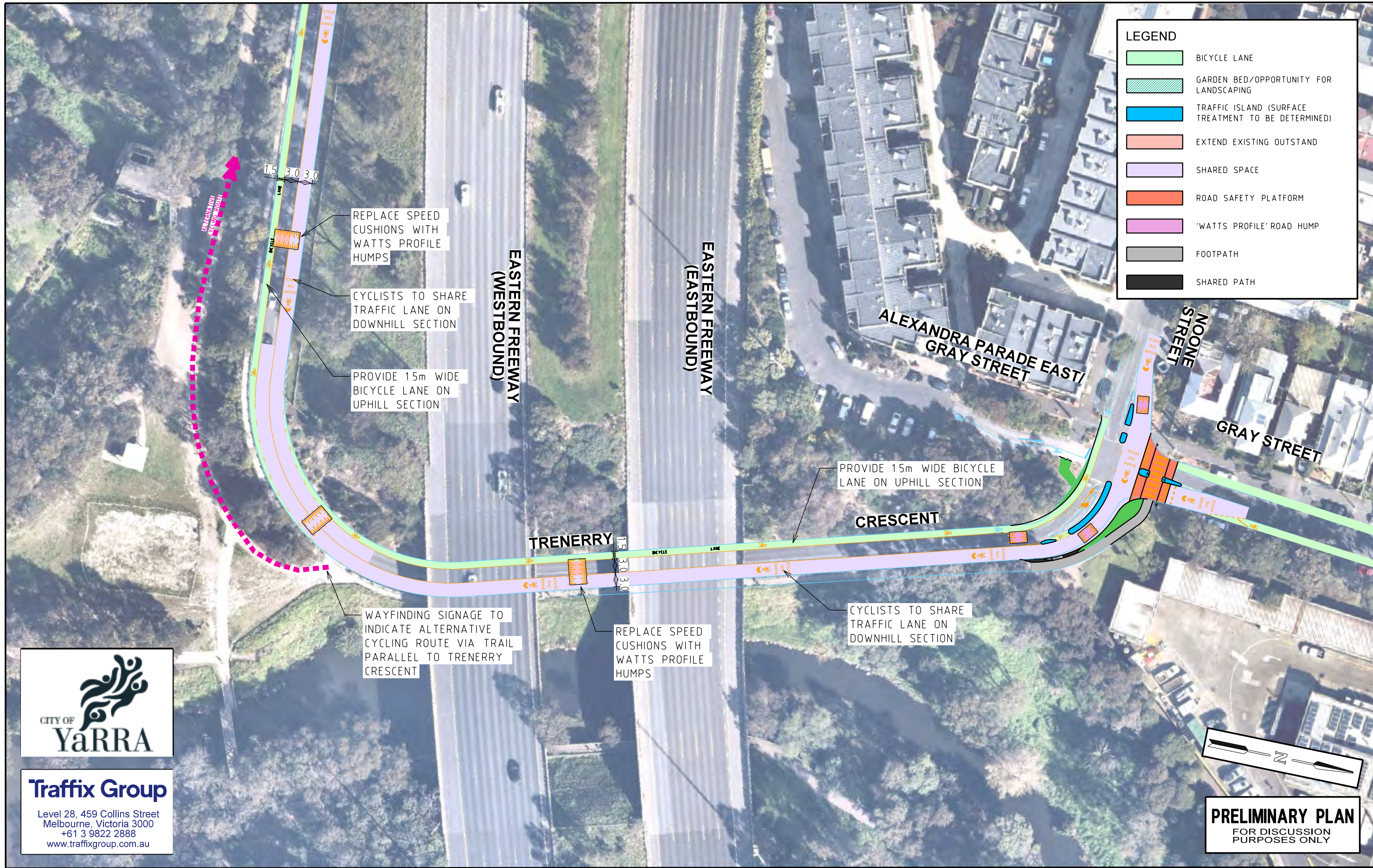
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CONCEPT PLAN



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT AT EASTERN FREEWAY (LOCATION 6) - INTERIM TREATMENT



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DATE: 28/10/2022  
MODEL: 8  
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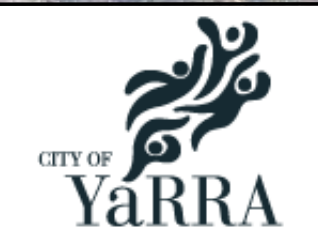
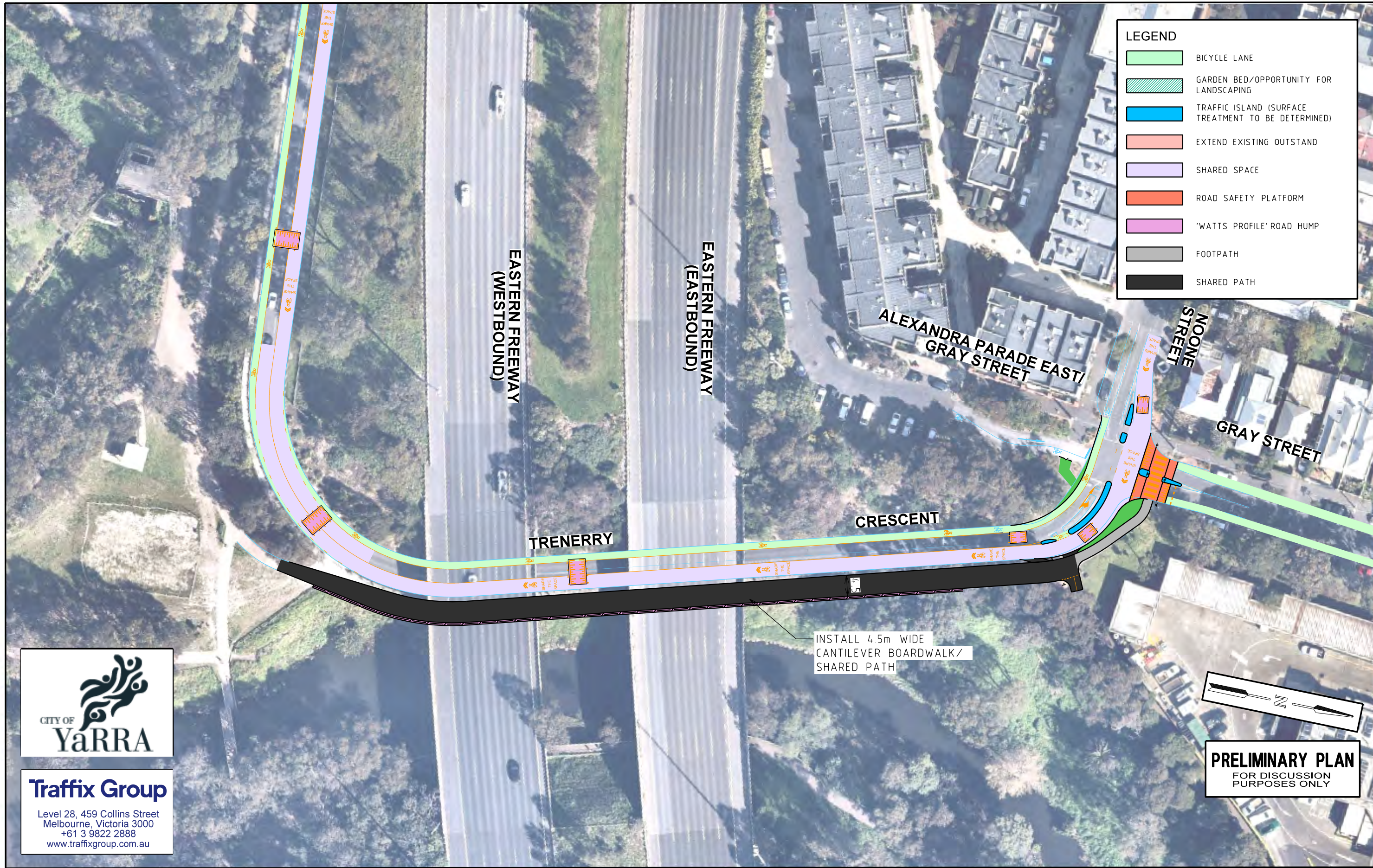
CONCEPT PLAN

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# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT AT EASTERN FREEWAY (LOCATION 6) - ULTIMATE TREATMENT



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DATE: 28/10/2022  
MODEL: 9  
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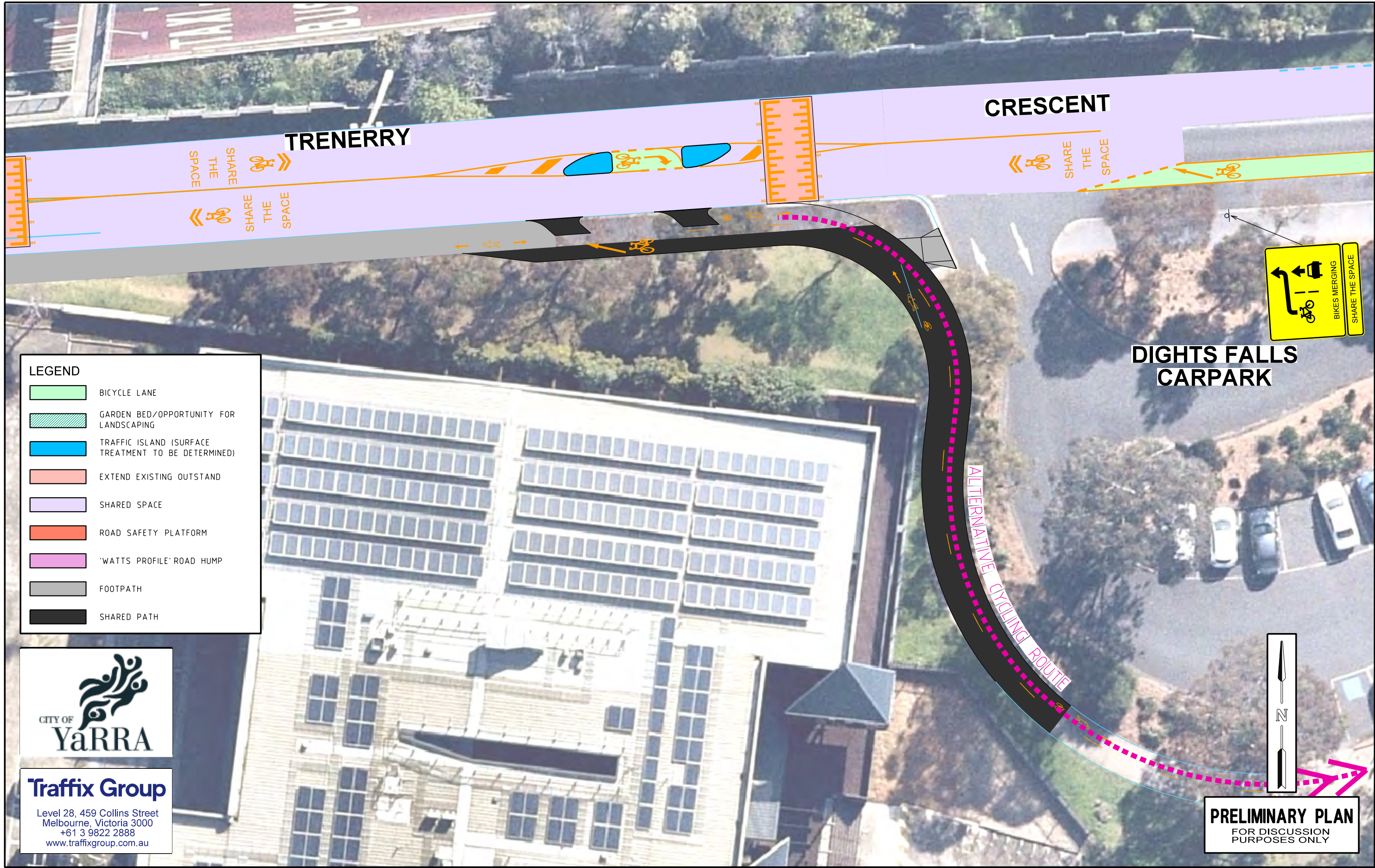
CONCEPT PLAN

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# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT NEAR DIGHTS FALLS CARPARK (LOCATION 6 CONT.)



DATE: 28/10/2022  
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE
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CONCEPT PLAN

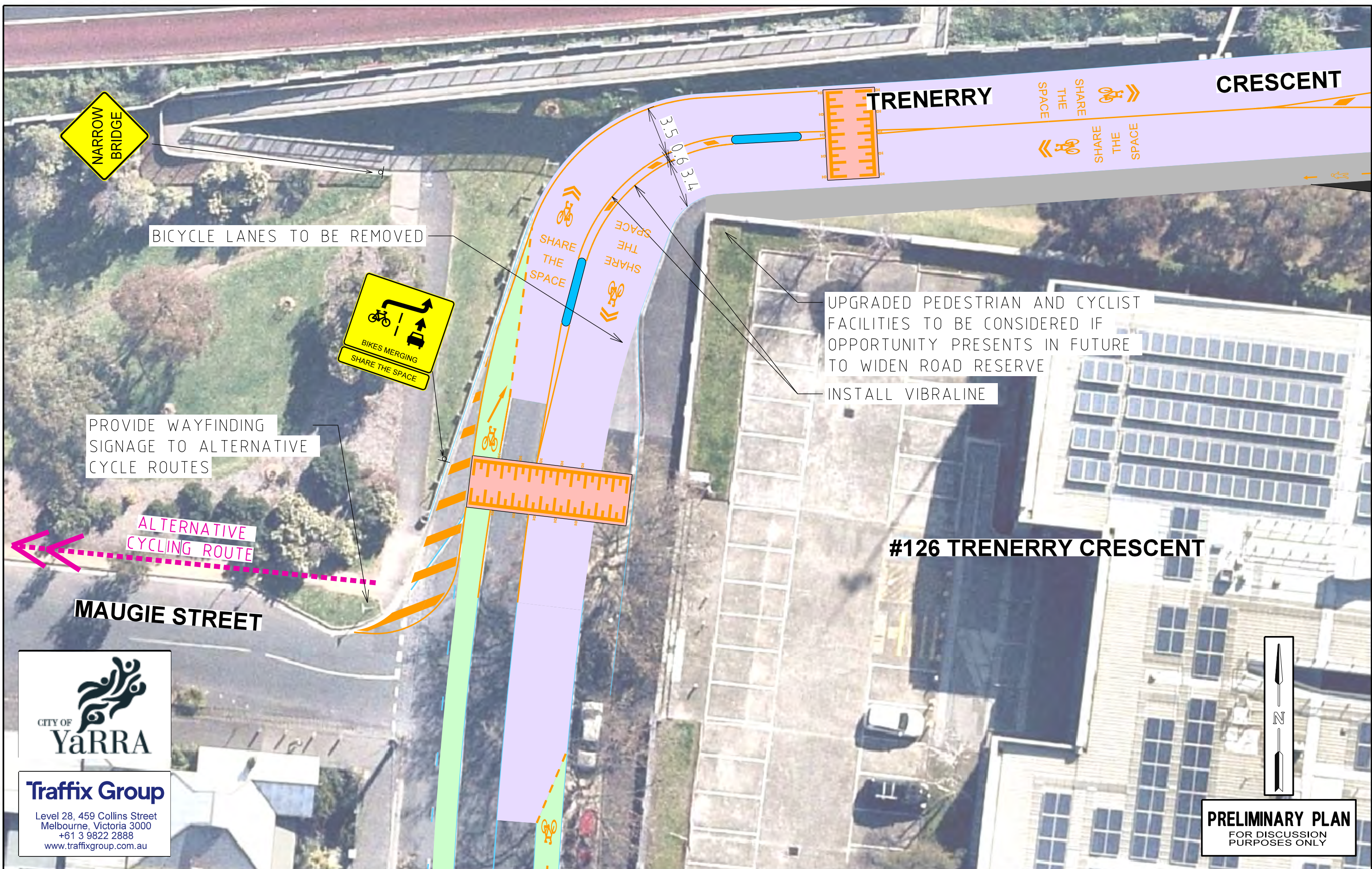
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SHEET NUMBER: 10



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT NEAR MAUGIE STREET (LOCATION 7) - INTERIM TREATMENT



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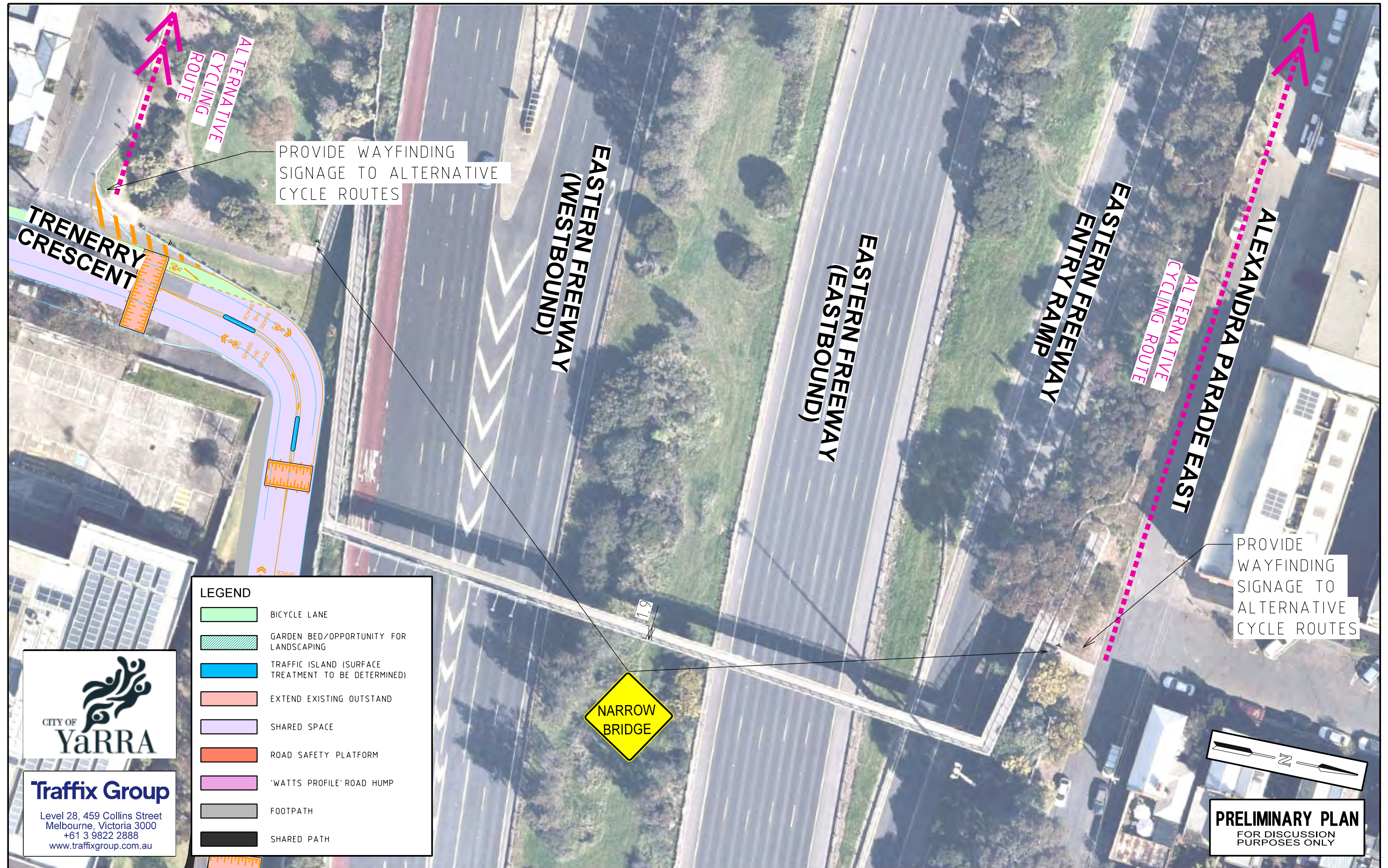
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# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## EASTERN FREEWAY PEDESTRIAN OVERPASS(LOCATION 8)



DATE: 28/10/2022  
MODEL: 12  
FILE: \\ussv02\group\Synergy\Projects\GRP3\GRP31210\03-Drawings\G31218-01 Issue D.dgn

ISSUE	ISSUE DESCRIPTION	ISSUE DATE
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	28/10/22

CONCEPT PLAN

SCALE  
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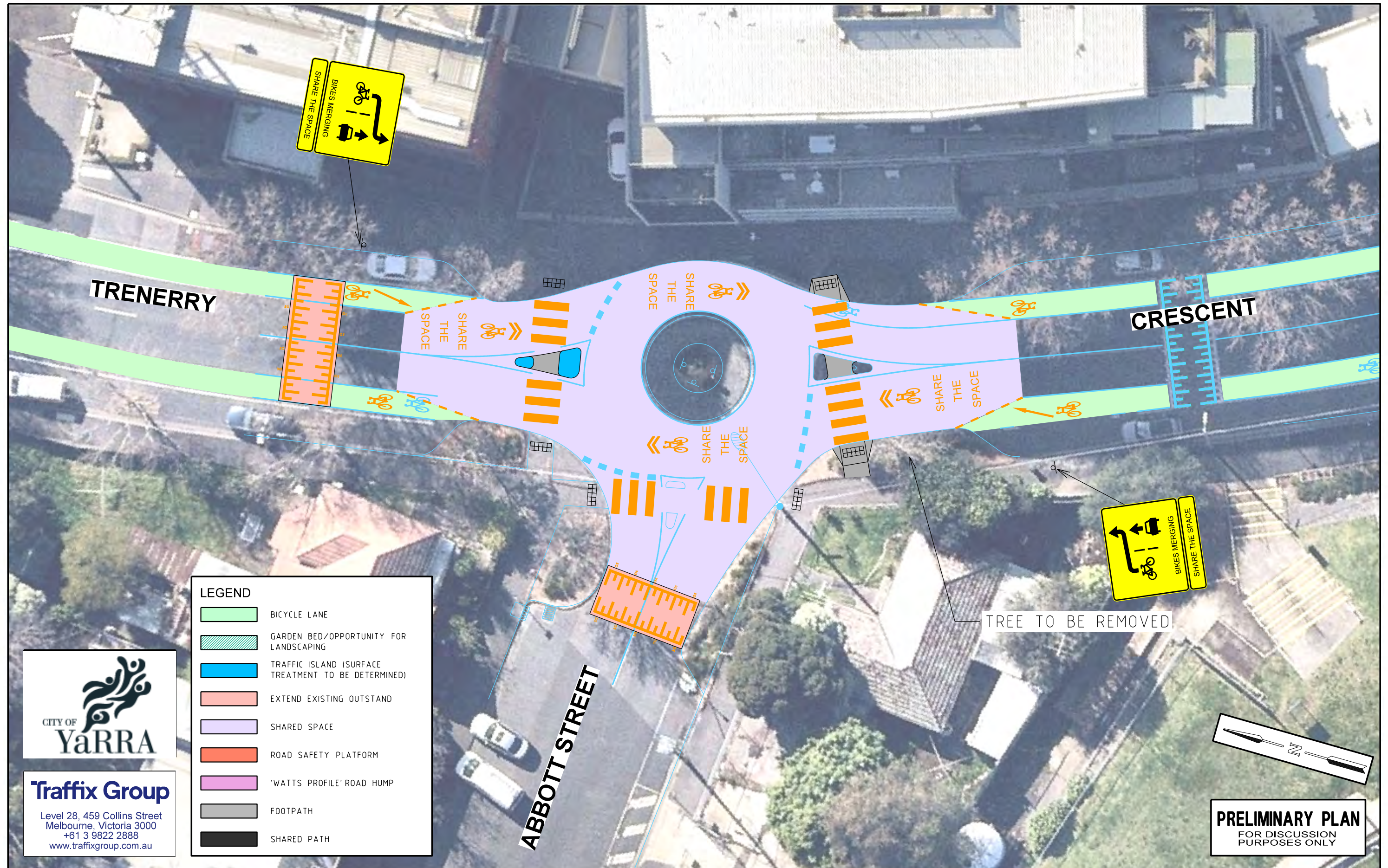
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SHEET NUMBER: 12



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT NEAR ABBOTT STREET (LOCATION 9)



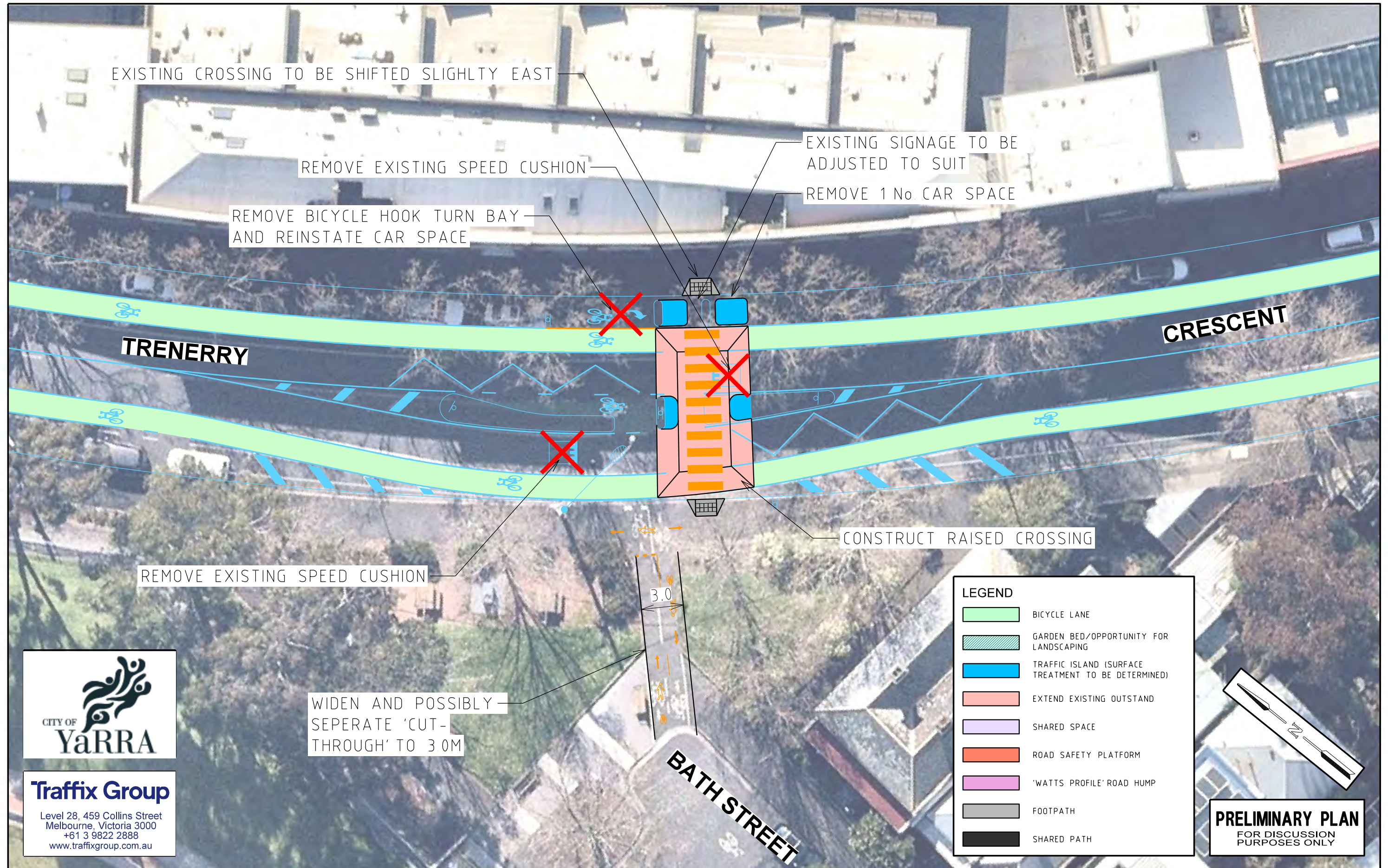
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE	SCALE	SHEET NUMBER
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	28/10/22	1:250 (A3) 0 125 25 375 5	13



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT NEAR BATH STREET (LOCATION 10)



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DATE: 28/10/2022  
MODEL: 14  
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE
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CONCEPT PLAN

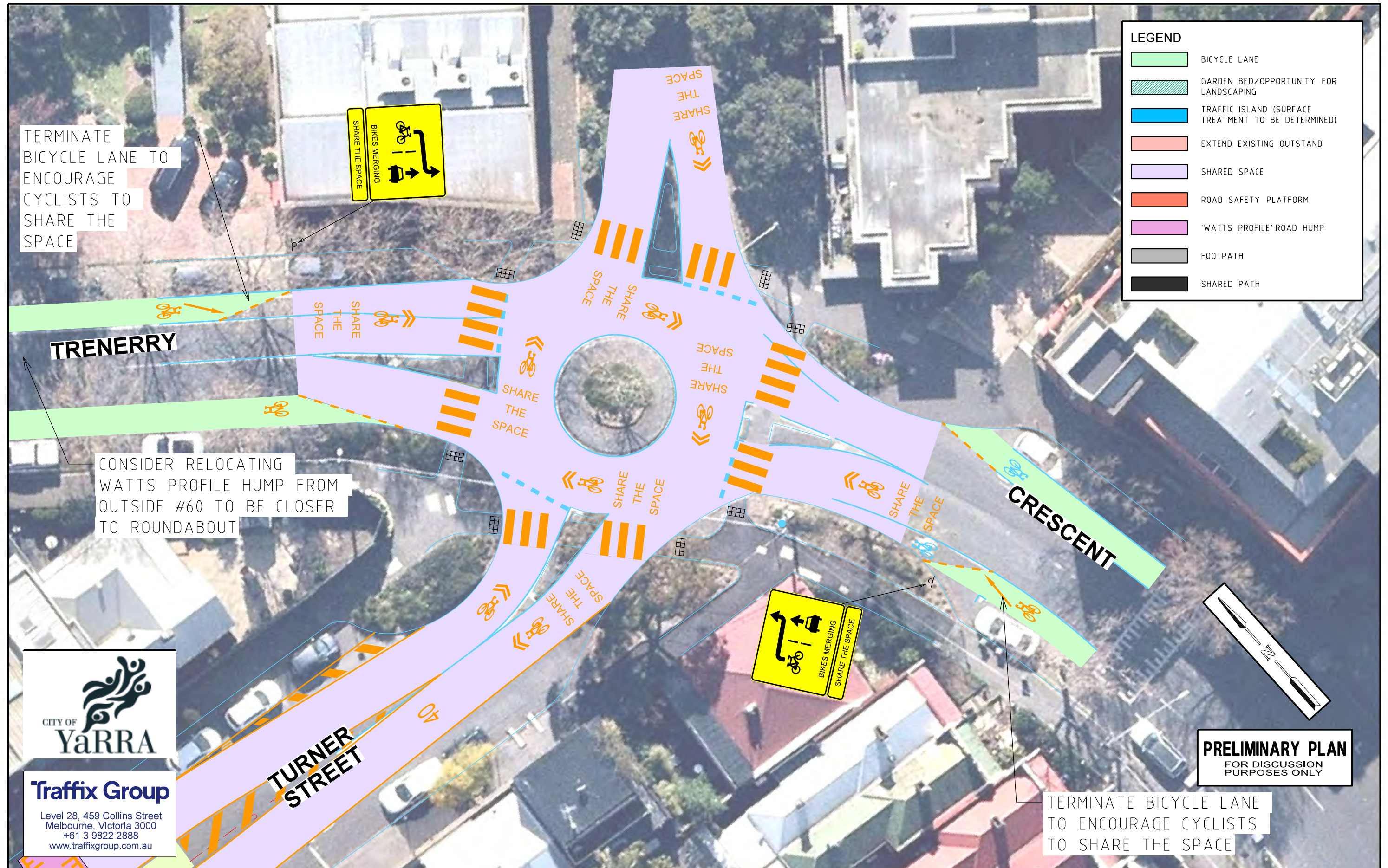
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SHEET NUMBER: 14



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT NEAR TURNER STREET(LOCATION 11)



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MODEL: 15  
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	28/10/22

CONCEPT PLAN

SCALE	0 125 250 375 500	SHEET NUMBER: 15
1:250 (A3)		



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TURNER STREET (LOCATION 12)



CONCEPT PLAN

SCALE  
1500 (A3)  
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SHEET NUMBER: 16

DATE: 28/10/2022  
MODEL: 16  
FILE: \Users\02group\Synergy\Projects\GRP3\GRP31210\Drawings\G31218-01 Issue D.dgn



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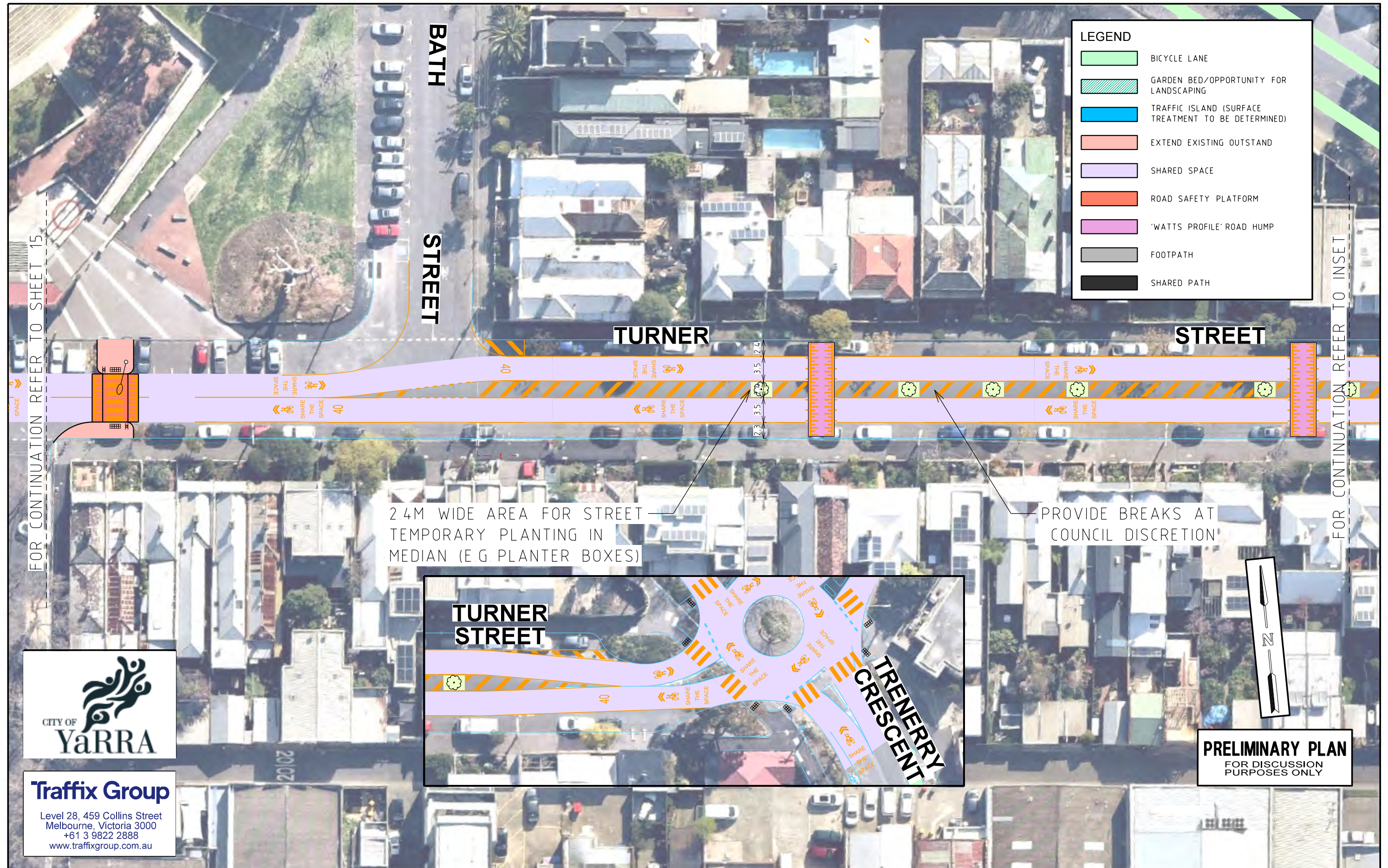
ISSUE	ISSUE DESCRIPTION
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION

ISSUE DATE
28/10/22



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TURNER STREET (LOCATION 12)



DATE: 28/10/2022  
MODEL: 17  
FILE: \Users\02group\Synergy\Projects\GRPs\GRP31218\Drawings\G31218-01 Issue D.dgn

ISSUE	ISSUE DESCRIPTION	ISSUE DATE	SCALE	SHEET NUMBER: 17
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	28/10/22	1500 (A3) 0 2.5 5 7.5 10	

CONCEPT PLAN



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## TRENERRY CRESCENT NEAR DIGHTS FALLS CARPARK (LOCATION 17)



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DATE: 28/10/2022  
 MODEL: 18  
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE	SCALE	SHEET NUMBER
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	28/10/22	1:250 (A3)	18

CONCEPT PLAN



# CLIFTON HILL AND NORTH ABBOTSFORD ROAD SAFETY STUDY

## YAMBLA STREET AT KIEWA STREET (LOCATION 18)



DATE: 28/10/2022  
MODEL: 19  
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ISSUE	ISSUE DESCRIPTION	ISSUE DATE
H	UPDATED ISSUE FOLLOWING COMMUNITY CONSULTATION	28/10/22

CONCEPT PLAN

SCALE  
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SHEET NUMBER: 19