



LOCAL MOVEMENT AND TRANSPORT REPORT

WARBURTON AND SURROUNDS

FINAL STRATEGY

SALT³

LOCAL MOVEMENT AND TRANSPORT REPORT WARBURTON AND SURROUNDS

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EXECUTIVE SUMMARY

The Warburton Local Movement and Transport Report (LMTR) reviews the current issues and opportunities regarding access, connectivity and parking within the Warburton township and surrounds. It builds on collected evidence obtained through site observations, parking and traffic surveys together with the experiences of the local community and identifies objectives and actions that will improve pedestrian and cyclist access and overall parking availability across the study area.

The local context of the Warburton township means that visitors have a heavy reliance on private vehicles and an expectation of finding a parking space very close to their destination. The commercial areas of Warburton experience high demand for parking in peak periods, particularly over weekends when tourist traffic is high.

Warburton is well positioned as a tourist destination, as the township is 20 minutes' drive from Mount Donna Buang, in addition to restaurants and cafés, river walks and trails, fishing and wineries in the local area. The township also has a strong cycling presence, given its location at the end of the popular rail trail that connects Warburton to Lilydale to the west.

Cyclist and tourist numbers are also expected to grow with the development of the Warburton Mountain Bike Destination. The creation of the world class destination is expected to attract a significant increase in tourists to the region, which will place pressure on existing transport infrastructure, with visitors, customers and staff competing for a limited number of parking spaces.

Given the high demand for parking across the township, additional public car parking may be required to support this growth.

In response to these issues, the LMTR recommends the following objectives to guide transport decision making into the future:

- Create streets and public spaces that reflect the character of each township within the study area as a 'place', not just part of the road network.
- Ensure the ongoing viability and development of Warburton township.
- Provide an appropriate level of parking within the Warburton township that caters for demand while supporting a future reduction in private vehicle usage.
- Encourage sustainable transport travel within and to key destinations and townships within the study area.

The following actions are recommended as ways to manage the current and future transport demands across the Warburton township and surrounding areas.

Roads and Public Spaces

- Undertake conceptual planning and design for a streetscape upgrade of Warburton Highway in order to adapt the road and its traffic to the needs of the Warburton township.
- Develop an on-going plan of streetscape improvements and use every opportunity to make improvements to the public realm, especially during any routine refurbishment.
- Reduce the speed limit along Warburton Highway to 40km/h in areas where pedestrian activity is encouraged, including within the commercial areas of Wesburn and Warburton.
- Consider opportunities to redistribute unused road space to pedestrians, cyclists and the public realm.

Sustainable Transport

- Ensure the footpath network is continuous, clear of fixed objects and other obstacles and is at least 1.8m wide, so two people using wheelchairs can comfortably pass each other.

The logo for SALT 3, featuring the word "SALT" in white on a black background, with a superscript "3" to its right. The logo is set against a geometric pattern of overlapping triangles in shades of blue, orange, and teal.

SALT³

- Look at opportunities to improve and extend the pedestrian footpath network beyond each township.
- Provide pedestrian crossing opportunities through the township.
- Consider expanding the cycling network to include new on-road and shared path routes.
- Consider improving connections between the rail trail and destinations within the study area.
- Provide improved shared path crossings across major roads.
- Consider providing end-of-trip facilities within the Warburton township for public use.
- Consider providing electric bike charging stations within the Warburton township.
- Advocate improvements to the frequency, coverage and accessibility of public bus services within the Warburton township and surrounding area.
- Encourage and support community and private providers to provide shuttle services to key destinations within the study area.
- Plan for a future bus interchange that allows for the safe and efficient movement for passengers between public and community transport services. This could be located at the main trail head of the Warburton Mountain Bike Destination, or within the Warburton township.

Car Parking

- Provide a greater mix of parking restrictions that reflects the varied needs of visitors to Warburton.
- Maintain consistency across parking restriction signs.

- Continue to monitor parking demand within the Warburton township, including conducting duration of stay and parking occupancy surveys at regular intervals.
- Use the parking user priorities (identified in Table 9) to review and manage the allocation of parking spaces within the Warburton township.
- Consider altering parking restrictions where over 85% of the parking spaces within a defined area were observed to be occupied during peak periods, or where a road safety concern has been identified by Council officers.
- Ensure traders and adjacent property occupiers are consulted on any changes to parking restrictions in the vicinity of their property prior to the restrictions being altered.
- Actively enforce car parking on-street and off-street to maintain a peak parking occupancy demand of 85% and compliance level of 90%.
- Continue to undertake frequent parking enforcement at random times of the day so that regular visitors to the precinct do not become familiar with when parking restrictions will be enforced.
- Review the need for paid and permit parking as part of the ongoing management of parking within the Warburton township.
- When designing new car parking facilities, ensure the design enables other activities such as markets and community events to be held on the site.
- Progress concept designs for the upgrades of informal car parking areas across the study area.

- Review the car parking rates as part of the review of the Warburton and Surrounds LMTR.
- Undertake further land use forecasting to understand the impact of the Mountain Bike Destination facility and overall tourist growth on potential development activity within the study area.

Education, Information and Engagement

- Undertake a detailed audit of wayfinding within the study area to identify current signage and any gaps and inconsistencies in information presented on the signs.
- Prepare a wayfinding signage strategy that comprehensively maps the transport and path network within the study area, including key destinations, and builds the foundation of a consistent signage network throughout the study area.
- Raise awareness about what parking is available and sustainable transport modes to business owners, staff, residents and visitors to Warburton through the development of parking fliers and a communications campaign both online and print media.
- Facilitate community participation in the process of change to Warburton's streetscapes and infrastructure.

An action plan has been prepared that outlines the priority of the action, the allocated timeframe, the responsible department and the resources required to deliver the action, as well as monitoring and evaluation requirements.

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1 INTRODUCTION

Warburton is located 75km east of Melbourne on the Yarra River, with a population of just over 2,000 residents. Bordering on the Yarra State Forest, the township has a range of cafés and restaurants, shops and community facilities. Due to its proximity to Redwoods Forest, Mt Donna Buang and many other scenic attractions, Warburton serves as a tourist and visitor focal point for the surrounding area. The number of visitors to the area is expected to grow following the anticipated construction of the Warburton Mountain Bike Destination.

The Warburton township is split into two distinct sections, connected by the Yarra River Walk and the Warburton Highway. Cycling connections are provided through to Warburton through the Lilydale – Warburton Rail Trail, with a number of connections through to the local tourist destinations and walking tracks along the route.

Due to Warburton’s anticipated growth in visitor and tourist volumes following the opening of the new mountain biking facility, further work is needed to plan for and manage car parking, transport demand and pedestrian accessibility across the township in order to respond to the increased demands placed on the centre.

Accordingly, SALT was engaged by Yarra Ranges Shire Council in September 2018 to develop the Local Parking, Pedestrian and Transport Report for the Warburton township and surrounds.

1.1 FOCUS

The Local Movement and Transport Report considers the planning and management of the current road and transport networks within a neighbourhood or suburb.

The LMTR looks at the movements of pedestrians, cyclists, public transport and private vehicles, as well as the supply and demand for parking, within the area, and identifies opportunities to improve the safety, connectivity, amenity and accessibility for each road user.

Roads and streets are often unable to accommodate all road users due to physical constraints. To encourage more trips by walking, cycling and public transport without significantly impacting on vehicle mobility, Local Movement and Transport Reports consider community concerns, existing conditions, local points of interest and infrastructure requirements to develop solutions to the competing demands.

Unlike local area traffic management strategies, the LMTR will consider new and improved infrastructure alongside operational changes, policy alterations, education and other initiatives in order to provide a holistic approach to managing parking and transport demand and access.

From a car parking perspective, the LMTR will provide direction on how to manage current and future car parking demands within the study area. It will provide an analysis of current parking supply and demand, assess the impact of future developments, and propose a series of parking tools and strategies that can be implemented to address key issues that are identified.

The LMTR will be able to provide the strategic justification for both statutory and non-statutory mechanisms to manage parking generation and demand, such as Parking Overlays, parking permits, paid parking and parking restriction changes.

1.2 OUTLINE OF REPORT

The LMTR provides an overview of the strategic and local transport context for the Warburton township and

surrounding areas. It reviews existing transport and parking conditions including current car parking demand and supply, analyses the expected future parking demand, and identifies the issues in relation to transport and parking within the activity centre.

The LMTR also identifies the principles and objectives that can guide the management of parking and transport within Warburton township and surrounds into the future and outlines the actions required to manage existing and future parking demand.

Key tasks undertaken as part of this study include:

- Review of the relevant background material;
- Undertaking a foot and saddle survey of the activity centre with Council to gain an understanding of the area at the pedestrian level;
- Discussions with key stakeholders, including the project reference group;
- Analysis of future land use growth and the forecast parking demand;
- Identification of principles, objectives and suggested actions;
- Preparation of a suggested Action Plan to guide the implementation of the Parking, Pedestrian and Transport Plan.

1.3 REFERENCES

In the preparation of this report, the following references have been consulted and are publicly accessible online:

- Transport Integration Act (2010)
- Plan Melbourne – Metropolitan Planning Strategy (2013)



- Towards Zero 2016–2020 Road Safety Strategy
- Victorian Cycling Strategy 2018–28
- Victorian Visitor Economy Strategy
- Vision 2020 Community Plan
- Council Plan 2017–2021
- Yarra Ranges Health & Wellbeing Strategy 2017–2021
- Yarra Ranges Equity, Access and Inclusion Strategy 2013–2023
- Yarra Ranges Environment Strategy 2015–2025
- Economic Development Strategy
- Recreation and Open Space Strategy
- Yarra Ranges Activity Centre Network Strategy
- Warburton Mountain Bike Feasibility Study (2013)
- Warburton Mountain Bike Destination Revised Economic Impact Assessment (2018)
- ABS Census Data 2016
- Commissioned traffic speed and volume data;
- Commissioned car parking occupancy and duration of stay data;
- VicRoads traffic volume data;
- VicRoads Crash Statistics (2013–2017); and
- Public Transport Victoria patronage data

1.4 STUDY AREA

The project study area broadly encompasses the townships of Wesburn, Warburton and East Warburton, including the length of Old Warburton Road to the south.

A contextual study area map is shown in Figure 1.



Figure 1 Study Area



SECTION 1 STRATEGIC CONTEXT

2 STATE & REGIONAL POLICY

Transport Integration Act 2010

The Transport Integration Act 2010 sets out decision-making principles that are to be applied when specified organisations undertake transport planning. Where councils make decisions that impact upon the transport system, the Act requires that transport system objectives and decision-making principles be considered. Transport planning across all levels of Government must follow these principles when developing transport plans.

Plan Melbourne 2017-2050

Plan Melbourne 2017 - 2050 is the metropolitan planning strategy for Melbourne that sets the vision for and guides Melbourne's growth to the year 2050. It seeks to integrate long-term land use, infrastructure and transport planning to meet the population, housing and employment needs of the future.

Plan Melbourne recognises that Victoria's growing population is placing increased pressure on the transport systems, including our roads and public transport services.

The relevant principles, directions and policies of *Plan Melbourne* are as follows:

Principle 1: Melbourne is a productive city that attracts investment, supports innovation and creates jobs

- Direction 1.2 – Improve access to jobs across Melbourne and closer to where people live
 - Support the development of a network of activity centres linked by transport



Figure 2 Relevant State Policies

- Facilitate investment in Melbourne's outer areas to increase local access to employment

Principle 3: A city of centres linked to regional Victoria

- Direction 3.2 – Improve transport in Melbourne's outer suburbs
 - Improve roads in growth areas and outer suburbs
 - Improve outer-suburban public transport
- Direction 3.3 – Improve local travel options to support 20-minute neighbourhoods
 - Create pedestrian friendly neighbourhoods
 - Create a network of cycling links for local trips
 - Improve local transport choices

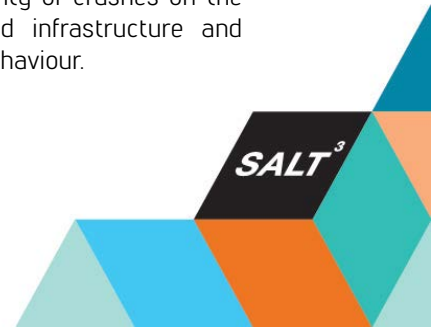
Principle 5: Living locally—20-minute neighbourhoods

- Direction 5.2 – Create neighbourhoods that support safe communities and healthy lifestyles

Towards Zero 2016-2020 Road Safety Strategy

The Towards Zero 2016-2020 Road Safety Strategy maps out how Victorian road safety partners will work towards a 20% reduction in deaths and 15% reduction in serious injuries in five years. The strategy focuses on creating a safe system for all Victorians, including an increased focus on regional and rural roads, where crashes are more likely to occur.

The Strategy outlines a multi-faceted approach to reduce the occurrence and severity of crashes on the road network, focusing on road infrastructure and design, speed limits and driver behaviour.



Victorian Cycling Strategy 2018–28

The Victorian Cycling Strategy 2018–28 sets out a vision for the future of cycling across Victoria and the actions and strategies needed to achieve it. Recognising that two of every five Victorians say that they would be encouraged to cycle more often if the network was safer and better connected the strategy supports increased funding to deliver high-quality cycling infrastructure and to improve the coordination of planning, development and delivery of cycling investments and programs.

The strategy also identifies the need to support recreational cycling and sport, tourism and community events as a means of improving cycling activity. To achieve this, the strategy outlines opportunities to encourage cycling tourism by improving wayfinding information and secure places to store bicycles, as well as better integration of cycling with public transport, and making it easier to carry bicycles on public transport, will help make cycle tourism more accessible.

Victorian Visitor Economy Strategy

The Victorian Visitor Economy Strategy recognises the importance of tourism and the visitor economy to Victoria’s future growth and prosperity. In regional and rural Victoria, areas like the Yarra Valley are strongly positioned as a destination for touring and cycling, food and wine, and wellness activities due to the diverse range of private and public produces and services in these areas.

In order to ensure tourism continues to grow, the Strategy identifies a number of priorities, including building on the potential of regional and rural Victoria, providing better tourist infrastructure, and improving access into and around Victoria.

3 LOCAL POLICY

Vision 2020 Community Plan

The Shire of Yarra Ranges Vision 2020 Community Plan, adopted by Council in 2008, outlines the community’s vision for the municipality over the next 12 years. It considers the key issues identified by the community and outlines the key steps that Council and other stakeholders can take to alleviate them.

The document outlines transport as a key issue impacting the community and the challenge of providing transport and other infrastructure to meeting the needs of the growing communities and industries. Key priorities include providing better transport and safer roads, improving pedestrian and cycling access, and reducing the community’s reliance on private vehicles.

Council Plan 2017–2021

The Yarra Ranges Shire Council Plan 2017–21 was adopted by Council in June 2017 and sets out the strategic direction of the Council and the strategies for achieving those objectives for the next four years.

The “Quality Infrastructure and Liveable Places” focus area acknowledges the community’s connection with place and focuses on respecting and preserving the environment while ensuring access to nearby services. A key initiative under this focus area is to *“Develop a Transportation Plan with a focus on improved public transport, pressures and freight to enable targeted advocacy to State and Federal Government and partnership with private industry.”*



Figure 3 Relevant Council Policies and Plans

Yarra Ranges Health & Wellbeing Strategy 2017-2021

The Yarra Ranges Health and Wellbeing Strategy 2017-2021 recognises the importance Council plays in promoting a healthier community. Adopted in June 2017, the strategy considers the health of people living in the Yarra Ranges and identifies priorities for how Council will work to improve health and well-being over the life of the strategy.

A key goal within the Health and Wellbeing Strategy is to promote access to active transport modes, such as walking, cycling and public transport. Ensuring these modes are catered for within the study area is an important step in promoting active transport within Warburton and surrounds.

Yarra Ranges Equity, Access and Inclusion Strategy 2013-2023

The Equity, Access and Inclusion Strategy (EAIS) 2013-2023 was adopted by Yarra Ranges Council and outlines the way Council will work to create more accessible and inclusive communities that encourage participation by people with a disability in all realms of life. Infrastructure is a key component of the EAIS and requires the incorporation of universal design principles for all infrastructure owned by Council. This includes buildings, parks, open space, signage, roads, kerbs, footpaths, playgrounds, and street furniture.

Yarra Ranges Environment Strategy 2015-2025

The Yarra Ranges Environment Strategy outlines a framework for the environmental program planning and decision making over a ten-year period. It is to ensure the protection and wellbeing of a number of important

community-identified elements of the Yarra Ranges landscape including forest and bushland, wildlife, quality of scenery, accessibility of natural place for exploration, recreation opportunities and clean air and waterways.

To this end, Council aims to achieve the following goals:

- Iconic places and their natural character are actively protected.
- Water resource is improved and preserved.
- Native plants and animals are protected, and their habitat is enhanced.
- Local economics are strengthened by environmentally sustainable activities.
- Communities are resilient in the face of changing climate and extreme events.
- People gain a sense of responsibility for the environment as stewards of the natural landscape.

Economic Development Strategy

The 2012-2022 Economic Development Strategy outlines Council's commitment to improving the health and wellbeing of individuals and local communities in Yarra Ranges by supporting and promoting a range of sustainable economic development initiatives.

The Strategy identifies tourism as a key sector within Yarra Ranges, with Council identifying the following actions to foster growth within the sector that are of relevance to Warburton:

- Achieve local and international recognition as a premier tourism destination.
- Increasing visitor numbers in targeted consumer segments, length of stay and improved experiences

- Work with industry to grow nature-based tourism in the region

Recreation and Open Space Strategy

The Recreation and Open Space Strategy seeks to "guide Council's decision-making process in providing recreation and open space services and facilities in Yarra Ranges" to yield social, environmental and economic benefits to its citizens. Specifically, the objectives of the strategy include developing recreation facilities through strategic planning and consultation, improving existing open space and recreation facilities and developing an implementation plan to execute via an integrated approach.

Yarra Ranges Activity Centre Network Strategy

The Yarra Ranges Activity Centre Network Strategy assesses the demand, supply and future provision of commercial development in Council's activity and industrial areas. It is to inform the long-term strategic planning of townships, suburban activity centres and residential communities, including Warburton.

One of the purposes of the studies is to identify "the relationship between economic activity, population levels, demographics, and social sustainability of activity centres" with the aim to yield high-performing activity centres in the municipality.

Road Management Plan

The Yarra Ranges Council Road Management Plan has been developed to assist Council in the management of Council's public municipal road system, taking into consideration the important links provided by the State road network. The Road Management Plan sets out the 'level of service' of the roads under Councils control in line with the community's reasonable expectations of

day to day maintenance and ongoing asset performance and management.

Warburton Mountain Bike Feasibility Study (2013)

The Warburton Mountain Bike Feasibility Study considers the impacts and benefits of constructing a world class mountain bike trail network within Warburton and surrounding areas. Noting the overarching need to create new economic stimuli and job opportunities in Warburton, the study considered the size of the mountain biking market in Australia, and the suitability of Warburton as a possible future destination in comparison to the characteristics and benchmarks of other facilities around the world.

The study determined that Warburton has the infrastructure, atmosphere, location and the terrain, scenery and topography to become a world-class Mountain Bike Destination. In addition, it is close enough to the Melbourne metropolitan area to become a destination for weekly social and recreational rides. The study also identified locations of potential trailheads for a future mountain biking trail network in the area, including possible locations within the Warburton township.

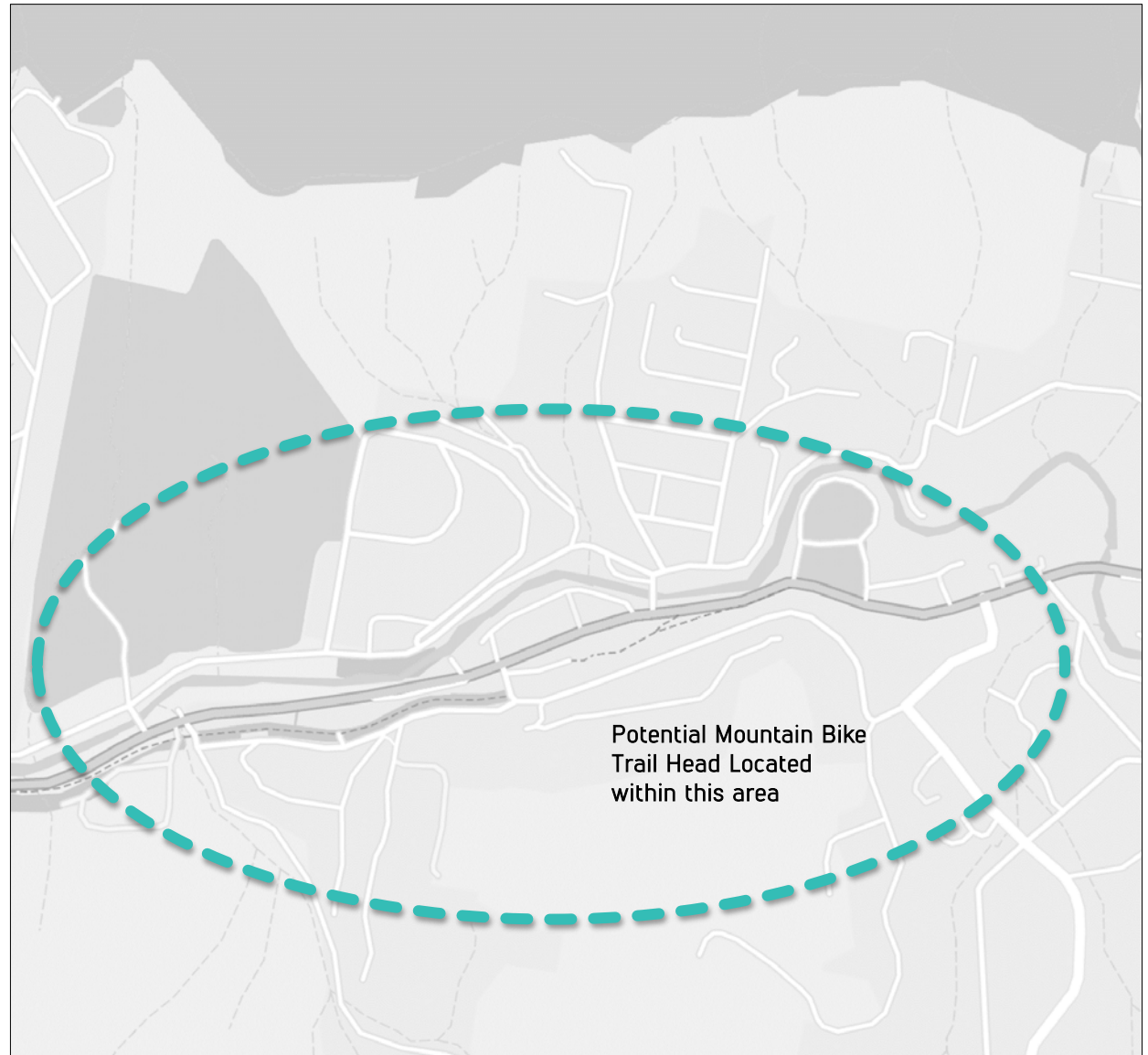


Figure 4 Potential Mountain Bike Trail head location



4 LOCAL CONTEXT

4.1 WARBURTON

Warburton is located 72km east of Melbourne on the Yarra River and is a popular tourist destination with access to several walking and cycling trails, natural landmarks and other destinations.

Throughout Victoria, Warburton has a reputation as one of the state's natural wonders, due to its peaceful and serene surroundings. Advocates often refer to the beauty of the township and its many natural amenities, such as swimming in the local Yarra River as key local attractors within the area.

The township is split into two distinct precincts, with the Yarra River meandering through both areas and Warburton Highway connecting the two. The western precinct is largely tourism-orientated, and contains a number of cafés, restaurants and specialty stores serving the visitor market. The eastern precinct, located approximately 500 metres to the east along the Warburton Highway, provides a mainly convenience-retailing role.

Warburton is also the terminating point of the Lilydale – Warburton Rail Trail, which runs along the former railway line. The shared trail is popular with pedestrians, cyclists, and horse-riders, providing an easy ride and walk between the two areas.

Planning is currently underway for the future Warburton Mountain Bike Destination project, which will see the construction of a world class mountain biking hub within the Warburton township that connects to over 100km of trails within the surrounding landscape. The project once completed and operational, is expected to attract cyclists from all over the world to experience



the natural environment, cycling tracks and other facilities offered by Warburton.

4.2 WESBURN

Wesburn is located 66km east of Melbourne and 6km west of Warburton. Predominantly rural in nature, the township has a narrow ribbon of residential dwellings along and branching off the Warburton Highway. There are several small shops and businesses within the centre of the township along with a few community facilities, including a primary school and sports reserve (Wesburn Recreation Reserve). The Wesburn Recreation Reserve hosts junior football and netball teams.

Wesburn had a railway station located on the former Warburton railway line and is one of the linked townships on the Warburton Rail Trail, which passes to the west of the township.

4.3 EAST WARBURTON

East Warburton is located 77km east of Melbourne and 5km east of Warburton. Like Wesburn, the township is predominantly rural in nature, comprising of a mix of residential dwellings, accommodation and small businesses.

East Warburton connects to a number of trails and points of interest, including Redwoods Forest to the north of the township which is continuing to grow in popularity. The township is not currently connected to the Warburton Rail Trail.

Figure 5 Yarra River, Warburton

Figure 6 View from Mount Donna Buang

Figure 7 Warburton Highway, Wesburn

Figure 8 Redwood Forest, East Warburton



SECTION 2 ANALYSIS & FINDINGS

5 WALKING

Each township within the study area is reasonably walkable, with walking tracks and paths connecting the majority of destinations within each precinct. In Warburton, access across the Yarra River is provided by a series of pedestrian and vehicular bridges.

Overall connectivity between the precincts, including between the two commercial areas of Warburton, and outside Wesburn and East Warburton, could be improved, as there are limited accessible options available to pedestrians between these areas.

The available footpath width in many areas across the study area does not allow opportunity for two prams or wheelchairs to pass. Crossing opportunities across Warburton Highway are limited, and existing signalised crossings do not align with desired pedestrian routes.

This may be improved by providing crossing opportunities every 80–100 metres within the Warburton township along Warburton Highway. Distances over 200 metres should be avoided, as they create compliance and safety issues.

Crossing distances should also be reduced where possible. Intersections such as Station Road and Warburton Highway, and Brett Street/Brisbane Bridge and Warburton Highway have a large splay for turning vehicles, increasing the distance for pedestrians to cross at these locations.

Providing a safe walking environment is a critical component of a good pedestrian network, particularly for the younger (15 years of age and under) and older (over 60 years of age) residents, who are at a higher



Figure 9 Pedestrian connectivity at the intersection of Warburton Highway and Brisbane Bridge

Figure 10 Existing Wayfinding along the Yarra River Walking Track

Figure 11 Footpath width at Yarra River Walking Track

risk of being involved in a pedestrian causality crash than other age groups.

A review of the crash statistics database for the five-year period between 2013 and 2017 indicated there were five pedestrian crashes within the study area during this timeframe (two serious injury crashes and three minor injury crashes), all located within the Warburton township.

While each crash occurred at a different location within the township, the frequency of the crashes indicates that there is some level of conflict between vehicles and pedestrians within Warburton. Given the expected increase in activity into the future within the township, it is important that the road environment ensures all road users are safe while travelling along or within the area.

In high pedestrian volume areas, road designs and streetscapes should always prioritise safe facilities for pedestrians. A walkable township that is easy and safe to navigate offers a level of independence and equity to users of all ages and abilities.

While lower vehicle speeds, footpaths and safe crossing points are key features of creating a walkable environment, it is also important to provide well-lit spaces, inviting building edges, shaded places to rest and walk, and wayfinding signage to provide a safe and comfortable street experience.

Warburton already features a number of these characteristics, with the natural environment and supporting infrastructure such as seats providing

Table 1 Warburton Rail Trail Pedestrian Count Summary

Site 1	Warburton Rail Trail, Warburton at Scotchmans Creek Road			
Date	Friday		Saturday	
	26 Oct 2018		26 Oct 2018	
Direction	East	West	East	West
Total	14	11	24	24
AM Peak	2	4	4	6
PM Peak	3	0	5	5
Site 2	Warburton Rail Trail, Warburton at Station Road			
Date	Friday		Saturday	
	26 Oct 2018		26 Oct 2018	
Direction	East	West	East	West
Total	16	20	34	28
AM Peak	4	4	7	6
PM Peak	5	3	7	7
Site 3	Warburton Rail Trail, Warburton at Station Road			
Date	Friday		Saturday	
	26 Oct 2018		26 Oct 2018	
Direction	East	West	East	West
Total	17	23	39	29
AM	0	5	9	0
PM	3	3	8	4

substantial shade and resting points within each precinct. There are opportunities to improve activity and levels of passive surveillance along property frontages and within the broader public realm, including encouraging the activation of property frontages along Thomas Avenue and the Yarra River.

The types and volumes of people on a path, road or route will depend on the surrounding land use and density, key destinations, and time of day. Without an enclosed vehicle and moving at slower speeds, pedestrians engage all their senses when walking. How people use these areas will depend on the space available to them, the facilities that offer a moment to pause, and the overall pedestrian experience.

Pedestrian count data collected along the Warburton Rail Trail in October 2018 suggests there is a reasonable level of pedestrian activity in the periphery areas around the commercial precincts of Warburton, with higher volumes observed along the path connecting the east and west commercial precincts. A summary of this data is provided in Table 1, with location maps and the full survey results provided in Appendix 1.

While inspections highlight that the current path network connecting these two precincts is unsafe, uneven, poor surface, narrow width and has difficult grades in some locations, the data indicates the route is popular despite the current environment. This connection could be better supported through path upgrades and improved crossing points between the two precincts, as well as improved wayfinding.

The existing wayfinding signage within Warburton provides some information on walking routes throughout the Warburton township. However, this does not provide uniform connections with the commercial core of Warburton and provides limited direction to other modes of transport within the township, including the Warburton Rail Trail.

Wayfinding should allow pedestrians and other road users to switch between transport modes and navigate the local road and path network with ease. Walking distances and times should also be included on signs and maps to provide pedestrians with clear information on how long the journey will take.

Key Challenges



Pedestrian routes connecting to destinations outside the core are indirect and discontinuous, including towards the golf club and accommodation areas to the north and west of the Warburton township.



Some sections of footpath are too narrow to allow wheelchairs or prams to pass one another, including along Warburton Highway between the two commercial areas of Warburton.

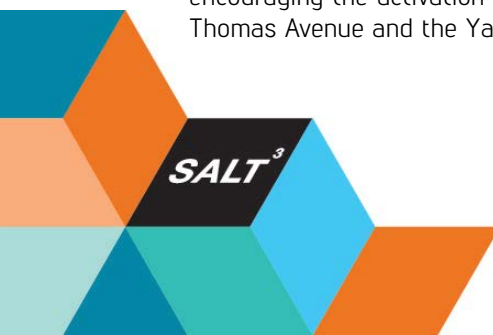
Opportunities



Provide consistent pedestrian signage in a clear visual language that can be universally understood. This helps those who are unfamiliar with the area to locate destinations and key points of interest.



Provide raised crossings and threshold treatments in locations where pedestrians have priority, such as at the intersection of Brisbane Bridge and Warburton Highway.



6 CYCLING

Cycling is a healthy, affordable, equitable, and sustainable transport mode. However, while many people may be interested in cycling as a recreational activity or as a means of commuting to work, they are often discouraged from riding as they perceive it as impractical and dangerous.

A safe, comfortable and connected bicycle network plays a key role in promoting cycling as a viable transport option. Given its location at the end of the Warburton Rail Trail, and the future construction of the Warburton Mountain Bike Destination, Warburton generally provides a range of cycling facilities and infrastructure that supports cyclists of all ages and abilities.

The Warburton Rail Trail provides a smooth and continuous ride from Lilydale, through Woori Yallock and Wesburn to Warburton, with nearly 84,000 cyclists travelling along the trail into Warburton during 2018. There are some bottlenecks along the trail that restrict full two-way movement, including along the Scotchmans Creek Bridge within the Warburton township.

Bicycle volume data collected along the Warburton Rail Trail in October 2018, as indicated in Table 2, highlights the popularity of the rail, particularly during weekend periods (the full survey results are provided in Appendix 1). Volumes were generally consistent across the two data collection points heading into Warburton, suggesting that cyclists generally travel from further afield into and out of Warburton along the trail. However, cyclist volumes were noted to drop nearly 80% between the Station Road survey point and the signposted end of the trail towards the eastern commercial precinct of Warburton.



Figure 12 The Footpath width adjacent to Brisbane Bridge

Figure 13 Station Road at the Warburton Rail Trail

Figure 14 Rail Trail at Warburton Highway

This suggests connection to the eastern precinct within Warburton, and towards East Warburton remains underutilised, with site inspections highlighting there is no clear end point of the Warburton Rail trail beyond the Warburton information centre. Given the forecasted growth in cyclist activity in the region with the

introduction of the Mountain Bike Destination facility, there is opportunity to expand the shared trail network further east beyond the formal end of the rail trail, including around the Warburton Recreation Reserve and towards East Warburton.

To support the future construction of the Mountain Bike Destination and enable the broader Warburton area to become a world class cycling destination, a comprehensive, connected and continuous network of cycling paths and infrastructure is required that enables cyclists to travel safely between key destinations.

Evidence shows that where comprehensive cycle facilities are extensively installed throughout the entire road network, the number of cyclists increases, and crashes decrease, making streets safer for all users. Within Warburton, improving connections between the main trail head, the Warburton Rail Trail, the commercial areas of Warburton, other tourist destinations in the local area as well as local accommodation will be an important step in building a cyclist friendly destination.

While the location of the main trail head has not been confirmed, it is strongly recommended that a safe and comfortable cycling link be provided between the Warburton rail trail and the trail head. While an at-grade connection is the preferred outcome, given the terrain, Warburton Highway and the Yarra River, a bridge could also be considered, provided the connection is well-designed and integrates into the local environment, is well-lit and properly maintained.

While there is limited on-road infrastructure for cyclists, the road network through Warburton and East Warburton (and beyond to Redwood Forest) allows for quieter connections to be provided between the townships.

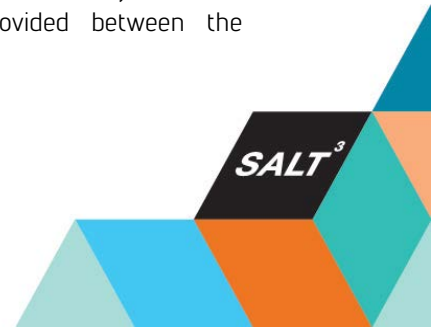


Table 2 Warburton Rail Trail Cyclist Count Summary

Site 1	Warburton Rail Trail, Warburton at Scotchmans Creek Road			
Date	Friday		Saturday	
	26 Oct 2018		26 Oct 2018	
Direction	East	West	East	West
Total	52	34	112	85
AM Peak	16	5	14	10
PM Peak	3	8	20	17
Site 2	Warburton Rail Trail, Warburton at Station Road			
Date	Friday		Saturday	
	26 Oct 2018		26 Oct 2018	
Direction	East	West	East	West
Total	50	35	112	87
AM Peak	18	2	18	8
PM Peak	4	8	21	18
Site 3	Warburton Rail Trail, Warburton at Warburton Highway			
Date	Friday		Saturday	
	26 Oct 2018		26 Oct 2018	
Direction	East	West	East	West
Total	34	17	24	18
AM	16	0	3	4
PM	5	4	6	6

This includes along Riverside Drive and Kellys Road, which runs parallel to Woods Point Road to the south of the Yarra River between Warburton and East Warburton, and Dammans Road to the north of the Yarra River within the Warburton township. These roads could also provide connections to the mountain bike trail heads, accommodation and other points of interest.

Locations where the off-street cycling and shared path network intersects the road network present conflict points for vehicles, cyclists and pedestrians, as it may be unclear which user group has priority. This occurs at several locations on the Warburton Rail Trail within the study area, including at Station Road in Wesburn, Hooks Road, Warburton, and Station Road in Warburton to the south of the township. Where this occurs, crossing points should be upgraded to alert drivers and cyclists to potential conflict areas and guide cyclists across intersections.

There are opportunities to encourage cycling through the provision of end-of-trip facilities within the study area, including providing charging stations for electric bicycles. Electric bicycles allow people, who might find regular cycling too difficult, to access the benefits of bicycle travel, particularly where the distances are long.

End-of-trip facilities should also include showers and changing rooms, lockers, secure undercover bicycle parking, and potentially a bike repair stand, spare parts vending machine and a bike mechanic. Such facilities would need to be located close to the intended destination, such as the commercial core of Warburton or the main Mountain Biking Trail head.

Wayfinding, signage, and markings are elements that identify cycle routes to reach key destinations or connecting shared paths. Wayfinding is provided for cyclists navigating the Warburton Rail trail, however the existing signage contains small lettering requires cyclists to dismount to navigate the local area. Improved wayfinding, parred with ground markings, should enable cyclists to orientate and navigate themselves to points of interest within the network, including to the township centres, tourist destinations and the mountain bike trail heads, without stopping to view a map.

Key Challenges



There is limited connectivity between the Warburton Lilydale Rail Trail and the Warburton town centre, and no guidance for cyclists when navigating these areas.

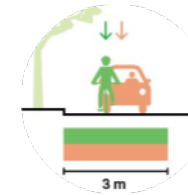


It is often unclear which road user has priority where the Rail trail crosses the road network, creating a potential conflict point for vehicles, pedestrians and cyclists.



There are bridges and shared paths within the study area that have a width of less than 2m wide, preventing cyclists and other road users from passing.

Opportunities



Look for opportunities to extend and expand the cycling network along Riverside Drive, Dammans Road and Blackwood Avenue, through the provision of cycling lanes, sharrow linemarking or fully separated facilities.



Provide electric bicycle charging points and stations at key destinations.



7 PUBLIC TRANSPORT

Public transport services connect people with places. All ages and abilities can use public transport, enabling access to a broader range of services, education, job and recreational opportunities.

The Warburton township is moderately serviced by public transport, with the 683-bus route travelling between Chirnside Park and Warburton via Lilydale Station, Seville, Yarra Junction, with some services extending to East Warburton during the weekday. The service connects the study area train services at Lilydale Station towards Melbourne.

A map of the bus route through the study area is provided in Figure 15 (Source: PTV). The service operates with a 30-minute frequency during peak hours. There are 29 bus stops within the study area along this route, and the most frequently used bus stops based on patronage data provided by PTV are outlined in Table 3. The table indicates the total number of “touch ons” and “touch offs” at each stop. It is noted that Myki data for buses has known accuracy issues, and recent reconciliation has indicated that up to 40% of stop information was incorrect. As such, the data presented in Table 3 should be used as indicative numbers rather than absolute values. For example, the fact that the Marion Park Gardens stop is the most utilised stop appears very unlikely and may be put down to erroneous data. Further, on average only 65% of bus users use a Myki card, therefore the touch on / touch off figures have been adjusted upwards.

Service frequency and duration of these services are lower than other areas of metropolitan Melbourne, with limited bus services running early morning, late evening or on weekends. There are no connections through to surrounding tourist areas, including Marysville and

Healesville without travelling via Lilydale, which increases dependence on cars for visitors and tourists.

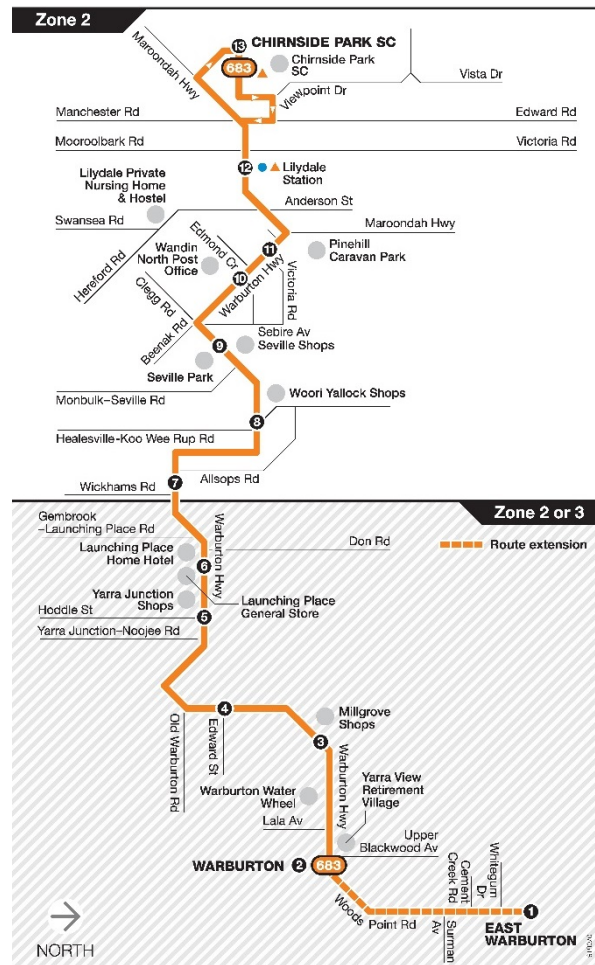


Figure 15 Route 683 Chirnside Park and Warburton – Map

Given the focus on cyclist activity in the region, there is an opportunity to advocate for the inclusion of bike racks on public transport buses. Trialled in parts of metropolitan Melbourne and regional Victoria in 2016, bike racks on the front of buses support cycle use, particularly on long-haul or regional routes.

Buses equipped with bike racks allow cyclists to use the local public transport network to travel between bike paths, extending the distance that can be travelled in one day. It would enable mountain bikers that may not otherwise be able to access the area an alternative means of transport into and out of Warburton.

While it is possible to advocate for improvements to the service frequency and coverage of public transport in the area, in the interim community transport and private transport options may be able to provide an alternative transport mode.

Community or shuttle buses are a low-cost option that could be considered where there are no existing public transport services, providing a responsive alternative that can be altered depending on demand. As these buses are typically smaller than standard public transport buses, they also are able to provide access to areas that may not be able to accommodate larger vehicles without significant infrastructure investment.

Shuttles may also be an option to connect cyclists to trail heads, accommodation and other destinations within the region. This would reduce the number of private vehicle trips on the road network and lessen the demand for parking in high demand areas.

Such services would need to be accredited by Transport Safety Victoria to ensure providers are competent in operating the service safely.



Table 3 Bus Patronage (01 May 2018 – 30 April 2019)

Suburb	Stop Location	Annual Patronage
Warburton	Marion Park Gardens / opp 171 Woods Point Rd	27,390
Warburton	Park Rd/Warburton Hwy	16,412
Warburton	Yarra View Retirement Village/Warburton Hwy	13,875
Warburton	Warburton Reserve/Opp 3456 Warburton Hwy	9,631
Wesburn	Edward St/Warburton Hwy	7,408
Warburton	Warburton Memorial Park/Warburton Hwy	6,732
Wesburn	Britannia Creek Rd/Warburton Hwy	5,622
Wesburn	Britannia Creek Rd/Warburton Hwy	5,126
East Warburton	Whitegum Dr/Woods Point Rd	5,002
Warburton	Warburton CFA/Warburton Hwy	4,897
Warburton	Warburton Post Office/Warburton Hwy	4,889
Warburton	Scotchmans Creek Rd/Warburton Hwy	4,549
Warburton	Yarra View Retirement Village/Warburton Hwy	4,371
Wesburn	Edward St/Warburton Hwy	3,657
Warburton	Scotchmans Creek Rd/Warburton Hwy	3,230
Warburton	Hooks Rd/Warburton Hwy	2,582

As well as improving the coverage and directness of bus services, it is also important to provide safe convenient and effective interchange facilities between transport modes and the broader township. Infrastructure plays a large role in ensuring bus stops are accessible for all users, and that buses are able to travel through the road network with relative ease.

For local bus stops, these should be designed to allow people of all ages and abilities to access the service. As well as route maps and timetabling information, bus stops should provide seating for waiting passengers, and maintain clear footpath connections for universal access. Where possible, stops should also have shelters that offer both overhead and vertical protection from the weather to passengers, including people with prams and wheelchairs.

In the future, there may also be a need for a bus interchange that facilitates movement between public and community transport services. This facility should be located either at the main trail head for the Mountain Bike Destination, or within the Warburton township in a location that allows for a well-integrated service with supporting land uses and activities.

Bus stops and interchange facilities should also provide real-time arrival information for public and shuttle transport services. Real-time arrival information increases legibility, reduces travel time, enables complex trip planning, and improves rider satisfaction. This is important where services provide connections to multiple routes or destinations and can be displayed on full-colour or LED signs, or be available by phone, SMS, or online.

Key Challenges



Bus services are indirect and infrequent, with some routes not running outside peak periods or on weekends.



There are currently no public or community transport services to the surrounding tourist areas, including Healesville and Marysville, and no routes to the proposed mountain bike trail heads.

Opportunities



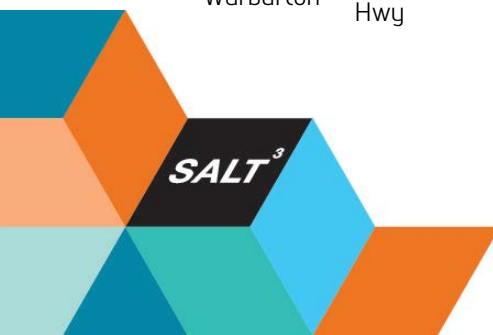
Improve coverage and frequency of strategic bus routes and introduce direct, express services through State Government & PTV advocacy.



Link public and community bus services with parking areas and accommodation within the region.



Plan for a future bus interchange to allow commuters, locals and tourists opportunity to move between transport modes.



8 ROADS AND PUBLIC SPACE

Roads and streets serve an important part of the transport network. As well as providing vital components of residential and commercial areas, they also get people and goods from one place to another. Given the wide number of users that access the road network each day, this asset must be managed carefully to provide equitable access and a safe, efficient transport system.

The road network within the study area provides a good level of accessibility from all directions to and from Wesburn, Warburton and East Warburton. Warburton Highway acts as the primary connector between the three townships, as well as providing access from Yarra Junction, Lilydale and the broader Melbourne metropolitan area to the west. Donna Buang Road and Woods Point Road provide further connections to the north and east, including to other tourist destinations within the Yarra Valley such as Healesville and Marysville.

Traffic speed and volume counts were completed at eleven locations across the study area during October and November to determine the average daily traffic volumes and speeds of vehicles through the area. A summary of these results is provided in Table 4, with more detailed information provided in Appendix 2.

The results suggest that just over a third of traffic travelling along Warburton Highway through the study area is local to the area. Of the 6,200 vehicles that travel along Warburton Highway through Warburton each day, over 4,000 vehicles each day are directed along the core of the study area to Donna Buang Road and Woods Point Road. As two-lane arterial roads can accommodate up to 20,000 vehicles per day, the road network has sufficient capacity at present.



Figure 16 Warburton Highway, Wesburn

Figure 17 Warburton Highway, Warburton

Figure 18 Riverside Road, East Warburton

Given the regional arterial road network, there are limited opportunities to direct this through traffic away from Warburton. However, instead of redirecting the traffic away from Warburton, an alternative may be to redesign Warburton Highway within the township areas, such as within both commercial precincts in

Warburton, in Wesburn and in East Warburton, to provide more emphasis on the local characteristics of each area and support local and active transport modes.

Local streets also provide access to the township and surrounding residential areas. These streets have varying levels of construction, however most roads within the study area have an asphalt surface. Roads generally allow for two-way traffic, with road widths ranging between 6.4m wide to 8.2m. Traffic volumes along these roads are low and generally under 1,200 vehicles per day. Some of these roads may expect some increase in traffic volumes with the proposed Mountain Bike Destination depending on the location of the main trail head, however based on the data collected, local roads within the study area will accommodate any additional traffic associated with the Warburton Mountain Bike Destination including the trail heads.

Old Warburton Road, which runs between Warburton and Wesburn to the south of Warburton Highway through Mount Tugwell, provides an alternative route through the area. Due to the level of vegetation and winding nature of the road through the area, traffic volumes and speeds may require intervention should demand through the area increase.

Given the number of vehicles accessing the road network each day, ensuring all road users remain safe is a critical part of the transport system. Observations of infrastructure conditions highlighted that line marking and signage on many roads, particularly approaching major intersections, is not clear and evident to drivers. This can often cause confusion with regard to direction of travel and priority for road users and should be managed to reduce conflict at these points.

A review of the Victorian Crash Statistics database revealed that between 2013 and 2017, 55 road crashes

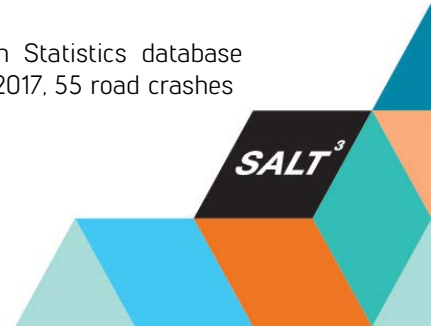


Table 4 Traffic Speed and Volume Counts Summary

Site	Location	Average Weekday Traffic ¹ (vehicles per day)	Average Daily Traffic ² (vehicles per day)	85% Speed ³ (km/h)
1	Warburton Highway, Wesburn	5,442 vpd	5,462 vpd	54.5 km/h
2	Mayer Bridge, Warburton	1,057 vpd	1,053 vpd	25.1 km/h
3	Station Road, Warburton	129 vpd	133 vpd	41.6 km/h
4	Warburton Highway, Warburton (near #3395)	6,039 vpd	6,235 vpd	44.9 km/h
5	Park Road, Warburton	910 vpd	958 vpd	47.4 km/h
6	Donna Buang Road, Warburton	859 vpd	992 vpd	62.0 km/h
7	Woods Point Road, Warburton (near #20)	2,744 vpd	2,925 vpd	62.7 km/h
8	Woods Point Road, East Warburton	1,084 vpd	1,190 vpd	72.8 km/h
9	Old Warburton Road, Wesburn	348 vpd	351 vpd	69.0 km/h
10	Old Warburton Road, Warburton (Midpoint)	128 vpd	134 vpd	55.1 km/h
11	Old Warburton Road, Warburton	427 vpd	436 vpd	56.9 km/h

- Notes:
1. The Average Weekday Traffic refers to the average number of vehicles recorded per day over a consecutive 5-day period (i.e. Monday to Friday)
 2. The Average Daily Traffic refers to the average number of vehicles recorded per day over a consecutive 7-day period (i.e. Monday to Sunday)
 3. The 85% percentile speed is the speed at or below of which 85% of all vehicles are observed to travel at. This is an industry recognised measure of determining the level of compliance with the speed limit.

occurred within the study area, including 33 along Warburton Highway.

While there are many factors that influence a crash, vehicle speed is a key risk factor in determining the severity of injuries caused by vehicle crashes. Vehicles travelling at high speeds increase the risk of severe injury or death in the event of a crash. In comparison, people moving at low speeds have more time to observe the street around them, have more reaction time, and have very short reaction distances.

Road and street design can greatly influence the speeds of which motorists travel along them. Wide travel lanes have been favored in some places to create a more forgiving environment for drivers, especially in high-speed environments where narrow lanes may feel uncomfortable or increase potential for side-swipe collisions. However, evidence shows that where road lanes are perceived as narrow, vehicles travel at lower speeds, leading to a safer road environment for all road users.

Within township areas where there are many other road users, lane widths of 3 metres are recommended to encourage vehicles to travel at lower speeds. In locations where trucks and buses are more common, travel lanes could be widened to 3.3 meters in each direction to support larger vehicles. Lanes wider than this are discouraged, as they enable unintended speeding and double parking, and consume valuable right-of way at the expense of other modes. Moreover, wider travel lanes increase exposure and crossing distance for pedestrians.

Key Challenges



Through traffic is directed through the core of the Warburton, Wesburn and East Warburton townships, increasing vehicle volumes and reducing pedestrian amenity.



Some roads away from the key road connections may not be able to support additional traffic due to winding routes and roadside vegetation without intervention.

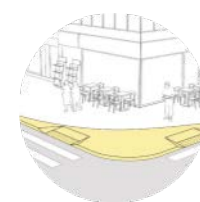
Opportunities



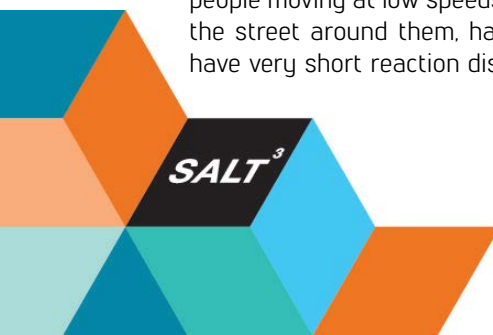
Consider the introduction of lower speed zones in areas of high pedestrian activity, including speed limits of 40km/h within the Warburton township.



Regain pedestrian and public space by reducing the corner radius at intersections with high pedestrian activity.



Look at redesigning key streets by introducing traffic calming measures and improving line marking and signage to reduce vehicle speeds and improve pedestrian and cyclist safety.



9 CAR PARKING

The community has frequently raised concerns with parking and availability, particularly along Warburton Highway within the Warburton township. In these areas, there is often limited on-street parking space available, and it is a challenge to provide enough car parking to satisfy demand for all users. There is also insufficient width along some streets to accommodate traffic flow as well as provide everyone with a parking space.

Parking restrictions within the core of the Warburton township are in place to drive parking turnover in high demand areas, however the restrictions don't cater for all users, resulting in some areas experiencing higher demands than other areas during the week. Within the surrounding residential areas, parking is generally unrestricted.

As a future tourist destination, the proposed Mountain Bike Destination facility is expected to draw local, regional and international visitors each day into the surrounding area. To ensure parking does not spill into the surrounding areas, there will need to be sufficient parking provided onsite or in other, accessible locations for staff, volunteers, and visitors. Managing the level of overflow car parking will be an important component of any future car parking strategy.

Further analysis of car parking supply and demand across the study area is provided in the following sections.

9.1.1 CAR PARKING SURVEY

The survey was conducted by Data Audit Systems on Thursday and Saturday over consecutive weeks between 25 October 2018 and 3 November 2018. These days were chosen to capture a general week day/end and a public holiday weekend.

The surveys were conducted between 7am and 7pm at hourly intervals and collected both car parking occupancy and duration of stay information.

All publicly available car parking within the area was surveyed, including:

- Marked and unmarked on-street car parking spaces; and
- Public off-street car parking areas.

The details within the survey results indicated that the weather was generally fine for the period of the survey.

The duration of stay for unique vehicles was determined through partial number plate recording. At each hourly interval, the last 4 characters of each vehicle's plate was noted, which provides a suitable balance between ensuring whether the same vehicle is parked and maintaining the privacy of the vehicle owner.

Due to the 1-hour interval, each survey recording has a built-in degree of error which varies depending on the actual time a vehicle enters and exits a car parking space. For assessment purposes, it has been adopted that each individual recording represents a 1-hour duration of stay.

Therefore, compliance with restrictions under 1-hour in length cannot be definitively determined. However, the minimum level of non-compliance can be established based on the number of vehicles staying within these spaces for 1 hour or more.

A map of the surveyed area as well as more detailed information on the survey data provided in Appendix 3.

9.1.1 TARGET PARKING OCCUPANCY

Measuring the car parking occupancy provides an indication of how easy it is for motorists to find a car parking space within an area. The occupancy should be high enough to ensure that they are occupied at a level

that justifies the supply but not so high that it is unreasonably difficult to find a space. An occupancy rate of 85% at times of peak demand means that approximately one in every seven parking spaces should be vacant. When parking occupancy is regularly above 85%, motorists are likely to experience frustration when trying to find an available parking space.

This 85% benchmark is a recognised best practice approach to the management of on-street parking. It means that the parking resource is well used but people can still easily find a space, thus reducing customer frustration and congestion. Generally, parking is considered 'at capacity' when available spaces are 85% occupied at times of peak demand (Shoup, High Cost of Free Parking, 2005).

9.2 PARKING SUPPLY

Parking within the Warburton township is provided for a wide range of users, including public transport, taxis, service and emergency vehicles, private staff/employee parking and public parking.

There is a total of 416 formalised public parking spaces available within the study area. Of these spaces, 300 parking spaces are located on-street with the remaining 116 spaces located in off-street car parks.

Parking within the study area is a mix of unrestricted and restricted parking. Parking restrictions include time limited parking, loading zones, taxi zones, disabled parking, and time operated No Stopping restrictions.

Parking in the area is typically unrestricted after 6:30pm Monday to Saturday.



Table 5 Parking Summary

Type of Parking Restriction	# Spaces
Short Term (2P)	114
Medium Term (4P)	12
Long Term (Unrestricted)	268
Disabled Parking	2
Taxi Zone	1
Bus Zone	2

9.3 PARKING DEMAND

Analysis of the data collected demonstrated that the peak parking demand during the survey period occurred at 12noon on Saturday 27 October 2018. At this time, 207 vehicles were observed to be parked within the study area, equating to a parking occupancy of 50%. The peak weekday period occurred at 12noon on Thursday 1 November 2018, with 145 parked vehicles within the study area (35%). Weekend parking demands were observed to be higher than the observed weekday.

The following sections assess the public parking demand during the week for short-term parking (1-2 hours), medium-term parking (3-4 hours), long-term (unrestricted) parking, as well as parking within the different precincts of the Warburton township.

9.3.1 SHORT-TERM PARKING

There are 114 public short-term parking spaces across the study area. Figure 20 shows the variation of short-term parking demand each surveyed day between 7am-7pm.

The peak demand for short-term parking occurred at 3pm on Saturday 27 October 2018, when 65% (74 parked vehicles) of the short-term parking spaces were

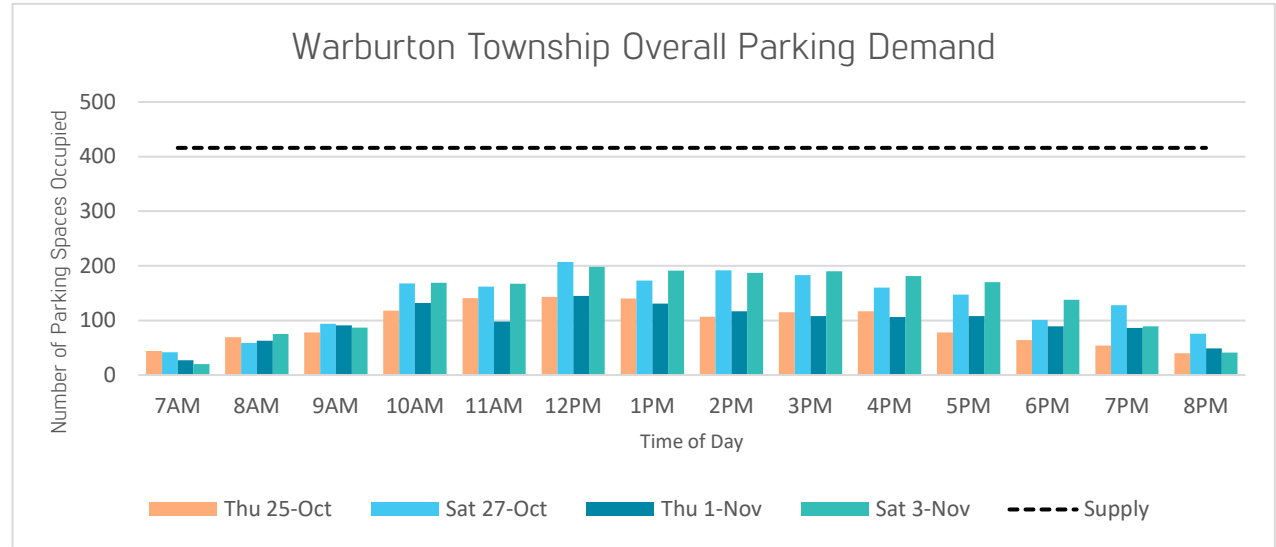


Figure 19 Warburton Township Parking Demand

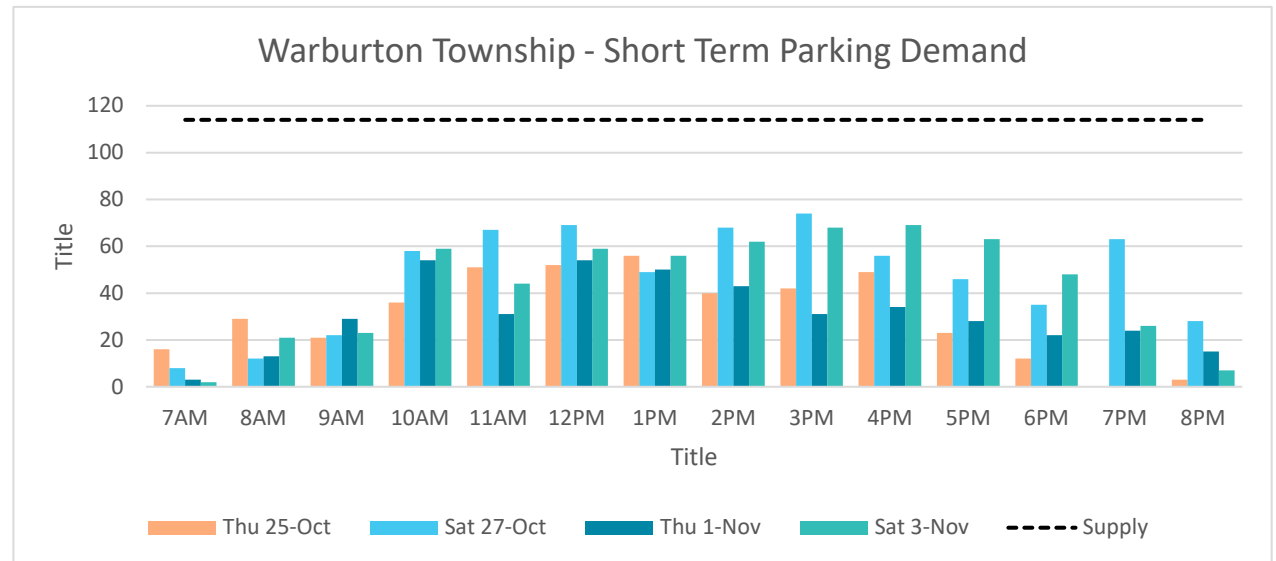
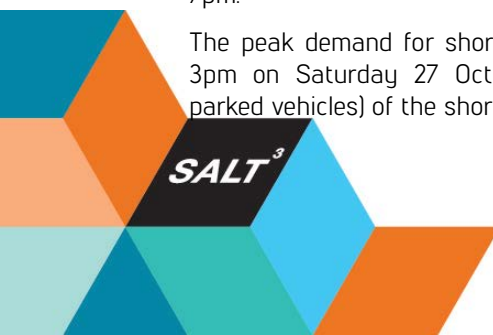


Figure 20 Warburton Township – Short Term (2-hour) Parking Demand



occupied. This suggests there is a moderate level of parking occurring within these spaces across Warburton.

The survey results highlighted a very high utilisation (greater than 85% occupancy) of short-term parking spaces across the study area, including along Warburton Highway between 3457 Warburton Highway and opposite Park Road.

Vehicles parked within these spaces were unlikely to overstay the signed parking restrictions, with 8% of vehicles parked for 2 hours or longer. Across all parking areas, 77% of vehicles were observed to be parked for two-hours or less, suggesting that the current quantity of short-term parking spaces is generally suited to the observed usage patterns.

9.3.2 MEDIUM-TERM PARKING

There are 12 public medium-term parking spaces across the Warburton township area, comprising of 4-hour parking located in the off-street car park accessed off Station Road in Warburton. Figure 19 shows the variation of medium-term parking demand over the survey period throughout the day.

At 10am on Thursday 25 October 2018, 83% (10 parked vehicles) of the medium-term parking spaces were occupied. This suggests there is a moderate to high level of demand for medium term parking within the township at this time.

Vehicles parked within these spaces were generally observed to comply with the signed parking restrictions, with 12% of vehicles parked for 4 hours or longer.

Across all parking areas, 14% of vehicles were observed to be parked between 3-4 hours. This suggests additional medium-term parking could be provided across the township as demand grows, however the

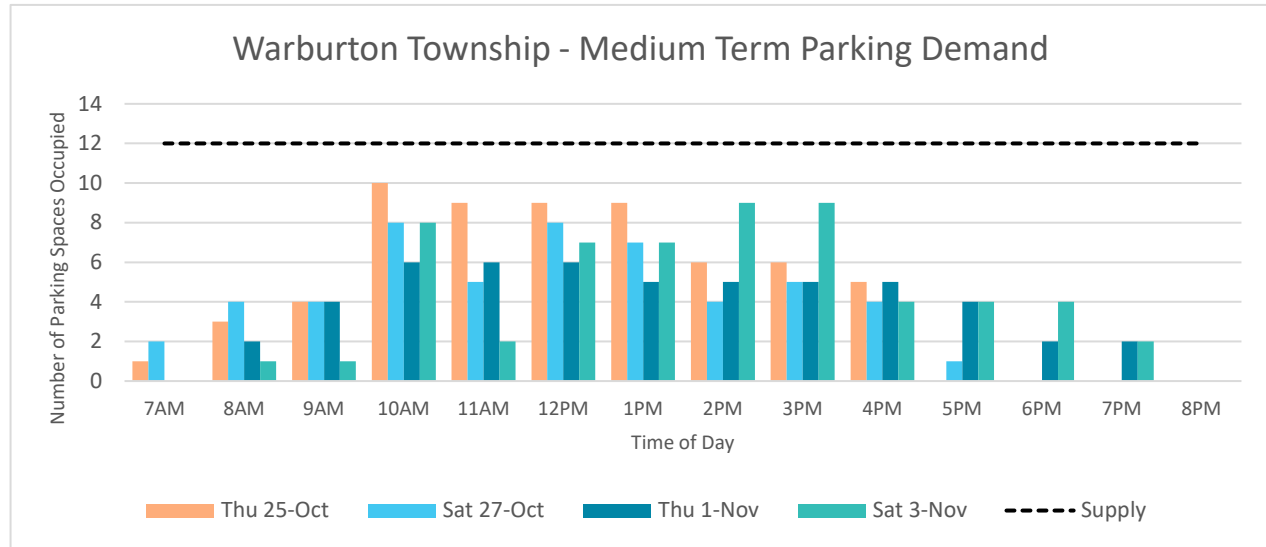


Figure 21 Warburton Township – Medium Term (4-hour) Parking Demand

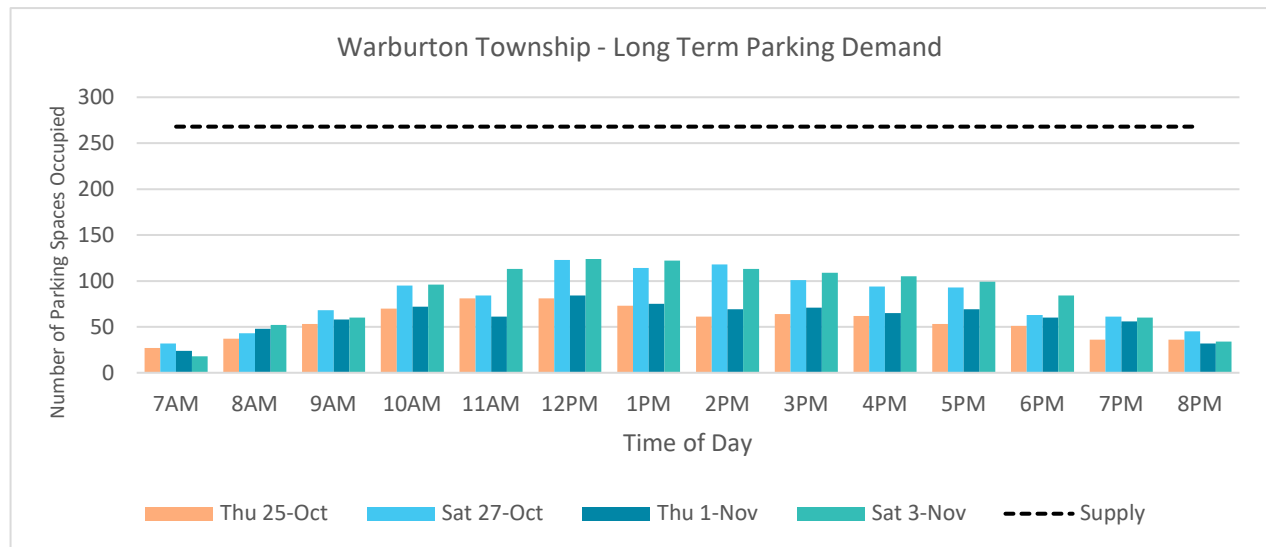


Figure 22 Warburton Township – Long term (unrestricted) Parking Demand



existing supply is generally suited to the observed usage patterns.

9.3.3 LONG-TERM PARKING

There are 268 public long-term (unrestricted) parking spaces throughout the Warburton township. Figure 22 shows the variation of long-term parking demand each surveyed day between 7am-7pm.

At 12noon on Saturday 27 October 2018, 46% (123 parked vehicles) of the long-term parking spaces were occupied. This suggests there is a moderate level of demand for long-term parking within the township.

The survey results highlighted a very high utilisation (greater than 85% occupancy) of long-term parking spaces in some locations, including:

- Along Thomas Avenue between Warburton Highway and End of the Road;
- Along Station Road between Warburton Highway and High Field Road;
- Within the off-street car park at Warburton Recreation Reserve;
- Within the off-street car park at Warburton Bowls Club
- Off Street carpark west of Warburton Bowls Club; and
- Along Warburton Highway between Riverside Drive and Park Road.

The majority of vehicles (88%) parked in the unrestricted parking spaces were parked for under four hours, with 70% parked for two hours or less. This suggests there is a reasonable level of demand for parking in some of these parking spaces.

9.4 AREA ANALYSIS

In order to better understand the dynamics of parking across the Warburton township, the study area has been divided into four areas for a more detailed analysis. These areas are shown in Figure 23 along with a summary of the overall parking demand for each area.

9.4.1 AREA 1 – THOMAS AVENUE PRECINCT

Area 1 includes all car parking to the north of Warburton Highway between 3354 Warburton Highway and Brisbane Bridge. There are 96 car parking spaces within this area, comprising of 37 parking spaces with restrictions of under 4 hours, 54 unrestricted parking spaces, 12 disabled parking spaces and 3 other restricted parking spaces.

The peak demand for Area 1 occurred at 12noon on Saturday 27 October 2018, where 76% of the parking spaces were occupied (73 parked vehicles). Notably, Thomas Avenue recorded a peak parking demand of 94% indicating that parking demand within this area is of high demand during peak periods.

9.4.2 AREA 2 – STATION ROAD PRECINCT

Area 2 includes all car parking to the south of Warburton Highway between 3354 Warburton Highway and Brisbane Bridge, the off-street car park adjacent to the Warburton Rail Trail. There are 90 car parking spaces within this area, comprising of 58 parking spaces with restrictions of under four hours, 25 unrestricted parking spaces, 2 disabled parking spaces and 5 other restricted parking spaces.

The peak demand for Area 2 occurred at 2pm on Saturday 3 November 2018, where 58% of the parking spaces were occupied (52 parked vehicles). The short-term term parking experienced the highest demand of all parking restrictions, with a recorded occupancy of

76%. These results indicate that parking remains available within this area during peak periods.

9.4.3 AREA 3 – WARBURTON RECREATION RESERVE

Area 3 includes all car parking to the north of Warburton Highway between the Warburton Recreation Reserve and 3505 Warburton Highway. There are 177 car parking spaces within this area, comprising of 10 parking spaces with restrictions of under 4 hours, 161 unrestricted parking spaces, 2 disabled parking spaces and 4 other restricted parking spaces.

The peak demand for Area 3 occurred at 1pm on Saturday 3 November 2018, where 41% of the parking spaces were occupied (72 parked vehicles). The unrestricted parking experienced the highest demand, with a recorded occupancy of 33%. These results indicate that parking remains available within this area during peak periods. It is noted there are additional informal parking spaces located within Area 3 to the rear of the Warburton Recreation Reserve which may be utilised during times of high demand.

9.4.4 AREA 4 – PARK ROAD PRECINCT

Area 4 includes all car parking to the south of Warburton Highway between 3446 Warburton Highway and Riverside Drive. All public parking within Area 3 is located on-street, with no off-street parking areas in the Park Road Precinct. There are 53 car parking spaces within this area, comprising of 21 parking spaces with restrictions of under 4 hours, 28 unrestricted parking spaces, and 4 other restricted parking spaces. There are no disabled parking spaces within this area.

The peak demand for Area 4 occurred at 10noon on Saturday 27 October 2018, where 55% of the parking spaces were occupied (29 parked vehicles). The short-term term parking experienced the highest demand of

all parking restrictions, with a recorded occupancy of 76%. These results indicate parking is generally available within the Area during peak periods.

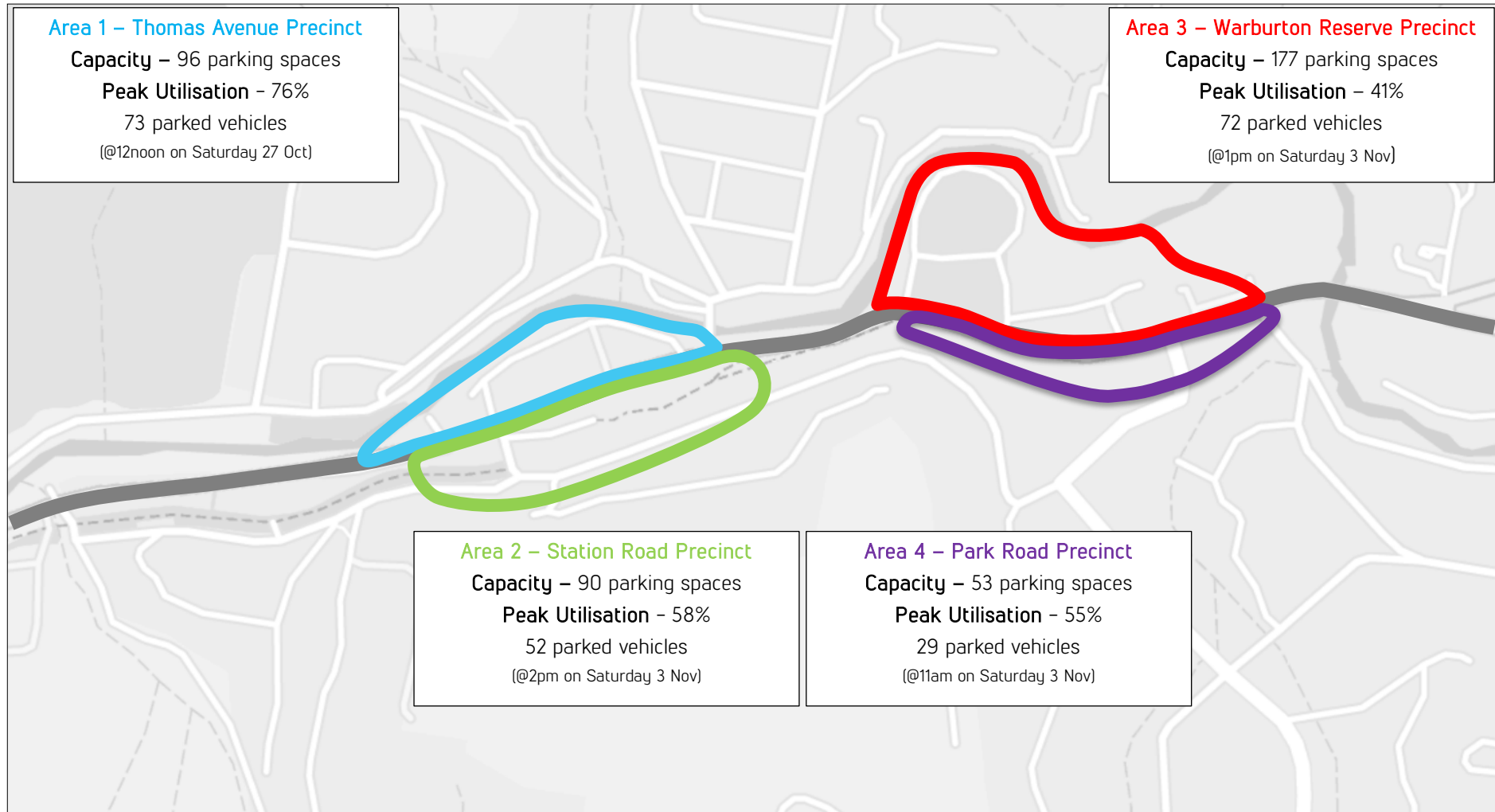


Figure 23 Parking Demand Summary



10 COMMUNITY ENGAGEMENT

10.1 INTRODUCTION

In order to gather additional information on the car parking and transport trends within the Warburton township, a questionnaire and intercept survey was completed with community members, local traders and business owners within the township participating.

This section outlines the results of this engagement and summarises the key findings conducted as part of this study.

10.2 TRADER SURVEY

A questionnaire was devised and distributed among traders of local businesses to gather their parking and travel experiences and any related issues or concerns facing them regarding the operation of their business. This questionnaire was distributed and collected between 15 November and 22 November.

The survey comprised of twelve (12) questions which sought information on the nature of their business, staff levels, parking practices and travel mode. Respondents were also invited to provide additional commentary on their experiences within the Warburton township.

10.2.1 SURVEY RESULTS

A total of 20 completed trader surveys were received from businesses out of a total of 38.

Of the survey respondents, five key business types emerged, including:

- Eight respondents were from retail tenancies;
- Two respondents were from offices tenancies;

- Four respondents were from Restaurant and Cafés;
- Three respondents were from medical tenancies;
- Five respondents were from other business types (including tourist and community facilities, hotels and other accommodation).

Travel Habits and Parking

The survey responses indicated that most traders and staff within the Warburton township prefer to drive to and park within the township over other modes of transport, with 75% of businesses reporting staff drove to work.

When considering the location and availability of long-term parking, 78% of respondents noted their business had some level of off-street parking available. Some staff rely on publicly available parking within Warburton.

Peak Periods and Duration of Stay

Respondents indicated that Friday through to Sunday are generally the busiest days for trading.

This corresponds to the parking demand data set out in Section 9 and highlights the increase in parking on a Saturday.

Survey respondents perceive their customers spend generally less than two-hours within Warburton at a time. However, some cafes, restaurants and other facilities reported a varied duration of stay times for patrons in their business, due to varied lengths of stay or the randomness of the number of takeaway orders versus dine in orders.

With respect to the level of activity experienced at various businesses, the survey responses reveal that while retail stores experience a steady stream of activity, restaurants tend to peak in the evenings and

community facilities within the morning and afternoon periods.

10.2.2 KEY OBSERVATIONS AND THEMES

The following summarises the key themes and points raised by respondents of the trader questionnaire.

Adequacy of parking supply

There was a general consensus among respondents that the provision and accessibility of car parking spaces needs to be improved.

The majority of respondents suggested additional parking was required in Warburton to cater for the needs of local customers, traders and tourists. Respondents commented that this increases parking demand in and around Warburton which cannot adequately be served from existing facilities. Subsequently, following the morning peak periods, respondents have reported a shortfall in parking for traders and customers.

Car Park and Infrastructure

Respondents highlighted concerns with the future Mountain Biking Facility and parking availability. Existing off-street car parks were requested to be formalised and/or upgraded. Alternative modes of transport were also recommended, including the provision of a shuttle bus service for cyclists and mountain bikers in the region.

Parking Preference

The majority of respondents highlighted that staff avoid parking in Main Street during peak periods, due to the inability to park. A significant number of respondents also indicated no preference to where they could park.



Safety & Accessibility

With respect to safety, some respondents indicated they felt uncomfortable parking their vehicles on site during evening periods. Reasons cited centred around feeling unsafe in the area, with staff opting to park in more populated areas during these periods.

Comments regarding disabled parking were also made by the respondents, with some indicating the lack of disabled and accessible parking along Main Street prevents some patrons and visitors from accessing their business.

10.3 INTERCEPT SURVEY

An intercept survey was completed on the morning of Saturday 27 October 2018 over a two-hour period to capture information on travel habits, experiences and any related issues or concerns facing them regarding transport and parking in the area.

The survey comprised of six (6) questions which sought information on the nature of their trip, preferred transport mode and route, and any opportunities for improving the local transport network within the Warburton township.

10.3.1 SURVEY RESULTS

A total of 104 respondents completed the survey during the time. Of the survey respondents, 71% considered themselves to be local to the area, with the majority of visitors travelling from metropolitan and regional Victoria.

Travel Habits and Parking

Of the survey respondents, three main travel modes were noted, with:

- 47% of respondents (49 people) drove to Warburton on the day of the survey;
- 28% of respondents (29 people) walked to Warburton on the day of the survey; and
- 23% of respondents (24 people) cycled into Warburton on the day of the survey.

The remaining 2 respondents caught public transport into Warburton on the day of the survey. This suggests that of all the transport modes available, public transport is the most difficult to access for trips into Warburton and surrounding townships.

Preferred Routes and Destinations

The survey respondents were invited to comment on their preferred walking or cycling route within the area or their preferred destination. Yarra River Walk was popular amongst visitors to the Warburton area, with 63% of visitors noting the river as their preferred route.

Warburton Rail Trail (52%) and Warburton Highway (19%) were notable routes for cyclists, with the O'Shannassy Aqueduct Trail also mentioned.

Within the surrounding areas, respondents highlighted the Rain Rainforest Gallery, Redwood Forest and La La Falls as key destinations within the area, along with the Yarra River through Warburton (alongside Thomas Avenue).

10.3.2 KEY OBSERVATIONS AND THEMES

The following summarises the key themes and points raised by respondents of the pedestrian intercept survey.

Parking

A number of respondents reported parking a key issue within the study area, particularly during peak tourist periods. Some local respondents noted parking for locals is not available along Warburton Highway during holiday periods.

Road Widths and Vehicle Speeds

Some respondents raised vehicle speeds as an issue throughout the township, recommending that the speed limit be reduced to 40km/h in some areas and speed humps introduced along the main roads. The width of Warburton Highway and some of the road bridges was also raised as a concern.

Path Networks

Respondents highlighted a number of opportunities to expand the existing pedestrian and cyclist network, including extending the Yarra River Walk and improved connections to the O'Shannassy Aqueduct Trail. The width of the rail trail and potential conflicts between pedestrians and cyclists were also noted.

Public Transport

The limited public transport option was noted by a number of respondents.

Community Infrastructure

Respondents highlighted opportunities to improve community amenities, including the provision of additional benches, toilets and lighting along key routes within the Warburton township.



SECTION 3 FUTURE DEMAND

11 LAND USE DEVELOPMENT GROWTH

Previous studies on land use within the Warburton region suggests that the area is anticipated to experience low growth over the next 10-20 years. Land use studies and forecasting undertaken as part of the Yarra Ranges Activity Centre Network Strategy suggest there are barriers to significant increases in land use floor area within the Warburton township.

These barriers include:

- Limited physical or functional integration between the two separate commercial precincts within Warburton.
- A limited residential catchment of only 6,200 people in 2011.
- Limited forecast population growth in Warburton and the surrounding areas.
- The lack of a major anchor tenant means that surrounding residents have to travel to other centres for the majority of their food and grocery requirements.

Notwithstanding the above, there are some sites within the Warburton township that have been earmarked as potential future development sites. This includes the proposed Edgewater redevelopment at the former Sanitarium factory, which will involve 100 rooms of accommodation, conference facilities, a food and wine centre and a wellness centre; and potential redevelopment of the old Warburton Hospital. The

Table 6 Commercial Land Uses and Parking Demand

Land Use	Current Floor Area	Statutory Parking Requirement	Future Floor Area	Future Parking Demand
Supermarket	800 sqm	40 spaces	840 sqm	42 spaces
Food and Drink Premises	1320 sqm	52 spaces	1386 sqm	55 spaces
Retail	2550 sqm	102 spaces	2678 sqm	107 spaces
Office	340 sqm	11 spaces	357 sqm	12 spaces
				11 additional parking spaces

proposed Mountain Bike Destination project may also encourage further development within the township as the project develops and matures, however at this time no additional forecasting of land use impact in relation to this project has been completed.

In the absence of additional data regarding land use projections across the Warburton township, it is expected there will be a slight increase (5%) in retail and office use on 2011 floor areas over the next 10 years.

Table 2 demonstrates the projected increase in net floor area across the core of the township for commercial land uses, and the corresponding additional parking demand based on the parking generation rates specified in Column A of Table 1 of Clause 52.06 of the Yarra Ranges Planning Scheme.

The results of this assessment indicate there will be a low increase in demand for parking spaces attributed to commercial growth within the township, however this

should be able to be accommodated within the current parking supply.

Any new development within Warburton or the broader study area should be encouraged to accommodate some level of parking onsite to ensure staff continue to have access to parking as demands within the township changes.

In addition, further work should be undertaken to understand the impacts of the future Mountain Bike Destination on land use and development potential within the study area, particularly in relation to accommodation and food and drink service uses. Should projections suggest a significant increase in floor area above the 2011 study, planning scheme changes, including changes to car parking generation rates, may need to be considered to ensure the appropriate level of car parking and transport accessibility is accommodated for within the study area.



12 TOURISM GROWTH

Warburton is expected to experience high growth with respect to tourist volumes over the next 10 years due to the development of the Warburton Mountain Bike Destination. The **Warburton Mountain Bike Destination Revised Economic Impact Assessment (2018)** indicates that between 55,000 and 165,000 additional visitors each year could be attracted to the study area.

Table 7 demonstrates the projected increase in visitor volumes attributed to the **Warburton Mountain Bike Destination**, and the corresponding additional parking demand. This analysis considers the general weekly peak day demand, as well as a likely event day demand.

The following assumptions have been made in the completion of this assessment:

- Peak Day User Volumes have been extrapolated from the data presented in the **Warburton Mountain Bike Destination Revised Economic Impact Assessment** report for each growth scenario.
- A parking generation rate of 0.35 vehicles per user has been adopted for this assessment, based on information provided by Council on likely user travel habits. This allows for a motor vehicle occupancy between 2 and 4 riders to each vehicle, in consideration of travel behavior of cyclists to other facilities. An occupancy rate of 2.8 cyclists per vehicle has been adopted as a conservative rate for the purposes of this assessment.

Table 7 Expected Tourism Growth and Parking Demand

Scenario	Annual Users	Peak Day User Volume	Additional Parking Required
Conservative (0-3 years of operation)	55,000	281 mountain bikers	98 parking spaces
Mature (3-8 years of operation)	130,000	675 mountain bikers	236 parking spaces
Full Potential (9+ years of operation)	165,000	844 mountain bikers	295 parking spaces
Event Day (Peak Demand)	NA	2,000 mountain bikers	700 parking spaces

- Overnight visitors to the Mountain Bike facility are expected to park their vehicles at their place of accommodation within the local area, and travel to the trail head via shuttle or by bike.
- A peak Event Day user volume of 2,000 has been adopted, which aligns with current cycling event patronage in the region.

The results of this assessment indicate that, when the Mountain Bike Destination is operating to its full potential, there will be an additional parking demand of 295 parking spaces at the main trail head location of the facility.

When considering the parking demand associated with major events, it is anticipated an event that attracts 2,000 patrons could expect a parking demand of up to 700 parking spaces.

At the time of assessment, the location of the proposed trail head within the study area had not been confirmed, however it is expected to be within 600m of the Warburton township. To ensure the parking demand

attributed to the main trail head does not impact on the demands of the township, the trail head should be located on the periphery of the township, with substantial pedestrian and cyclist connections to deter driving from the trail head to the township.

During peak event periods, additional traffic management will be required to ensure event parking does not overflow into the township parking areas. Depending on the size and the location of the event, shuttling or alternative modes of transport from the surrounding area, including towards Lilydale should be identified and communicated to patrons and visitors.

As the planning for the Mountain Bike Destination progresses, it is recommended that further investigations be completed to confirm the parking generation rate for the facility, including during a peak event day or weekend. This could be completed through the undertaking of a case study of a similar facility within Australia.



13 TRAFFIC VOLUME GROWTH

With expected increase to land use areas and tourism growth in the region, Warburton is expected to experience growth on the road network within and surrounding the township.

Table 7 demonstrates the projected increase in traffic volumes across roads within the study area over the next 10 years. This analysis considers the average annual growth of the region, traffic generated by the **Warburton Mountain Bike Destination**, and forecasted land use growth as detailed in previous sections.

The following assumptions have been made in the completion of this assessment:

- The roads within the study area are expected to experience an average annual growth in traffic volumes of 1%, in accordance with historical VicRoads traffic volume data for the area.
- The weekend daily average traffic volumes have been used for this assessment to reflect the peak traffic period during a course of the week.
- A daily traffic generation rate of 2.7 trips per parked vehicle has been adopted for the **Warburton Mountain Bike Destination** (equating to .872 trips per cyclist). This has been based on collated trip data for recreational facilities and includes both day trip and overnight cyclists to the region. The rate also includes an allowance for 100 shuttle buses operating in the region, which has been conservatively adopted for analysis purposes (current estimates are for approximately 30 daily shuttle buses).

- The following daily traffic generation rates have been adopted for the associated land uses based on the RTA NSW guide for traffic generating developments:
 - Supermarket – 121 daily trips per 100sqm of floor area.
 - Food and Drink Premises – 60 daily trips per 100sqm of floor area.
 - Retail – 121 daily trips per 100sqm of floor area.
 - Office – 11 daily trips per 100sqm of floor area.
- It is considered unlikely that all roads within the study area will experience a uniform increase in traffic demand due to the increase in development and tourist traffic. As such, a distribution factor has been adopted for each of the roads identified depending on its location within the township, the nature of the road (arterial, collector or local road) and its proximity to the proposed trail head location. The factors used in the assessment are shown in Table 8.

The results of this assessment indicate that, over the 10-year time-frame when the Mountain Bike Destination is operating to its full potential, there is sufficient capacity across the road network to accommodate the forecasted growth in additional traffic.

As described in previous sections, the road environment along Old Warburton Road does not support a large increase in traffic volumes without infrastructure intervention. The forecasted traffic volumes for the road indicate future traffic will remain within acceptable levels for a 'local road' classification. Ongoing monitoring of traffic volumes in the area as activity and

development increases is recommended to ensure traffic volumes remain within acceptable limits for the road classification.

With regards to traffic within the Warburton township, the forecasted volumes support a more equitable allocation of road space across the range of users accessing the area. This could be reallocating excess road space at intersections to provide improved pedestrian crossings and footpaths, as well as narrowing Warburton Highway in some sections to increase footpath areas and allow greater roadside trading opportunities. A single lane in each direction along Warburton Highway would provide adequate capacity for the volumes of traffic anticipated throughout the centre.

This could be combined with opportunities to improve pedestrian and cyclist connections and facilities throughout the study area. This would lessen the impacts of traffic by encouraging the use of active modes for short trips within the township and study area, including between accommodation venues, the Mountain Bike Trail head and the Warburton Township.



Table 8 Forecasted Traffic Volumes in the Warburton Area

Site	Location	Road Classification ¹	Daily Capacity ² (vehicles per day)	Distribution Factor ³	Average Weekend Daily Traffic Volumes			
					2018 (vehicles per day)	0-3 Years (vehicles per day)	3-8 Years (vehicles per day)	9+ years (vehicles per day)
1	Warburton Highway, Wesburn	Arterial Road	> 8,000	100%	5,511	6,037	6,846	7,210
2	Mayer Bridge (Dammans Road), Warburton	Collector Road	3,000 – 8,000	90%	1,041	1,397	1,928	2,178
3	Station Road, Warburton	Local Road	500 – 3,000	35%	145	275	470	562
4	Warburton Highway, Warburton (near #3395)	Arterial Road	> 8,000	100%	6,713	7,275	8,144	8,532
5	Park Road, Warburton	Collector Road	3,000 – 8,000	55%	1,079	1,310	1,657	1,818
6	Donna Buang Road, Warburton	Arterial Road	> 8,000	75%	1,316	1,626	2,092	2,309
7	Woods Point Road, Warburton (near #20)	Arterial Road	> 8,000	55%	3,374	3,674	4,136	4,342
8	Woods Point Road, East Warburton	Arterial Road	> 8,000	45%	1,454	1,661	1,973	2,115
9	Old Warburton Road, Wesburn	Collector Road	500 – 3,000 ⁴	10%	357	404	475	508
10	Old Warburton Road, Warburton (Midpoint)	Collector Road	500 – 3,000 ⁴	5%	332	360	404	422
11	Old Warburton Road, Warburton	Collector Road	500 – 3,000 ⁴	10%	459	509	585	620

- Notes:
- The assigned Road Classification is in accordance with Yarra Ranges Shire Council Road Management Plan and Road Register.
 - The Daily Capacity reflects industry standards and expectations of daily traffic volumes for each road classification.
 - The Distribution Factor reflects a conservative estimation on the likelihood of the expected generated traffic attributed to the Mountain Bike Destination and additional development within the Warburton area of travelling along a particular road. This factor considers the road location within the township, the nature of the road (arterial, collector or local road) and its proximity to the proposed trail head location.
 - While Old Warburton Road has been classified as a "Collector" Road within the Shire Council Road Register, a review of collected traffic volume data and observations of vehicle movements along the road suggests the road is more suited to a Local Road classification. As such, the daily capacity of a Local Road has been adopted for Old Warburton Road in this instance.



SECTION 4 LOCAL MOVEMENT & TRANSPORT PLAN

14 ISSUES, PRINCIPLES AND OBJECTIVES

14.1 ISSUES

The following issues have been identified in the previous sections:

- Due to its location and the surrounding arterial road network, through traffic is directed through the core of the Warburton, Wesburn and East Warburton townships, increasing vehicle volumes and reducing pedestrian amenity.
- Pedestrian routes connecting to destinations outside the core are indirect and discontinuous, including towards the golf club and accommodation areas to the north and west of the Warburton township.
- Some sections of footpath are too narrow to allow wheelchairs or prams to pass one another, including along Warburton Highway between the two commercial areas of Warburton.
- There is limited connectivity between the Warburton Lilydale Rail Trail and the Warburton town centre, and no guidance for cyclists when navigating these areas.
- It is often unclear which road user has priority where the Rail trail crosses the road network, creating a potential conflict point for vehicles, pedestrians and cyclists.
- There are bridges and shared paths within the study area that have a width of less than 1.8m

wide, preventing cyclists and other road users from passing.

- Bus services are indirect and infrequent, with some routes not running outside peak periods or on weekends.
- There are currently no public or community transport services to the surrounding tourist areas, including Healesville and Marysville, and no routes to the proposed mountain bike trail heads.
- Some roads away from the key road connections may not be able to support additional traffic due to winding routes and roadside vegetation without intervention.
- Off-street parking areas aren't well signposted, making it difficult for tourists and visitors to find off-street parking across the Warburton township.
- Demand for parking increases over weekends and during peak tourist periods, reducing the availability of parking for local traders and customers.
- The growth in tourist volumes is expected to place pressure on existing transport infrastructure, with visitors, customers and staff competing for a limited number of parking spaces.

14.2 PRINCIPLES

In response to the identified issues and the overall aspirations of the Warburton township, seven principles have been developed to guide the future management of transport across the study area.

Balance

Ensure a balanced approach to the management of road space and parking within the Warburton township. Public car parking will be managed to achieve an average parking occupancy of 85% during peak demand periods.

Economic Viability

Ensure parking and transport improvements support businesses and the local economy.

Convenience and Suitability

Ensure parking and sustainable transport modes are convenient and accessible for a wide range of users. Due consideration will be given to the needs of all road users in the allocation of available on-street car parking spaces, prioritising the needs of the abutting land uses.

Connectivity

Directly link destinations and key nodes within the Warburton township with surrounding townships and areas using a fine-grain network that accommodates diverse modes of travel.

Consistency

Parking controls will be clearly signposted, and where possible, parking controls will be simple and locally consistent in order to minimise the risk of unintentional breaches.

Partnership

Engage with the community and local businesses to ensure they have a say on transport changes and parking management within the township.

Environmental Sustainability

Ensure streets and public spaces incorporate environmentally sensitive design features.

14.3 VISION AND OBJECTIVES

The vision of the **Warburton and surrounds Local Movement and Transport Report** is to:

“Improve economic prosperity and local amenity and to support sustainable transport choices and access to a balance of parking options.”

The recommended objectives of the plan are to:

- Create streets and public spaces that reflect the character of each township within the study area as a ‘place’, not just part of the road network.
- Ensure the ongoing viability and development of Warburton township.
- Provide an appropriate level of parking within the Warburton township that caters for demand while supporting a future reduction in private vehicle usage.
- Encourage sustainable transport travel within and to key destinations and townships within the study area.

15 ACTIONS AND STRATEGIES

There are many opportunities available to improve access to transport services, parking and overall movement within the Warburton township and surrounding areas.

This section outlines the recommended strategies and actions that should be implemented across the study area in order to address the issues and achieve the objectives identified in Part 14.

15.1 ROADS AND PUBLIC SPACE

Roads and streets are not about facilitating vehicle movement and access, they are dynamic spaces that provide for a variety of uses and activities, adapting over time to support environmental sustainability, public health, economic activity, and cultural significance.

Due to Warburton’s position within the Yarra Valley, Warburton Highway is used as a link through the township to the surrounding regional and tourist areas and the wider Melbourne metropolitan area. While some traffic may be able to be redirected to the north and south at a regional level, it is expected that the link along Warburton Highway through Wesburn, Warburton and East Warburton will remain an important part of the region’s road network.

It will be necessary to ensure that through traffic is catered for, given Warburton Highway serves as a spine linking the commercial centres of the study area. However, there is an opportunity to plan for and upgrade the road environment to change driving behaviour and reduce negative impacts of the through traffic on the township and particularly within the commercial core, and to give priority to pedestrian movement.



There are also opportunities to redistribute unused road space to pedestrians and the public realm, including around Thomas Avenue and Brett Street / Brisbane Bridge. Vehicle movements would still be catered for, but in a reduced speed environment more suited to within the Warburton township. This could also be reinforced through the adoption of lower speeds through high pedestrian and cyclist areas.

Within a township like Warburton, street design must meet the needs of people walking, cycling, taking transit, doing business, providing community services, and driving, all in a constrained space.

Action 1. Undertake conceptual planning and design for a streetscape upgrade of Warburton Highway in order to adapt the road and its traffic to the needs of the Warburton township, focusing on:

- a. The western commercial precinct between the Warburton Tennis Club and Brett Road;
- b. The eastern commercial precinct, between the Warburton Recreational Reserve and Riverside Drive;

Action 2. Develop an on-going plan of streetscape improvements and use every opportunity to make improvements to the public realm, especially during any routine refurbishment.

Action 3. Reduce the speed limit along Warburton Highway to 40km/h in areas where pedestrian activity is encouraged, including within the commercial areas of Wesburn and Warburton.

Action 4. Consider opportunities to redistribute unused road space to pedestrians and the public realm, including at:

- a. The intersection of Brett Road/Brisbane Bridge and Warburton Highway.
- b. The intersection of Station Road and Warburton Highway.
- c. The intersection of Scotchmans Creek Road and Warburton Highway.
- d. The intersection of Park Road and Warburton Highway.
- e. The intersection of Riverside Drive and Warburton Highway.

Action 5. Ensure the safety of all road users is considered in new infrastructure works by undertaking a Road Safety Audit of the design prior to construction.

15.2 SUSTAINABLE TRANSPORT

15.2.1 WALKING

As identified in the previous sections, pedestrian infrastructure within the study area can be improved to encourage walking and other local activities. This includes addressing the actual and perceived barriers that may be in place for these types of transport, across the area.

To be useful, footpaths and pedestrian crossings must offer a continuous clear path. Even short stretches of path that are unpaved, uneven, obstructed, or that end abruptly disincentivise walking and create serious barriers for wheelchair users and people with prams. While the footpath network within the townships of the study area are relatively well connected, outside of

these areas' footpaths are either not present, too narrow or impeded by physical obstructions.

Safe and frequent pedestrian crossings support a walkable urban environment. Pedestrian crossings should be located at all intersections within areas where high pedestrian activity is sought, in addition to mid-block points where pedestrian traffic is anticipated or desire lines are observed. Crossings points should include curb extensions or refuge islands to shorten crossing distance and provide protected areas for pedestrians waiting to cross, and where possible, raised for increased safety.

Action 6. Ensure the footpath network is continuous, clear of fixed objects and other obstacles and is at least 1.8m wide, so two people using wheelchairs can comfortably pass each other.

Action 7. Look at opportunities to improve and extend the pedestrian footpath network beyond each township, including:

- a. Along Woods Point Road towards the Warburton Holiday Park.
- b. Between Warburton Highway and Backstairs Track
- c. Along Dammans Road towards the Golf Club.

Action 8. Provide pedestrian crossing opportunities through the township including:

- a. On Warburton Highway at Scotchmans Creek Road.
- b. On Warburton Highway at Station Road.



- c. On Warburton Highway at Warburton Reserve, near the current end of the Warburton Rail Trail.
- d. On Warburton Highway near Park Road.
- e. At the intersection of Warburton Highway, Woods Point Road and Donna Buang Road.

15.2.2 CYCLING

Warburton is well-positioned to be a leader in cyclist activity, with a number of points of interest easily accessible by bicycle and or walking tracks from the Warburton Highway and the townships within the study area. Promoting and encouraging cycling is also good for the economy. Many recent studies demonstrate the impact of cycling on local economies. Places that increase the cycle accessibility of their commercial areas attract new customers, generating more spending in local shops and businesses, and ultimately creating jobs and economic activity.

Given Warburton's connection with the Warburton Rail Trail and the future Mountain Bike Destination, there is real opportunity to capitalise on cycling through improved infrastructure and connections to the commercial areas within the study area. This includes providing connections to the surrounding areas, including East Warburton and Redwoods Forest, and providing alternative east-west connections throughout the Warburton township on the northern side of the Yarra River.

- Action 9.** Consider expanding the cycling network to include:
- a. Along Dammans and Blackwood Avenue.

- b. A cycling connection between Warburton and East Warburton, which may include shared or separated facilities along Riverside Drive.
- c. A cycling connection between East Warburton and Redwood Forest. This may require an upgrade of the existing Yarra River bridge crossing to accommodate cyclists.

Action 10. Consider improving connections between the rail trail and destinations within the study area, including:

- a. Providing a formal shared path connection between the Rail Trail in Wesburn along Station Road to the township and Wesburn Park.
- b. Providing a formal shared path connection between the rail trail and the western commercial precinct of Warburton along Station Road.
- c. Extending the rail trail to the eastern commercial precinct of Warburton, including around the Warburton Recreational Reserve.

Action 11. Provide improved shared path crossings across major roads including:

- a. Along the rail trail at Station Road in Wesburn.
- b. Along the rail trail at Hooks Road, Warburton.
- c. Along the rail trail at Station Road, Warburton.

- d. At the end of the rail trail at Warburton Highway, Warburton.

Action 12. Consider providing end-of-trip facilities within the Warburton township for public use.

Action 13. Consider providing electric bike charging stations within the Warburton township.

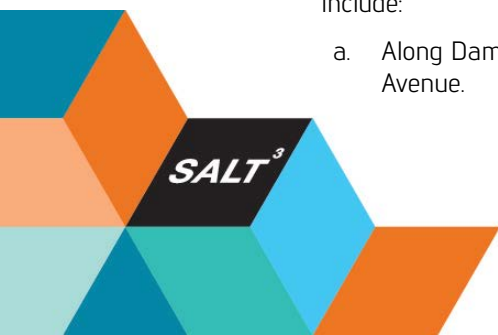
15.2.3 PUBLIC TRANSPORT

The Warburton township and surrounding area has limited public transport access, with one bus service connecting the area to Lilydale and broader metropolitan Melbourne.

Given the study area attracts people from a wide geographical region, public transport may not be a practical alternative for all people. However, there may be opportunities to improve service levels and interchange facilities to encourage a greater uptake of public transport in the township. Community transport options, including volunteer and private shuttling services, may also be a viable option for local trips in the area.

Action 14. Advocate improvements to the frequency, coverage and accessibility of public bus services within the Warburton township and surrounding area, including:

- a. The introduction of a public transport route connecting key tourist destinations, including Healesville and Warburton.
- b. Improved frequency of bus services to Warburton and East Warburton, particularly during off-peak commuter periods.



- c. The introduction of bicycle racks to bus routes within the study area.

Action 15. Encourage and support community and private providers to provide shuttle services to key destinations within the study area.

Action 16. Plan for a future bus interchange that allows for the safe and efficient movement for passengers between public and community transport services. This could be located at the main trail head of the Warburton Mountain Bike Destination, or within the Warburton township.

15.3 CAR PARKING

15.3.1 EXISTING CAR PARKING

Existing Parking Restrictions & Infrastructure

The results of the parking occupancy and duration of stay surveys indicate there is high demand for parking around the commercial areas of Warburton, particularly in high tourist periods. While there is some capacity within the remaining precincts, the type of parking restrictions may not align with the preferred user for these parking spaces.

Reviewing and altering parking restrictions are some mechanisms that can be utilised to achieve better use of existing car parking supply. This can be done by implementing restrictions which give priority to customers and traders for parking spaces within the township core.

The current parking restrictions within the Warburton township generally align to this approach, with short-term (1-hour) parking located on Warburton Highway, and medium to longer term parking located on the periphery of the township.

There are opportunities to further improve turnover in high demand areas by reducing the duration of parking restrictions. This may include introducing shorter term parking along Warburton Highway and within the Thomas Avenue car park.

It is important to ensure parking restrictions are clear, understandable, and installed and maintained in accordance with the relevant Australian Standards. Council must continue to undertake regular assessments of their signs.

Action 17. Provide a greater mix of parking restrictions that reflects the varied needs of visitors to Warburton by:

- a. Changing seven 2P parking spaces on Warburton Highway between 3369 Warburton Highway and Thomas Avenue to 1P.
- b. Changing 15 unrestricted parking spaces on Thomas Avenue to 4P.

Action 18. Maintain consistency across parking restriction signs by ensuring:

- a. Very short-term parking spaces (<1P) and short-term parking spaces (1P and 2P) operate 9am–6pm Monday to Friday, and 9am–1pm Saturday to Sunday.
- b. Medium-term parking spaces (3–4P) operate 9am–6pm Monday to Friday.

Action 19. Continue to monitor parking demand within the Warburton township, including conducting duration of stay and parking occupancy surveys at regular intervals.

Parking User Priorities and Parking demands

Within activity centres and townships, each road and place have a unique set of users with competing interests. When different parking user groups compete for the same parking space and demand exceeds supply, there is often tension in how these spaces are allocated.

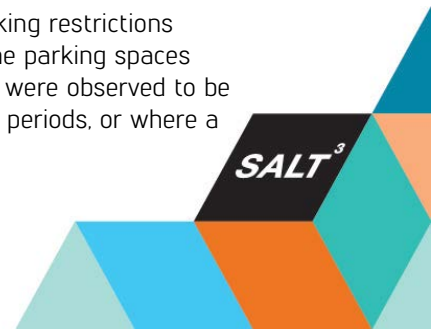
In order to promote the equitable and transparent allocation of parking spaces, and to plan for the best and highest use of the limited parking supply, public on-street and off-street parking spaces will be prioritised to allocate parking to a user group. These priorities will help determine the most appropriate restrictions for each street section and off-street car park.

This doesn't mean higher priorities will have access to all the available parking. Rather, parking restrictions will be designed to facilitate reasonable access to the higher priority users. When a higher priority user is reasonably satisfied, the next user group will then be considered in the allocation of parking spaces.

As parking demands across the study area change, it is likely parking restrictions may need to be introduced or altered to ensure the needs of the community are continued to be met. In order to ensure any changes to parking restrictions are assessed and conducted in a consistent manner, it is recommended that parking restrictions be considered for alteration where over 85% of parking spaces are occupied during peak periods.

Action 20. Use the parking user priorities (identified in Table 9) to review and manage the allocation of parking spaces within the Warburton township.

Action 21. Consider altering parking restrictions where over 85% of the parking spaces within a defined area were observed to be occupied during peak periods, or where a



road safety concern has been identified by Council officers.

Action 22. Ensure traders and adjacent property occupiers are consulted on any changes to parking restrictions in the vicinity of their property prior to the restrictions being altered.

Enforcement

Compliance with parking restrictions is an important component of the parking system. Restrictions are put in place to support parking goals such as turnover or access in order to support local businesses. This is particularly important within commercial areas as it results in more convenient parking spaces being available for visitors and customers. It also encourages long-term parking in the areas dedicated for that purpose, which is generally towards the periphery of the activity area.

When parking restrictions are not enforced, it can encourage undesirable parking habits and increases the number of parking spaces needed to meet the demands of short and medium stay users. It also increases total vehicle traffic, as motorists are more likely to need to circulate to find an available parking space, increasing traffic congestion, crashes, energy consumption and pollution emissions.

A review of the duration of stay survey data indicates that of the 1,361 vehicles observed to park within public time-restricted parking spaces, 8% (115 vehicles) overstayed the parking restrictions. These results are considered reasonable for an activity centre and indicates that the majority of motorists are obeying parking restrictions within the study area

Table 9 Proposed Township User Parking Priorities

Priority	Warburton Township		Surrounding Residential Area	
	On-Street	Off-Street	On-Street	Off-Street
High	Public Transport	Disabled Parking	Public Transport	Long-term parking
	Loading	Medium-term (3-4hrs)	Disabled Parking	Medium-term (3-4hrs)
	Drop-off / Pick Up	Loading	Residents	Disabled Parking
	Short term (<2hrs)	Long-term parking for staff and traders	Drop-off / Pick Up	Drop-off / Pick Up
Low	Motorcyclists, cyclists & scooters	Drop-off / Pick Up	Long-term parking for staff and traders	Residents
	Disabled Parking	Cyclists	Loading	Cyclists
	(Not allocated in this zone)	Long-term parking	Public Transport	Public Transport
	Residents	Residents		

While enforcement is often necessary to ensure that rules and restrictions are observed, there are significant resource implications associated from both a labour and equipment standpoint. A clear definition of existing resources and implications are an important consideration when selecting a management tool or designing a parking management program for an area.

Action 23. Actively enforce car parking on-street and off-street to maintain a peak parking occupancy demand of 85 percent and compliance level of 90%.

Action 24. Continue to undertake frequent parking enforcement at random times of the day so that regular visitors to the precinct do not become familiar with when parking restrictions will be enforced.

Paid Parking and Parking Permits

As the Warburton township grows, there is the potential for parking to intrude onto the streets of the surrounding residential areas. To ensure that residents

have priority for parking in these areas, consideration could be given to introducing a residential parking permit scheme.

This can be achieved by implementing time-limit parking for vehicles other than those displaying resident parking permits, or by implementing a permit zone for the exclusive use of vehicles displaying special permits. Trader and staff parking permits could also be considered to prioritise long-term parking in the periphery off-street parking areas.

Paid parking is another tool that can be used to manage parking demand, and refers to the direct charges for using a parking space. Charging for parking benefits the community by:

- Increasing turnover of the most convenient spaces;
- Encouraging longer-term parkers to use less convenient spaces, such as off-street car parks;



- Reducing total vehicle traffic, including congestion due to vehicles circulating while looking for a space; and
- Can generate revenue which can be used to improve transport infrastructure.

There are some time-restricted parking areas within the core commercial precinct that experience higher than desired parking occupancy, which may result in motorist frustration in driving around to find an available car parking space close to their destination.

At this time, the introduction of paid parking or permit schemes is considered premature for the study area. Given the availability of parking in surrounding areas, it would more than likely direct motorists to park in these areas, creating additional issues.

In the future, the introduction of paid parking could be a practical alternative to managing the existing parking patterns, rather than introducing additional parking spaces being provided to meet an ever-increasing car parking demand. An appropriately priced paid parking scheme would encourage modal shift that can ultimately reduce peak parking demands.

With regards to the implementation of permit parking schemes, Council should assess both the short and long-term compatibility of permit scheme objectives with any adopted (or future) strategic initiatives associated with transport demand management and/or consolidated parking.

At this point in time, there are other strategies to assist with managing car parking demand within the Warburton Area, and these should be focused on in the short to medium term.

Action 25. Review the need for paid and permit parking as part of the ongoing

management of parking within the Warburton township.

15.3.2 FUTURE CAR PARKING Future Car Park Locations

The anticipated tourism demand in Warburton will likely generate further demand for car parking within the township. While there are opportunities to manage car parking in the shorter term to accommodate some of this demand, over time it is expected that additional car parking may be required within the study area.

Some of this car parking demand may be able to be accommodated through the formalisation of existing parking areas throughout Warburton and Wesburn, including Wesburn Park, on Warburton Highway opposite the Alpine Retreat, adjacent to the Warburton Tennis Club, Warburton Recreational Reserve and adjacent to the Warburton Skate Park on the southern side of Warburton Highway. These areas are generally currently underutilised and would likely see increased use should they be upgraded.

It is understood that additional parking will be provided at the future Mountain Bike Destination trail head, which is expected to be located within 600m of the western commercial precinct in Warburton. Additional public car parking is also proposed within the eastern commercial precinct as part of the future Edgewater Development to the east of the Warburton Recreational Reserve.

Formalized off-street parking areas may also provide opportunity for using space dedicated for on-street parking in high activity areas for other purposes, such as creating a pedestrian forecourt or improved roadside trading and dining areas. Providing co-located parking facilities allows for increased sharing of these spaces between complementary uses and improves overall amenity and safety within the area.

Any future car parking facility should be designed to allow use of some of the area for events and community activities in addition to car parking.

Action 26. When designing new car parking facilities, ensure the design enables other activities such as markets and community events to be held on the site.

Action 27. Progress concept designs for the upgrades of the following car parking areas:

- The car park at Wesburn Park,
- The informal parking area adjacent to Warburton Highway opposite the Alpine Retreat,
- The car parking area adjacent to the Warburton Tennis Club;
- The car park around Warburton Recreational Reserve; and
- The car parking area adjacent to the Warburton Skate Park.

Planning Scheme Changes and Car Parking Overlays

Clause 52.06 Car parking of the Yarra Ranges Planning Scheme outlines the number of parking spaces that are required to be provided on-site for both new and expanded development.

Under these provisions, there are two types of rates; Column A, the standard rate applicable to development within all land use zones, unless Column B applies; and Column B, a rate that can apply when the site is covered by a Parking Overlay, and the schedule to the Parking Overlay specifies that the Column B rates apply.

The planning scheme also provides the opportunity to enact a mechanism to collect financial contributions in



lieu of parking for new developments. Where proposed developments cannot provide parking spaces onsite, the financial contribution scheme allows for a nominated cash payment in lieu of each space to be paid to Council.

Money can be used to fund:

- The increase of parking supply or availability of car parking through the construction of new carparks or the upgrade of existing car parks.
- Actions to reduce car parking demand, for example access improvements to public transport, cycling paths and lanes, and end-of-trip facilities.

While a financial contribution scheme through new development may allow for collection of funding for new parking facilities, the growth forecasted within the Warburton township is attributed to growth in visitor numbers, and not in significant development. It is unlikely this would satisfy the merits of the Victorian Planning Provisions Practice Note 57: The Parking Overlay, and as such is not recommended to be pursued at this time.

However, it is recognised that the increase in demand for services due to the increase in tourism may impact the level of development and land use composition over time. Further work is recommended to understand the potential impact and size of development due to the introduction of the Warburton Mountain Bike Destination.

Action 28. Review the car parking rates as part of the review of the Warburton and Surrounds LMTR.

Action 29. Undertake further land use forecasting to understand the impact of the Mountain Bike Destination facility and overall tourist

growth on potential development activity within the study area.

15.4 EDUCATION, INFORMATION AND ENGAGEMENT

15.4.1 WAYFINDING

Wayfinding at the local level helps people orientate themselves and easily find their way to their destinations. As well as giving visitors confidence to explore the area, it helps people to move easily between transport modes and to destinations within the township.

Given the broad range of users anticipated to access Warburton and the surrounding areas, it is recommended that an integrated approach to wayfinding be adopted to ensure consistent messaging between the different modes of transport.

To do this, a comprehensive wayfinding strategy should be prepared to help unify and improve the sense of place by reinforcing the linkages between the Warburton township and surrounding trail network. With the tourist demands on the area expected to grow, the strategy will also need to strengthen the case for sustainable 'active' modes of transport such as walking, cycling, and public transport for local trips through the Warburton area.

The strategy should consider the placing and design of:

- Gateway Signs
- Township Entry Signs
- Street Signs
- Community Facility Entry & Information Signs
- Town Centre Information Signs
- Walkway/Cycleway Signs

The strategy should also include wayfinding to parking within each township, which will help reduce the likelihood of motorists circulating to find an available parking space and helps minimise overstay of short-term parking spaces.

Action 30. Undertake a detailed audit of way finding within the study area to identify current signage and any gaps and consistencies in information presented on the signs.

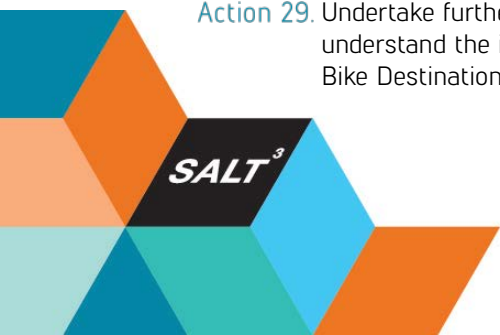
Action 31. Prepare a wayfinding signage strategy that comprehensively maps the transport and path network within the study area, including key destinations, and builds the foundation of a consistent signage network throughout the study area.

15.4.2 TRANSPORT AND CAR PARKING MAPS

In order to communicate changes to parking and other key transport information, a transport and parking map could be provided to inform visitors to Warburton and the surrounding areas where parking and other key transport facilities are located.

This map will allow motorists to better plan their trip/s and could highlight the different types of parking such as trailer parking, electric vehicle charging points, bicycle parking, off street parking, and short and long-term parking. In addition, providing information on key walking, cycling and public transport routes will also encourage more sustainable transport trips into the township.

Educating local business owners and staff about the importance of short stay parking from an economic development perspective to ensure that short stay spaces are utilised for that purpose. To encourage long term parking to occur in long term areas, business



owners and staff need to know where these areas are. The use of maps and communications can support this.

Action 32. Raise awareness about what parking is available and sustainable transport modes to business owners, staff, residents and visitors to Warburton through the development of parking fliers and a communications campaign both online and print media.

15.4.3 COMMUNITY AND BUSINESS ENGAGEMENT

As the Warburton township experiences increased demand for services with the increase in tourism within the area, it is important to ensure the existing businesses and traders are on-board and involved in decision making and the activation of the township. The creation of a business group or trader's association for the Warburton township is one method of encouraging involvement in marketing and promotion, as well as sharing ideas and experiences across local business owners.

Although premature at this point in time, in the future as Warburton develops, a business group could be supported through introduction of a local activity centre special rate or charge program. This approach has been used in other centres across metropolitan Melbourne to enable traditional shopping strips and townships to strategically plan, market and manage as a collective group.

On a broader scale, a special charge program enables:

- The continued collective marketing and promotion of Warburton as a whole, which will assist to create a greater awareness and profile of the area, including what it has to offer to the community and its customers;

- All businesses to benefit from the continuation of a resourced and supported traders' association that coordinates the daily management of activities and drives the overall strategic direction of the township with the support of Council; and
- Enhanced property values and improved use, enjoyment and occupation of properties and overall business goodwill within the township.

It is also important to ensure ongoing community involvement in the planning and design of any streetscape or infrastructure improvement works that change the public realm. Local community members can offer critical insight that can supplement the technical knowledge of design professionals, and engaging the community early in the process can help shape the project's success.

Action 33. Facilitate community participation in the process of change to Warburton's streetscapes and infrastructure, through encouraging community participation in:

- a. community events within public spaces (e.g. street parties, garden clubs and nature strip maintenance groups)
- b. streetscape design development;
- c. streetscape maintenance;
- d. community art projects within public spaces.



16 IMPLEMENTATION

The implementation of the Local Movement and Transport Report will be critical to its success.

It is anticipated resourcing commitments, including financial budget allocations as well as officer time, will be necessary to enable the delivery of the actions identified in Section 14.

Table 10 sets out an action plan that identifies:

- The actions;
- The allocated timeframe;
- The responsible department; and
- The stakeholders for each action.

Where infrastructure upgrades have been identified, the works should undergo functional and detailed design with community input before construction commences. Preliminary concept plans for some of these works have been prepared as part of the development of the LMTR and have been included in Appendix 3.

However, while some of the actions and projects may fall under Council's responsibility, support and resourcing from other stakeholders, including other government bodies should be sought in delivering the LMTR. This includes considering external funding streams, including (but are not limited to):

- Victorian Government funding sources.
- Australian Government funding sources.

Timeframe

Indicative timings for actions are set out as follows:

Immediate	0-1 years
Short Term	2-4 years
Medium Term	5-8 years
Long Term	8+ years.

Some actions are also designated as **Ongoing** to reflect their delivery being achieved through changes to Council process or policy.

Responsible Department

The LMTR identifies a lead Council department and relevant partner stakeholders for each action. The lead department is responsible for project managing the various tasks required to ensure successful delivery. Key stakeholders are those departments, state agencies, neighbouring councils or organisations considered important partners for implementation. The list of partners is not exclusive and additional stakeholders may be identified as implementation progresses.

Monitoring and evaluation

Successful implementation is underpinned by effective monitoring, review and evaluation processes. Council is responsible for the monitoring and evaluation of the actions identified within this implementation plan.

It is recommended that targeted communications are conducted to ensure government departments, agencies, key stakeholders and the community as a whole will remain well-informed and engaged in the process.

Examples of targeted communications could include (but are not limited to):

- Major projects/tasks and milestones published via Yarra Ranges Local (the Shire's community publication) or via a media release;
- Updates on Council's website (when considered necessary) to advise the community of the achievements and milestones for projects/tasks.

An open and transparent monitoring and evaluation process that allows the community, stakeholders and government agencies access to information about the progress of the management plan and increases Council's credibility and accountability.

It is recommended that the LMTR (including the implementation plan) be reviewed every five years, with the first review to occur in 2024.



Table 10 Action Plan

No.	Action	Timeframe	Lead Department	Stakeholders
1	Undertake conceptual planning and design for a streetscape upgrade of Warburton Highway in order to adapt the road and its traffic to the needs of the Warburton township, focusing on:			
	a. The western commercial precinct between the Warburton Tennis Club and Brett Road;	Medium Term	TRANSPORT	COUNCIL VICROADS
b. The eastern commercial precinct, between the Warburton Recreational Reserve and Riverside Drive;	Medium Term			
2	Develop an on-going plan of streetscape improvements and use every opportunity to make improvements to the public realm, especially during any routine refurbishment.	Short Term	TRANSPORT	COUNCIL VICROADS
3	Reduce the speed limit along Warburton Highway to 40km/h in areas where pedestrian activity is encouraged, including within the commercial areas of Wesburn and Warburton.	Immediate	TRANSPORT	COUNCIL VICROADS
4	Consider opportunities to redistribute unused road space to pedestrians and the public realm, including at:			
	a. The intersection of Brett Road/Brisbane Bridge and Warburton Highway.	Medium Term	TRANSPORT	COUNCIL VICROADS
	b. The intersection of Station Road and Warburton Highway.	Medium Term		
	c. The intersection of Scotchmans Creek Road and Warburton Highway.	Medium Term		
	d. The intersection of Park Road and Warburton Highway.	Medium Term		
e. The intersection of Riverside Drive and Warburton Highway.	Medium Term			
5	Ensure the safety of all road users is considered in new infrastructure works by undertaking a Road Safety Audit of the design prior to construction.	Short Term	TRANSPORT	COUNCIL VICROADS
6	Ensure the footpath network is continuous, clear of fixed objects and other obstacles and is at least 1.8m wide, so two people using wheelchairs can comfortably pass each other.	Medium Term	TRANSPORT INFRASTRUCTURE	COUNCIL
7	Look at opportunities to improve and extend the pedestrian footpath network beyond each township, including:			
	a. Along Woods Point Road towards the Warburton Holiday Park;	Short Term	TRANSPORT INFRASTRUCTURE	COUNCIL
	b. Between Warburton Highway and Backstairs Track;	Short Term		
c. Along Dammans Road towards the Golf Club.	Short Term			
8	Provide pedestrian crossing opportunities through the township including:			
	a. On Warburton Highway at Scotchmans Creek Road.	Medium Term	TRANSPORT	COUNCIL



	b. On Warburton Highway at Station Road.	Short Term		PEDESTRIANS
	c. On Warburton Highway at Warburton Reserve, near the current end of the Warburton Rail Trail.	Short Term		
	d. On Warburton Highway near Park Road.	Short Term		
	e. At the intersection of Warburton Highway, Woods Point Road and Donna Buang Road.	Short Term		
9	Consider expanding the cycling network to include:			
	a. Along Dammans Road and Blackwood Avenue	Medium Term		
	b. A cycling connection between Warburton and East Warburton, which may include shared or separated facilities along Riverside Drive.	Long Term	TRANSPORT	COUNCIL CYCLISTS
	c. A cycling connection between East Warburton and Redwood Forest. This may require an upgrade of the existing Yarra River bridge crossing to accommodate cyclists.	Long Term		
10	Consider improving connections between the rail trail and destinations within the study area, including:			
	a. Providing a formal shared path connection between the Rail Trail in Wesburn along Station Road to the township and Wesburn Park.	Medium Term		
	b. Providing a formal shared path connection between the rail trail and the western commercial precinct of Warburton along Station Road.	Short Term	INFRASTRUCTURE	COUNCIL
	c. Extending the rail trail to the eastern commercial precinct of Warburton, including around the Warburton Recreational Reserve.	Medium Term		
11	Provide improved shared path crossings across major roads including:			
	a. Along the rail trail at Station Road in Wesburn.	Short Term		
	b. Along the rail trail at Hooks Road, Warburton.	Short Term	TRANSPORT INFRASTRUCTURE	COUNCIL
	c. Along the rail trail at Station Road, Warburton.	Short Term		
	d. At the end of the rail trail at Warburton Highway, Warburton.	Short Term		
12	Consider providing end-of-trip facilities within the Warburton township for public use.	Short Term	PLANNING	COUNCIL
13	Consider providing electric bike charging stations within the Warburton township.	Immediate	PLANNING	COUNCIL
14	Advocate improvements to the frequency, coverage and accessibility of public bus services within the Warburton township and surrounding area, including:			
	a. The introduction of a public transport route connecting key tourist destinations, including Healesville and Warburton.	Ongoing		
	b. Improved frequency of bus services to Warburton and East Warburton, particularly during off-peak commuter periods.	Ongoing	PLANNING	COUNCIL PTV

	c. The introduction of bicycle racks to bus routes within the study area.	Ongoing		
15	Encourage and support community and private providers to provide shuttle services to key destinations within the study area.	Ongoing	PLANNING	COUNCIL
16	Plan for a future bus interchange that allows for the safe and efficient movement for passengers between public and community transport services. This could be located at the main trail head of the Warburton Mountain Bike Destination, or within the Warburton township.	Medium Term	PLANNING	COUNCIL PTV
17	Provide a greater mix of parking restrictions that reflects the varied needs of visitors to Warburton by:			
	a. Changing seven 2P parking spaces on Warburton Highway between 3369 Warburton Highway and Thomas Avenue to 1P.	Immediate	TRANSPORT	COUNCIL
	b. Changing 15 unrestricted parking spaces on Thomas Avenue to 4P.	Immediate		
18	Maintain consistency across parking restriction signs by ensuring:			
	a. Very short-term parking spaces (<1P) and short-term parking spaces (1P and 2P) operate 9am-6pm Monday to Friday, and 9am-1pm Saturday to Sunday.	Immediate	TRANSPORT	COUNCIL
	b. Medium-term parking spaces (3-4P) operate 9am-6pm Monday to Friday.	Immediate		
19	Continue to monitor parking demand within the Warburton township, including conducting duration of stay and parking occupancy surveys at regular intervals.	Ongoing	TRANSPORT	COUNCIL
20	Use the parking user priorities (identified in Table 9) to review and manage the allocation of parking spaces within the Warburton township.	Ongoing	TRANSPORT	COUNCIL
21	Consider altering parking restrictions where over 85% of the parking spaces within a defined area were observed to be occupied during peak periods, or where a road safety concern has been identified by Council officers.	Immediate	TRANSPORT	COUNCIL
22	Ensure traders and adjacent property occupiers are consulted on any changes to parking restrictions in the vicinity of their property prior to the restrictions being altered.	Ongoing	TRANSPORT	COUNCIL BUSINESSES
23	Actively enforce car parking on-street and off-street to maintain a peak parking occupancy demand of 85 percent and compliance level of 90%.	Ongoing	ENFORCEMENT	COUNCIL
24	Continue to undertake frequent parking enforcement at random times of the day so that regular visitors to the precinct do not become familiar with when parking restrictions will be enforced.	Ongoing	ENFORCEMENT	COUNCIL
25	Review the need for paid and permit parking as part of the ongoing management of parking within the Warburton township.	Short Term	TRANSPORT	COUNCIL
26	When designing new car parking facilities, ensure the design enables other activities such as markets and community events to be held on the site.	Ongoing	PLANNING	COUNCIL
27	Progress concept designs for the upgrades of the following car parking areas:			



	a. The car park at Wesburn Park;	Medium Term		
	b. The informal parking area adjacent to Warburton Highway opposite the Alpine Retreat.	Medium Term		
	c. The car parking area adjacent to the Warburton Tennis Club;	Medium Term	TRANSPORT	COUNCIL
	d. The car park around Warburton Recreational Reserve;	Medium Term		
	e. The car parking area adjacent to the Warburton Skate Park.	Medium Term		
28	Review the car parking rates as part of the review of the Warburton and Surrounds LMTR.	Short Term	TRANSPORT	COUNCIL
29	Undertake further land use forecasting to understand the impact of the Mountain Bike Destination facility and overall tourist growth on potential development activity within the study area.	Medium Term	PLANNING	COUNCIL
30	Undertake a detailed audit of way finding within the study area to identify current signage and any gaps and inconsistencies in information presented on the signs.	Short Term	TRANSPORT	COUNCIL
31	Prepare a wayfinding signage strategy that comprehensively maps the transport and path network within the study area, including key destinations, and builds the foundation of a consistent signage network throughout the study area.	Short Term	TRANSPORT	COUNCIL
32	Raise awareness about what parking is available and sustainable transport modes to business owners, staff, residents and visitors to Warburton through the development of parking fliers and a communications campaign both online and print media.	Ongoing	TRANSPORT PLANNING	COUNCIL
33	Facilitate community participation in the process of change to Warburton's streetscapes and infrastructure, through encouraging community participation in:			
	a. Community events within public spaces (e.g. street parties, garden clubs and nature strip maintenance groups);	Ongoing		COUNCIL
	b. Streetscape design development;	Ongoing		COUNCIL
	c. Streetscape maintenance	Ongoing		COUNCIL
	d. Community art projects within public spaces.	Ongoing		COUNCIL

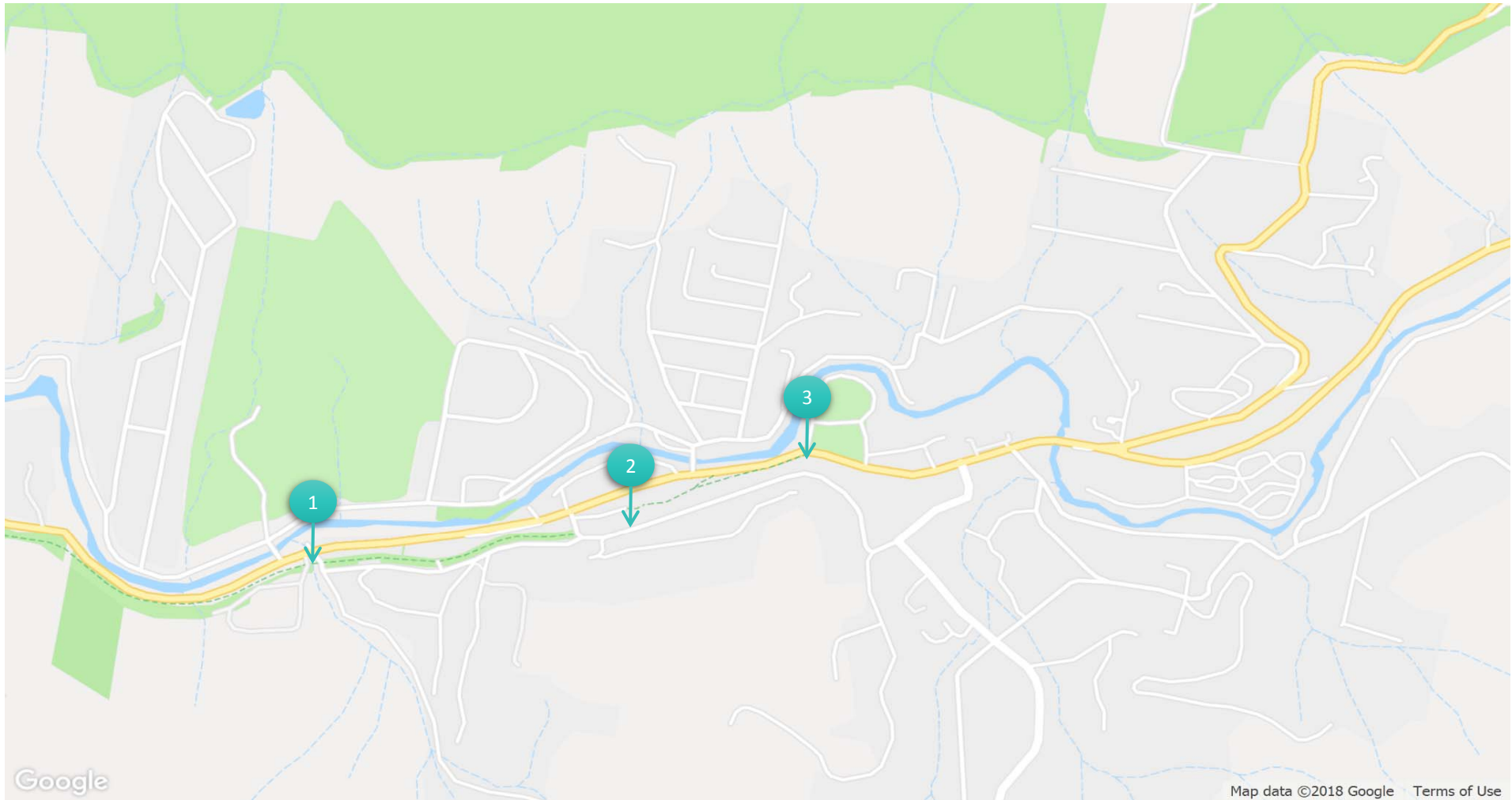


APPENDIX 1 PEDESTRIAN & CYCLIST SURVEY RESULTS



Location
Description

Warburton Township
Warburton Rail Trail Cycling and Pedestrian Survey (Map)



Location Site 1 Warburton Rail Trail, Warburton at Scotchmans Creek Road
Date Fri, 26 October 2018 (7:00-21:00)
Description Warburton Rail Trail Pedestrian Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	1	0
7:30 - 7:45	0	0
7:45 - 8:00	0	0
8:00 - 8:15	0	0
8:15 - 8:30	1	1
8:30 - 8:45	0	0
8:45 - 9:00	0	2
9:00 - 9:15	0	0
9:15 - 9:30	2	2
9:30 - 9:45	0	0
9:45 - 10:00	2	0
10:00 - 10:15	0	0
10:15 - 10:30	0	0
10:30 - 10:45	0	0
10:45 - 11:00	0	2
11:00 - 11:15	0	0
11:15 - 11:30	0	0
11:30 - 11:45	0	0
11:45 - 12:00	0	0
12:00 - 12:15	0	2
12:15 - 12:30	0	0
12:30 - 12:45	0	0
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	0	0
13:30 - 13:45	0	0
13:45 - 14:00	0	0
14:00 - 14:15	1	0
14:15 - 14:30	0	0
14:30 - 14:45	0	0
14:45 - 15:00	0	0
15:00 - 15:15	1	0
15:15 - 15:30	0	0
15:30 - 15:45	0	0
15:45 - 16:00	1	0
16:00 - 16:15	1	0
16:15 - 16:30	1	0
16:30 - 16:45	0	0
16:45 - 17:00	0	1
17:00 - 17:15	0	0
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	0	0
18:00 - 18:15	0	0
18:15 - 18:30	1	1
18:30 - 18:45	0	0
18:45 - 19:00	0	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	2	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	14	11

Location Site 1 Warburton Rail Trail, Warburton at Scotchmans Creek Road
Date Fri, 26 October 2018 (7:00-21:00)
Description Warburton Rail Trail Cyclist Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	4
7:45 - 8:00	1	0
8:00 - 8:15	0	4
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	3	0
9:00 - 9:15	2	0
9:15 - 9:30	0	0
9:30 - 9:45	2	2
9:45 - 10:00	0	1
10:00 - 10:15	0	0
10:15 - 10:30	2	0
10:30 - 10:45	1	2
10:45 - 11:00	0	2
11:00 - 11:15	0	1
11:15 - 11:30	15	0
11:30 - 11:45	2	0
11:45 - 12:00	2	0
12:00 - 12:15	0	2
12:15 - 12:30	3	0
12:30 - 12:45	2	0
12:45 - 13:00	0	1

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	1	0
13:15 - 13:30	2	1
13:30 - 13:45	2	0
13:45 - 14:00	0	2
14:00 - 14:15	0	2
14:15 - 14:30	1	4
14:30 - 14:45	0	1
14:45 - 15:00	1	1
15:00 - 15:15	0	1
15:15 - 15:30	1	0
15:30 - 15:45	0	0
15:45 - 16:00	0	0
16:00 - 16:15	4	2
16:15 - 16:30	0	0
16:30 - 16:45	2	0
16:45 - 17:00	0	0
17:00 - 17:15	1	0
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	2	0
18:00 - 18:15	0	1
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	0	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	52	34

Location Site 1 Warburton Rail Trail, Warburton at Scotchmans Creek Road
Date Sat, 27 October 2018 (7:00-21:00)
Description Warburton Rail Trail Pedestrian Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	2
7:45 - 8:00	1	0
8:00 - 8:15	1	2
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	3	4
9:00 - 9:15	2	0
9:15 - 9:30	0	0
9:30 - 9:45	0	0
9:45 - 10:00	1	0
10:00 - 10:15	2	0
10:15 - 10:30	0	1
10:30 - 10:45	0	1
10:45 - 11:00	0	0
11:00 - 11:15	1	0
11:15 - 11:30	0	0
11:30 - 11:45	0	0
11:45 - 12:00	1	0
12:00 - 12:15	0	1
12:15 - 12:30	0	0
12:30 - 12:45	0	1
12:45 - 13:00	0	1

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	0	0
13:30 - 13:45	0	0
13:45 - 14:00	0	1
14:00 - 14:15	0	0
14:15 - 14:30	0	1
14:30 - 14:45	0	0
14:45 - 15:00	3	0
15:00 - 15:15	0	0
15:15 - 15:30	1	1
15:30 - 15:45	1	0
15:45 - 16:00	1	2
16:00 - 16:15	0	1
16:15 - 16:30	1	0
16:30 - 16:45	0	0
16:45 - 17:00	0	0
17:00 - 17:15	0	0
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	0	3
18:00 - 18:15	0	0
18:15 - 18:30	5	0
18:30 - 18:45	0	2
18:45 - 19:00	0	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	24	24

Location Site 1 Warburton Rail Trail, Warburton at Scotchmans Creek Road
Date Sat, 27 October 2018 (7:00-21:00)
Description Warburton Rail Trail Cyclist Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	1	0
7:45 - 8:00	1	2
8:00 - 8:15	0	0
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	4	1
9:15 - 9:30	4	2
9:30 - 9:45	0	2
9:45 - 10:00	6	2
10:00 - 10:15	1	3
10:15 - 10:30	2	4
10:30 - 10:45	5	1
10:45 - 11:00	0	3
11:00 - 11:15	2	1
11:15 - 11:30	0	3
11:30 - 11:45	0	3
11:45 - 12:00	6	1
12:00 - 12:15	3	0
12:15 - 12:30	5	0
12:30 - 12:45	3	5
12:45 - 13:00	4	1

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	1	3
13:15 - 13:30	7	6
13:30 - 13:45	1	5
13:45 - 14:00	7	0
14:00 - 14:15	5	6
14:15 - 14:30	1	4
14:30 - 14:45	4	3
14:45 - 15:00	3	4
15:00 - 15:15	10	2
15:15 - 15:30	0	4
15:30 - 15:45	2	0
15:45 - 16:00	6	5
16:00 - 16:15	0	0
16:15 - 16:30	2	3
16:30 - 16:45	5	0
16:45 - 17:00	0	4
17:00 - 17:15	2	0
17:15 - 17:30	2	0
17:30 - 17:45	0	2
17:45 - 18:00	3	0
18:00 - 18:15	0	0
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	4	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	112	85

Location Site 2 Warburton Rail Trail, Warburton at Station Road
Date Fri, 26 October 2018 (7:00-21:00)
Description Warburton Rail Trail Pedestrian Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	1	0
7:30 - 7:45	0	0
7:45 - 8:00	0	0
8:00 - 8:15	1	0
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	0	2
9:00 - 9:15	0	0
9:15 - 9:30	2	2
9:30 - 9:45	0	0
9:45 - 10:00	0	0
10:00 - 10:15	2	2
10:15 - 10:30	0	0
10:30 - 10:45	0	0
10:45 - 11:00	0	0
11:00 - 11:15	0	1
11:15 - 11:30	0	0
11:30 - 11:45	0	0
11:45 - 12:00	0	2
12:00 - 12:15	0	0
12:15 - 12:30	0	0
12:30 - 12:45	0	0
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	2	0
13:30 - 13:45	0	0
13:45 - 14:00	0	1
14:00 - 14:15	0	1
14:15 - 14:30	1	0
14:30 - 14:45	0	1
14:45 - 15:00	0	0
15:00 - 15:15	0	0
15:15 - 15:30	0	0
15:30 - 15:45	0	0
15:45 - 16:00	0	0
16:00 - 16:15	3	0
16:15 - 16:30	1	0
16:30 - 16:45	0	3
16:45 - 17:00	1	0
17:00 - 17:15	0	1
17:15 - 17:30	0	0
17:30 - 17:45	1	0
17:45 - 18:00	0	0
18:00 - 18:15	0	0
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	1	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	3
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	1
20:45 - 21:00	0	0
Total	16	20

Location Site 2 Warburton Rail Trail, Warburton at Station Road
Date Fri, 26 October 2018 (7:00-21:00)
Description Warburton Rail Trail Cyclist Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	3
7:45 - 8:00	0	0
8:00 - 8:15	0	4
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	1	0
9:00 - 9:15	4	0
9:15 - 9:30	0	0
9:30 - 9:45	1	2
9:45 - 10:00	1	1
10:00 - 10:15	0	0
10:15 - 10:30	2	0
10:30 - 10:45	1	3
10:45 - 11:00	0	2
11:00 - 11:15	0	1
11:15 - 11:30	1	0
11:30 - 11:45	15	0
11:45 - 12:00	2	0
12:00 - 12:15	0	2
12:15 - 12:30	1	0
12:30 - 12:45	4	0
12:45 - 13:00	0	1

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	1	0
13:15 - 13:30	1	1
13:30 - 13:45	3	0
13:45 - 14:00	0	2
14:00 - 14:15	0	2
14:15 - 14:30	1	4
14:30 - 14:45	0	1
14:45 - 15:00	1	1
15:00 - 15:15	0	1
15:15 - 15:30	0	0
15:30 - 15:45	1	0
15:45 - 16:00	0	0
16:00 - 16:15	1	2
16:15 - 16:30	3	0
16:30 - 16:45	0	0
16:45 - 17:00	2	1
17:00 - 17:15	1	0
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	2	0
18:00 - 18:15	0	1
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	0	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	50	35

Location Site 2 Warburton Rail Trail, Warburton at Station Road
Date Sat, 27 October 2018 (7:00-21:00)
Description Warburton Rail Trail Pedestrian Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	2	0
7:15 - 7:30	0	0
7:30 - 7:45	0	0
7:45 - 8:00	0	1
8:00 - 8:15	1	1
8:15 - 8:30	1	0
8:30 - 8:45	0	1
8:45 - 9:00	1	5
9:00 - 9:15	5	0
9:15 - 9:30	0	1
9:30 - 9:45	0	0
9:45 - 10:00	0	0
10:00 - 10:15	2	0
10:15 - 10:30	1	0
10:30 - 10:45	0	1
10:45 - 11:00	0	0
11:00 - 11:15	1	0
11:15 - 11:30	0	0
11:30 - 11:45	0	0
11:45 - 12:00	0	0
12:00 - 12:15	0	0
12:15 - 12:30	1	0
12:30 - 12:45	0	1
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	0	0
13:30 - 13:45	0	0
13:45 - 14:00	0	1
14:00 - 14:15	0	0
14:15 - 14:30	0	1
14:30 - 14:45	2	0
14:45 - 15:00	3	0
15:00 - 15:15	0	1
15:15 - 15:30	0	1
15:30 - 15:45	0	0
15:45 - 16:00	1	2
16:00 - 16:15	0	2
16:15 - 16:30	2	0
16:30 - 16:45	1	0
16:45 - 17:00	0	0
17:00 - 17:15	0	0
17:15 - 17:30	1	0
17:30 - 17:45	1	0
17:45 - 18:00	1	1
18:00 - 18:15	0	0
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	0	5

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	5	1
19:15 - 19:30	2	1
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	1
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	34	28

Location Site 2 Warburton Rail Trail, Warburton at Station Road
Date Sat, 27 October 2018 (7:00-21:00)
Description Warburton Rail Trail Cyclist Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	1	0
7:45 - 8:00	1	2
8:00 - 8:15	0	0
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	4	1
9:15 - 9:30	4	3
9:30 - 9:45	0	1
9:45 - 10:00	6	2
10:00 - 10:15	1	3
10:15 - 10:30	2	4
10:30 - 10:45	5	1
10:45 - 11:00	0	3
11:00 - 11:15	2	1
11:15 - 11:30	0	3
11:30 - 11:45	0	3
11:45 - 12:00	6	1
12:00 - 12:15	3	0
12:15 - 12:30	6	0
12:30 - 12:45	3	7
12:45 - 13:00	4	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	3	3
13:15 - 13:30	4	4
13:30 - 13:45	4	4
13:45 - 14:00	6	3
14:00 - 14:15	7	7
14:15 - 14:30	0	0
14:30 - 14:45	1	7
14:45 - 15:00	7	1
15:00 - 15:15	8	2
15:15 - 15:30	1	4
15:30 - 15:45	2	0
15:45 - 16:00	4	5
16:00 - 16:15	0	0
16:15 - 16:30	1	3
16:30 - 16:45	2	1
16:45 - 17:00	3	6
17:00 - 17:15	2	0
17:15 - 17:30	0	0
17:30 - 17:45	2	2
17:45 - 18:00	1	0
18:00 - 18:15	2	0
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	4	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	112	87

Location Site 3 Warburton Rail Trail on the southern side of Warburton Highway, near #3446
Date Fri, 26 October 2018 (7:00-21:00)
Description Warburton Rail Trail Pedestrian Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	3
7:45 - 8:00	0	1
8:00 - 8:15	0	0
8:15 - 8:30	0	1
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	0	0
9:15 - 9:30	0	0
9:30 - 9:45	1	2
9:45 - 10:00	0	0
10:00 - 10:15	1	1
10:15 - 10:30	0	0
10:30 - 10:45	0	0
10:45 - 11:00	0	0
11:00 - 11:15	1	1
11:15 - 11:30	0	0
11:30 - 11:45	0	1
11:45 - 12:00	0	0
12:00 - 12:15	0	0
12:15 - 12:30	0	0
12:30 - 12:45	1	1
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	2	0
13:30 - 13:45	0	0
13:45 - 14:00	0	1
14:00 - 14:15	0	0
14:15 - 14:30	0	1
14:30 - 14:45	0	1
14:45 - 15:00	1	0
15:00 - 15:15	1	0
15:15 - 15:30	0	0
15:30 - 15:45	1	0
15:45 - 16:00	1	0
16:00 - 16:15	0	0
16:15 - 16:30	2	0
16:30 - 16:45	0	3
16:45 - 17:00	0	0
17:00 - 17:15	0	0
17:15 - 17:30	0	0
17:30 - 17:45	1	0
17:45 - 18:00	1	0
18:00 - 18:15	0	0
18:15 - 18:30	0	0
18:30 - 18:45	2	0
18:45 - 19:00	1	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	3
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	1
20:00 - 20:15	0	2
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	17	23

Location Site 3 Warburton Rail Trail on the southern side of Warburton Highway, near #3446
Date Fri, 26 October 2018 (7:00-21:00)
Description Warburton Rail Trail Cyclist Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	0
7:45 - 8:00	0	0
8:00 - 8:15	0	0
8:15 - 8:30	0	0
8:30 - 8:45	1	0
8:45 - 9:00	0	0
9:00 - 9:15	1	0
9:15 - 9:30	0	0
9:30 - 9:45	0	0
9:45 - 10:00	0	0
10:00 - 10:15	0	0
10:15 - 10:30	2	0
10:30 - 10:45	0	3
10:45 - 11:00	0	0
11:00 - 11:15	0	0
11:15 - 11:30	0	0
11:30 - 11:45	15	0
11:45 - 12:00	0	0
12:00 - 12:15	0	0
12:15 - 12:30	1	0
12:30 - 12:45	2	3
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	1	1
13:15 - 13:30	1	0
13:30 - 13:45	0	0
13:45 - 14:00	0	0
14:00 - 14:15	0	0
14:15 - 14:30	1	2
14:30 - 14:45	0	0
14:45 - 15:00	0	0
15:00 - 15:15	1	0
15:15 - 15:30	0	0
15:30 - 15:45	1	0
15:45 - 16:00	0	0
16:00 - 16:15	0	1
16:15 - 16:30	3	2
16:30 - 16:45	0	0
16:45 - 17:00	2	1
17:00 - 17:15	1	0
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	1	0
18:00 - 18:15	0	3
18:15 - 18:30	0	0
18:30 - 18:45	0	1
18:45 - 19:00	0	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	34	17

Location Site 3 Warburton Rail Trail on the southern side of Warburton Highway, near #3446
Date Sat, 27 October 2018 (7:00-21:00)
Description Warburton Rail Trail Pedestrian Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	0
7:45 - 8:00	0	0
8:00 - 8:15	1	2
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	1	4
9:15 - 9:30	1	0
9:30 - 9:45	0	1
9:45 - 10:00	0	0
10:00 - 10:15	3	0
10:15 - 10:30	1	0
10:30 - 10:45	1	0
10:45 - 11:00	4	0
11:00 - 11:15	0	0
11:15 - 11:30	0	2
11:30 - 11:45	0	0
11:45 - 12:00	1	0
12:00 - 12:15	1	0
12:15 - 12:30	0	0
12:30 - 12:45	0	0
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	1	0
13:30 - 13:45	0	2
13:45 - 14:00	2	5
14:00 - 14:15	0	0
14:15 - 14:30	0	0
14:30 - 14:45	2	0
14:45 - 15:00	0	0
15:00 - 15:15	0	0
15:15 - 15:30	0	0
15:30 - 15:45	1	4
15:45 - 16:00	0	0
16:00 - 16:15	2	0
16:15 - 16:30	0	0
16:30 - 16:45	1	0
16:45 - 17:00	2	0
17:00 - 17:15	2	2
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	1	0
18:00 - 18:15	0	0
18:15 - 18:30	0	0
18:30 - 18:45	0	4
18:45 - 19:00	0	0

15 Minute Total	Eastbound	Westbound
19:00 - 19:15	4	0
19:15 - 19:30	4	0
19:30 - 19:45	3	0
19:45 - 20:00	0	0
20:00 - 20:15	0	3
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	14	11

Location Site 3 Warburton Rail Trail on the southern side of Warburton Highway, near #3446
Date Sat, 27 October 2018 (7:00-21:00)
Description Warburton Rail Trail Cyclist Survey Data

15 Minute Total	Eastbound	Westbound
7:00 - 7:15	0	0
7:15 - 7:30	0	0
7:30 - 7:45	0	0
7:45 - 8:00	0	0
8:00 - 8:15	0	0
8:15 - 8:30	0	0
8:30 - 8:45	0	0
8:45 - 9:00	0	0
9:00 - 9:15	0	2
9:15 - 9:30	0	1
9:30 - 9:45	1	0
9:45 - 10:00	2	1
10:00 - 10:15	0	1
10:15 - 10:30	0	1
10:30 - 10:45	0	0
10:45 - 11:00	0	1
11:00 - 11:15	0	0
11:15 - 11:30	0	0
11:30 - 11:45	2	0
11:45 - 12:00	0	0
12:00 - 12:15	1	1
12:15 - 12:30	2	0
12:30 - 12:45	0	0
12:45 - 13:00	0	0

15 Minute Total	Eastbound	Westbound
13:00 - 13:15	0	0
13:15 - 13:30	1	1
13:30 - 13:45	0	0
13:45 - 14:00	0	0
14:00 - 14:15	5	4
14:15 - 14:30	0	1
14:30 - 14:45	1	1
14:45 - 15:00	0	0
15:00 - 15:15	0	0
15:15 - 15:30	0	0
15:30 - 15:45	2	0
15:45 - 16:00	0	0
16:00 - 16:15	2	2
16:15 - 16:30	2	0
16:30 - 16:45	1	1
16:45 - 17:00	1	0
17:00 - 17:15	0	0
17:15 - 17:30	0	0
17:30 - 17:45	0	0
17:45 - 18:00	1	0
18:00 - 18:15	0	0
18:15 - 18:30	0	0
18:30 - 18:45	0	0
18:45 - 19:00	0	0

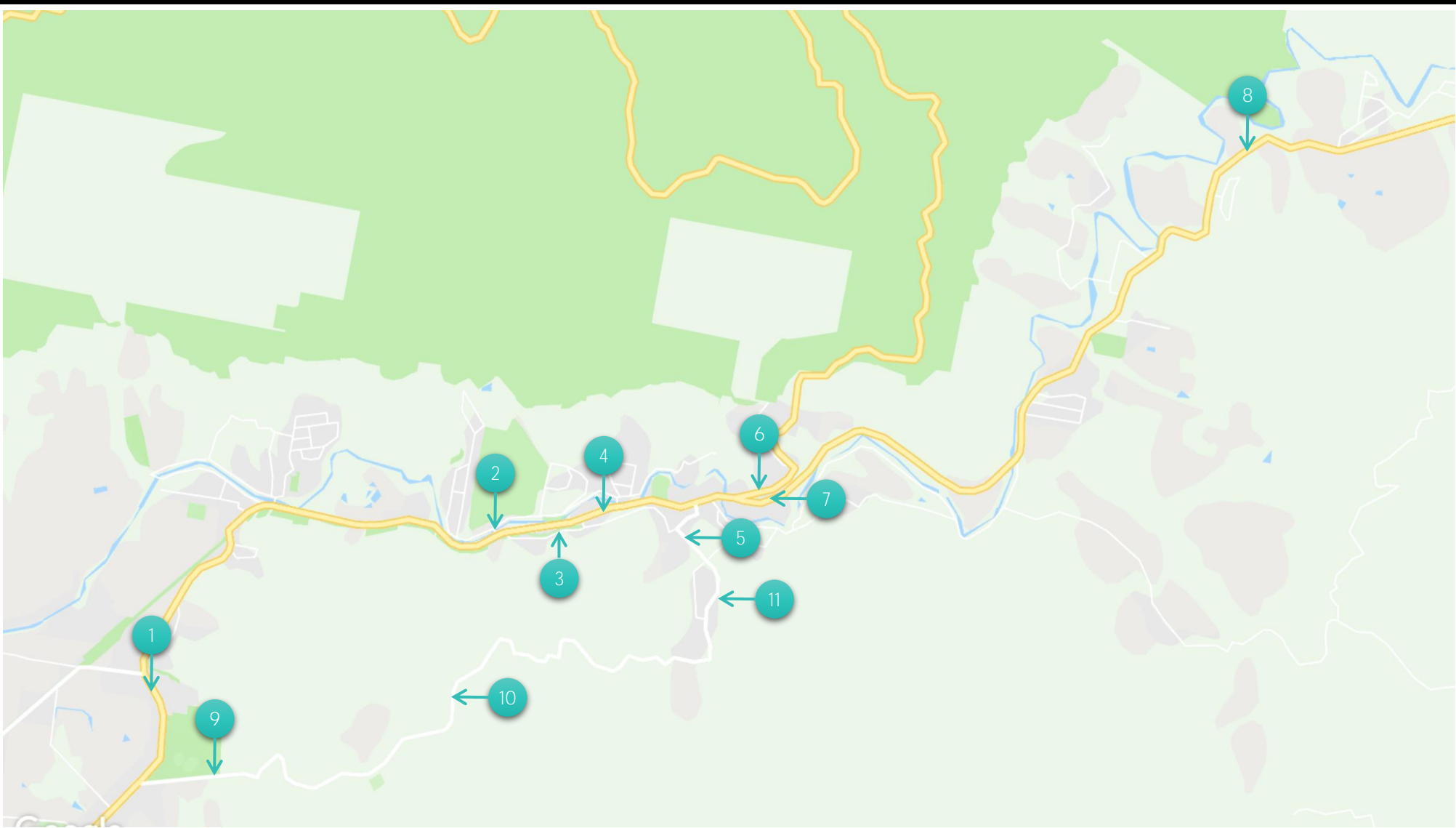
15 Minute Total	Eastbound	Westbound
19:00 - 19:15	0	0
19:15 - 19:30	0	0
19:30 - 19:45	0	0
19:45 - 20:00	0	0
20:00 - 20:15	0	0
20:15 - 20:30	0	0
20:30 - 20:45	0	0
20:45 - 21:00	0	0
Total	24	18

APPENDIX 2 TRAFFIC SPEED AND VOLUME SURVEY RESULTS



Location
Description

Warburton & Surrounds
Traffic Speed and Volume Survey Locations



Street: Warburton Highway
 Suburb: Wesburn
 Location: Near #2899

Count No.: 1
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	2290	2324	4614	2275	2333	4608	2449	2510	4959	2401	2511	4912	2539	2650	5189	2486	2636	5122	2314	2720	5034
Medium Vehicle - Class 3 to 5	369	197	566	305	171	476	320	223	543	312	216	528	370	223	593	281	146	427	235	127	362
Long Vehicle - Class 6 to 12	34	11	45	27	12	39	21	16	37	27	26	53	29	11	40	22	13	35	28	14	42
7am-7pm Vol	2373	2148	4521	2235	2121	4356	2365	2369	4734	2306	2319	4625	2408	2392	4800	2434	2375	4809	2286	2562	4848
24Hr Vol	2693	2532	5225	2607	2516	5123	2790	2749	5539	2740	2753	5493	2938	2884	5822	2789	2795	5584	2577	2861	5438
85%ile Speed	57	56	56	54	54	54	54	54	54	54	54	54	53	53	53	55	54	55	55	54	55
Mean Speed	51.7	50.3	51.0	50.0	49.2	49.6	49.7	48.9	49.3	49.3	48.7	49.0	48.4	48.0	48.2	49.9	48.9	49.4	49.9	48.8	49.4
AM Pk Hr Vol	229	289	431	192	304	455	192	311	451	193	302	454	204	298	453	276	237	513	271	240	511
AM Hr Factor	0.09	0.11	0.08	0.07	0.12	0.09	0.07	0.11	0.08	0.07	0.11	0.08	0.07	0.10	0.08	0.10	0.08	0.09	0.11	0.08	0.09
AM Peak 85%	64	72	65	64	65	65	67	67	67	63	75	63	62	65	64	65	69	64	70	70	70
AM Peak Time	11:00	8:00	8:00	11:00	8:00	8:00	11:00	8:00	8:00	11:00	8:00	8:00	11:00	8:00	8:00	11:00	11:00	11:00	11:00	11:00	11:00
PM Pk Hr Vol	283	218	499	278	225	503	286	214	498	280	268	548	300	247	547	289	256	502	294	307	568
PM Hr Factor	0.11	0.09	0.10	0.11	0.09	0.10	0.10	0.08	0.09	0.10	0.10	0.10	0.10	0.09	0.09	0.10	0.09	0.09	0.11	0.11	0.10
PM Peak 85%	65	71	67	63	61	62	71	63	61	63	62	62	63	64	63	63	60	61	68	63	61
PM Peak Time	15:00	14:00	15:00	15:00	15:00	15:00	15:00	14:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	12:00	16:00	12:00	12:00	15:00	12:00

Street: Warburton Highway
 Suburb: Wesburn
 Location: Near #2899

Count No.: 1
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		5,442 vpd	2,755 vpd	2,687 vpd
Peak Hr AM	08:00	449 vpd	148 vpd	301 vpd
Peak Hr PM	15:00	519 vpd	285 vpd	234 vpd
Speeds	85th%	54.4 km/h	54.5 km/h	54.3 km/h
	Average	49.4 km/h	49.8 km/h	49.0 km/h
Commercial Vehicles %		10.7%	13.2%	8.2%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		5,462 vpd	2,735 vpd	2,728 vpd
Peak Hr AM	11:00	416 vpd	222 vpd	247 vpd
Peak Hr PM	15:00	508 vpd	262 vpd	246 vpd
Speeds	85th%	54.5 km/h	54.6 km/h	54.4 km/h
	Average	49.4 km/h	49.8 km/h	49.0 km/h
Commercial Vehicles %		9.9%	12.4%	7.4%

Street: Maher Bridge
 Suburb: Warburton
 Location: South of Dammans Road

Count No.: 2
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18			
	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	
Data Record Interval = 1Hr																						
Light Vehicle - Class 1 to 2	458	544	1002	458	512	970	447	534	981	472	552	1024	464	549	1013	481	570	1051	420	529	949	
Medium Vehicle - Class 3 to 5	40	10	50	47	11	58	37	14	51	48	20	68	39	21	60	32	9	41	33	7	40	
Long Vehicle - Class 6 to 12	1	0	1	1	0	1	1	0	1	0	0	0	3	2	5	0	0	0	0	0	0	
7am-7pm Vol	453	472	925	428	431	859	403	456	859	440	455	895	406	469	875	419	483	902	372	485	857	
24Hr Vol	499	554	1053	506	523	1029	485	548	1033	520	572	1092	506	572	1078	513	579	1092	453	536	989	
85%ile Speed	24	27	26	24	26	25	24	26	25	25	27	26	23	26	25	24	26	25	23	25	24	
Mean Speed	21.8	24.3	23.1	21.7	24.1	22.9	22.0	24.2	23.2	21.5	24.1	22.9	21.7	23.9	22.9	21.2	23.8	22.6	21.8	23.5	22.7	
AM Pk Hr Vol	31	50	70	36	63	93	29	65	88	30	48	75	31	53	77	33	48	81	32	49	81	
AM Hr Factor	0.06	0.09	0.07	0.07	0.12	0.09	0.06	0.12	0.09	0.06	0.08	0.07	0.06	0.09	0.07	0.06	0.08	0.07	0.07	0.09	0.08	
AM Peak 85%	25	31	29	27	30	28	27	29	28	26	30	30	25	30	27	25	29	26	24	28	27	
AM Peak Time	10:00	7:00	9:00	10:00	8:00	8:00	11:00	8:00	8:00	10:00	8:00	10:00	9:00	8:00	8:00	9:00	9:00	9:00	10:00	10:00	10:00	
PM Pk Hr Vol	64	69	103	64	44	92	57	50	101	66	49	100	57	53	98	53	55	92	47	50	91	
PM Hr Factor	0.13	0.12	0.10	0.13	0.08	0.09	0.12	0.09	0.10	0.13	0.09	0.09	0.11	0.09	0.09	0.10	0.09	0.08	0.10	0.09	0.09	
PM Peak 85%	26	28	27	27	29	28	27	29	27	27	28	27	27	28	27	27	30	28	27	30	27	
PM Peak Time	12:00	14:00	15:00	16:00	15:00	16:00	17:00	16:00	16:00	16:00	15:00	16:00	16:00	12:00	16:00	17:00	14:00	16:00	17:00	13:00	13:00	

Street: Maher Bridge
 Suburb: Warburton
 Location: South of Dammans Road

Count No.: 2
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		1,057 vpd	503 vpd	554 vpd
Peak Hr AM	08:00	78 vpd	23 vpd	56 vpd
Peak Hr PM	16:00	97 vpd	59 vpd	38 vpd
Speeds	85th%	25.4 km/h	24.1 km/h	26.6 km/h
	Average	23.0 km/h	21.7 km/h	24.1 km/h
Commercial Vehicles %		5.6%	8.6%	2.8%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		1,053 vpd	498 vpd	555 vpd
Peak Hr AM	08:00	73 vpd	30 vpd	50 vpd
Peak Hr PM	16:00	95 vpd	55 vpd	47 vpd
Speeds	85th%	25.1 km/h	23.8 km/h	26.3 km/h
	Average	22.9 km/h	21.7 km/h	24.0 km/h
Commercial Vehicles %		5.1%	8.1%	2.4%

Street: Station Road
 Suburb: Warburton
 Location: West of Alpine Street

Count No.: 3
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	70	83	153	52	63	115	54	70	124	71	61	132	55	45	100	81	66	147	61	75	136
Medium Vehicle - Class 3 to 5	0	1	1	2	2	4	5	5	10	1	2	3	2	0	2	1	2	3	2	1	3
Long Vehicle - Class 6 to 12	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0
7am-7pm Vol	54	67	121	40	55	95	51	67	118	42	39	81	39	34	73	69	61	130	43	53	96
24Hr Vol	70	84	154	54	65	119	59	75	134	72	64	136	57	45	102	82	68	150	63	76	139
85%ile Speed	40	46	43	39	43	41	40	44	42	35	34	35	43	45	44	45	46	46	36	44	41
Mean Speed	32.1	33.8	33.0	30.2	32.7	31.6	31.3	33.4	32.5	30.0	29.1	29.6	34.7	36.3	35.4	32.8	32.5	32.7	31.5	34.8	33.3
AM Pk Hr Vol	9	7	16	4	8	10	5	9	14	5	8	10	4	8	9	11	11	22	2	6	8
AM Hr Factor	0.13	0.08	0.10	0.07	0.12	0.08	0.08	0.12	0.10	0.07	0.13	0.07	0.07	0.18	0.09	0.13	0.16	0.15	0.03	0.08	0.06
AM Peak 85%	46	61	61	47	59	59	46	62	62	75	55	56	60	57	60	49	57	52	44	51	47
AM Peak Time	8:00	7:00	8:00	8:00	7:00	7:00	7:00	11:00	11:00	8:00	7:00	7:00	8:00	7:00	7:00	10:00	10:00	10:00	4:00	10:00	10:00
PM Pk Hr Vol	11	15	20	8	15	23	9	12	21	16	16	32	11	5	16	10	7	15	15	13	28
PM Hr Factor	0.16	0.18	0.13	0.15	0.23	0.19	0.15	0.16	0.16	0.22	0.25	0.24	0.19	0.11	0.16	0.12	0.10	0.10	0.24	0.17	0.20
PM Peak 85%	52	69	61	53	54	51	52	60	60	56	52	54	57	52	49	51	55	49	55	55	52
PM Peak Time	16:00	12:00	12:00	15:00	15:00	15:00	14:00	14:00	14:00	20:00	20:00	20:00	19:00	13:00	19:00	14:00	12:00	12:00	19:00	19:00	19:00

Street: Station Road
 Suburb: Warburton
 Location: West of Alpine Street

Count No.: 3
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		129 vpd	62 vpd	67 vpd
Peak Hr AM	15:00	10 vpd	0 vpd	0 vpd
Peak Hr PM	15:00	12 vpd	6 vpd	6 vpd
Speeds	85th%	40.9 km/h	39.1 km/h	42.6 km/h
	Average	32.3 km/h	31.6 km/h	33.0 km/h
Commercial Vehicles %		3.3%	3.2%	3.3%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		133 vpd	65 vpd	68 vpd
Peak Hr AM	08:00	9 vpd	4 vpd	6 vpd
Peak Hr PM	19:00	13 vpd	8 vpd	5 vpd
Speeds	85th%	41.6 km/h	39.8 km/h	43.4 km/h
	Average	32.5 km/h	31.8 km/h	33.2 km/h
Commercial Vehicles %		2.9%	2.8%	2.9%

Street: Warburton Highway
 Suburb: Warburton
 Location: Near #3395

Count No.: 4
 Speed Limit: 50 km/h
 Start Date: Tuesday, 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	2753	2632	5385	2637	2575	5212	2843	2770	5613	2771	2775	5546	3025	2923	5948	3349	3200	6549	2968	3229	6197
Medium Vehicle - Class 3 to 5	222	209	431	184	233	417	210	256	466	225	272	497	225	238	463	175	164	339	110	171	281
Long Vehicle - Class 6 to 12	29	11	40	14	13	27	11	12	23	18	16	34	12	11	23	14	12	26	9	25	34
7am-7pm Vol	2626	2343	4969	2388	2279	4667	2601	2500	5101	2518	2526	5044	2621	2556	5177	3005	2845	5850	2720	3093	5813
24Hr Vol	3004	2852	5856	2835	2821	5656	3064	3038	6102	3014	3063	6077	3262	3172	6434	3538	3376	6914	3087	3425	6512
85%ile Speed	45	48	46	44	48	46	44	49	47	44	48	46	44	48	46	40	44	42	41	43	42
Mean Speed	38.8	42.3	40.5	38.7	42.6	40.6	38.9	43.1	40.9	38.0	41.5	39.8	37.8	42.1	39.9	33.7	37.6	35.6	34.7	37.1	36.0
AM Pk Hr Vol	268	248	470	210	256	423	203	269	424	222	260	440	202	271	419	331	289	620	317	275	584
AM Hr Factor	0.09	0.09	0.08	0.07	0.09	0.07	0.07	0.09	0.07	0.07	0.08	0.07	0.06	0.09	0.07	0.09	0.09	0.09	0.10	0.08	0.09
AM Peak 85%	55	64	60	55	64	63	57	64	61	57	63	62	54	64	62	59	64	60	54	64	56
AM Peak Time	11:00	8:00	11:00	9:00	8:00	9:00	11:00	8:00	8:00	9:00	8:00	9:00	11:00	8:00	9:00	11:00	11:00	11:00	11:00	10:00	11:00
PM Pk Hr Vol	302	221	523	280	226	493	286	246	532	307	249	512	330	247	567	343	292	615	351	383	703
PM Hr Factor	0.10	0.08	0.09	0.10	0.08	0.09	0.09	0.08	0.09	0.10	0.08	0.08	0.10	0.08	0.09	0.10	0.09	0.09	0.11	0.11	0.11
PM Peak 85%	57	58	56	58	57	57	62	62	62	59	58	59	57	60	58	52	54	53	56	59	57
PM Peak Time	16:00	16:00	16:00	16:00	15:00	15:00	15:00	15:00	15:00	16:00	14:00	16:00	16:00	15:00	16:00	13:00	15:00	13:00	12:00	16:00	12:00

Street: Warburton Highway
 Suburb: Warburton
 Location: Near #3395

Count No.: 1
 Speed Limit: 50 km/h
 Start Date: Tuesday, 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		6,039 vpd	3,049 vpd	2,990 vpd
Peak Hr AM	09:00	425 vpd	205 vpd	220 vpd
Peak Hr PM	15:00	513 vpd	277 vpd	236 vpd
Speeds	85th%	46.2 km/h	44.2 km/h	48.2 km/h
	Average	40.3 km/h	38.4 km/h	42.3 km/h
Commercial Vehicles %		8.0%	7.5%	8.5%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		6,235 vpd	3,128 vpd	3,108 vpd
Peak Hr AM	11:00	472 vpd	245 vpd	227 vpd
Peak Hr PM	16:00	529 vpd	289 vpd	253 vpd
Speeds	85th%	44.9 km/h	43.1 km/h	46.8 km/h
	Average	38.9 km/h	37.1 km/h	40.7 km/h
Commercial Vehicles %		7.1%	6.7%	7.6%

Street: Park Road
 Suburb: Warburton
 Location: Near #15

Count No.: 5
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18			
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	
Data Record Interval = 1Hr																						
Light Vehicle - Class 1 to 2	433	447	880	390	417	807	391	415	806	420	438	858	464	503	967	534	551	1085	540	464	1004	
Medium Vehicle - Class 3 to 5	15	21	36	22	29	51	25	26	51	18	28	46	19	25	44	13	26	39	17	12	29	
Long Vehicle - Class 6 to 12	0	0	0	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	1	1	
7am-7pm Vol	384	389	773	347	376	723	343	364	707	381	394	775	410	427	837	489	489	978	517	396	913	
24Hr Vol	448	468	916	412	446	858	417	442	859	438	466	904	483	528	1011	547	577	1124	557	477	1034	
85%ile Speed	48	49	48	46	47	47	47	47	47	46	51	48	49	51	50	44	46	45	48	45	47	
Mean Speed	46.0	46.6	46.3	44.0	44.5	44.3	42.9	44.3	43.6	44.9	46.6	45.8	44.7	45.9	45.3	40.0	41.5	40.7	41.8	43.0	42.3	
AM Pk Hr Vol	51	34	85	45	35	78	43	30	72	45	41	86	51	34	85	58	37	95	86	40	126	
AM Hr Factor	0.11	0.07	0.09	0.11	0.08	0.09	0.10	0.07	0.08	0.10	0.09	0.10	0.11	0.06	0.08	0.11	0.06	0.08	0.15	0.08	0.12	
AM Peak 85%	54	53	53	52	52	52	52	52	51	53	55	53	54	54	53	51	54	52	58	53	55	
AM Peak Time	8:00	8:00	8:00	9:00	8:00	8:00	9:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	8:00	10:00	10:00	10:00	11:00	11:00	11:00	
PM Pk Hr Vol	40	60	95	31	47	78	32	54	86	41	49	90	53	54	107	63	72	129	54	63	113	
PM Hr Factor	0.09	0.13	0.10	0.08	0.11	0.09	0.08	0.12	0.10	0.09	0.11	0.10	0.11	0.10	0.11	0.12	0.12	0.11	0.10	0.13	0.11	
PM Peak 85%	53	55	53	52	55	54	55	55	54	53	58	55	54	55	55	49	55	50	51	54	52	
PM Peak Time	16:00	15:00	15:00	17:00	15:00	17:00	14:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	14:00	14:00	15:00	13:00	13:00	

Street: Park Road
 Suburb: Warburton
 Location: Near #15

Count No.: 5
 Speed Limit: 50km/h
 Start Date: Tuesday 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		910 vpd	440 vpd	470 vpd
Peak Hr AM	08:00	81 vpd	46 vpd	35 vpd
Peak Hr PM	15:00	91 vpd	38 vpd	53 vpd
Speeds	85th%	48.1 km/h	47.1 km/h	49.0 km/h
	Average	45.1 km/h	44.5 km/h	45.6 km/h
Commercial Vehicles %		5.1%	4.5%	5.5%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		958 vpd	472 vpd	486 vpd
Peak Hr AM	11:00	69 vpd	43 vpd	31 vpd
Peak Hr PM	15:00	93 vpd	44 vpd	49 vpd
Speeds	85th%	47.4 km/h	46.7 km/h	48.0 km/h
	Average	43.9 km/h	43.3 km/h	44.5 km/h
Commercial Vehicles %		4.5%	3.9%	5.0%

Street: Donna Buang Road
 Suburb: Warburton
 Location: Near Warburton Motel

Count No.: 6
 Speed Limit: 60km/h
 Start Date: Tuesday 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	417	423	840	348	375	723	413	428	841	437	451	888	409	450	859	583	624	1207	633	731	1364
Medium Vehicle - Class 3 to 5	14	15	29	7	6	13	12	10	22	13	16	29	18	10	28	18	13	31	8	18	26
Long Vehicle - Class 6 to 12	2	1	3	1	2	3	0	1	1	0	2	2	0	1	1	0	2	2	0	2	2
7am-7pm Vol	354	377	731	291	322	613	349	379	728	360	395	755	332	379	711	508	553	1061	588	697	1285
24Hr Vol	433	439	872	356	383	739	425	439	864	450	469	919	427	461	888	601	639	1240	641	751	1392
85%ile Speed	64	62	63	62	61	61	62	62	62	65	61	63	63	61	62	60	60	60	63	63	63
Mean Speed	59.5	59.8	59.6	58.8	58.2	58.5	57.8	58.0	57.9	58.5	57.7	58.1	58.8	58.0	58.4	56.5	55.6	56.1	58.0	57.7	57.8
AM Pk Hr Vol	37	39	76	30	39	62	28	39	67	38	37	72	30	38	61	47	68	115	111	61	172
AM Hr Factor	0.09	0.09	0.09	0.08	0.10	0.08	0.07	0.09	0.08	0.08	0.08	0.08	0.07	0.08	0.07	0.08	0.11	0.09	0.17	0.08	0.12
AM Peak 85%	72	71	70	71	67	66	67	70	68	65	67	66	66	71	66	66	67	66	71	69	69
AM Peak Time	11:00	11:00	11:00	9:00	8:00	9:00	8:00	8:00	8:00	11:00	8:00	11:00	11:00	8:00	9:00	11:00	11:00	11:00	11:00	11:00	11:00
PM Pk Hr Vol	41	41	72	40	39	77	41	44	81	45	46	83	42	46	83	68	76	138	81	119	195
PM Hr Factor	0.09	0.09	0.08	0.11	0.10	0.10	0.10	0.10	0.09	0.10	0.10	0.09	0.10	0.10	0.09	0.11	0.12	0.11	0.13	0.16	0.14
PM Peak 85%	76	72	74	80	72	73	73	75	73	73	68	70	74	77	72	72	66	69	76	71	71
PM Peak Time	16:00	13:00	12:00	17:00	15:00	15:00	15:00	13:00	15:00	17:00	13:00	13:00	16:00	15:00	15:00	13:00	15:00	15:00	14:00	12:00	12:00

Street: Donna Buang Road
 Suburb: Warburton
 Location: Near Warburton Motel

Count No.: 6
 Speed Limit: 60km/h
 Start Date: Tuesday 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		859 vpd	421 vpd	438 vpd
Peak Hr AM	11:00	60 vpd	32 vpd	28 vpd
Peak Hr PM	15:00	74 vpd	36 vpd	38 vpd
Speeds	85th%	62.2 km/h	63.2 km/h	61.4 km/h
	Average	58.5 km/h	58.7 km/h	58.3 km/h
Commercial Vehicles %		3.1%	3.2%	2.9%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		992 vpd	480 vpd	512 vpd
Peak Hr AM	11:00	84 vpd	45 vpd	39 vpd
Peak Hr PM	12:00	89 vpd	41 vpd	48 vpd
Speeds	85th%	62.0 km/h	62.6 km/h	61.4 km/h
	Average	57.9 km/h	58.2 km/h	57.7 km/h
Commercial Vehicles %		2.8%	2.8%	2.8%

Street: Woods Point Road
 Suburb: Warburton
 Location: Near #20

Count No.: 7
 Speed Limit: 60km/h
 Start Date: Tuesday 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	1276	1287	2563	1152	1198	2350	1237	1335	2572	1258	1377	2635	1379	1440	2819	1599	1625	3224	1499	1819	3318
Medium Vehicle - Class 3 to 5	62	68	130	55	60	115	85	81	166	55	69	124	73	86	159	51	60	111	29	45	74
Long Vehicle - Class 6 to 12	8	4	12	10	6	16	4	5	9	14	18	32	4	8	12	5	4	9	2	9	11
7am-7pm Vol	1168	1075	2243	1014	993	2007	1105	1124	2229	1086	1186	2272	1171	1230	2401	1408	1463	2871	1334	1694	3028
24Hr Vol	1346	1359	2705	1217	1264	2481	1326	1421	2747	1327	1464	2791	1456	1534	2990	1655	1689	3344	1530	1873	3403
85%ile Speed	60	59	59	63	65	64	63	64	63	65	64	64	64	64	64	62	63	62	63	62	63
Mean Speed	54.1	51.7	52.9	56.9	58.0	57.5	56.6	57.1	56.9	57.8	56.9	57.4	56.3	56.8	56.6	54.9	55.1	55.0	56.0	55.4	55.7
AM Pk Hr Vol	104	127	206	70	121	174	78	134	193	87	127	191	83	134	198	135	144	279	148	175	323
AM Hr Factor	0.08	0.09	0.08	0.06	0.10	0.07	0.06	0.09	0.07	0.07	0.09	0.07	0.06	0.09	0.07	0.08	0.09	0.08	0.10	0.09	0.09
AM Peak 85%	59	76	69	67	81	73	67	82	80	65	79	79	66	79	72	72	79	72	71	77	72
AM Peak Time	11:00	8:00	9:00	11:00	8:00	9:00	11:00	8:00	8:00	11:00	8:00	9:00	11:00	8:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
PM Pk Hr Vol	139	97	215	146	89	208	141	115	227	146	113	247	159	110	237	160	157	314	179	197	376
PM Hr Factor	0.10	0.07	0.08	0.12	0.07	0.08	0.11	0.08	0.08	0.11	0.08	0.09	0.11	0.07	0.08	0.10	0.09	0.09	0.12	0.11	0.11
PM Peak 85%	77	73	76	69	68	67	72	70	68	76	68	69	70	70	70	69	70	69	73	67	67
PM Peak Time	16:00	13:00	16:00	17:00	15:00	15:00	17:00	15:00	15:00	16:00	14:00	16:00	17:00	13:00	16:00	15:00	13:00	13:00	12:00	12:00	12:00

Street: Woods Point Road
 Suburb: Warburton
 Location: Near #20

Count No.: 7
 Speed Limit: 60km/h
 Start Date: Tuesday 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		2,744 vpd	1,335 vpd	1,409 vpd
Peak Hr AM	09:00	191 vpd	76 vpd	114 vpd
Peak Hr PM	16:00	216 vpd	135 vpd	80 vpd
Speeds	85th%	62.8 km/h	62.8 km/h	62.9 km/h
	Average	56.2 km/h	56.3 km/h	56.1 km/h
Commercial Vehicles %		5.6%	5.5%	5.7%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		2,925 vpd	1,409 vpd	1,516 vpd
Peak Hr AM	11:00	212 vpd	101 vpd	119 vpd
Peak Hr PM	15:00	237 vpd	134 vpd	118 vpd
Speeds	85th%	62.7 km/h	62.6 km/h	62.7 km/h
	Average	55.9 km/h	56.0 km/h	55.8 km/h
Commercial Vehicles %		4.8%	4.6%	4.9%

Street: Woods Point Road
 Suburb: East Warburton
 Location: East of Cement Creek Road

Count No.: 8
 Speed Limit: 80km/h
 Start Date: Tuesday, 23 October 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18			
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	
Data Record Interval = 1Hr																						
Light Vehicle - Class 1 to 2	605	432	1037	416	407	823	442	463	905	452	509	961	570	544	1114	677	616	1293	641	783	1424	
Medium Vehicle - Class 3 to 5	60	48	108	44	54	98	47	56	103	50	65	115	51	59	110	39	51	90	28	41	69	
Long Vehicle - Class 6 to 12	10	0	10	9	2	11	3	2	5	6	4	10	5	4	9	8	2	10	7	14	21	
7am-7pm Vol	609	383	992	387	379	766	418	418	836	417	473	890	498	485	983	613	563	1176	587	747	1334	
24Hr Vol	675	480	1155	469	463	932	492	521	1013	508	578	1086	626	607	1233	724	669	1393	676	838	1514	
85%ile Speed	80	75	78	70	66	68	71	68	70	73	68	70	70	64	67	76	79	78	77	76	76	
Mean Speed	73.7	73.2	73.5	67.0	61.3	64.2	66.3	61.4	63.8	66.5	61.9	64.1	65.4	56.6	61.1	73.0	74.2	73.6	73.4	72.9	73.1	
AM Pk Hr Vol	77	53	111	37	44	73	35	45	75	39	51	90	38	67	88	68	55	123	77	79	138	
AM Hr Factor	0.11	0.11	0.10	0.08	0.10	0.08	0.07	0.09	0.07	0.08	0.09	0.08	0.06	0.11	0.07	0.09	0.08	0.09	0.11	0.09	0.09	
AM Peak 85%	84	86	83	75	90	80	77	91	86	71	89	79	84	90	89	83	87	85	87	84	85	
AM Peak Time	11:00	8:00	11:00	9:00	10:00	9:00	9:00	8:00	9:00	11:00	11:00	11:00	9:00	8:00	11:00	11:00	11:00	11:00	10:00	11:00	10:00	
PM Pk Hr Vol	85	36	116	52	37	80	55	46	89	53	58	94	73	50	102	74	73	128	94	92	182	
PM Hr Factor	0.13	0.08	0.10	0.11	0.08	0.09	0.11	0.09	0.09	0.10	0.10	0.09	0.12	0.08	0.08	0.10	0.11	0.09	0.14	0.11	0.12	
PM Peak 85%	91	86	87	86	82	84	84	84	84	88	92	87	94	87	88	86	89	85	93	84	85	
PM Peak Time	12:00	13:00	12:00	16:00	12:00	14:00	16:00	12:00	16:00	17:00	14:00	14:00	18:00	13:00	16:00	16:00	13:00	16:00	12:00	14:00	12:00	

Street: Woods Point Road
 Suburb: East Warburton
 Location: East of Cement Creek Road

Count No.: 8
 Speed Limit: 80km/h
 Start Date: Tuesday, 23 October 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		1,084 vpd	554 vpd	530 vpd
Peak Hr AM	11:00	82 vpd	43 vpd	39 vpd
Peak Hr PM	16:00	91 vpd	56 vpd	35 vpd
Speeds	85th%	70.5 km/h	73.0 km/h	67.9 km/h
	Average	65.4 km/h	68.0 km/h	62.6 km/h
Commercial Vehicles %		10.7%	10.3%	11.1%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		1,190 vpd	596 vpd	594 vpd
Peak Hr AM	11:00	96 vpd	49 vpd	47 vpd
Peak Hr PM	12:00	103 vpd	56 vpd	51 vpd
Speeds	85th%	72.8 km/h	74.3 km/h	71.3 km/h
	Average	68.2 km/h	69.8 km/h	66.5 km/h
Commercial Vehicles %		9.2%	8.8%	9.7%

Street: Old Warburton Road
 Suburb: Wesburn
 Location: East of Warburton Highway

Count No.: 9
 Speed Limit: 60km/h
 Start Date: Sunday 02 December 2018

DAILY SUMMARY

	Mon, 03 Dec 18			Tue, 04 Dec 18			Wed, 05 Dec 18			Thu, 06 Dec 18			Fri, 07 Dec 18			Sat, 08 Dec 18			Sun, 02 Dec 18		
	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined	E'Bound	W'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	163	141	304	197	173	370	157	164	321	160	159	319	158	148	306	199	158	357	180	134	314
Medium Vehicle - Class 3 to 5	12	7	19	9	9	18	12	8	20	17	12	29	15	7	22	15	5	20	14	2	16
Long Vehicle - Class 6 to 12	1	0	1	0	4	4	1	1	2	1	2	3	1	1	2	0	0	0	4	1	5
7am-7pm Vol	157	116	273	173	152	325	141	129	270	151	142	293	149	128	277	186	145	331	172	127	299
24Hr Vol	176	148	324	207	186	393	170	173	343	178	173	351	174	156	330	214	164	378	198	138	336
85%ile Speed	68	72	70	67	68	67	66	68	68	70	69	70	70	72	71	69	71	70	65	66	66
Mean Speed	51.0	57.1	53.8	50.8	49.8	50.3	53.6	52.2	52.9	55.2	53.7	54.5	49.7	54.7	52.1	51.9	57.4	54.3	49.1	53.5	50.9
AM Pk Hr Vol	17	15	32	21	16	37	23	19	36	16	14	27	18	16	33	22	22	44	22	16	38
AM Hr Factor	0.10	0.10	0.10	0.10	0.09	0.09	0.14	0.11	0.10	0.09	0.08	0.08	0.10	0.10	0.10	0.10	0.13	0.12	0.11	0.12	0.11
AM Peak 85%	55	57	57	60	63	62	68	54	64	54	63	63	53	68	66	65	72	71	59	67	65
AM Peak Time	10:00	10:00	10:00	9:00	9:00	9:00	9:00	11:00	10:00	9:00	10:00	9:00	9:00	10:00	10:00	11:00	11:00	11:00	11:00	11:00	11:00
PM Pk Hr Vol	27	14	37	32	21	47	15	14	27	24	19	39	23	13	35	29	18	41	25	16	38
PM Hr Factor	0.15	0.09	0.11	0.15	0.11	0.12	0.09	0.08	0.08	0.13	0.11	0.11	0.13	0.08	0.11	0.14	0.11	0.11	0.13	0.12	0.11
PM Peak 85%	70	57	70	67	67	66	64	66	66	73	68	73	67	60	70	64	68	65	62	65	70
PM Peak Time	17:00	13:00	17:00	17:00	14:00	17:00	16:00	19:00	16:00	16:00	13:00	16:00	15:00	13:00	15:00	12:00	13:00	12:00	14:00	16:00	14:00

Street: Old Warburton Road
 Suburb: Wesburn
 Location: East of Warburton Highway

Count No.: 9
 Speed Limit: 60km/h
 Start Date: Sunday 02 December 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		348 vpd	181 vpd	167 vpd
Peak Hr AM	09:00	32 vpd	19 vpd	13 vpd
Peak Hr PM	17:00	29 vpd	19 vpd	10 vpd
Speeds	85th%	69.0 km/h	68.3 km/h	70.1 km/h
	Average	52.6 km/h	52.0 km/h	53.3 km/h
Commercial Vehicles %		6.9%	7.6%	6.1%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Eastbound	Westbound
		351 vpd	188 vpd	163 vpd
Peak Hr AM	11:00	30 vpd	15 vpd	14 vpd
Peak Hr PM	13:00	31 vpd	17 vpd	14 vpd
Speeds	85th%	69.0 km/h	68.1 km/h	69.7 km/h
	Average	52.7 km/h	51.6 km/h	53.9 km/h
Commercial Vehicles %		6.6%	7.7%	5.2%

Street: Old Warburton Highway
 Suburb: Warburton
 Location: North of Mt Bride Road

Count No.: 10
 Speed Limit: 60 km/h
 Start Date: Sunday 02 December 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	58	60	118	66	52	118	65	55	120	67	57	124	56	70	126	89	70	159	72	52	124
Medium Vehicle - Class 3 to 5	2	5	7	2	2	4	5	3	8	4	5	9	2	0	2	4	4	8	1	7	8
Long Vehicle - Class 6 to 12	0	0	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0
7am-7pm Vol	52	50	102	53	47	100	56	42	98	52	46	98	45	54	99	75	61	136	58	55	113
24Hr Vol	60	65	125	68	55	123	70	58	128	71	63	134	58	71	129	94	74	168	73	59	132
85%ile Speed	53	58	55	53	58	56	52	53	52	56	59	58	50	57	55	52	57	54	51	58	54
Mean Speed	45.4	47.6	46.6	46.1	46.6	46.3	45.3	44.8	45.1	46.6	46.7	46.6	44.9	46.7	45.9	46.0	46.2	46.1	44.9	47.1	45.9
AM Pk Hr Vol	5	7	10	4	7	8	8	6	14	7	5	11	4	7	9	6	13	19	7	6	11
AM Hr Factor	0.08	0.11	0.08	0.06	0.13	0.07	0.11	0.10	0.11	0.10	0.08	0.08	0.07	0.10	0.07	0.06	0.18	0.11	0.10	0.10	0.08
AM Peak 85%	50	55	53	43	53	53	48	57	48	55	54	52	46	55	54	54	57	57	45	49	49
AM Peak Time	11:00	9:00	11:00	9:00	7:00	7:00	10:00	5:00	10:00	11:00	9:00	11:00	9:00	10:00	10:00	11:00	11:00	11:00	11:00	10:00	11:00
PM Pk Hr Vol	17	6	21	12	6	15	8	6	12	8	7	15	9	7	16	12	8	17	18	11	25
PM Hr Factor	0.28	0.09	0.17	0.18	0.11	0.12	0.11	0.10	0.09	0.11	0.11	0.11	0.16	0.10	0.12	0.13	0.11	0.10	0.25	0.19	0.19
PM Peak 85%	55	55	55	59	64	60	54	51	53	55	60	59	46	58	57	50	58	50	52	58	52
PM Peak Time	17:00	15:00	17:00	17:00	13:00	17:00	16:00	15:00	16:00	16:00	15:00	15:00	15:00	15:00	15:00	12:00	15:00	13:00	14:00	13:00	14:00

Street: Old Warburton Highway
 Suburb: Warburton
 Location: North of Mt Bride Road

Count No.: 10
 Speed Limit: 60 km/h
 Start Date: Sunday 02 December 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		128 vpd	65 vpd	62 vpd
Peak Hr AM	09:00	8 vpd	4 vpd	4 vpd
Peak Hr PM	15:00	12 vpd	9 vpd	6 vpd
Speeds	85th%	55.3 km/h	53.4 km/h	57.7 km/h
	Average	46.1 km/h	45.7 km/h	46.5 km/h
Commercial Vehicles %		5.0%	4.6%	5.5%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		134 vpd	71 vpd	64 vpd
Peak Hr AM	11:00	10 vpd	5 vpd	5 vpd
Peak Hr PM	15:00	12 vpd	6 vpd	6 vpd
Speeds	85th%	55.1 km/h	52.8 km/h	57.7 km/h
	Average	46.1 km/h	45.6 km/h	46.5 km/h
Commercial Vehicles %		5.1%	4.1%	6.3%

Street: Old Warburton Highway
 Suburb: Warburton
 Location: South of Prospect Avenue

Count No.: 11
 Speed Limit: 60 km/h
 Start Date: Sunday 02 December 2018

DAILY SUMMARY

	Mon, 29 Oct 18			Tue, 23 Oct 18			Wed, 24 Oct 18			Thu, 25 Oct 18			Fri, 26 Oct 18			Sat, 27 Oct 18			Sun, 28 Oct 18		
	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined	N'Bound	S'Bound	Combined
Data Record Interval = 1Hr																					
Light Vehicle - Class 1 to 2	163	179	342	191	179	370	209	205	414	206	199	405	206	212	418	235	218	453	205	182	387
Medium Vehicle - Class 3 to 5	19	17	36	15	14	29	21	18	39	18	16	34	20	14	34	23	16	39	18	19	37
Long Vehicle - Class 6 to 12	3	1	4	0	0	0	1	0	1	0	0	0	0	2	2	1	0	1	0	0	0
7am-7pm Vol	153	164	317	169	158	327	200	182	382	188	164	352	190	174	364	217	189	406	199	173	372
24Hr Vol	186	198	384	208	194	402	231	223	454	225	216	441	226	228	454	259	234	493	223	201	424
85%ile Speed	57	57	57	56	57	57	56	57	57	57	57	57	57	57	57	56	56	56	56	57	57
Mean Speed	49.2	49.7	49.5	47.6	48.5	48.0	47.9	48.5	48.2	49.1	47.8	48.5	49.7	49.4	49.5	46.6	46.7	46.6	48.0	48.6	48.3
AM Pk Hr Vol	23	15	32	28	14	33	31	15	40	29	12	37	26	24	36	29	21	50	27	17	44
AM Hr Factor	0.12	0.08	0.08	0.13	0.07	0.08	0.13	0.07	0.09	0.13	0.06	0.08	0.12	0.11	0.08	0.11	0.09	0.10	0.12	0.08	0.10
AM Peak 85%	52	56	55	62	57	62	56	50	57	60	57	58	59	58	58	53	49	50	54	56	54
AM Peak Time	9:00	10:00	9:00	8:00	11:00	8:00	8:00	11:00	8:00	8:00	11:00	8:00	8:00	22:00	10:00	10:00	10:00	10:00	10:00	10:00	10:00
PM Pk Hr Vol	21	27	38	19	29	45	22	33	55	19	22	41	18	33	45	26	26	52	25	23	44
PM Hr Factor	0.11	0.14	0.10	0.09	0.15	0.11	0.10	0.15	0.12	0.08	0.10	0.09	0.08	0.14	0.10	0.10	0.11	0.11	0.11	0.11	0.10
PM Peak 85%	58	58	57	52	28	56	55	57	56	59	58	59	56	57	57	54	58	56	58	57	57
PM Peak Time	17:00	16:00	17:00	18:00	17:00	18:00	15:00	15:00	15:00	15:00	15:00	15:00	15:00	16:00	16:00	15:00	15:00	15:00	14:00	16:00	16:00

Street: Old Warburton Highway
 Suburb: Warburton
 Location: South of Prospect Avenue

Count No.: 11
 Speed Limit: 60 km/h
 Start Date: Sunday 02 December 2018

SITE SUMMARY

5 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		427 vpd	215 vpd	212 vpd
Peak Hr AM	08:00	34 vpd	26 vpd	7 vpd
Peak Hr PM	15:00	40 vpd	17 vpd	23 vpd
Speeds	85th%	57.0 km/h	57.0 km/h	57.1 km/h
	Average	48.7 km/h	48.7 km/h	48.8 km/h
Commercial Vehicles %		8.4%	9.0%	7.7%

7 day Speed & Volume Data				
		Travel Direction		
		Bidirectional	Northbound	Southbound
		436 vpd	223 vpd	213 vpd
Peak Hr AM	10:00	32 vpd	18 vpd	14 vpd
Peak Hr PM	15:00	41 vpd	18 vpd	23 vpd
Speeds	85th%	56.9 km/h	56.8 km/h	57.0 km/h
	Average	48.3 km/h	48.2 km/h	48.4 km/h
Commercial Vehicles %		8.4%	8.9%	7.8%

APPENDIX 3 PARKING SURVEY RESULTS



Location Warburton Township
Description Warburton Township Parking Survey (Map)



Location Warburton Township
Description Warburton Township Parking Survey (Map)



Location Warburton Township
 Date Thu, 25 October 2018 (7:00-20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	
Station Road	Warburton Highway and High Field Road	Off-street	Disabled		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Station Road		Off-street	Unrestricted		14	4	7	6	11	11	10	11	9	9	8	0	0	0	0	
Warburton Highway		Station Road and 3370 Warburton Highway	Westside	Unrestricted		7	2	2	7	6	7	7	7	6	7	6	3	1	1	1
			Eastside	Unrestricted		4	2	2	1	1	2	2	1	2	1	0	0	0	0	0
	Southside	2P	8:30am-4pm Mon-Fri & 9:30am-		6	0	0	0	1	2	2	2	0	0	0	3	0	0	0	0
		No Standing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		2P	8:30am-4pm Mon-Fri & 9:30am-		40	7	11	9	20	20	19	19	16	15	15	10	3	8	0	0
		Bus Zone			2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Southside	No Standing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	No Standing	Buses Excepted		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total					90	16	25	27	51	51	49	49	39	38	37	13	4	9	1
% Capacity						18%	28%	30%	57%	57%	54%	54%	43%	42%	41%	14%	4%	10%	1%	
Area 3 – Warburton Reserve Precinct																				
Off Street carpark at 3457A Warburton Hwy		Off-street	Unrestricted		45	10	14	13	16	15	14	15	17	16	14	15	11	8	7	
Off Street carpark at Warburton Recreation Reserve		Off-street	Unrestricted		16	0	0	5	2	0	0	0	0	0	0	0	1	0	0	
Off Street carpark west of Warburton Bowls Club		Off-street	Unrestricted		10	0	0	1	1	0	1	1	0	0	0	3	3	4	4	

Location Warburton Township
 Date Thu, 25 October 2018 (7:00-20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	
Warburton Highway	Walk and Riverside Dr	Southside	Unrestricted		5	1	0	2	1	0	0	0	2	3	3	4	2	0	0	
			2P	8:30am-5:30pm Mon-Fri & 8:30am-8:30am-5:30pm Mon-Fri & 8:30am-	12	0	2	0	2	2	3	6	5	7	5	7	4	2	1	
	Park Road and 3446 Warburton Hwy	Southside	2P	8:30am-8:30am-5:30pm Mon-Fri & 8:30am-	9	1	2	2	2	3	1	2	4	5	5	0	4	0	2	
			Bus Zone		1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
			No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Riverside Dr and Park Road	Southside	No Standing	When Flag Displayed	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			P 5minute		1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
			Unrestricted		3	0	1	1	1	1	1	1	1	1	2	2	0	0	0	1
Total				53	2	5	5	7	7	9	12	14	21	20	12	13	5	7		
% Capacity					4%	9%	9%	13%	13%	17%	23%	26%	40%	38%	23%	25%	9%	13%		

Location Warburton Township
 Date Sat, 27 October 2018 (7:00-20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00		
Area 1 – Thomas Avenue Precinct																					
Off Street carpark west of Warburton Tennis Club		Off-street	Unrestricted		15	0	2	7	23	23	27	14	23	24	18	16	11	26	14		
		Northside	P Disabled		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Thomas Avenue	Warburton Highway and End of the Road	Northside	Unrestricted		33	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
		Southside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Southside	Unrestricted		6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Northside	2P	8:30am-4pm Mon-Fri & 9:30am-	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Northside	Bus Zone		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Northside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Northside	P Disabled		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Northside	Taxi Zone		1	2	2	8	9	5	10	5	5	2	0	1	1	7	2		
		Warburton Highway	3457 Warburton Highway and opposite Park Road	Northside	2P	8:30am-4pm Mon-Fri & 9:30am-	2	1	2	5	16	18	31	27	29	22	17	12	9	12	10
				Northside	No Standing		0	3	4	4	3	3	5	5	5	2	2	1	0	0	0
	opposite 3352 Warburton Highway and 3369 Warburton Highway	Northside	No Standing		0	3	4	4	3	3	5	5	5	2	2	1	0	0	0		
Total					96	6	10	24	51	49	73	51	62	50	37	30	21	45	26		
% Capacity						6%	10%	25%	53%	51%	76%	53%	65%	52%	39%	31%	22%	47%	27%		
Area 2 – Station Road Precinct																					
Off Street carpark at		Off-street	4P	8am-4pm	12	0	0	1	0	1	2	2	0	1	1	1	0	3	0		
		Off-street	Bus Zone		2	5	5	9	24	29	26	22	29	29	21	14	8	19	7		

Location Warburton Township
 Date Sat, 27 October 2018 (7:00-20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
Warburton Highway	Walk and Riverside Dr	Southside	Unrestricted		5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			2P	8:30am-5:30pm Mon-Fri & 8:30am-8:30am-5:30pm Mon-Fri & 8:30am-	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Park Road and 3446 Warburton Hwy	Southside	2P	8:30am-5:30pm Mon-Fri & 8:30am-	9	0	0	0	2	2	2	2	0	0	2	2	1	2	2
			Bus Zone		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Riverside Dr and Park Road	Southside	No Standing		0	1	3	3	5	5	2	1	1	3	1	5	0	0	0
			No Standing	When Flag Displayed	2	3	6	8	6	4	4	3	5	4	4	5	2	2	1
			P 5minute		1	1	1	1	2	1	0	1	1	0	0	0	4	4	2
			Unrestricted		3	0	0	1	3	2	1	1	1	1	3	3	2	1	3
Total				53	8	15	18	29	24	20	16	20	24	23	28	25	24	15	
% Capacity					15%	28%	34%	55%	45%	38%	30%	38%	45%	43%	53%	47%	45%	28%	

Location Warburton Township
 Date Thu, 1 November 2018 (7:00–20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	
Area 1 – Thomas Avenue Precinct																				
Off Street carpark west of Warburton Tennis Club		Off-street	Unrestricted		15	0	5	12	22	15	24	19	16	18	15	8	3	7	6	
			P Disabled		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thomas Avenue	Warburton Highway and End of the Road	Northside	Unrestricted		33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Southside	Unrestricted		6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			2P	8:30am-4pm Mon-Fri & 9:30am-	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warburton Highway	3369 Warburton Highway and Thomas Avenue	Northside	Bus Zone		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			No Standing		0	0	0	0	0	0	0	1	1	0	0	1	0	0	0	0
		Northside	P Disabled		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Taxi Zone		1	0	3	0	3	0	7	7	6	1	0	2	1	0	1	0
	3457 Warburton Highway and opposite Park Road	Northside	2P	8:30am-4pm Mon-Fri & 9:30am-	2	0	4	6	11	4	24	20	17	18	13	7	7	5	5	
			No Standing		0	0	3	4	4	4	3	2	2	2	1	1	0	1	0	
Total					96	0	15	22	40	23	59	49	41	39	30	18	11	13	12	
% Capacity						0%	16%	23%	42%	24%	61%	51%	43%	41%	31%	19%	11%	14%	13%	
Area 2 – Station Road Precinct																				
Off Street carpark at		Off-street	4P	8am-4pm	12	0	0	0	0	3	3	2	1	0	1	1	3	1	0	
		Off-street	Bus Zone		2	0	3	12	23	3	17	20	18	10	17	15	11	8	6	

Location Warburton Township
 Date Thu, 1 November 2018 (7:00-20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	
Warburton Highway	Walk and Riverside Dr	Southside	Unrestricted		5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			2P	8:30am-5:30pm Mon-Fri & 8:30am-8:30am-5:30pm Mon-Fri & 8:30am-	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Park Road and 3446 Warburton Hwy	Southside	2P	8:30am-5:30pm Mon-Fri & 8:30am-	9	0	0	0	0	0	0	0	0	0	0	2	1	0	0	
			Bus Zone		1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Riverside Dr and Park Road	Southside	No Standing		0	1	2	1	1	1	0	0	0	0	0	0	0	0	0	0
			No Standing	When Flag Displayed	2	1	2	2	2	4	2	1	1	0	0	0	0	0	0	0
			P 5minute		1	1	1	2	1	2	2	2	0	0	0	0	0	0	0	0
			Unrestricted		3	1	1	1	1	0	1	1	1	1	1	2	2	2	3	1
Total				53	7	11	11	13	15	12	10	8	4	3	9	8	9	3		
% Capacity					13%	21%	21%	25%	28%	23%	19%	15%	8%	6%	17%	15%	17%	6%		

Location Warburton Township
 Date Sat, 3 November 2018 (7:00–20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	
Station Road	Warburton Highway and High Field Road	Off-street	Disabled		2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	
Station Road		Off-street	Unrestricted		14	2	5	3	5	3	4	4	4	5	5	5	2	3	0	
Station Road		Westside	Unrestricted		7	1	4	5	5	5	5	5	5	5	5	5	3	3	3	
		Eastside	Unrestricted		4	0	0	2	3	1	2	1	1	1	3	3	2	2	1	0
Warburton Highway	Station Road and 3370 Warburton Highway	Southside	2P	8:30am-4pm Mon-Fri & 9:30am-	6	0	0	0	0	3	3	2	1	0	1	1	3	1	0	
			No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Warburton Rail Trail and Station Road	Southside	2P	8:30am-4pm Mon-Fri & 9:30am-	40	0	3	12	23	3	17	20	18	10	17	15	11	8	6	
			Bus Zone		2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
No Standing	Buses Excepted	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total					90	3	14	26	42	21	37	37	34	29	36	32	23	18	9	
% Capacity						3%	16%	29%	47%	23%	41%	41%	38%	32%	40%	36%	26%	20%	10%	
Area 3 – Warburton Reserve Precinct																				
Off Street carpark at 3457A Warburton Hwy		Off-street	Unrestricted		45	15	19	19	20	20	20	19	22	21	19	12	11	10	9	
Off Street carpark at Warburton Recreation Reserve		Off-street	Unrestricted		16	0	0	2	4	0	0	0	0	0	0	1	2	0	0	
Off Street carpark west of Warburton Bowls Club		Off-street	Unrestricted		10	0	0	1	0	1	1	0	1	2	1	3	2	2	1	

Location Warburton Township
 Date Sat, 3 November 2018 (7:00–20:00)
 Description Warburton Township Parking Survey

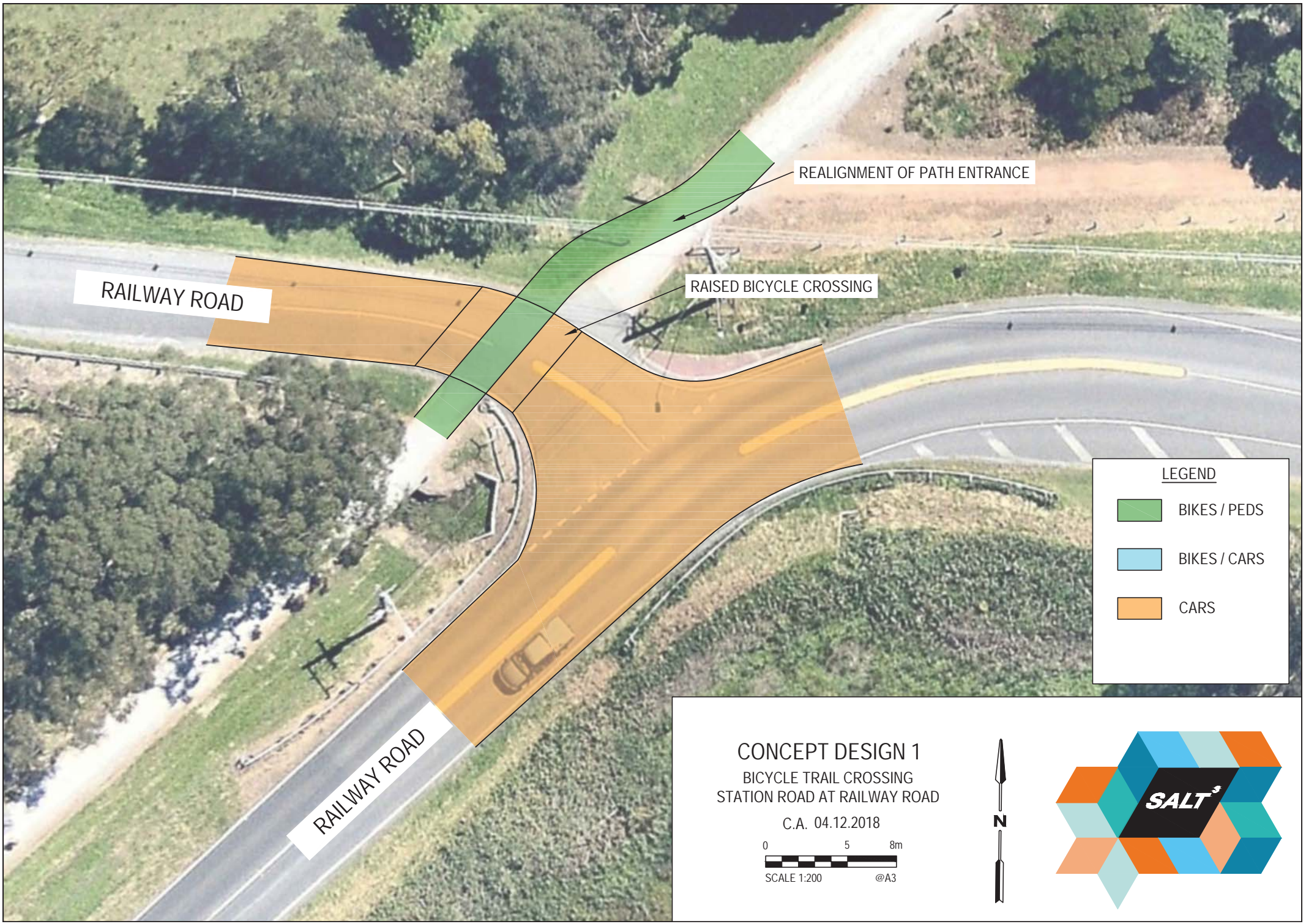
Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00
Warburton Bowls Club	3457 Warburton Highway and opposite Park Road	Southside	P disabled		2	0	0	0	0	0	0	0	0	0	1	2	2	2	0
		Southside	Unrestricted		12	0	0	2	1	1	3	1	1	1	5	8	9	8	3
Warburton Highway		Northside	2P	8:30am-5:30pm Mon-Fri & 8:30am-	10	0	0	0	1	2	3	3	2	0	0	0	0	2	1
				No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0
				Unrestricted		18	0	2	6	9	10	8	10	5	9	8	7	6	6
Warburton Highway	opposite Park Road and opposite Riverside Dr	Northside	No Standing	When Flag Displayed	4	0	0	0	0	0	0	0	0	0	0	2	2	2	2
		Northside	Unrestricted		10	0	0	0	0	0	0	0	1	2	2	7	5	7	3
		Northside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Northside	Unrestricted		8	2	2	2	2	5	2	2	2	1	1	2	2	1	1
Warburton Highway	Yarra River Walk and 3457 Warburton Hwy	Northside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Eastside	Unrestricted		10	0	0	0	0	0	0	0	0	0	0	2	2	1	1
Warburton Recreation Reserve		Northside	Unrestricted		12	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Southside	Unrestricted		10	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Westside	Unrestricted		10	0	0	0	0	0	0	0	0	0	0	3	4	5	2
Total					177	17	23	32	37	39	37	35	34	36	37	49	47	46	25
% Capacity						10%	13%	18%	21%	22%	21%	20%	19%	20%	21%	28%	27%	26%	14%
Area 4 – Park Road Precinct																			
Park Road	Warburton Highway and 5A Park Road	Eastside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Westside	Unrestricted		10	1	2	1	1	1	0	0	0	0	0	0	0	0	0
Riverside Dr	Warburton Highway and Kellys Road	Eastside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Westside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
			Unrestricted		10	1	2	2	2	4	2	1	1	0	0	0	0	0	0

Location Warburton Township
 Date Sat, 3 November 2018 (7:00–20:00)
 Description Warburton Township Parking Survey

Street	Between	Side	Parking Restriction	Time Restrictions	Capacity	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	
Warburton Highway	opposite Yarra River Walk and Riverside Dr	Southside	No Standing		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
			Unrestricted		5	1	1	2	1	2	2	2	0	0	0	0	0	0	0	0
		2P	8:30am-5:30pm Mon-Fri & 8:30am-8:30am-	12	1	2	3	4	5	5	4	4	0	0	2	2	5	1		
		Park Road and 3446 Warburton Hwy	Southside	2P	8:30am-5:30pm Mon-Fri & 8:30am-	9	2	3	2	4	3	2	2	2	3	1	2	3	1	1
	Bus Zone				1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	No Standing			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Riverside Dr and Park Road	Southside	No Standing	When Flag Displayed	2	0	0	0	0	0	0	0	0	0	0	2	1	0	0
	P 5minute				1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
	Unrestricted				3	1	1	1	1	0	1	1	1	1	2	2	2	3	1	
Total					53	7	11	11	13	15	12	10	8	4	3	9	8	9	3	
% Capacity						13%	21%	21%	25%	28%	23%	19%	15%	8%	6%	17%	15%	17%	6%	

APPENDIX 4 INFRASTRUCTURE CONCEPT DESIGNS








RAILWAY ROAD

REALIGNMENT OF PATH ENTRANCE

RAISED BICYCLE CROSSING

RAILWAY ROAD

LEGEND

-  BIKES / PEDS
-  BIKES / CARS
-  CARS

CONCEPT DESIGN 1
 BICYCLE TRAIL CROSSING
 STATION ROAD AT RAILWAY ROAD

C.A. 04.12.2018
 0 5 8m
 SCALE 1:200 @A3





DAMMANS ROAD




GOLF CLUB

WARBURTON HIGHWAY

PROPOSED CYCLIST AND PEDESTRIAN BRIDGE

REQUIRED RAMP LENGTH FOR 4.5M DROP IS APPROXIMATELY 71 METRES

LEGEND

-  BIKES / PEDS
-  BIKES / CARS
-  CARS

CONCEPT DESIGN 2

PROPOSED BRIDGE
WARBURTON HIGHWAY

C.A. 06.12.2018






SCALE 1:1000 @A3





LEGEND

-  BIKES / PEDS
-  BIKES / CARS
-  CARS

PROPOSED CYCLIST AND PEDESTRIAN CROSSING

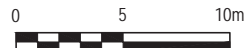
WARBURTON HIGHWAY

SCOTCHMANS CREEK ROAD

CONCEPT DESIGN 3

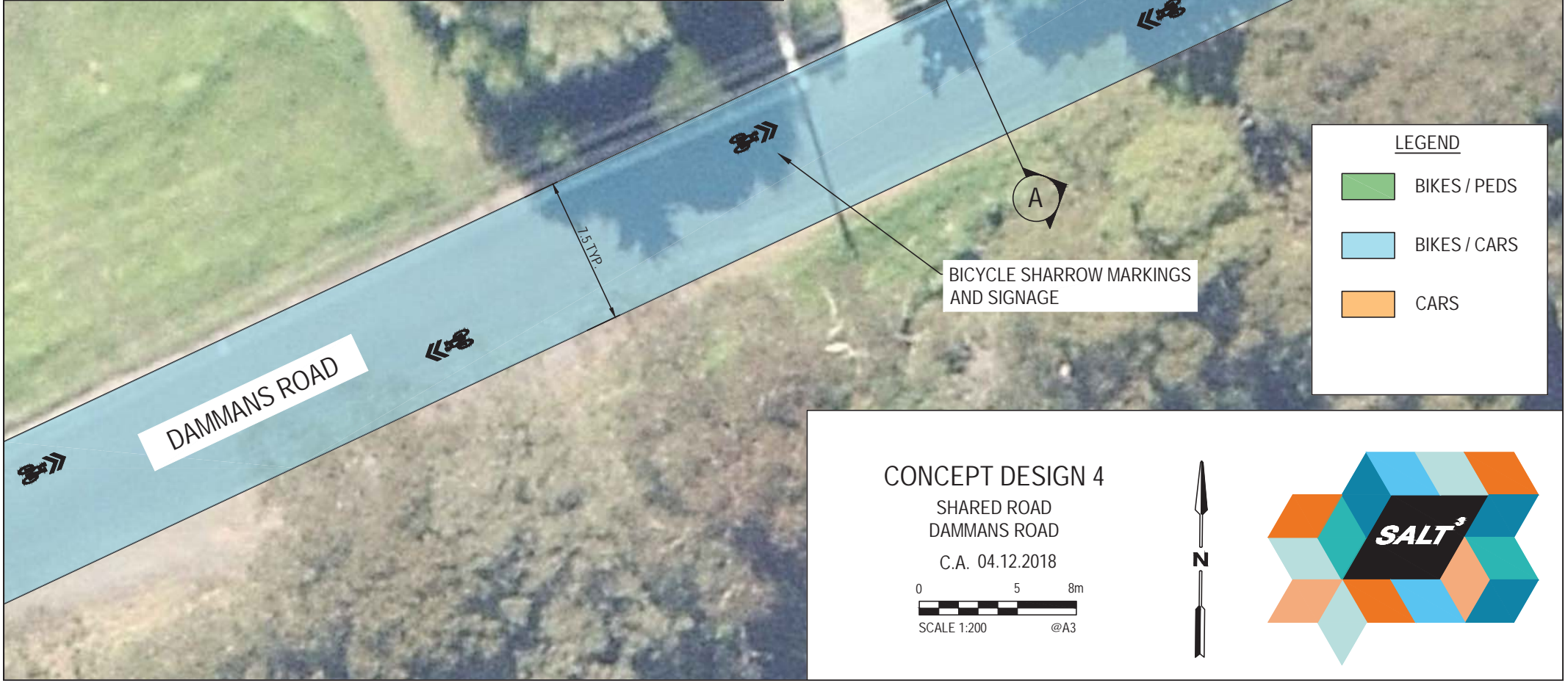
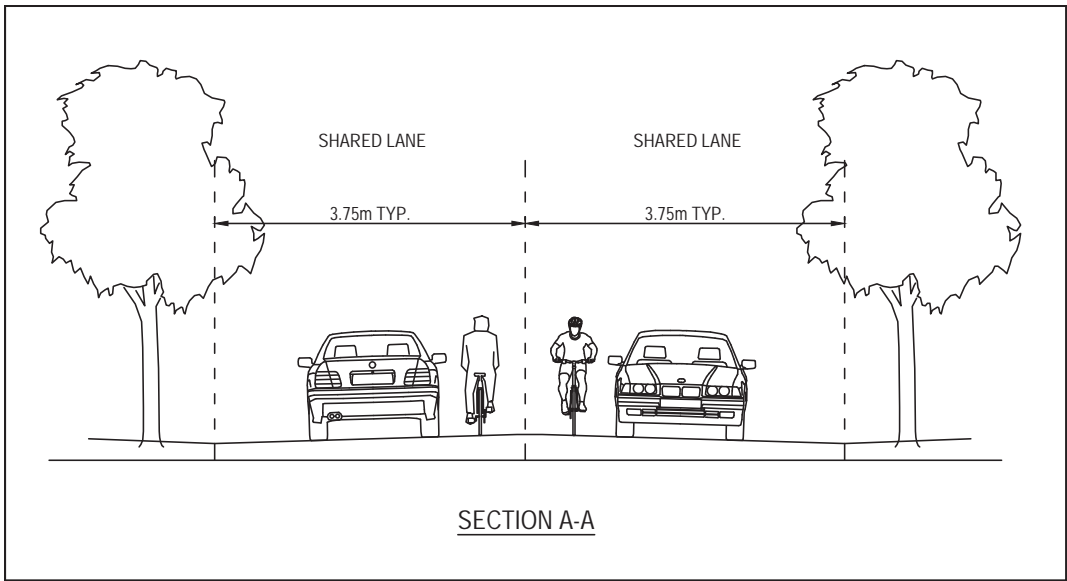
PROPOSED BRIDGE
WARBURTON HIGHWAY

C.A. 06.12.2018



SCALE 1:250 @A3

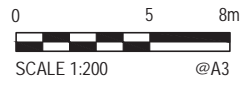


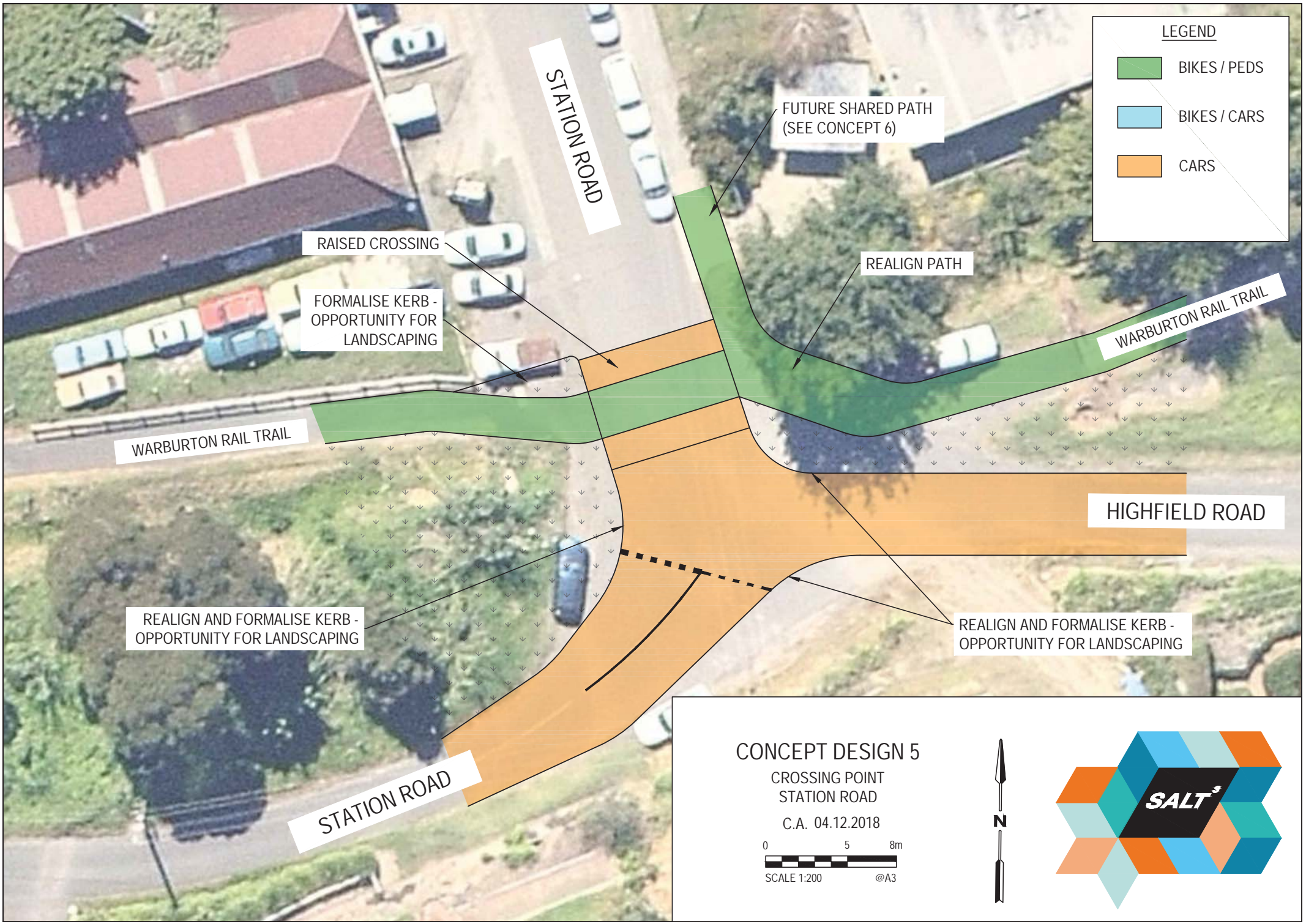


LEGEND

	BIKES / PEDS
	BIKES / CARS
	CARS

CONCEPT DESIGN 4
 SHARED ROAD
 DAMMANS ROAD
 C.A. 04.12.2018





LEGEND

- BIKES / PEDS
- BIKES / CARS
- CARS

STATION ROAD

FUTURE SHARED PATH
(SEE CONCEPT 6)

RAISED CROSSING

REALIGN PATH

FORMALISE KERB -
OPPORTUNITY FOR
LANDSCAPING

WARBURTON RAIL TRAIL

WARBURTON RAIL TRAIL

HIGHFIELD ROAD

REALIGN AND FORMALISE KERB -
OPPORTUNITY FOR LANDSCAPING

REALIGN AND FORMALISE KERB -
OPPORTUNITY FOR LANDSCAPING

STATION ROAD

CONCEPT DESIGN 5

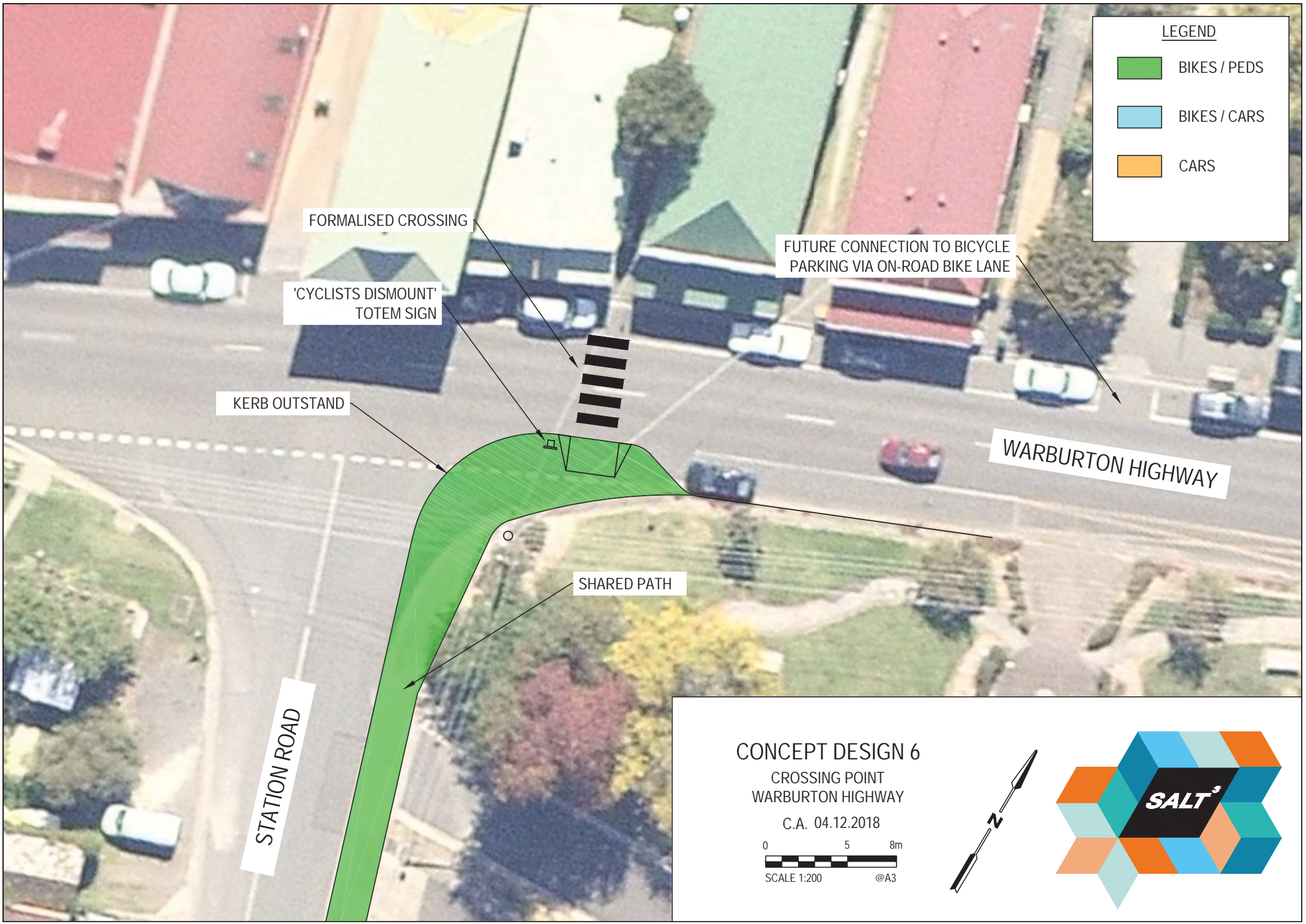
CROSSING POINT
STATION ROAD

C.A. 04.12.2018



SCALE 1:200 @A3





LEGEND

- BIKES / PEDS
- BIKES / CARS
- CARS

FORMALISED CROSSING

'CYCLISTS DISMOUNT'
TOTEM SIGN

KERB OUTSTAND

FUTURE CONNECTION TO BICYCLE
PARKING VIA ON-ROAD BIKE LANE

WARBURTON HIGHWAY

SHARED PATH

STATION ROAD

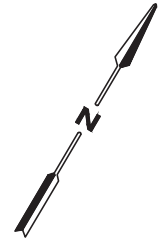
CONCEPT DESIGN 6

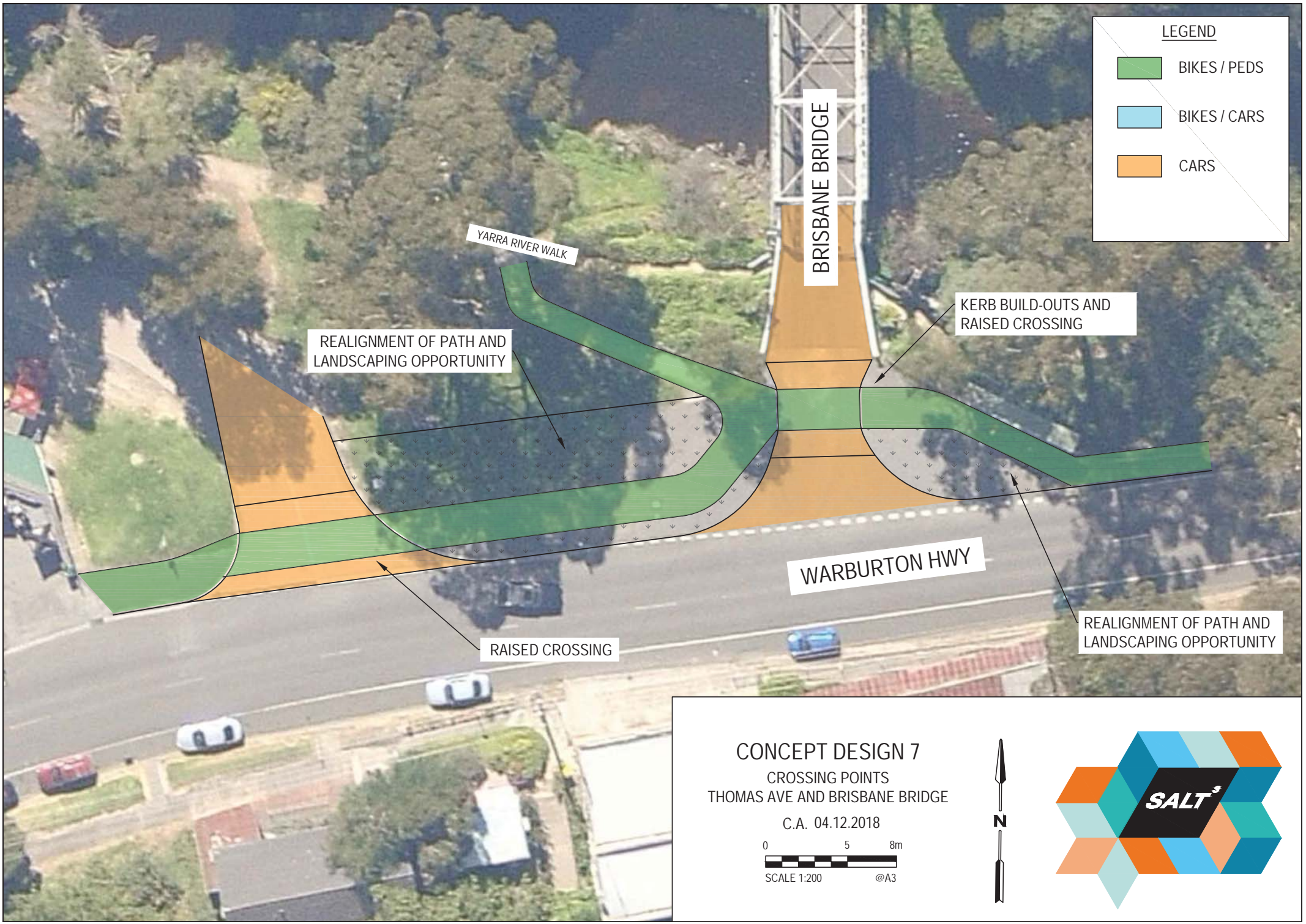
CROSSING POINT
WARBURTON HIGHWAY

C.A. 04.12.2018






SCALE 1:200 @A3





LEGEND

-  BIKES / PEDS
-  BIKES / CARS
-  CARS

REALIGNMENT OF PATH AND LANDSCAPING OPPORTUNITY

YARRA RIVER WALK

BRISBANE BRIDGE

KERB BUILD-OUTS AND RAISED CROSSING

WARBURTON HWY

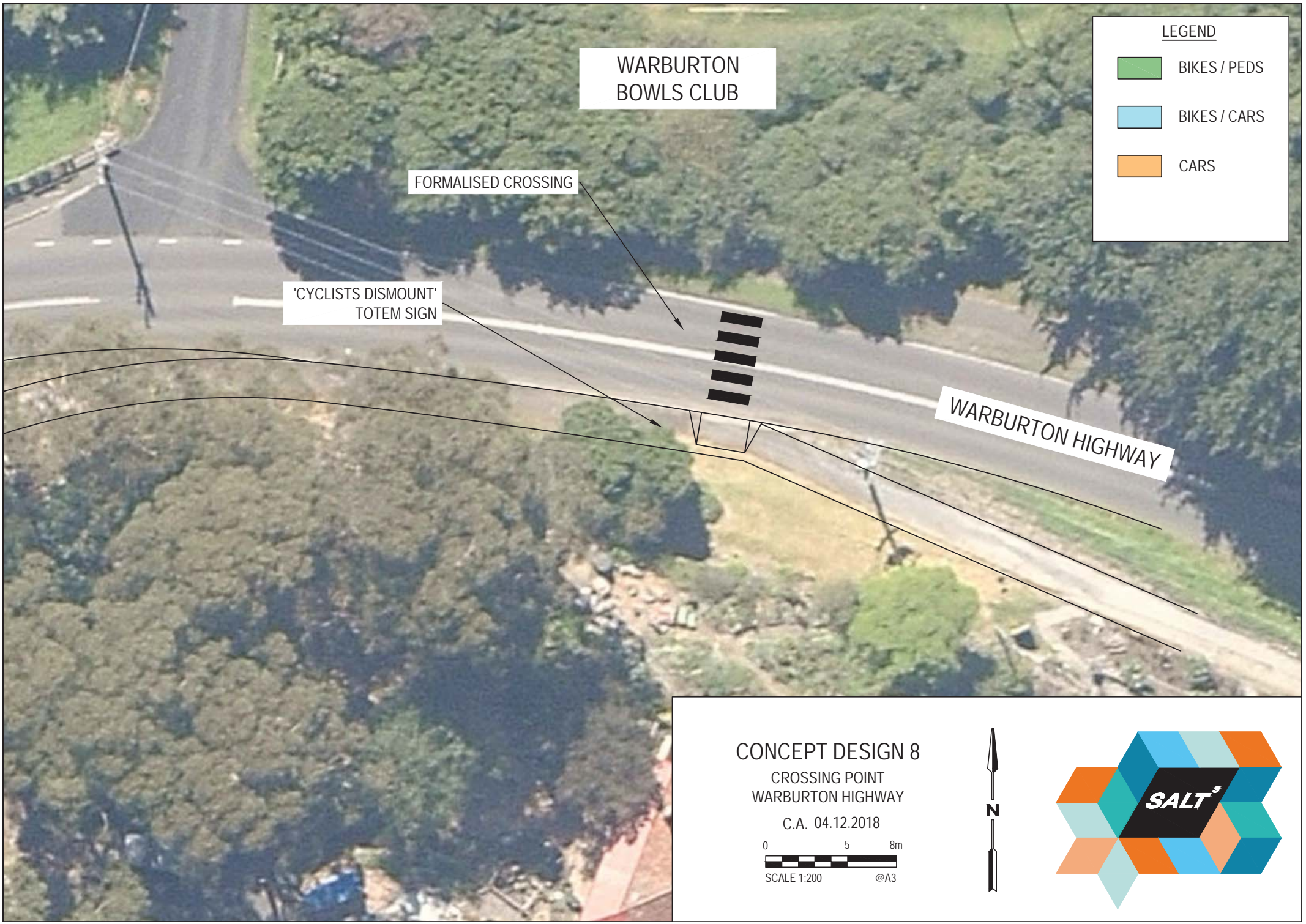
RAISED CROSSING

REALIGNMENT OF PATH AND LANDSCAPING OPPORTUNITY

CONCEPT DESIGN 7
CROSSING POINTS
THOMAS AVE AND BRISBANE BRIDGE

C.A. 04.12.2018
0 5 8m
SCALE 1:200 @A3





WARBURTON
BOWLS CLUB

FORMALISED CROSSING

'CYCLISTS DISMOUNT'
TOTEM SIGN

LEGEND

- BIKES / PEDS
- BIKES / CARS
- CARS

WARBURTON HIGHWAY




CONCEPT DESIGN 8

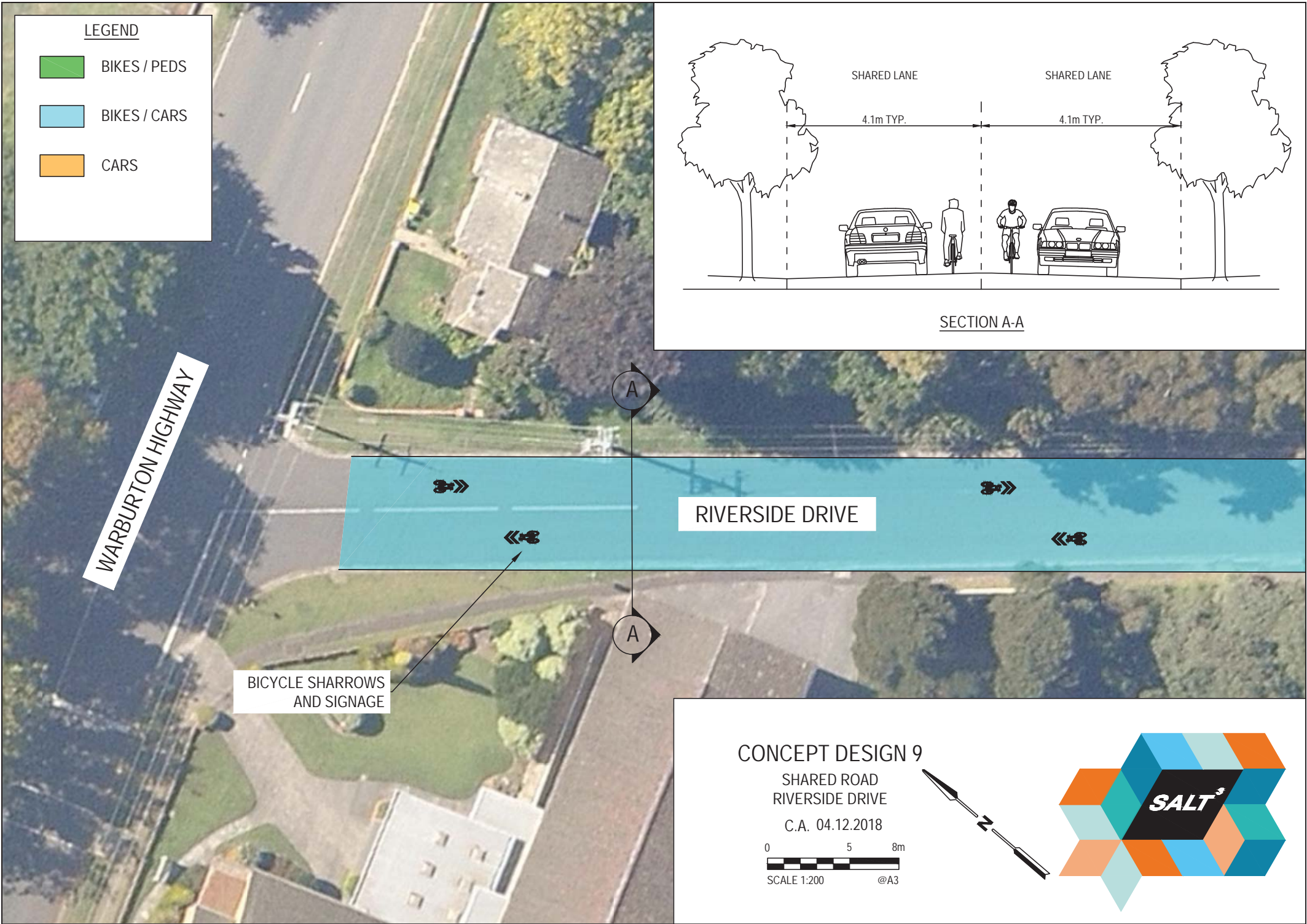
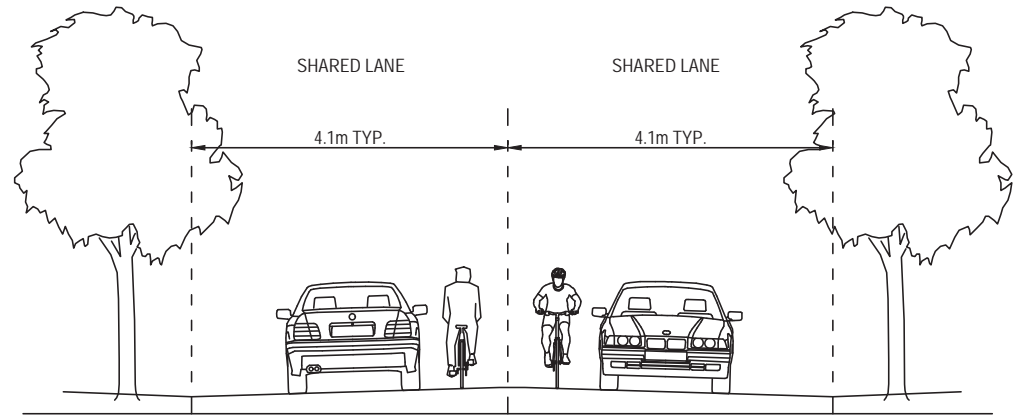
CROSSING POINT
WARBURTON HIGHWAY

C.A. 04.12.2018



LEGEND

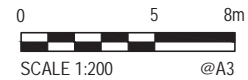
-  BIKES / PEDS
-  BIKES / CARS
-  CARS



CONCEPT DESIGN 9

SHARED ROAD
RIVERSIDE DRIVE

C.A. 04.12.2018



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