Draft Geraldine Transport Strategy

Timaru District Council

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Executive Summary

Geraldine is located midway along the Inland Scenic Route between Christchurch and Queenstown. This presents an opportunity for Geraldine to maximise the economic opportunities from passing through tourists. The local economy is also founded on the agricultural industry which relies on an efficient transport system for the import and export of its products.

The transport system is therefore pivotal to the success of Geraldine. To extract the most from the transport system, Timaru District Council engaged Abley to develop a transport strategy that is built on an understanding of the local context, problems and the desires of the local community.

The primary problem is that the transport system is set up for the private motor vehicle. The roads are wide which allow for high travel speeds, and a high supply of parking. This means that walking and cycling are not well provided for and are generally not well used by the community. The urban environment is focused on moving people (in cars) through the space, rather than spending time in the place. The car dominated nature of the town has led to a high expectation of being able to drive straight to a destination, and park outside. However, this problem is typical for small rural towns in New Zealand.

To help address the problems a strategic vision and set of objectives have been developed to help guide the future development of the transport system.

Strategic vision for Geraldine's transport system
The Geraldine transport system provides safe access for all types of travel, and promotes economic growth by enabling tourism and freight.
Objectives of Geraldine's transport strategy
• ***Safe –*** *a transport system where there are no deaths or serious injuries* • ***Access to all types of travel –*** *a transport system that provides a range of options to move around the town* • ***Tourism –*** *a transport system that encourages visitors to spend time and money in Geraldine* • ***Freight –*** *a transport system that enables efficient movement of freight*

A programme of interventions has been developed to achieve the strategic vision for Geraldine. The programme contains walking, cycling and network improvements for general traffic and freight vehicles. The interventions are phased over the short (0 – 3 years), medium (4 – 10 years) and long term (11 – 30 years) to ensure that interventions are delivered at the right time, and that the programme is affordable for the Timaru District Council. The improvements programme is summarised in the following table.

Improvements	Short term	Medium term	Long term
Walking	$125,000 - $250,000	$200,000 - $400,000	
Cycling	$50,000 - $95,000	$175,000 - $365,000	
Network	$75,000 - $200,000	$45,000 - $80,000	$2,700,000 - $4,050,000
Total	**$250,000 - $545,000**	**$420,000 - $845,000**	**$2,700,000 - $4,050,000**

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1. Introduction

Geraldine is a township of approximately 2,300 people in the Timaru District. Although the population is small, with modest growth, the town is on a busy tourist route between Christchurch and Queenstown which is experiencing increasing traffic volumes. This presents an opportunity for Geraldine to maximise the economic opportunities from passing through tourists. The local economy is also founded on the agricultural industry which relies on an efficient transport system for the import and export of its products.

The transport system is therefore pivotal to the success of Geraldine. To extract the most from the transport system, Timaru District Council (TDC) engaged Ableyto develop a transport strategy (the strategy) that is built on an understanding of the local context, problems and the desires of the local community. The strategy identifies a range of interventions over the short (0 – 3yrs), medium (4 – 10yrs) and long term (11 – 30yrs) that will see the fulfilment of the strategy and ultimately a more prosperous Geraldine.

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2. Strategic context

The strategy has been developed within the context of existing national, regional and local strategic documents. These documents have been reviewed to identify the key themes that should influence the development of the strategy. The following sections identifies the relevant documents and highlights the key priorities.

2.1 National strategy

The **Government Policy Statement for Land Transport 2018**[1] (GPS) sets out the Government's 10-year strategic direction and informs how the National Land Transport Fund is to be invested. The four strategic priorities are:

- **Safety -** a safe system, free of death and serious injury.

The focus on safety has increased and is expected to result in a greater investment in safety improvements for state highways, local roads and for all road users including active travel modes.

- **Access -** provides increased access to economic and social opportunities, enables transport choices and access, is resilient.

This priority focuses on regional development by providing important freight and tourism connections that are safe, resilient, efficient and minimise emissions. It also seeks to minimise the use of private motor vehicles by providing for walking, cycling and public transport.

- **Environment -** reduces greenhouse gas emissions, as well as adverse effects on the local environment and public health.

The government seeks to support lower emission forms of travel than the private motor vehicle, such as walking, cycling and public transport. This also seeks to recognise that these modes have public health benefits, and can create more liveable cities.

- **Value for money -** delivers the right infrastructure and services to the right level at the best cost.

This priority seeks to ensure that the government invests to achieve maximum benefit, while considering whole-of-life costs.

These priorities indicate a change in direction from the GPS that is now focused on safety and providing for efficient and environmentally friendly modes of transport, as opposed to a focus on investment in large roading projects that was the focus of the previous GPS. This change in direction should be reflected in the strategy.

2.2 Regional strategy

The **Canterbury Regional Land Transport Plan 2015 – 2025**[2] (revised June 2018) identifies the issues and challenges that are facing the region, and takes into account the direction of the GPS, to identify the following priority investment areas:

- **Safety -** improving road safety for all users.
- **Accessibility -** maintaining and enhancing accessibility, providing transport options.
- **Condition and suitability of assets -** network security.
- **Travel reliability -** managing private household vehicle traffic growth.
- **Resilience -** network security and earthquake recovery.
- **Environmental impact -** managing the environmental impacts of transport, use of the transport system has implications for the population's health.

[1] https://www.transport.govt.nz/assets/Uploads/Our-Work/Documents/c6b0fea45a/Government-Policy-Statement-on-land-transport-2018.pdf
[2] https://www.ecan.govt.nz/document/download?uri=3439094

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Based on the priority investment areas, the following outcomes are sought for the Canterbury region.

An accessible, affordable, integrated, safe, resilient and sustainable transport system that:

- supports the safe, efficient and effective movement of people and goods by the most appropriate mode (including road, rail, sea, air);
- is responsive and supports population change and economic development, including freight and tourism growth;
- minimises the consequences of disruptive events;
- supports convenient and connected transport options to support mobility and access;
- reduces the likelihood and extent of death and serious injury;
- is the result of co-ordinated transport and land use planning and infrastructure investment;
- fully incorporates sustainability issues, including environmental sustainability, into transport planning decisions;
- ensures transport makes a positive contribution to the health of Cantabrians; and
- represents good value-for-money.

The **Canterbury Regional Policy Statement 2013**[3] (Revised February 2017) identifies the resource management issues facing the region and set objectives, policies and methods to address the issues and guide their management. Of relevance to the Geraldine Transport Strategy is the consideration of land use and infrastructure.

Two key relevant objectives are as follows:

- A safe, efficient and effective transport system to meet local regional, inter-regional and national needs for transport, which:
  - supports a consolidated and sustainable urban form;
  - avoids, remedies or mitigates the adverse effects of transport use and its provision;
  - provides an acceptable level of accessibility; and,
  - is consistent with the regional roading hierarchy identified in the Regional Land Transport Strategy.

- In relation to the integration of land use and regionally significant infrastructure:
  - to recognise the benefits of enabling people and communities to provide for their social, economic and cultural well-being and health and safety and to provide for infrastructure that is regionally significant to the extent that it promotes sustainable management in accordance with the RMA.
  - to achieve patterns and sequencing of land-use with regionally significant infrastructure in the wider region so that:
    - development does not result in adverse effects on the operation, use and development of regionally significant infrastructure.
    - adverse effects resulting from the development or operation of regionally significant infrastructure are avoided, remedied or mitigated as fully as practicable.
    - there is increased sustainability, efficiency and liveability.

The regional strategic direction reflects the national direction emphasising the importance of safety, efficiency, environmental impact, integrated transportation and land use and the provision of travel options.

2.3 Local strategy

The **Timaru District Growth Management Strategy 2045**[4] (2018) identifies Geraldine as one of the region's growth areas, although the growth is relatively modest. It is anticipated that most of the growth until 2045 can be accommodated through vacant and infill opportunities around the town centre, and some new rural residential areas on the periphery of the town at Cascade Place and Main North Road. New residential areas are proposed on Connolly

[3] https://www.ecan.govt.nz/document/download/?uri=3122551
[4] https://www.timaru.govt.nz/__data/assets/pdf_file/0003/204375/Growth-Management-Strategy-Adopted-Low-Resolution-08052018.pdf

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Street and Orari Station Road. Ten hectares of industrial rezoning at Tiplady has been identified to cater for industrial growth.

The strategic direction for transport is *to promote an effective, efficient and safe transport system that integrates with land use and growth, and promotes community prosperity through improving connectivity and accessibility.*

The strategy identifies the following issues for transport in the region:

- Maintenance and suitability of roads;
- Managing increased traffic flow and movement;
- Responding proactively to our aging population influencing the demand for cycling, walking and public transport;
- Identifying and implementing road run-off contaminate treatment and discharge management;
- Recognising and providing for the implications of the District's strategic transport infrastructure (State Highways, the Rail network, Port of Timaru and Timaru Airport) and ensuring that this infrastructure can grow and develop especially where needed to match demands in freight needs; and,
- Promoting a consolidated urban form which improves the access, transport choices, and connectivity of the community to areas of employment, community facilities and shops.

The **Timaru District Council Transportation Vision**[5] (2006) states the transport vision as *we will provide a Transport System that promotes Community Prosperity.*

The strategy identifies the following issues:

- Disproportionate and increasing number of elderly people in the community (a need to provide mobility options);
- Growth in population, particularly in Geraldine, placing pressure on local and collector roads;
- Low income compared to NZ averages, however, low unemployment;
- Growth of dairy, farming and forestry industries have an impact on the transportation network;
- To facilitate economic growth, freight movements must be efficient between local centres, farms, other service industries and to sea and rail ports;
- Increasing tourist numbers;
- Timaru airport is a key strategic transport asset for the region; and,
- Safety is a key aspect for achieving sustainability.

The **Timaru District Active Transport Strategy**[6] (2018 refresh) seeks *for active transport in the Timaru District to be accessible, safe, and enjoyable for all.* The vision is supported by two objectives:

- Develop a safe, accessible, sustainable and integrated network for active transport; and,
- Educate and encourage residents and visitors to choose active transport for active and healthy lifestyles.

The strategy identifies key initiatives for Geraldine. The highest priority is for walking and cycling facilities along State highway 79 and Talbot Street. The existing facilities are primarily to the north west end of the town.

The **Off-Road Walking and Biking Strategy 2012 to 2032**[7] (2012) identifies that Geraldine has 3.5km of off-road track and that the future provision will be 13.7km.

The local strategic documents focus more on issues of an aging population, the importance of the transport network for tourism and freight while also referencing safety, efficiency and transport options.

[5] https://www.timaru.govt.nz/__data/assets/pdf_file/0015/20490/486801-Final_-_Timaru_District_Council_Transportation_Vision_-_September_2006.pdf
[6] https://www.timaru.govt.nz/__data/assets/pdf_file/0019/20476/760969-Final_-_Timaru_District_Active_Transport_Strategy_-_July_2011.pdf
[7] https://www.timaru.govt.nz/__data/assets/pdf_file/0017/46250/Off-Road-Walking-and-Biking-Strategy-2012-2032.pdf

2.4 Summary

There are consistent themes through the national and regional strategic documents that focus on safety, access, efficiency, integration between land use and transport, providing for active modes and reducing the environmental impact of the transport system. Meanwhile, the local strategic documents acknowledge the local issues such as a small and aging population and noting the importance of tourism and providing for efficient movement of freight through the transport system. These themes are considered in Section 5 in developing the vision and objectives for the strategy.

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3. Understanding Geraldine

This section summarises the key demographics, land use and transport data to form an understanding of Geraldine and inform the strategy.

3.1 Geraldine township and the surrounding area

The strategy focuses the Geraldine township, however, it is recognised that there is a strong interplay between the Geraldine township and the surrounding areas and communities[8].

Generally, the surrounding areas have a younger population with higher incomes than the Geraldine township. It is where a lot of the economic prosperity of the area is generated through farming and agriculture, and where many of the freight trips travel to and from.

For clarity, the figures discussed in the following sections relate to the Geraldine township, and not the surrounding areas.

3.2 Demographic and economic context

The population of Geraldine is 2,301[9], contributing 5% to the Timaru District population of 43,932. The median age in Geraldine is 50.3 years old and 28.6% of Geraldine's population is over 65 years old. By way of comparison the New Zealand medium age is 38 years old and 14.3% is over 65 years old. This demonstrates that Geraldine has a particularly old population, which may influence mode choice and the accessibility requirements of the transport system.

The unemployment rate in Geraldine is 4.4% (7.1% nationally) and key occupational groups are labourers, managers, professionals, technicians and trade workers. Although unemployment is low, the income for people over 15 is only $23,900 compared to $28,500 nationally.

The major industry in the Timaru District is agriculture which includes farming (crops, dairy, cattle and sheep), and associated manufacturing, services and food processing industries. Dairy farming is predominantly in the north-west of the Timaru District near Temuka, Clandeboye and the Rangitata river. Forestry is another industry in the district, and is concentrated to the west of Geraldine. These industries rely on an efficient transportation of export products to the port or to manufacturing locations such as dairy factories. Heavy vehicles influence road maintenance regimes and also have a significant impact when they travel through urban areas due to air pollution, noise and vibration.

3.3 Future development of Geraldine

The Timaru District Council's Growth Management Strategy (GMS) anticipates only modest growth, as shown in **Figure 3.1**. There is a reasonable upward trend until 2033, and then growth is relatively stagnant through to 2048. Between 2018 and 2048 there is an anticipated 136 extra households, equating to 12.6% growth over 30 years.

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[8] The Census area is Orari

[9] 2013 Census data sourced from Stats.govt.nz

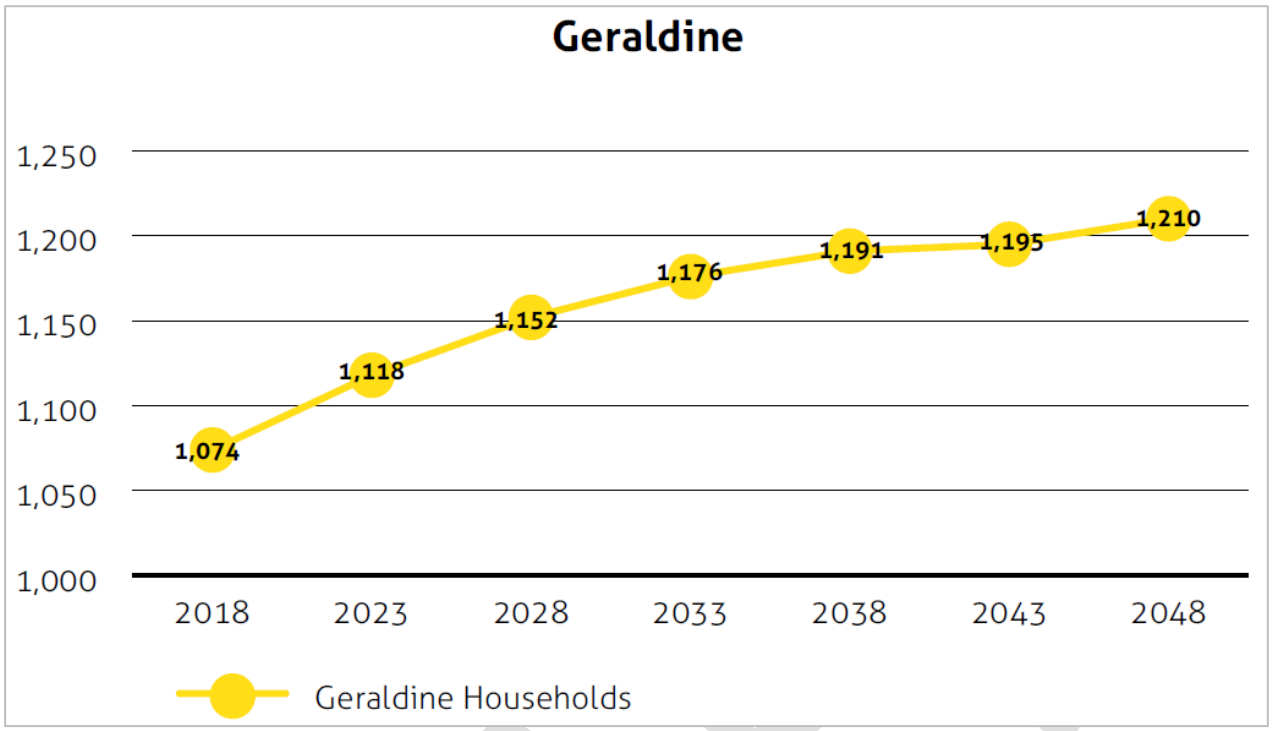

Figure 3.1 Geraldine household growth forecast

The GMS primarily expects new residential development to occur as infill development up until 2028, and then as greenfield development from 2028 to 2045. It is expected to be located, as shown in **Figure 3.2**, to the east and southeast of the town centre, at Cascade Place, south side of Orari Station, Templer Street, Strawberry Place and Connolly Street (McKenzie Village). Development is also expected to the west of the town centre at Geraldine Downs, Main North Road East and Hislop Street beyond 2028.

The GMS does not anticipate the need for any additional commercial activity in the town centre, but expects some redevelopment of the current sites. Industrial development is anticipated around Majors Road, and is provided for at the corner of Tiplady Road and Winchester-Geraldine Road.

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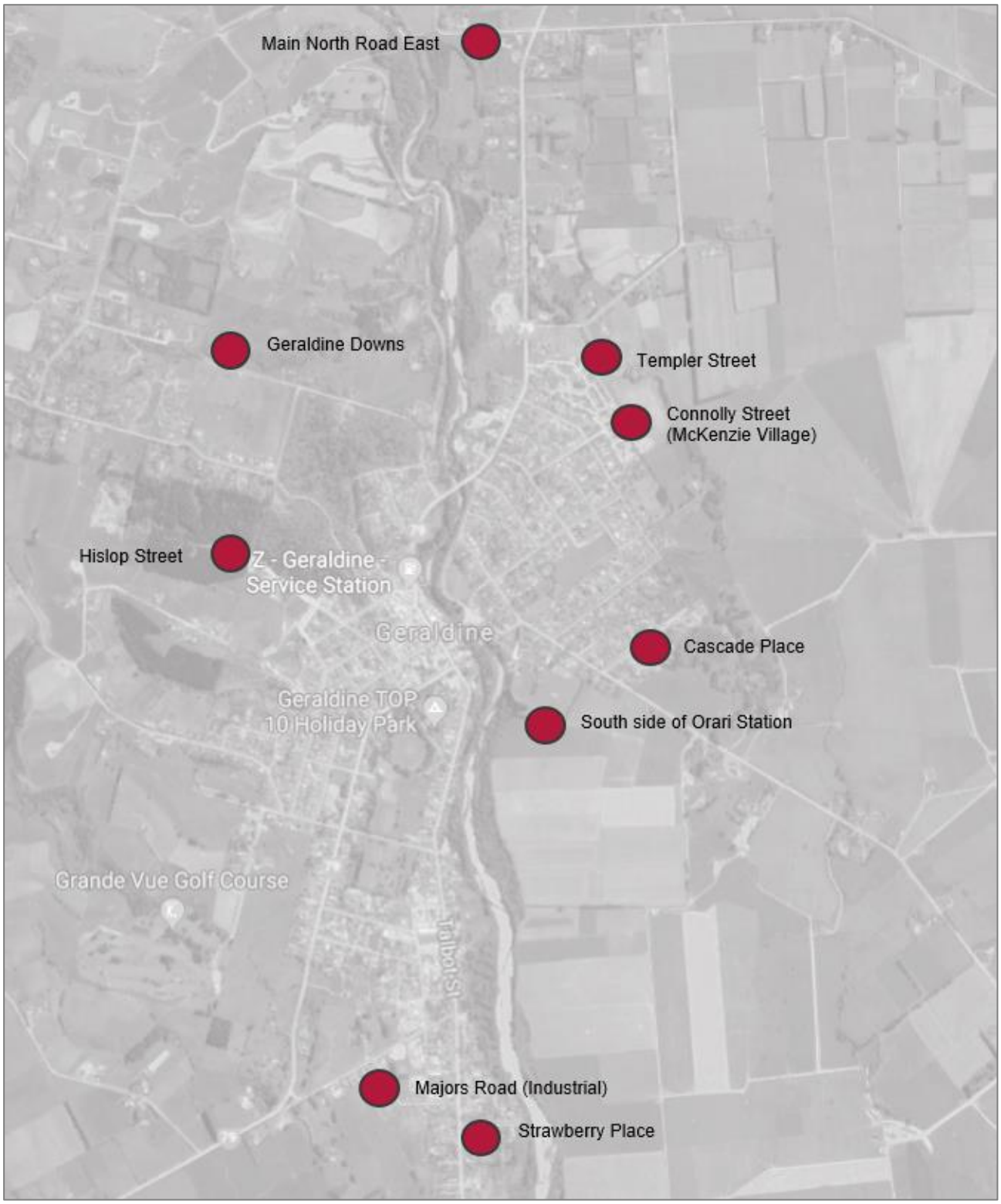

Figure 3.2 Location of development

3.4 Tourist movements

Geraldine is positioned on the scenic inland route (SH72-79) connecting tourists from the Christchurch International Airport through to Tekapo, Mount Cook, Wanaka and Queenstown. Consequently, Geraldine has a high number of free independent travellers and also large tourist buses (such as Intercity and Atomic Shuttles). It is situated as a break stop between these locations.

Tourists present an economic opportunity for Geraldine, but also place pressure on public infrastructure such as parking and public toilets (on Cox Street).

The key tourist season, based on the increased traffic profile, is over the summer from January through March.

3.5 Travel to work

Vehicle ownership in Geraldine is high, with 12% of houses with access to 3 or more vehicles[10]. Approximately 5% of households have no vehicle, 46% have one vehicle and 36% have two vehicles.

Most people drive to work (79%), while 12.5% either walk or jog. There was no record of people cycling to work, and there are no public transport options available.

3.6 Traffic volumes

State highway Annual Average Daily Traffic Volumes are collected by the NZ Transport Agency[11] on Cox Street just north of Lewis Street. **Figure 3.3** shows a gradual increase in traffic volumes between 2014 and 2018 of 11%, roughly a 3% increase per year which is generally in line with national vehicle travel trends[12]. The proportion of heavy vehicles is 5.6%, which compared to other State highways is relatively low. However, the proportion at the Upper Orari Bridge on SH79 is 10.3%, indicating that additional heavy vehicles are generated from Geraldine itself and from Talbot Street.

In 2018, Google maps changed their route algorithm at the request of the Geraldine community. Previously, northbound motorists approaching Geraldine were directed west along Tiplady Road and Coach Road towards SH1. However, now the route directs motorists through Geraldine on SH79. The effects of this changed have not yet been picked up in the traffic volumes. There may also be an impact on the crash numbers at the intersection of Tiplady Road and Winchester-Geraldine Road.

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[10] 2013 Census data sourced from Stats.govt.nz
[11] https://www.nzta.govt.nz/resources/state-highway-traffic-volumes/
[12] Based on Road VKT collect by the Ministry of Transport https://www.transport.govt.nz/resources/tmif/transport-volume/tv001/

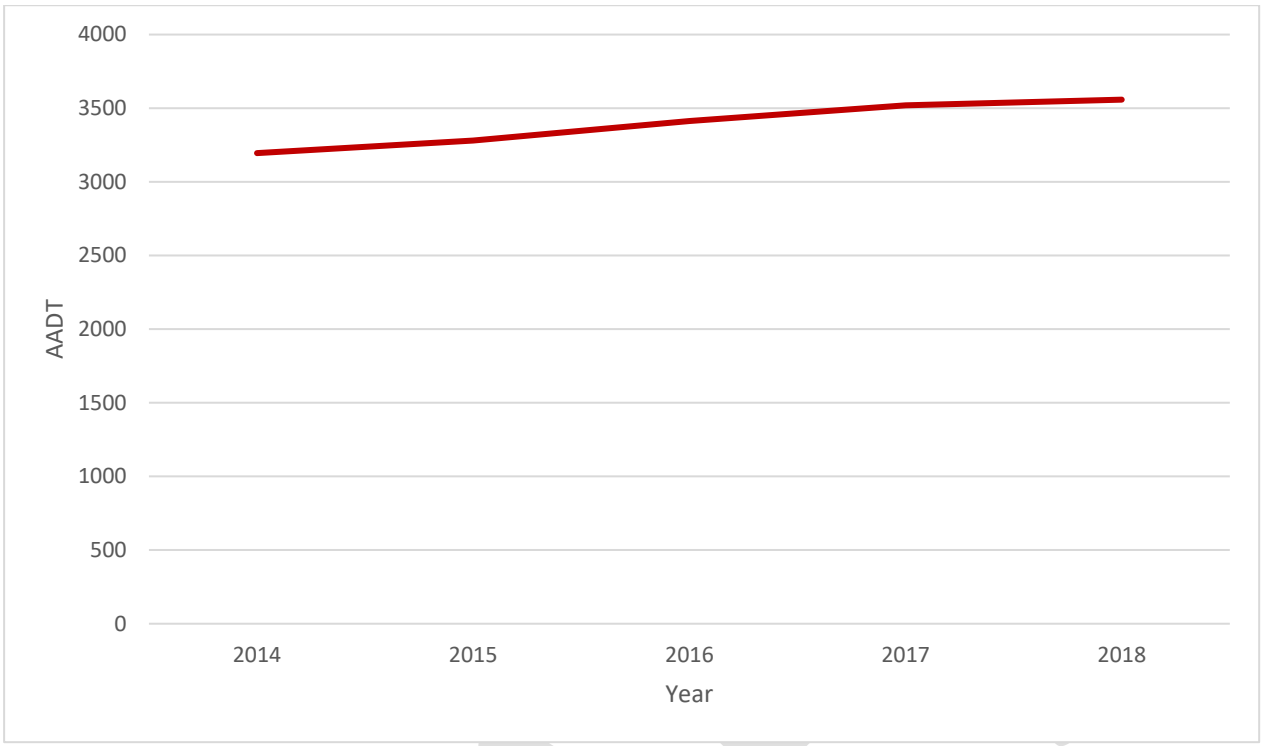

Figure 3.3 SH79 (north of Lewis St) annual traffic volumes

Figure 3.4 illustrates that peak traffic demand is experienced between 2 - 3pm. There is also a significant variation across the months of the year. The highest traffic volumes are experienced during the summer months between January and March, and the lowest volumes are experienced during winter in July.

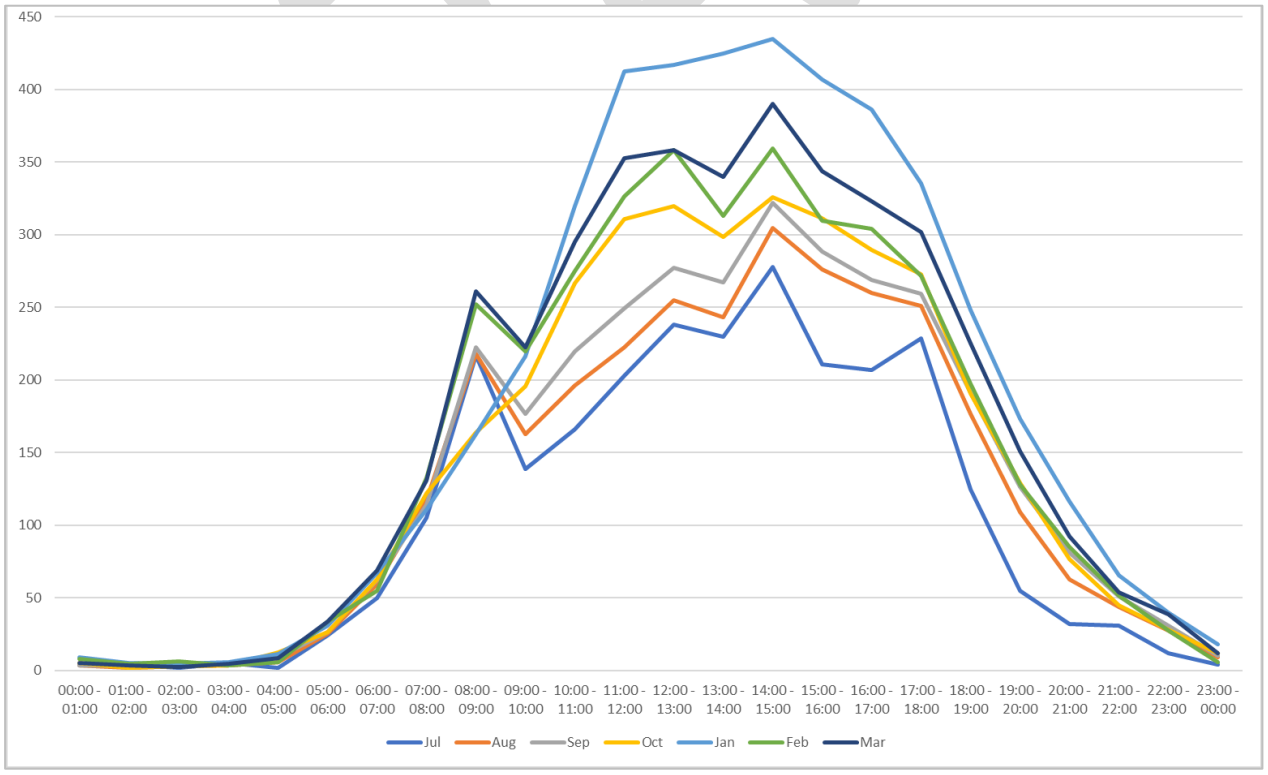

Figure 3.4 SH79 (north of Lewis St) hourly and monthly variations (July 17 – March 18)

Figure 3.5 illustrates that future traffic volumes forecasts[13] in 2044/45 on SH79 are predicted to reach nearly 10,000 vehicles per day (vpd) during the peak summer season, dropping to just over 6,000 vpd during the winter months. This equates to an approximate 100% increase in traffic between seasons. By 2027/28, the increase of traffic is approximately 30%.

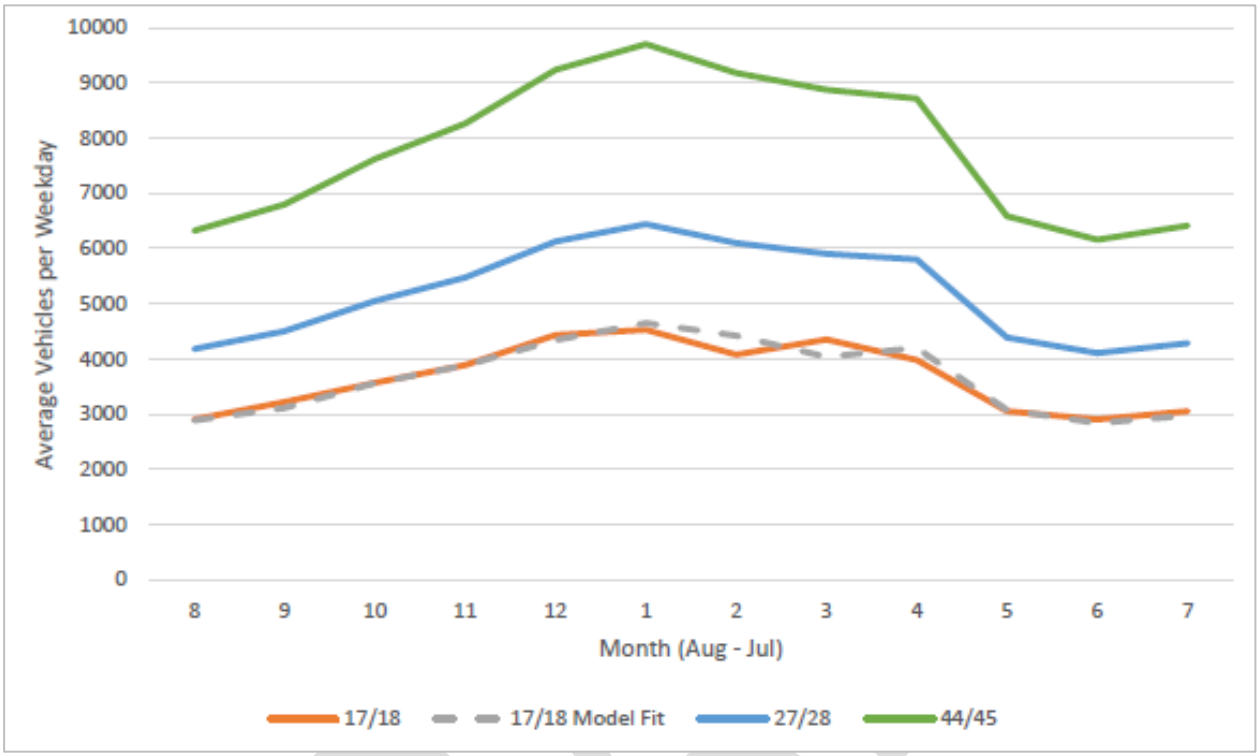

Figure 3.5 SH79 (north of Lewis St) modelled future traffic volumes

3.7 Intersection performance

The State highway Routing analysis[14] undertook a level of service analysis of the key intersections in Geraldine. **Figure 3.6** identifies the overall level of service (on a scale of A to F) for each intersection based on a weighted average of delay per vehicle for all approaches.

The analysis identified that most intersections are performing well, with a level of service A (0 – 9 seconds of delay) or B (10 – 15 seconds of delay). However, by the 2045 future modelled year, both Talbot Street / Wilson Street and Talbot Street / Cox Street intersections decrease in performance to a level of service C (16 – 25 of delay).

A level of service C is generally considered to be an acceptable level of delay but justifies a closer look at the individual movements to identify the cause of the delay. Section 4.1 identifies the level of service for each individual movement, and more clearly shows the turning manoeuvres that suffer delay.

[13] Generated from the Geraldine Transport Paramics Model, reported in SH79 Routing and Upper Orari Bridge Options Analysis, Abley 2018
[14] SH79 Rerouting and Upper Orari Bridge Option Analysis, Abley, 2018

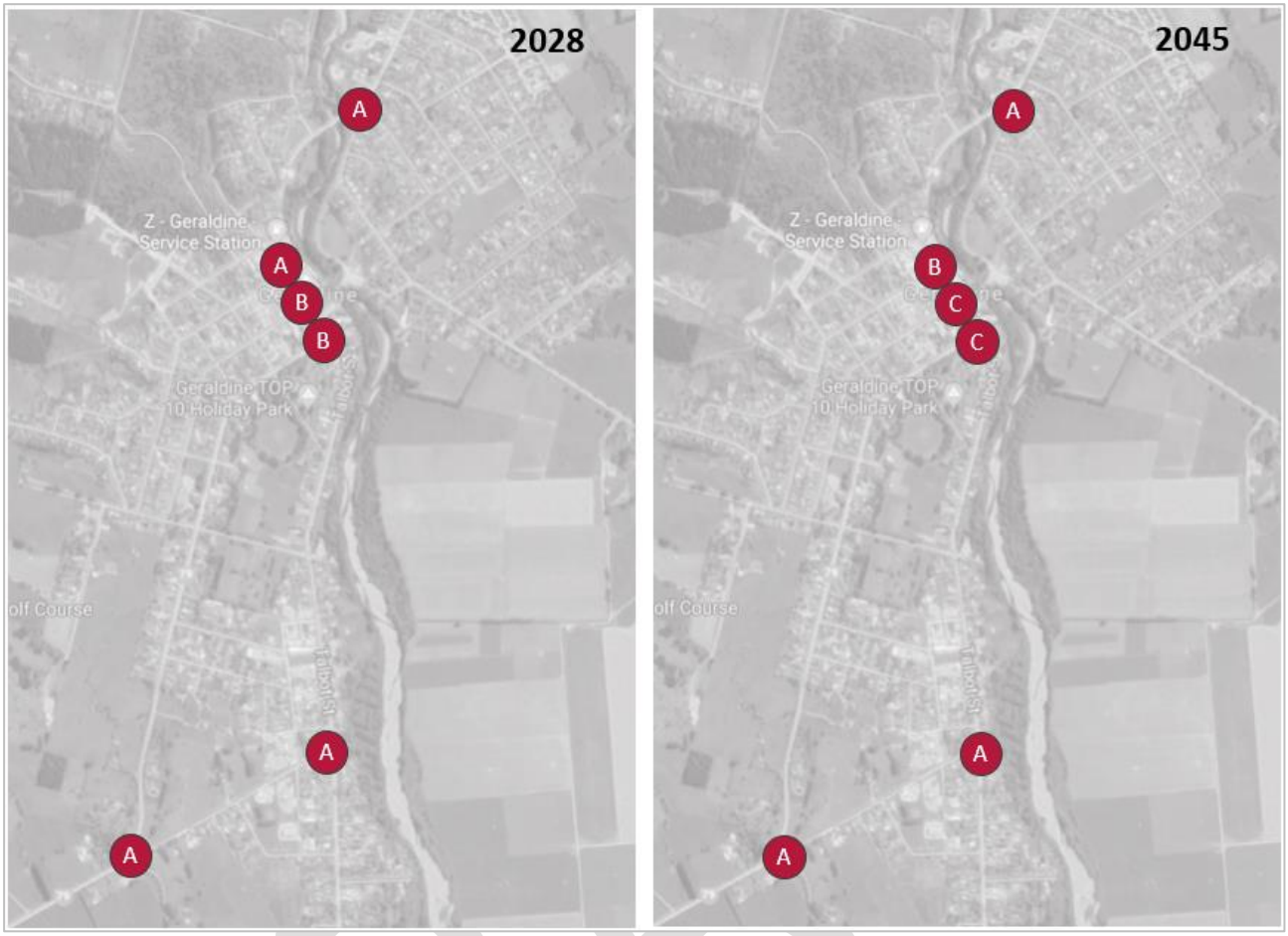

Figure 3.6 Intersection level of service

3.8 Walking and cycling

There are no on-street cycle facilities in Geraldine, however, most streets contain wide traffic lanes and shoulders where parking is often not used, providing space for cyclists. Although it is noted that the presence of large/heavy vehicles on the State highway may make riding uncomfortable.

There is an off-road shared walking and cycling path through Pekapeka Gully and Riddells Reserve, and Ribbonwood Road circuit. The TDC Off-Road Walking and Biking Strategy (2012-2032) identifies an additional 13.7km of tracks in Geraldine and also connections between the rural townships in the District. Most of the extensions are along the river edge.

Most streets have wide footpaths on at least one side of the street, with the exception of some residential streets where no footpaths are provided. The main shopping street has wide footpaths on both sides of the street and has a couple of crossing opportunities via pedestrian crossings.

TDC's Active Transport Strategy (refreshed in 2018) prioritises a number of interventions in Geraldine demonstrated by **Figure 3.7** and the details of the projects are described in **Table 3.1.**

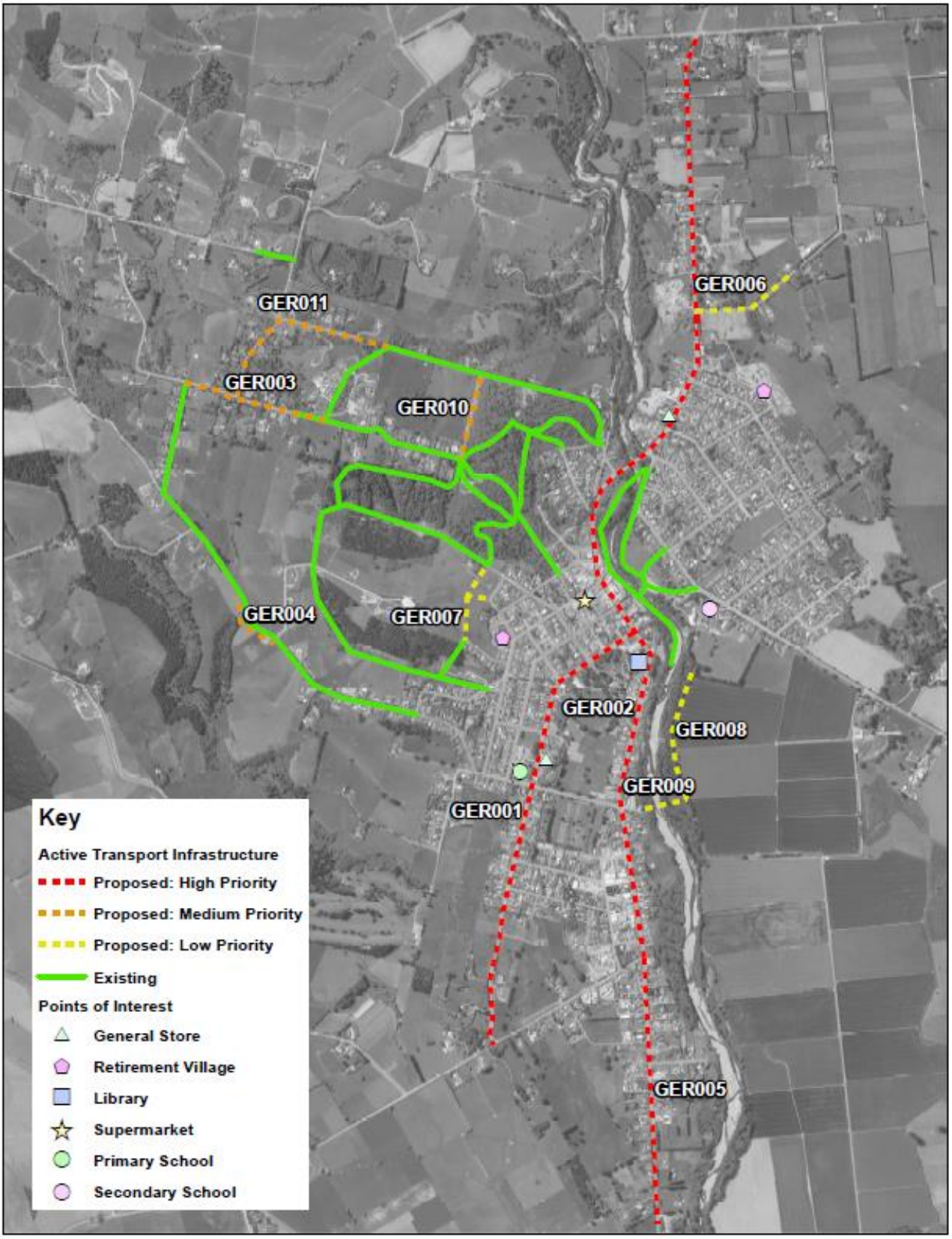

Figure 3.7 Geraldine walking and cycling recommendations

Table 3.1 Geraldine walking and cycling projects

	Description	Priority	Cost
GER001	Cycle lanes on SH 79 from Woodbury Road to Kennedy Street and installation of cyclist warning signage at Waihi Bridge.	High	$$
GER002	On-road cycle lanes on Talbot Street (Inland Scenic Route 72) from Cox Street (SH79) to Kennedy Street.	High	$
GER003	Pedestrian facility on one side of Pye Road extending from existing footpath at Ribbonwood Rise subdivision to Downs Road (500m).	Medium	$$
GER004	Pedestrian facility along Downs Road sub-station (including the 200m section).	Medium	$$
GER005	Footpaths or shared path on Lower Talbot Street to link to urban expansion and Strawberry Place, Black and White Motel and Stonebridge function centre).	High	$$
GER006	Facility on Templer Street	Low	$
GER007	Barker Street to Hislop Street and Shaw Street connection – predominantly recreational facility.	Low	$
GER008	River path on eastern side to cater for increased residential development	Low	$$
GER009	River crossing connecting GER008 to Talbot Street	Low	$$$
GER010	Path on Davies Street.	Medium	$
GER011	Facility on Ribbonwood Road.	Medium	$
GER012	New footpaths in urban Geraldine area to be constructed over time, in order of precedence.	High	$$
GER013	Pedestrian facilities at intersections	High	$$

Cost key: $>$50,000 $$ $50,000 >< $150,000 $$$ > $150,000

3.9 Public transport services

There are no public transport services within Geraldine, with the exception of a community bus providing scheduled return trips between Geraldine and Timaru/Temuka each Tuesday. The service is provided by volunteer drivers, and costs $15 for a round trip. With buses leaving Geraldine at 9:30am and returning from Timaru at 2:30pm, they are unlikely to be providing a service for commuters. The service also provides connections to other destinations around the district on-demand, on a pay-for-hire basis.

Geraldine also has a companion driving service called Here4u Ltd providing personal pick up and drop off services. The service is targeted at the elderly population with disability pass parking, and a walker frame available on request.

Geraldine does not have its own taxi service, however, Timaru Taxis Limited does provide tour options from Timaru to Pleasant Point and Geraldine.

3.10 Speed limits

The speed limit in Geraldine in urban areas is 50km/hr past schools and through the town centre. To the north, the speed limit is 80 km/hr on the periphery of the town before changing to 100km/hr into the rural area. To the south, on both Geraldine-Fairlie Highway and Winchester Geraldine Road, the speed changes from 50km/hr to 100km/hr at the edge of the town. Kennedy Street is 70km/hr at the western end and 50km/hr through the residential section.

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3.11 Parking

On-street parking is freely provided in Geraldine. Time restrictions apply in the town centre and range from P10, P30, P60 and P120 as far as Hislop Street to the south and Peel Street to the north. Outside of the shopping street there are no parking restrictions.

Public off-street parking is provided on Cox Street and Peel Street which is free and available all day.

Timaru District Council provides parking exemptions for drivers over the age of 80. In Geraldine, the exemption allows over 80's to stay for twice the time restriction.

3.12 Safety

Geraldine's crash record was extracted from the NZ Transport Agency's Crash Analysis System for 2008-2019 within the red boundary shown in **Figure 3.8.**

The following bullet points provide a summary of the key statistics:

- A total of 128 crashes were recorded (between four and 16 crashes per year over the 12-year period).
- No fatal crashes have been recorded.
- A total of 12 serious injury crashes and 28 minor injury crashes have been recorded.
- 115 of the crashes only involved one or more vehicles (five serious crashes)
  - One crash involved a pedestrian (serious crash)
  - Five crashes involved a cyclist (three were serious crashes)
  - Seven crashes involved a motorbike/moped (three were serious crashes)
- The predominant crash type is loss of control (both on straight road segments and while turning) followed by crashes at crossroad intersections between vehicles travelling in perpendicular directions.
- 56% of crashes were in 50km/hr zones, 8% were in 80km/hr zones, and 36% in 100 km/hr zones.
- Twelve crashes involved drivers holding foreign licences Accordingly, at least 12 crashes are assumed to be directly related to related to tourists.
- A particular area of concern was identified at the intersection of Winchester Geraldine Road, McKenzie Road, Tiplady Road and Coach Road where 22 of the 106 crashes occurred. Six of these involved tourists, one cyclist and one motorcyclist. No crashes have been recorded since January 2018.

It is encouraging that there are no fatalities and very few crashes involving pedestrians, cyclists or motorists. The most significant safety concern to address is at Winchester Geraldine / Tiplady Road intersection.

The Upper Orari River Bridge was assessed separately. A search of the period between 2008 and 2018, plus the records available for 2019 on SH79 between Orari Back Road and Geraldine-Arundel Road found a total of 34 crashes. Twenty-six of these crashes (one serious injury crash, four minor injury crashes and 21 non-injury crashes) occurred at the bridge or on the approaches to the bridge. Of the remaining eight crashes, five (one serious injury and four non-injury crashes) occurred at the SH79/ Geraldine-Arundel Road intersection and three (all non-injury crashes) at the SH79/ Orari Back Road intersection.

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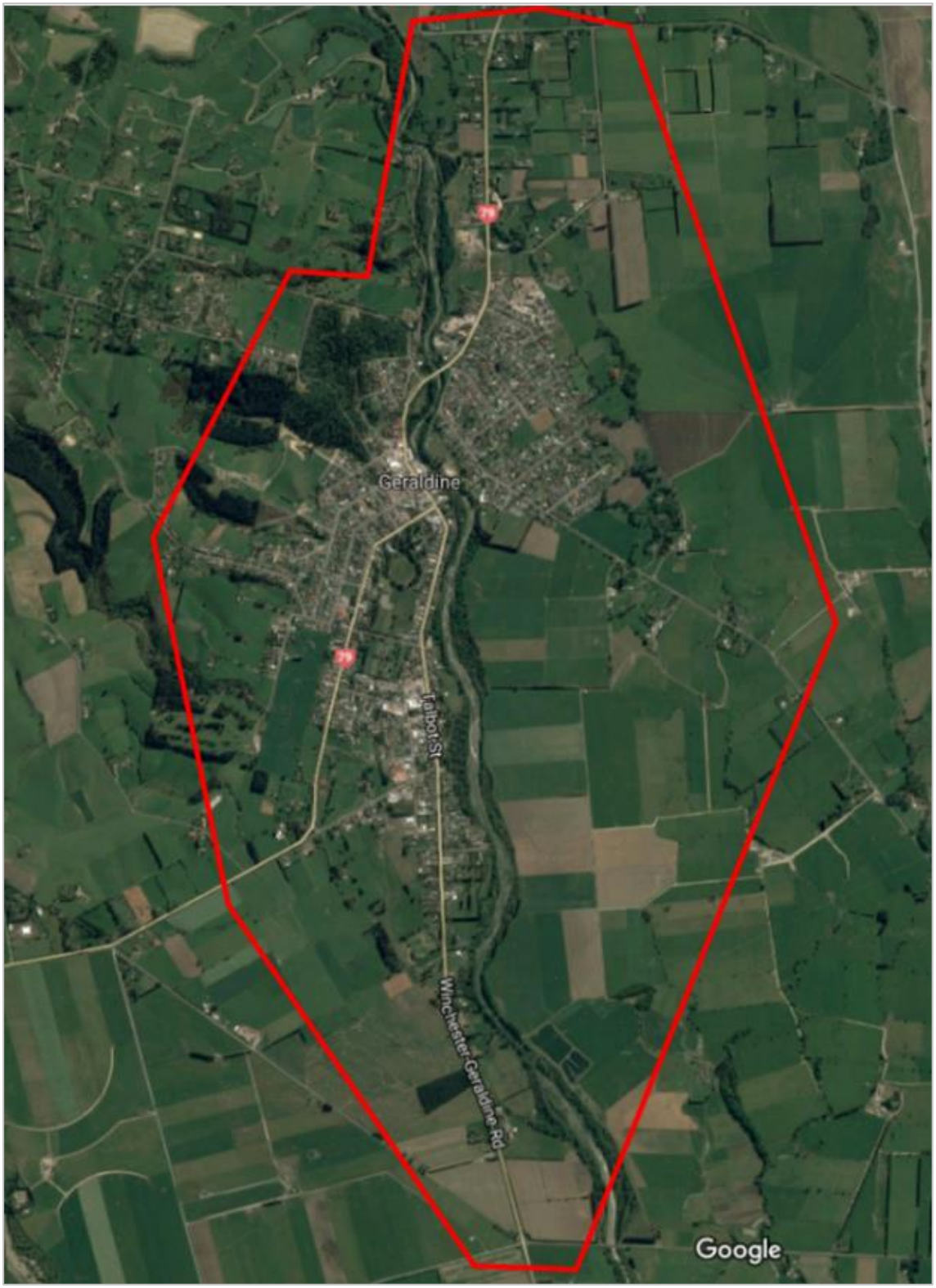

Figure 3.8 Crash record study area

3.13 Road hierarchy

The One Network Road Classification (ONRC) is a classification system of all roads into eight levels based on how busy they are and their connection to important destinations. It informs how the roads are managed and operated. The ONRC identifies Cox Street and Talbot Street as Arterial Roads (4th most strategically important classification), these are the highest classification in the Geraldine area. There are a number of secondary collectors and access roads shown in **Figure 3.9**.

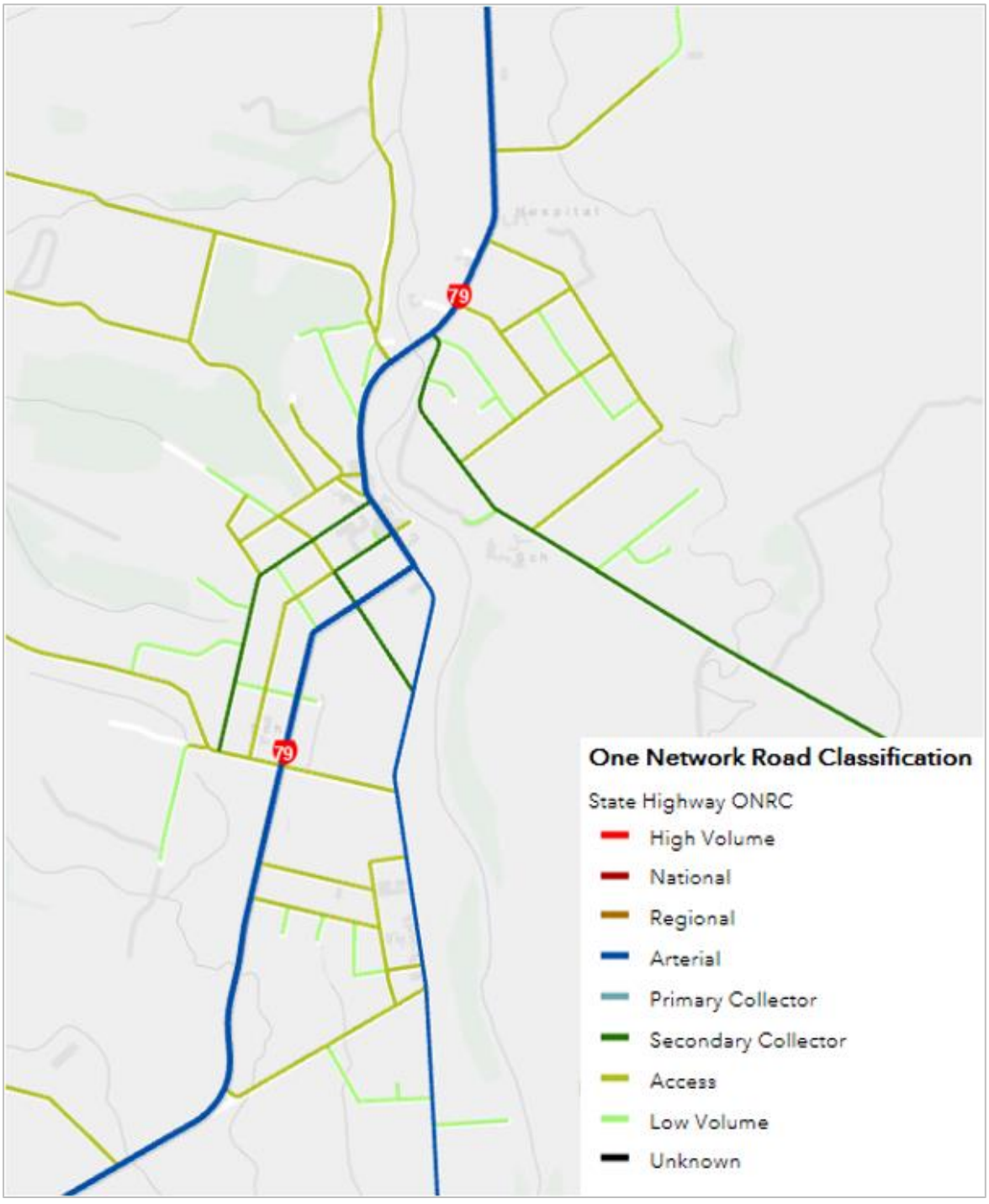

Figure 3.9 One Network Road Classification

4. Problems with the transport system

The *Understanding Geraldine* section gives some insight into the problems that Geraldine's transport system and its users face. The primary problem is that the transport system is set up for the private motor vehicle. The roads are wide which allow for high travel speeds, and a high supply of parking. This means that walking and cycling are not well provided for and are generally not well used by the community. The urban environment is focused on moving people (in cars) through the space, rather than spending time in the place. The car dominated nature of the town has led to a high expectation of being able to drive straight to a destination, and park outside. However, this problem is typical for small rural towns in New Zealand.

Geraldine's aging population has an impact on the infrastructure requirements. Members of the community may no longer be willing or able to drive, and will rely on good pedestrian connections that also provide for mobility scooters. Consideration needs to be given to the smoothness of the footpath, crossing widths, and for pedestrians with mobility, visual and hearing impairments.

A workshop to discuss Geraldine's transport problems was held with representatives of the local community in May 2019 and was attended by 17 representatives from Timaru District Council, Geraldine Community Board, AA, NZ Fire Service, Four Peaks Plaza, NZ Transport Agency, Parkside and Go Geraldine. The workshop attendees were asked to identify and map all the problems that they were aware of relating to the transport system. A full list of the problems is contained within in Appendix A, and are discussed below:

4.1 Network problems

Two intersections were highlighted as a problem. The first is the intersection of Cox Street and Talbot Street shown in **Figure 4.1**. This is where the arterial route travelling south through town splits in two. State highway 79 is sign posted down Cox Street and provides the main route through to Tekapo and beyond. Talbot Street is the main route through to Winchester and Timaru. The t-intersection is controlled by a give way on Cox Street, and has a pedestrian crossing in close proximity on Talbot Street. It is also a busy area with public toilets, coach parking, Barkers and access into Café Verde nearby. The turning traffic into Cox Street, and the other activities in the area, can produce some congestion during peak visitor periods.

Figure 4.1 Cox Street and Talbot Street intersection

The second intersection is at the southern approach to Geraldine, where SH79 intersects with Kennedy Street shown in **Figure 4.2**[15]. It is a t-intersection on a long left-hand curve, and contains a short one-way lane from Kennedy Street onto SH79 that acts as a slip lane. The complicated geometry and constrained sight lines create a potentially unsafe environment particularly for unfamiliar drivers.

Figure 4.2 SH79 and Kennedy Street intersection

Modelling of intersection performance

Section 3.7 identifies that overall intersection performance is expected to be acceptable out until 204516, however, some individual movements at the intersections suffer a poor and deteriorating level of service.

The diagrams in **Figure 4.3** to **Figure 4.6** identify the movements that have a level of service C or worse (more than 15 seconds of delay per vehicle). In 2028 the following movements were identified with poor performance:

- The right turn from McKenzie Street onto SH79,
- the right turn from Talbot Street into Peel Street; and,
- several movements at the intersection of Talbot Street and Wilson Street (and all movements from the northern approach of Wilson Street).

By 2045 the performance of these intersections deteriorated, and the following additional movements experienced a level of C or worse:

- The right turn from SH79 into McKenzie Street,
- the left turn from Peel Street into Talbot Street; and,
- almost all turning movements at the Wilson Street and Talbot Street intersection.

[15] Source: Google maps
[16] SH79 Rerouting and Upper Orari Bridge Option Analysis, Abley, 2018

In 2045 three movements at the intersection of Talbot Street and Cox Street experience suffer a level of service C, none of these movements experience anything worse than a B in 2028.

These results indicate that there are no serious performance issues in the short to medium term, however, investigation will be required in the medium term to either provide protection or capacity for the turning movements, or to provide alternatives to turning movements at these locations in the long term.

Figure 4.3 SH79 / McKenzie Street intersection performance

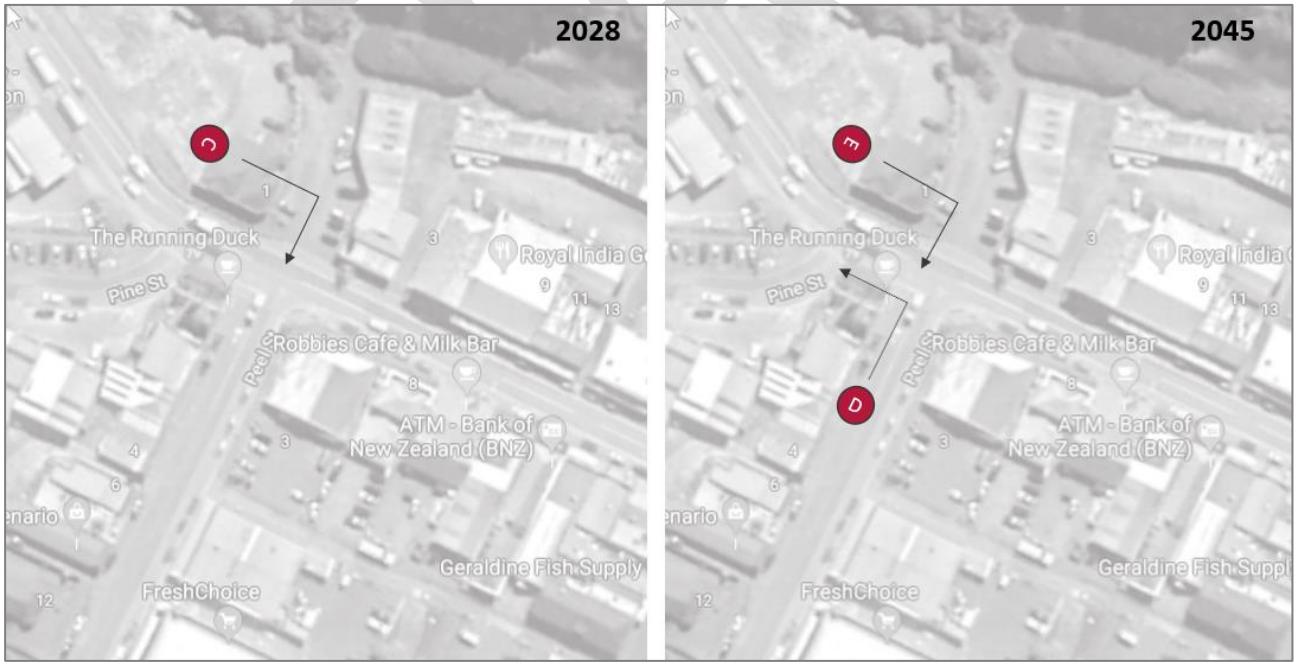

Figure 4.4 Talbot Street / Peel Street intersection performance

Figure 4.5 Talbot Street / Wilson Street intersection performance

Figure 4.6 Talbot Street / Cox Street intersection performance

Upper Orari River Bridge

The one-way Orari River Bridge on SH79 to the north of Geraldine, shown in **Figure 4.7**, has long been a point of contention with the local community. At the northern end there is a t-intersection on a left-hand curve where SH79 diverts right onto the Rangitata-Orari Bridge Highway, and the Inland Scenic Route (72) carries on straight through. The bridge is the first one-way bridge that international visitors will experience when flying into Christchurch and driving south to Queenstown, and can therefore cause some confusion for unfamiliar drivers. The local Fire Chief commented that it is the location of a high number of crashes (supported by the crash record in section 0). The one-way bridge, at approximately 270m long, creates delays at busy times especially with unfamiliar drivers. This acts to bunch up traffic just before entering Geraldine, resulting in platoons of traffic arriving at once in the town centre. The bridge's narrow width also does not provide for cyclists, which is a growing mode along the Inland Scenic Route.

Figure 4.7 Upper Orari River Bridge

Speed limits and vehicle speeds were also raised as a problem. The road network, with its wide traffic lanes, encourages high speeds. This was particularly raised as a problem for people attempting to walk across the road in various locations such as the primary school, domain and swimming pool. The effects of traffic, such as vehicle noise, was also raised but not at a specific location.

Parking

Parking was a strong theme in the workshop. There is a strong expectation that free parking is provided close to all destinations. It was noted that parking is not well provided for large vehicles including campervans, trucks and vehicles towing boats which often stop in Geraldine.

The lack of all-day employee parking was also raised as a problem, as was the parking access to Café Verde and a lack of parking near the swimming pool. It was commented that parked vehicles limited visibility for people attempting to cross the road.

4.2 Cycling problems

It was acknowledged that there are no on-street cycling facilities, and that there is a need to provide urban cycle routes. The lack of safe connections to the recreational cycle routes that are located just out of town and along the riverside was also discussed. Outside of the workshop, it was identified that the Waihi River bridge just north of the township does not allow for cyclists heading northbound.

4.3 Walking problems

The aging population of Geraldine was noted as a factor that impacts on the quality of footpaths that are required. Uneven and narrow footpaths make it tricky for the less able. It was also noted that there is a greater need to provide for mobility scooters for the elderly and for scooters for the younger generations.

Cox Street was raised several times as an impediment for pedestrians, particularly attempting to access the public toilets, the domain and the swimming pool. Vehicle speeds and the wide roads also make crossing the road as a pedestrian more difficult.

Schools

The safety around schools was identified as a problem, particularly the Geraldine Primary School, which has its main entrance onto Cox Street. This is the State highway route, although there is a pedestrian crossing over Cox Street. The other streets around the primary school, such as Wilson Street, are all very wide and do not provide dedicated protected walking facilities for children. **Figure 4.8**[17] illustrates the wide crossing width for pedestrians, and the absence of dropped kerbs and pedestrian refuges.

Figure 4.8 Wilson Street primary school access

The pedestrian access to Geraldine High School through Kennedy Park and over the river was also identified as an area for improvement.

4.4 Amenity problems

Talbot Street has a place function as the main shopping street, but also a movement function as part of the State highway route through town. These competing outcomes sometimes mean that it achieves neither of these functions well.

4.5 Mapping the problems

Figure 4.9 shows the location of the specific problems discussed above. Some problems, such as speed limits apply to the whole area and are not located on the map. The Orari River Bridge is also not shown on the map but is located 5.2km to the north of location 7.

[17] Source: Google maps

1	SH79 / Kennedy St intersection
2	Cox St / Talbot St intersection (and parking access)
3	Pedestrian school access
4	Pedestrian domain and pool access
5	Town centre amenity
6	Pedestrian amenity through Kennedy Park
7	Cycle access over river bridge
8	Pedestrian access to Geraldine High School

Figure 4.9 Location of transport problems

5. Vision and objectives

The vision sets the scene for the transport strategy and outlines what the transport system should achieve. By setting the vision and comparing the current performance of the transport system, improvements can be identified.

Chapter 2 describes the strategic context from the national, regional and local documents. The strategic themes from these documents should flow down and inform the vision and objectives for this strategy.

The strategic themes to inform the vision include:

- safety,
- access,
- efficiency,
- integration between land use and transport,
- providing for active modes,
- reducing the environmental impact of the transport system,
- providing for tourism; and,
- providing for efficient movement of freight.

The themes were tabled at the stakeholder workshop to understand which themes the community representatives felt were most important. Each workshop participant was given four votes that could be used in any way across the eight themes. **Figure 5.1** shows the results of the voting process, and that the top four themes were providing for tourism, safety, providing for active modes and efficient movement of freight. Notably, efficiency and access were considered lower priorities. This makes sense in the local context where there is very little congestion, and aligns to the problems discussion.

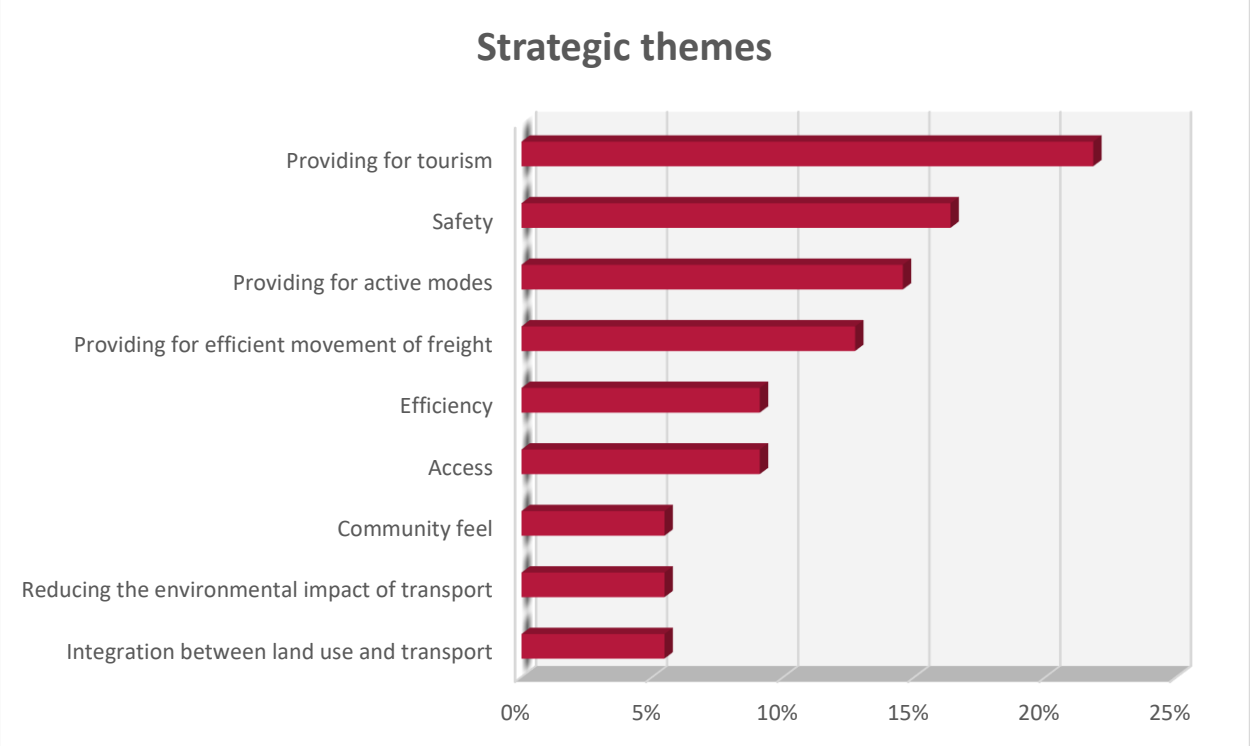

Figure 5.1 Community prioritisation of strategic themes

The vision and objectives were developed based on the review of the relevant strategic document, and the feedback received through the workshop.

Strategic vision for Geraldine's transport system
The Geraldine transport system provides safe access for all types of travel, and promotes economic growth by enabling tourism and freight.

Objectives are brief statements that set out the intended goals that will help achieve the vision. Four objectives have been identified to align with the elements of the vision.

Objectives of Geraldine's transport strategy
Safe – a transport system where there are no deaths or serious injuries
Nobody should expect to be injured or lose their life from using the transport system. The crash record in Geraldine demonstrates there has been a relatively low level of harm on the transport network (no fatalities in over 11 years). Keeping safety as the first objective is to ensure that this continues, and is a focus of any future development.
Access to all types of travel – a transport system that provides a range of options to move around the town
The aim is to provide access to better travel options, specifically walking and cycling. These forms of travel are good for the individual and good for the community. Walking and cycling can be encouraged by providing better infrastructure.
Tourism – a transport system that encourages visitors to spend time and money in Geraldine
Tourism is a key part of the Geraldine economy. Being along the Inland Scenic Route provides a great opportunity to grow this segment of the economy. This can be achieved by encouraging tourists driving through Geraldine, to stop and spend time and money. This can be achieved through offering services and facilities, and being an attractive place to spend time.
Freight – a transport system that enables efficient movement of freight
Agriculture and manufacturing are the cornerstone of the local economy. These industries rely on efficient supply chains, including through urban areas.

6. Options and programme development

A useful starting point for determining the improvements that may be required is to identify the priority routes for each mode of transport, together referred to as the road hierarchy. A priority route is where a particular mode is encouraged by either improving the facilities along the route to make it safer, faster or easier, or to discourage the use of other modes of transport by making it slower or less convenient.

In Geraldine, the relevant modes of transport are walking, cycling and vehicular (cars and freight). The road hierarchy has been identified for the preferred long term outcome, and is shown in **Figure 6.1**. It is noted that this would require a change to the One Network Road Classification.

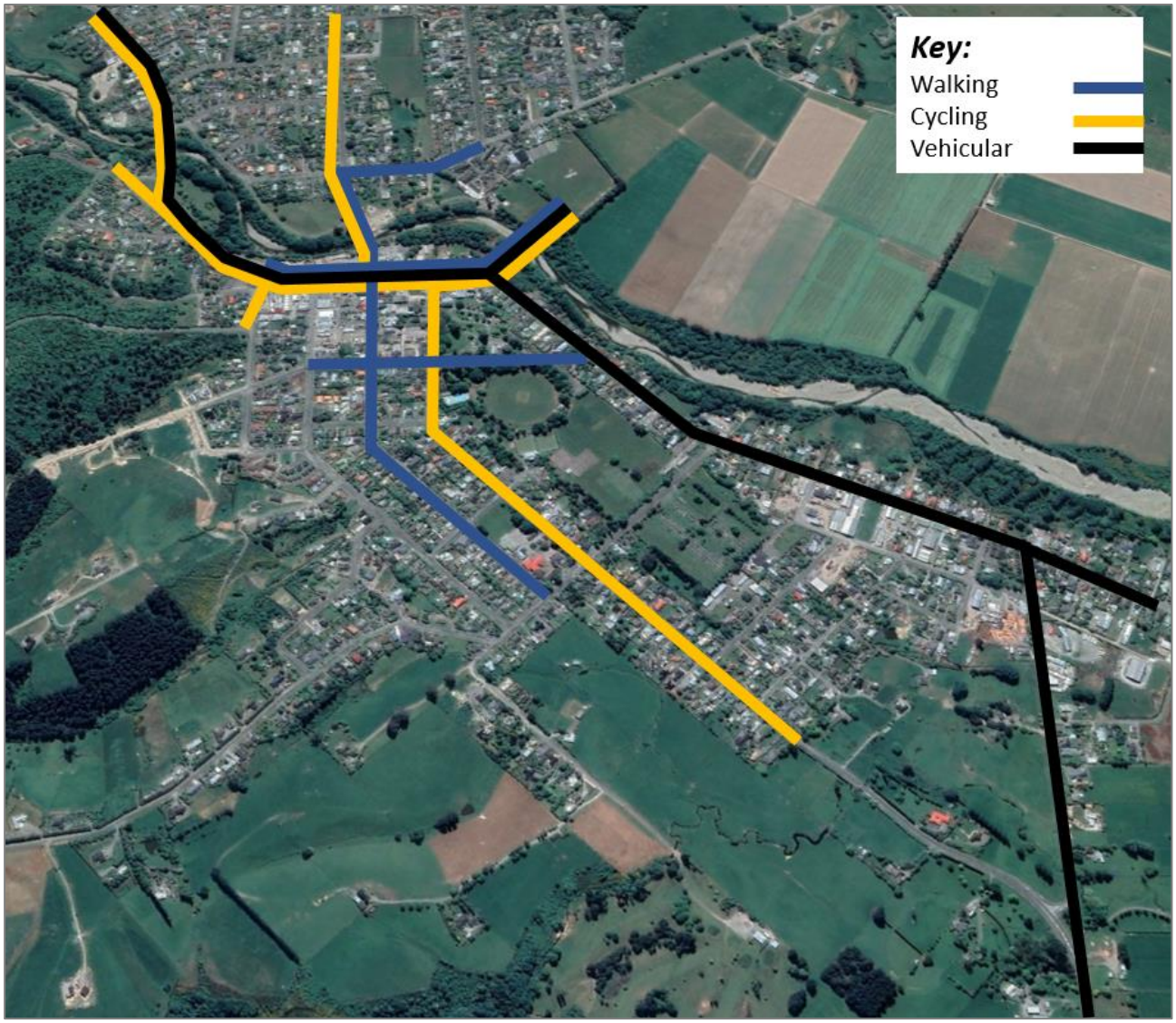

Figure 6.1 Road hierarchy

The walking route has been identified to link the primary school and the high school through the centre of town via the pedestrian bridge over the Waihi River. This has been selected as the preferred route as it takes school children away from the main traffic streets to improve safety. It is also the most direct route through town, and doubles as access to the main shopping and employment area. The east-west routes are along Talbot Street, the main shopping street, and along Hislop Street to connect the domain and swimming pool to the walking route.

It is proposed to make Talbot Street the main vehicle route through Geraldine. This will:

- bring all through traffic onto one route through town;
- allow for Cox Street to be prioritised for other purposes;
- move the main traffic route away from sensitive areas such as the primary school, the domain and swimming pool where there is a lot of pedestrian activity and associated parking;
- enables the two problem intersections, SH79/Kennedy Street and Talbot/Cox Street, to be redesigned to provide for safer and more efficient movements; and,
- be a better match with the land use, as there is more commercial and industrial activity off Talbot Street, whereas Cox Street is primarily residential.

Moving the traffic priority route to Talbot Street means that Cox Street can be prioritised for cyclists. This is consistent with the Timaru District Council Active Travel Strategy. The main cycle route has been extended to travel through Kennedy Park to provide better facilities for high school students to cycle to school and to connect the northern and southern ends of the town over the Waihi River. The cycle route is continued along George Street to link in the northern residential areas. There are also some small offshoots to connect into the recreational cycle tracks.

In the future it is anticipated that there will be a secondary bridge over the Waihi River linking from Talbot Street to a development to the south of Orari Station Road. It is likely that the connection would be required as part of the development of the site, and may not be a cost for the Council. The form of the bridge, whether it provides for just walking and cycling or vehicles as well, will be determined when the area is developed.

6.1 Walking improvements

To achieve the road use hierarchy, the priority route requires intersection improvements to upgrade pedestrian facilities. At some intersections there are no dropped kerbs, and there are very wide crossing widths without any protection. It is also recommended that attention is given to the four intersections that surround the primary school, and improving the north south connection through the town. Consideration should be given to the smoothness of footpath surfaces through asset management planning to provide better for the elderly and use of scooters.

Figure 6.2 illustrates the location of the recommended walking improvements, the references relate to. The options are assessed in Appendix C.

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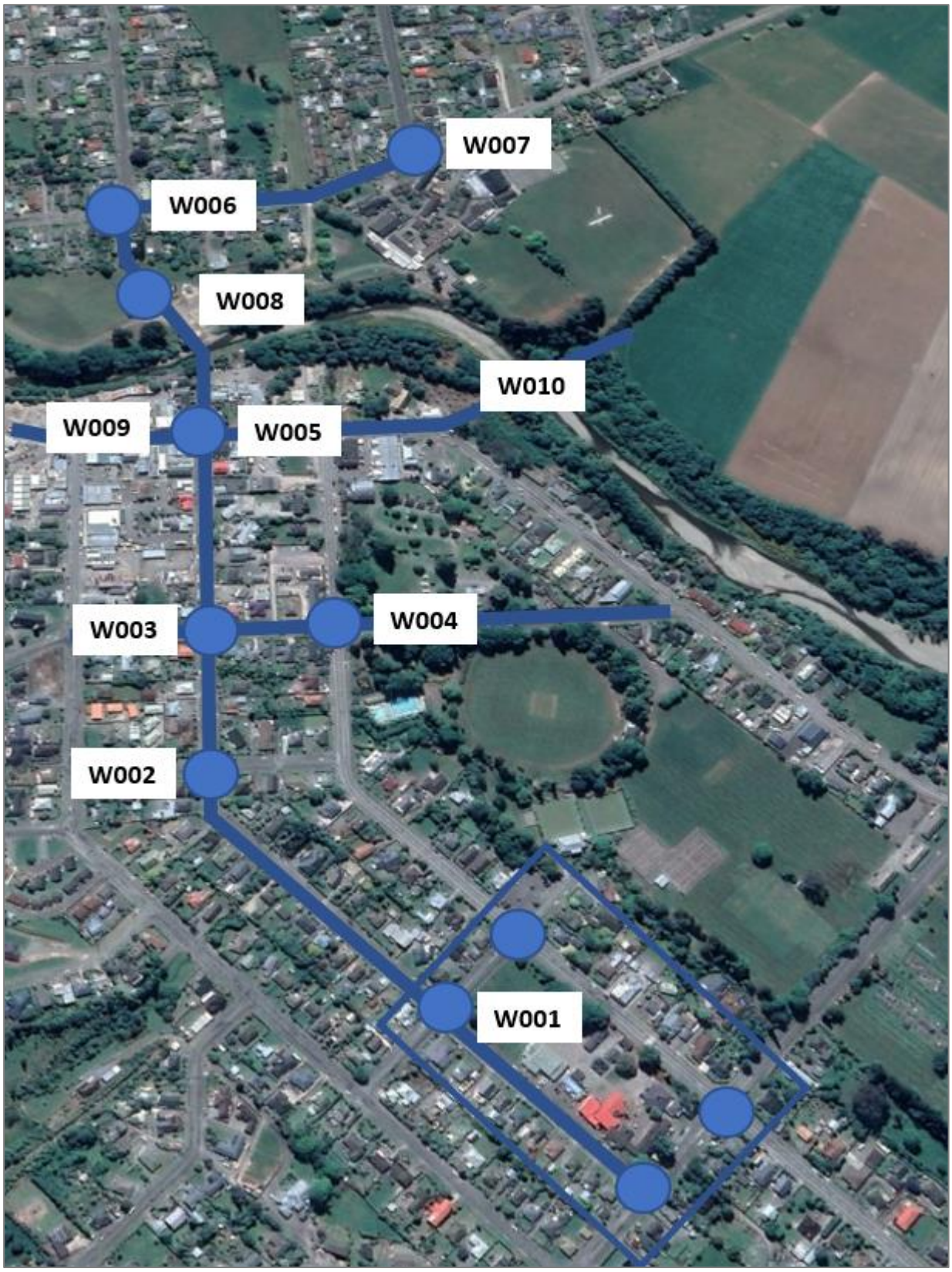

Figure 6.2 Walking improvements

Table 6.1 Walking improvements description

Walking improvements			
Project ID	**Location**	**Description**	**Issue**
W001	Geraldine Primary School Pedestrian Upgrade (Cox St/Wilson St/Huffey St/Wright St)	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands	Poor pedestrian access to the primary school
W002	Lewis St/Wilson St	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands	Poor pedestrian access to the primary school
W003	Wilson St/Hislop St	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands	Poor pedestrian access to the primary school
W004	Cox St/Hislop St	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands. A pedestrian crossing	Poor pedestrian access to the domain and swimming pool
W005	Wilson St/Talbot St	Improved pedestrian crossing, and traffic calming	Poor north south connection through shopping street
W006	Mckenzie St/George St	Improved pedestrian crossing and access to Kennedy Park	Poor north south connection
W007	Mckenzie St/Campbell St	Improved pedestrian access to the High School	Poor pedestrian connection to the High School
W008	Kennedy Park pedestrian connection	Improved footpath and lighting	Poor pedestrian connection
W009	Talbot Street	Raised pedestrian platforms on Pine St, Peel St, Wilson St	Current priority is for cars, this transfers some priority to pedestrians and also acts to slow vehicle speeds
W010	Talbot Street to Orari Station Road	A proposed future bridge connection to a development area (may be walk, cycle and vehicle)	Provide additional capacity over Waihi River (likely to be required from developer - no cost for the Council)

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6.2 Cycling improvements

There are currently no dedicated cycle facilities in Geraldine. This strategy is consistent with the earlier Timaru District Council Active Transport Strategy, however, it also links into recreational routes, and connects the High School and the northern end of town to the southern end with better facilities to encourage greater uptake of cycling.

Figure 6.3 illustrates the location of the recommended improvements, the references relate to **Table 6.2**. The options are assessed in Appendix C.

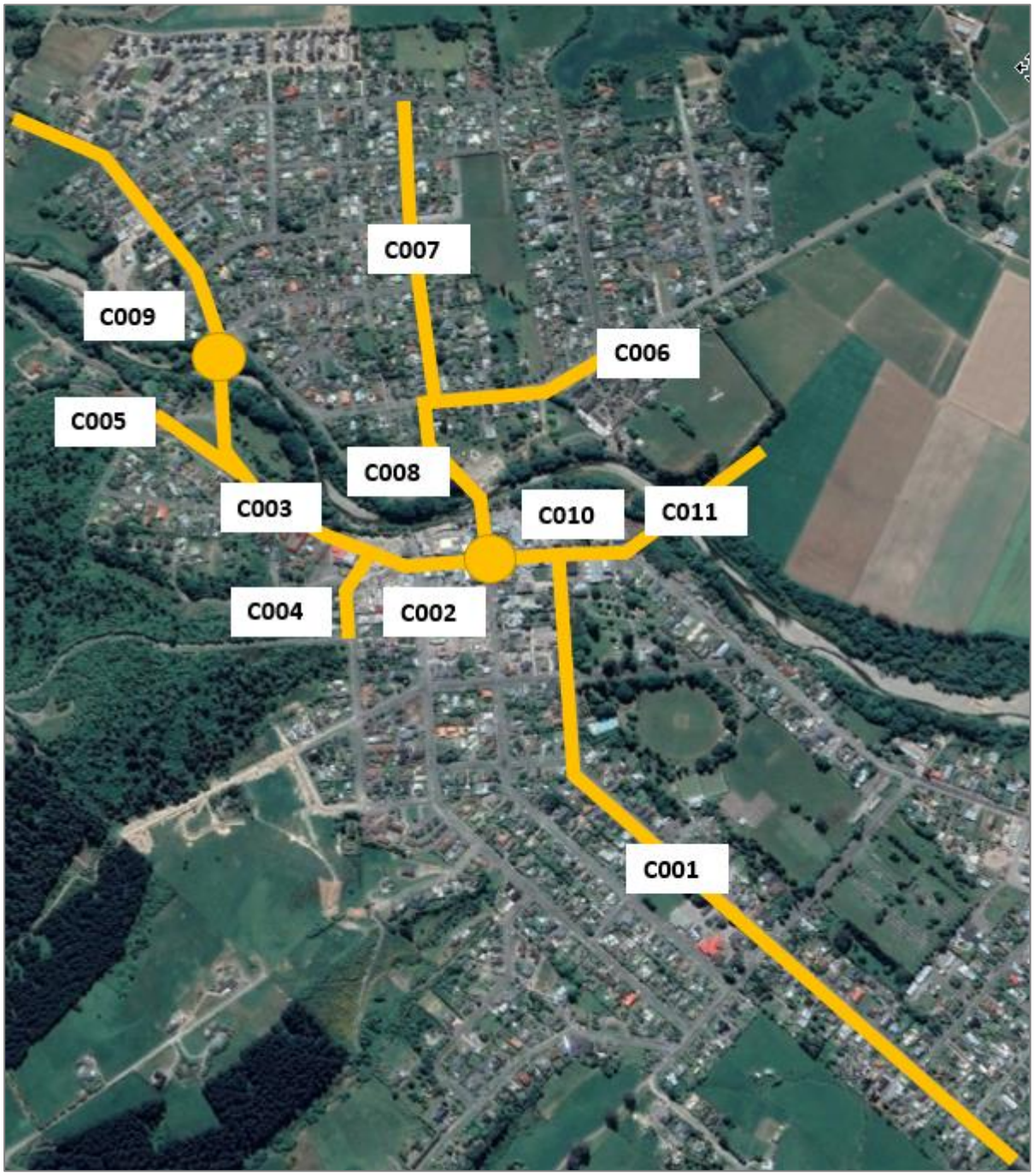

Figure 6.3 Cycling improvements

Table 6.2 Cycling improvements description

Cycling improvements			
Project ID	**Location**	**Description**	**Issue**
C001	Cox St (from beginning of the residential area in the south to Talbot Street)	On-street cycle lanes	No cycle protection
C002	Talbot Street (from Cox Street to Rangitata Orari Bridge Highway)	On-street cycle lanes	No cycle protection
C003	Rangitata Orari Bridge Highway (From Talbot Street to Woodbury Street)	On-street cycle lanes	No cycle protection
C004	Jollie Street (Rangitata Orari Bridge Highway to Totara Street)	On-street cycle lanes to connect on-street routes to recreational routes	No cycle protection or connectivity to recreational routes
C005	Tripp Street (to Bridge Street)	On-street cycle lanes to connect on-street routes to recreational routes	No cycle protection or connectivity to recreational routes
C006	McKenzie Street (from Kennedy Park to the High School)	On-street cycle lanes	No cycle protection to the High School
C007	George Street (from McKenzie Street to Connolly Street)	On-street cycle lanes	No cycle protection
C008	Kennedy Park	Off-street cycle lane, lighting, signage	No cycle facilities
C009	Waihi River Bridge	Cycle warning signage	Limited space for cyclists causing a safety risk
C010	Wilson Street (at intersection with Talbot Street)	Cycle parking and crossing facilities	No cycle facilites to safely cross Talbot Street, and no parking in the central area
C011	Talbot Street to Orari Station Road	A proposed future bridge connection to a development area (may be walk, cycle and vehicle)	Provide additional capacity over Waihi River (likely to be required from developer - no cost for the Council)

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6.3 Network improvements

Parking

Parking was a common theme at the stakeholder workshop, specifically the availability of all-day employee parking, and parking for larger vehicles passing through town such as cars with caravans or boats.

Time restrictions are currently in place along Talbot Street, Cox Street (between Talbot and Helsop Street), Wilson and Peel Streets (northern half of the block between Talbot and Helsop Street). The remainder of the town has no time restrictions and is available for all day parking. There are also free off-street all-day car parks on Peel Street and Cox Street. That means that all day parking is available within 130 metres of the main shopping street. Indicatively there is plenty of on-street capacity in this area, however, this should be confirmed with a parking study. It is suggested that the perceived problem does not justify significant investment.

It was suggested at the workshop that parking could be provided by converting (part of) Kennedy Park to provide for employee parking, and also long vehicle parking. This solution will divert southbound traffic off the main route, and would require northbound traffic to drive through the main shopping street and loop back to find the car park, and walk into town.

An alternative option for northbound traffic is to direct long vehicles into Hislop Street between Talbot Street and Cox Street. The street is very wide and has very few vehicle crossings that interrupt the kerb line for parking. The area is relatively close to the central area and does not require a diversion or significant investment. Traffic can be directed to the location by signage from both Cox Street and Talbot Street.

Long vehicle parking for southbound traffic could be provided for on Pine Street or on Rangitata-Orari Bridge Highway opposite the Z petrol station where there are long stretches of kerb side parking.

Speed limits

A central area lower speed limit is recommended to improve the safety of the area for all users, and also to improve the amenity of the shopping area for locals and for tourists. It contributes to moving the priority of the area from a vehicle dominated area to a people area. The pedestrian platforms recommended on the side streets of Talbot Street also contribute to reducing the speed environment.

A speed limit of either 30 or 40km/hr is recommended. The extents of the speed limit would be confirmed through the speed setting process, and is subject to public consultation. It is recommended that threshold treatment are installed at the location that the speed limit change to signify the change in speed environment and encourage drivers to slow down. The location of the thresholds should be positioned to consider changes in driver behaviour such as rat running where drivers take different routes to avoid the new speed limit. The other main consideration is the number of speed limit changes (and signage) that are required.

The green shaded area in **Figure 6.4** indicates an approximate lower speed limit area that covers the retail area, access to the domain and swimming pool. The speed limit is extended along Talbot Street for some length in the anticipation that land use is expected to change to more commercial over time.

Intersection performance

Intersection performance is forecast to be at acceptable levels of service until 2045. It is recommended that the intersection performance is assessed again in the medium term to confirm the forecast performance and to determine whether any interventions are required in the long term.

State highway route

The State highway route (79) bisects Geraldine. It is strategically important as a main tourist route, and significantly contributes to the local economy. However, at the same time it is detrimental to the place value of the main shopping street. At the southern end of Geraldine's shopping street, State highway 79 turns into Cox Street and Talbot Street continues as an arterial route providing access to Winchester, Temuka and Timaru. It is proposed to move the State highway onto Talbot Street in order to have just one major arterial through the township. A key outcome is to reduce the turning movements from Talbot Street into Cox Street for traffic following the State highway to Wanaka or Queenstown. This is seen as a congestion point during peak periods.

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Abley were engaged by TDC in 2018 to undertake a modelling analysis[18] of the impact of rerouting SH79 onto Talbot Street. The study found that even in 2028 the intersections through the town were operating at acceptable levels of service (no more than an average of 28 seconds of delay per vehicle). The worst performing movements were right-hand turn movements conflicting against high volume straight through movements.

In 2028, the Cox Street / Talbot Street intersection experiences average delays of no more than 15 seconds per vehicle. By 2045, the delays increase up to 21 seconds per vehicle. This level of delay is considered to be acceptable to most users, however, as part of this strategy the change to the network is recommended based on wider considerations than traffic delay alone.

Benefits

- It provides a clear road hierarchy, bringing all through traffic onto a single route. This means that Cox Street can be allocated for other priorities, such as cycling. This is consistent with the strategy outlined in this document, and also the TDC Active Transport Strategy.
- There are sensitive land uses along Cox Street. The primary school, domain and swimming pool are all accessed off Cox Street. During busy periods there are conflicts between high through traffic volumes, and people accessing these locations, either walking or parking.
- Further to the above, Cox Street is only residential whereas Talbot Street has more commercial and industrial land use, consistent with an arterial route.
- Improved intersection form at each end of Cox Street. The current intersection form at Talbot Street creates an unnecessary high right-turning movement. The intersection of Kennedy Street and Cox Street is also not optimal, and could be simplified with the proposed alignment.
- The benefit to the performance of the network is the improved operation of the Talbot Street / Cox Street intersection by reducing the opposing turning movements. This removes the need for any intersection control, such as a roundabout or signals, that may be required in the long term to provide for these turning movements.
- It will provide a better-quality access for heavy vehicles to the industrial area on Majors Road by the upgrade of Kennedy Street.

Disbenefits

- The increased traffic on Talbot Street and Kennedy Street will likely be objected to by the current residents along the route.
- Some of the turning movements from the Talbot Street / Cox Street intersection will be transferred to the Talbot Street / Kennedy Street intersection.
- Public facilities are provided on Cox Street and may attract people along this route, or the facilities may need to be moved onto the new route.

Implementation

The project is expected to be in the order of $2.5 - $3.75M. This will require a business case to justify the investment, ensure appropriate options have been considered and to provide detailed design. No cost benefit analysis has yet been undertaken for this project. The benefits and disbenefits discussed above are generally strategic in nature, a more in-depth study is required to quantify the tangible and intangible value of the project.

Although the project proposes to move the State highway, which is the jurisdiction of the NZ Transport Agency, it is likely that the costs will be met by TDC as the outcomes sought are for better urban outcomes for Geraldine rather than the performance or safety of the State highway. Regardless of the funding arrangement, TDC and the NZ Transport Agency will need to come to an agreement to move the State highway before the project should proceed into detailed design.

[18] SH79 Rerouting and Upper Orari Bridge Option Analysis, Abley, 2018

Upper Orari River Bridge

The community has also discussed increasing the capacity of the one-way Upper-Orari River Bridge to provide one lane in each direction. This would also provide an opportunity to provide for improved pedestrian and cycling connection, where currently there is none. Abley assessed two options to improve the capacity of the bridge with the use of a SIDRA transport model[19]. One option was to signalise the bridge, the other to provide an extra one-way bridge to provide for traffic in each direction (as the current bridge has significant remaining design life).

The modelling found that the current average delay is only 4.2 seconds per vehicle in 2018. In the future forecast year of 2028 this increased to 10.5 seconds and in 2045 it significantly increased out to 154.2 seconds of delay on average. This illustrates that there is likely to be a significant capacity problem in the future that needs to be addressed.

By signalising the bridge, average delay could be reduced to 78.5 seconds per vehicle in 2045. However, in the medium term at 2028 this would be a worse situation than without the traffic signals with 36.8 average seconds of delay per vehicle. Further to the failure to significantly relieve congestion, the signal options will retain some safety risk as traffic signals in the remote location will be unexpected to many users. This option was therefore discounted.

The option to increase the capacity with an additional one-way bridge means that there would be no delay at the bridge location, and would remove the safety risk. A high level BCR assessment indicates that the increased bridge capacity would have an approximate BCR of 2.7 and is therefore a viable long-term investment.

The upgrade of the Upper Orari Bridge is the jurisdiction of the NZ Transport Agency and will be funded from State highway improvements activity class. The project will require a business case to proceed through NZ Transport Agency's funding and approvals processes. However, the business case will include TDC as a key stakeholder in the development of the project.

Figure 6.4 illustrates the location of the recommended improvements, the references relate to **Table 6.3**. The options are assessed in Appendix C.

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[19] SH79 Rerouting and Upper Orari Bridge Option Analysis, Abley, 2018

Figure 6.4 Network improvements

Table 6.3 Network improvements description

Network improvements			
Project ID	**Location**	**Description**	**Issue**
N001	Kennedy / Cox Street intersection	To design the main SH route through Kennedy Street rather than onto Cox Street. Requires intersection upgrade to a proper t-intersection	The change in road hierarchy requires SH traffic to travel along Kennedy Street. Intersection form does not provide for this
N002	Kennedy Street upgrade	Upgrade and widen Kennedy Street to provide for SH traffic	Kennedy Street is only local road quality and is not fit for SH traffic
N003	Kennedy / Talbot Street intersection	Upgrade the intersection to provide for higher turning movements from the new SH route	The intersection is not designed for the additional traffic flow down Kennedy Street
N004	Cox / Talbot Street intersection	Upgrade intersection to provide for the new priority for straight through traffic	Intersection is design under current priorities, may need to disincentivise traffic travelling down Cox Street
N005	Central shopping area	Establish a lower speed limit area in the central shopping area	Current speed limit prioritises vehicle movement through the shopping street
N006	Hislop Street	Provide large vehicle parking (northbound)	Current parking in central area doesn't not provide for long vehicles such as cars towing a boat
N007	Rangitata Orari Bridge Highway	Provide large vehicle parking (southbound)	Current parking in central area doesn't not provide for long vehicles such as cars towing a boat
N008	Upper Orari River Bridge	Provide an additional lane bridge to increase capacity and safety	The current one-way bridge creates some congestion and a high crash record
N009	Central shopping area	A parking study to better understand the needs, deficiencies and potential improvements.	A lack of understanding of parking supply and demand in the central shopping area
N010	Talbot Street to Orari Station Road	A proposed future bridge connection to a development area (may be walk, cycle and vehicle)	Provide additional capacity over Waihi River (likely to be required from developer - no cost for the Council)
N011	Whole network	Reassess the performance of the network to determine when improvements are required	Intersection performance is forecast to deteriorate in 2045

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6.4 Improvements programme assessment

An assessment of the improvements programme is contained in Appendix C. The options are assessed against the objectives of the strategy, and broad assessment criteria commonly used in a business case (that is feasibility, value for money, social and environmental impact and stakeholder impact). An indicative timing for implementation and cost range estimates[20] are also included.

The programme has the strongest alignment to the safe and access objectives across walking, cycling and network improvements. The tourism objective is achieved relatively well across all improvements, however, the freight objective is only achieved from the network improvements.

There is a good alignment against the assessment criteria, scoring either a high or medium alignment. Some options received a medium alignment where the scale of the project might be difficult to fund or justify (value for money). The feasibility has been assessed as a medium alignment where there is a trade off against another mode of transport. The new State highway route scored a medium alignment for the social and environmental impact criteria as the residents on Kennedy Street will experience a negative impact from the additional traffic, however, there will be a positive impact for residents on Cox Street with less traffic. Kennedy Street will also have to be widened to accommodate State highway traffic.

The implementation of the programme has been grouped into short (0 – 3yrs), medium (3 – 10yrs) and long term (10 – 30yrs) periods. The options have been phased based on the scale of the project, considering that funding is yet to be allocated to these initiatives, along with when the real need occurs and interaction with other options in the programme. The walking improvements are phased to be delivered in the short-to-medium term, and can be delivered at relatively low cost. The same applies to the cycling improvements, however, these are more phased towards the medium term. The network improvements are mostly phased to be delivered in the long term apart from lower cost options such as a reducing the speed limit and parking improvements. The Upper Orari River Bridge project is expected to be funded by the NZ Transport Agency, and the State highway Rerouting project will be funded by the TDC but will require the support of the NZ Transport Agency to proceed.

Table 6.4 contains a summary of costs for each improvement category and implementation phasing. These cost ranges are highly indicatively, and have not been developed through a design process, but are to give an indication of the scale of investment required over time.

Table 6.4 Improvements programme cost summary

Improvements	Short term	Medium term	Long term
Walking	$125,000 - $250,000	$200,000 - $400,000	
Cycling	$50,000 - $95,000	$175,000 - $365,000	
Network	$75,000 - $200,000	$45,000 - $80,000	$2,700,000 - $4,050,000
Total	**$250,000 - $545,000**	**$420,000 - $845,000**	**$2,700,000 - $4,050,000**

[20] Based on high level estimates, not a detailed cost breakdown

7. Conclusion

A programme of interventions has been identified that will enable the achievement of the strategic vision, that is:

The Geraldine transport system provides safe access for all types of travel, and promotes economic growth by enabling tourism and freight.

The vision can be achieved by prioritising a route for each mode of transport, and improving the infrastructure to ensure that each mode safe and efficient. These improvements must be made with a strong consideration of the impact on the place value of Geraldine to ensure that it continues to be a popular place for tourists to visit.

Following the approval of the strategy, individual interventions will require their own funding approvals, design and costing, and public consultation. The State highway Rerouting project will require the support of the NZ Transport Agency, and will require a full business case to be developed. The Upper Orari River Bridge Project is the responsibility of the NZ Transport Agency, but will involve TDC as a key stakeholder.

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Appendix A
Workshop notes - transport problems

Problems identified in the workshop
It is dangerous crossing the main road with cars/vans parked on the street
Conflict along the central street between the movement function of the State highway and the place function of the shopping street
Traffic noise and safety concerns throughout town
Safety concerns at the entrance to the primary school
School children crossing either way from the river
Camber of the road at Z petrol station
All day parking availability concerns
Kennedy street – optical illusion, 70km/hr. Open road sign then giveaway, non-local very dangerous.
No cycle lanes on Highway
Not enough parking for boats and trucks
No parking for the pool
Intersection of Highway 79 and Cox Street
Danger to students and families having to cross the road to primary school, traffic is moving to fast
Problems with walking/mobility scooter/scooter amenity
Need better cycling routes for urban cycling and also safe links to allow cyclists to get out of town to leisure routes.
Need dedicated parking for campers/large vehicles outside main street, Kennedy Park or Nislop Street.
Want a stop sign at corner of Talbot and Cox Street beside subway to give right of way to SH79
Parking concerns outside AOK clothing -> get rid of 2
In summer lots of people park on both sides of Cox Street to use the domain playground and swimming pool and find it hard to cross the road.
People crossing from Cox Street carpark across to toilets is currently difficult due to the speed of traffic
Heavy vehicles parking in street to drop off to supermarket.
Exiting from Café Verde carpark for car cars to get out on congested intersection
Don’t want any less parking in CBD for Talbot Street, Wilson Street or Peels street
Templer Street to Woodbury Road drainage problems
The one-way bridge at Orari bridge impacts the flow of traffic through town. There is big congestion during holiday and accidents have occurred on this bridge as well

Appendix B
Workshop notes - improvement options

Ideas proposed in the workshop
At the intersection of Talbot/Cox Street, remove the pedestrian crossing from the intersection and add two new mid-block crossings either side.
Cycling hierarchy is required, routes and links need to be provided.
Pedestrian (footpath) hierarchy required
Use the whole Timaru District Council Cox/Hillsop street property for car parking
Require State Highway Pedestrian crossing points.
Geraldine to Winchester track and trail link on top of the stopbank
New bridge link between Mackenzie Street and Talbot Street
Close the gate at the primary school on Cox Street
Use Kennedy Park as car parking
Reduce the speed limit to 30km/hr in the town centre
SH79 single lane bridge upgrade. Upgrading with signals and two-lanes.
New marked parking for camper vans and cars towing boats near the CBD but off Talbot Street.
Remove 2 carparks directly outside AOK Clothing
Improved public transport system building on community trust, perhaps using an ‘on demand’ system.
Public transport from Geraldine to Timaru via Temuka for commuters.
Traffic calming and speed management, 30km/hr zone from Z energy to the 1st block on Cox Street for Talbot Street.
Need central all-day free carparking for workers
Changing route of SH79 to continue down Talbot Street and turn at Kennedy rather than Cox Street.
Exiting Café Verde carpark is hard, maybe open up land at the rear to exit through the village inn carpark.
Traffic down Talbot Street is turning into Cox Street (right-turn) has right of way.
Stop sign outside at east of Talbot Street outside subway
Future high-school bus parking off McKenzie Street instead of Kenny Park side parking
Crossing opportunity for pedestrians between river walk heading to Talbot Street
SH79 Talbot/Cox Street, SH doesn’t have priority at the intersection whereas Cox does.
Transport mode conflicts on SH79 Talbot Street commercial area. Pedestrians, cyclists, crossing points, HCVS, agricultural vehicles all conflict, introduce a slow 30km area here.
At the SH79/Route 72 intersection, the SH doesn’t have priority.
SH79 Upper Orari Bridge is one-way, longer term this needs two-lanes. This is on NZTA’s radar but is still 10+ years away from the planning stage.
Explore use of the plantings, speed controls, ledges etc, to influence traffic noise, safety, general ambience
Examine the potential to use traffic restrictions to influence safety, noise and movements everywhere.
Move the main entrance to the primary school to make it safer.
Speed limit reduction from Mackenzie St Road Bridge through past school (40km/hr)
Open up pine street to public parking, at present 2 businesses use it as own private carparks
A network of high quality main thoroughfare footpaths connecting main suburbs with the CBD, schools, rest homes and early childhood centres.

Appendix C
Programme assessment

Walking improvements				Objectives				Assessment critera				Implementation (term)			
Project ID	Location	Description	Issue	Safe	Access	Tourism	Freight	Feasibility	Value for money	Social & environmental impact	Stakeholder impact	Short	Medium	Long	Cost
W001	Geraldine Primary School Pedestrian Upgrade (Cox St/Wilson St/Huffey St/Wright St)	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands	Poor pedestrian access to the primary school	Y	Y							Y			$
W002	Lewis St/Wilson St	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands	Poor pedestrian access to the primary school	Y	Y							Y			$
W003	Wilson St/Hislop St	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands	Poor pedestrian access to the primary school	Y	Y							Y			$
W004	Cox St/Hislop St	Improvement to pedestrian crossing facilities, dropped kerbs and pedestrian refuge islands. A pedestrian crossing	Poor pedestrian access to the domain and swimming pool	Y	Y	Y						Y			$
W005	Wilson St/Talbot St	Improved pedestrian crossing, and traffic calming	Poor north south connection through shopping street	Y	Y	Y							Y		$
W006	Mckenzie St/George St	Improved pedestrian crossing and access to Kennedy Park	Poor north south connection	Y	Y								Y		$
W007	Mckenzie St/Campbell St	Improved pedestrian access to the High School	Poor pedestrian connection to the High School	Y	Y							Y			$
W008	Kennedy Park pedestrian connection	Improved footpath and lighting	Poor pedestrian connection	Y	Y	Y							Y		$$
W009	Talbot Street	Raised pedestrian platforms on Pine St, Peel St, Wilson St	Current priority is for cars, this transfers some priority to pedestrians and also acts to slow vehicle speeds	Y	Y	Y							Y		$$
W010	Talbot Street to Orari Station Road	A proposed future bridge connection to a development area (may be walk, cycle and vehicle)	Provide additional capacity over Waihi River (likely to be required from developer - no cost for the Council)	Y	Y									Y	-

Key
$ projects under $50,000
$$ project cost of $50,000-$150,000
$$$ project cost $150,000-$1M
$$$$ greater than $1M
High alignment with criteria
Medium alignment with criteria
Y = Yes

Cycling improvements				Objectives				Assessment critera				Implementation (term)			
Project ID	Location	Description	Issue	Safe	Access	Tourism	Freight	Feasibility	Value for money	Social and environmental impact	Stakeholder impact	Short	Medium	Long	Cost
C001	Cox St (from beginning of the residential area in the south to Talbot Street)	On-street cycle lanes	No cycle protection	Y	Y	Y						Y			$
C002	Talbot Street (from Cox Street to Rangitata Orari Bridge Highway)	On-street cycle lanes	No cycle protection	Y	Y	Y						Y			$
C003	Rangitata Orari Bridge Highway (From Talbot Street to Woodbury Street)	On-street cycle lanes	No cycle protection	Y	Y	Y							Y		$ - $$
C004	Jollie Street (Rangitata Orari Bridge Highway to Totara Street)	On-street cycle lanes to connect on-street routes to recreational routes	No cycle protection or connectivity to recreational routes	Y	Y	Y							Y		$
C005	Tripp Street (to Bridge Street)	On-street cycle lanes to connect on-street routes to recreational routes	No cycle protection or connectivity to recreational routes	Y	Y	Y							Y		$
C006	McKenzie Street (from Kennedy Park to the High School)	On-street cycle lanes	No cycle protection to the High School	Y	Y	Y						Y			$
C007	George Street (from McKenzie Street to Connolly Street)	On-street cycle lanes	No cycle protection	Y	Y	Y							Y		$
C008	Kennedy Park	Off-street cycle lane, lighting, signage	No cycle facilities	Y	Y	Y							Y		$$
C009	Waihi River Bridge	Cycle warning signage	Limited space for cyclists causing a safety risk	Y	Y	Y							Y		$
C010	Wilson Street (at intersection with Talbot Street)	Cycle parking and crossing facilities	No cycle facilites to safely cross Talbot Street, and no parking in the central area	Y	Y	Y							Y		$
C011	Talbot Street to Orari Station Road	A proposed future bridge connection to a development area (may be walk, cycle and vehicle)	Provide additional capacity over Waihi River (likely to be required from developer - no cost for the Council)	Y	Y									Y	-

Network improvements				Objectives				Assessment critera				Implementation (term)			
Project ID	Location	Description	Issue	Safe	Access	Tourism	Freight	Feasibility	Value for money	Social and environmental impact	Stakeholder impact	Short	Medium	Long	Cost
N001	Kennedy / Cox Street intersection	To design the main SH route through Kennedy Street rather than onto Cox Street. Requires intersection upgrade to a proper t-intersection	The change in road hierarchy requires SH traffic to travel along Kennedy Street. Intersection form does not provide for this	Y			Y							Y	$$$
N002	Kennedy Street upgrade	Upgrade and widen Kennedy Street to provide for SH traffic	Kennedy Street is only local road quality and is not fit for SH traffic	Y			Y							Y	$$$$
N003	Kennedy / Talbot Street intersection	Upgrade the intersection to provide for higher turning movements from the new SH route	The intersection is not designed for the additional traffic flow down Kennedy Street	Y			Y							Y	$$$
N004	Cox / Talbot Street intersection	Upgrade intersection to provide for the new priority for straight through traffic	Intersection is design under current priorities, may need to disincentivise traffic travelling down Cox Street	Y	Y	Y	Y							Y	$$$
N005	Central shopping area	Establish a lower speed limit area in the central shopping area	Current speed limit prioritises vehicle movement through the shopping street	Y	Y	Y						Y			$$
N006	Hislop Street	Provide large vehicle parking (northbound)	Current parking in central area doesn't not provide for long vehicles such as cars towing a boat			Y	Y						Y		$
N007	Rangitata Orari Bridge Highway	Provide large vehicle parking (southbound)	Current parking in central area doesn't not provide for long vehicles such as cars towing a boat			Y	Y						Y		$
N008	Upper Orari River Bridge	Provide an additional lane bridge to increase capacity and safety	The current one-way bridge creates some congestion and a high crash record	Y	Y	Y	Y							Y	(NZTA)
N009	Central shopping area	A parking study to better understand the needs, deficiencies and potential improvements.	A lack of understanding of parking supply and demand in the central shopping area	Y	Y	Y						Y			$
N010	Talbot Street to Orari Station Road	A proposed future bridge connection to a development area (may be walk, cycle and vehicle)	Provide additional capacity over Waihi River (likely to be required from developer - no cost for the Council)	Y	Y									Y	(Developer)
N011	Whole network	Reassess the peformance of the network to determine when improvements are required	Intersection performance is forecast to deteriorate in 2045	Y	Y	Y	Y						Y		$

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