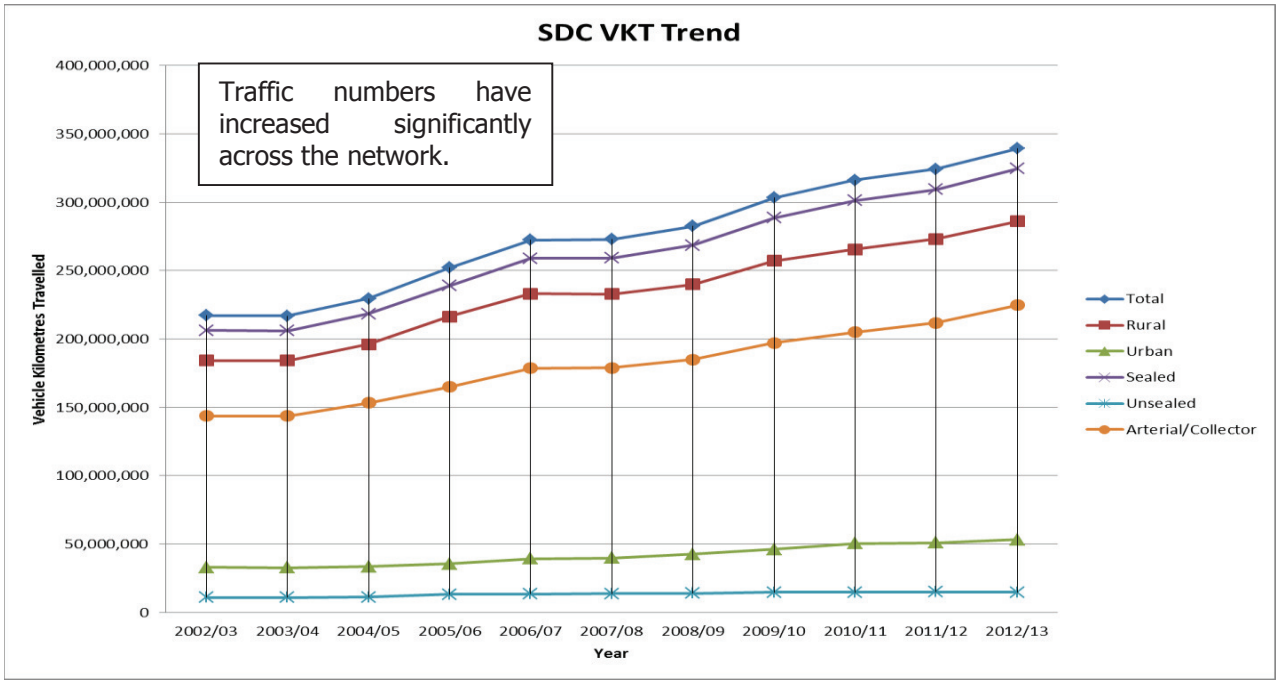
5 Growth and Network Usage

Selwyn is the country's fastest growing Territorial Authority (TA) according to the 2013 Census results, with the population increasing from 33,000 to 45,000 people since the 2006 census. This rate of growth is significantly above that projected under Statistics New Zealand's "high growth" scenario.

By way of example there has been a 44% increase in Selwyn based commuter traffic to and from Christchurch. In our rural areas major new dairy processing plants are generating in excess of 500 - 1000 tanker trips a day on our roads from servicing an expanding dairy industry. In addition the Rolleston industrial area near Christchurch is expected to double in size to over 300 hectares, including accommodating 2 inland (freight) ports. Traffic growth on our network is increasing by over 5% per annum

As shown in Figure 5.1 below the amount of vehicle kilometres travelled on our roading network has increased 60% in 10 years. The jumps in travel reflect periods of high urban and rural growth that has put more vehicles of all types on the road.

Figure 5.1: Vehicle Kilometres Travelled – Selwyn District



By 2031, Selwyn is expected to have a population in the order of 75,000 people, of which an increasing proportion will be people in older age groups that will have their own transport issues. By 2020 it is expected that traffic volumes will have doubled, focused in the Greater Christchurch area of the district.

Highest growth is planned to occur in the townships of Rolleston, Lincoln and Prebbleton, whilst rural townships like Darfield are also expected to grow in response to an increase in rural based activities.

Due to earthquake resettlement patterns, the districts population is also growing at a faster rate. This is exhibiting trends that are different to what were originally envisaged associated with transport planning. The Land Use Recovery Plan[3] will open up further areas for development. As a result there will be more people and vehicles of all types using our networks in the future that need to be catered for in a safe way. An example of this is an increase in commuter traffic from new residents travelling to and from the city that is adding to safety and congestion issues on the fringe of metropolitan Christchurch, and putting pressure on our more rural arterial roading links and intersections.

Figure 5.2: Selwyn Growth Model 2013

We also expect that central Government funding for all roading activities, including safety and travel demand management will become more constrained. This means more innovative and skilled use of available resources will be needed to enable us to achieve our road safety goals.

However while there will be local issues that will continue to occupy us, we also expect to be affected by some big emerging global issues that will affect the future of Selwyn's road transport network way beyond 2020. These include:

- New transport opportunities (including motorways and public transport)
- New technologies
- Peak oil
- Climate change

[3] A statutory document that directs the greater Christchurch Councils to make changes to district plans and land use planning within certain timeframes to assist in earthquake recovery

6. Strategy Direction

The Strategy's direction relating to the key road safety priorities are based on concerns, opportunities, key challenges, assumptions, and risk. It also looks to integrate the "Safe System" approach (national level) with safety concerns and contributing factors within Selwyn District (local level). This is because what may be considered a significant national problem, may not be entirely relevant to the Selwyn context and vice versa.

The following sections will introduce the aspirational vision, goals, and achievable objectives and documents the key indicators and targets that this strategy will be monitored on. The strategy seeks to blend both national and local issues into a cohesive response to road safety in the district.

6.1 Safer Journeys Safety Priorities

Figure 6.1: Safer Journeys' areas of concern and the Safe System

In early 2010 the National *Safer Journeys to 2020* Road Safety Strategy was released. Over the intervening period the Government will give priority to the 13 national areas of road safety concern. The high concern priorities will be given the most attention.

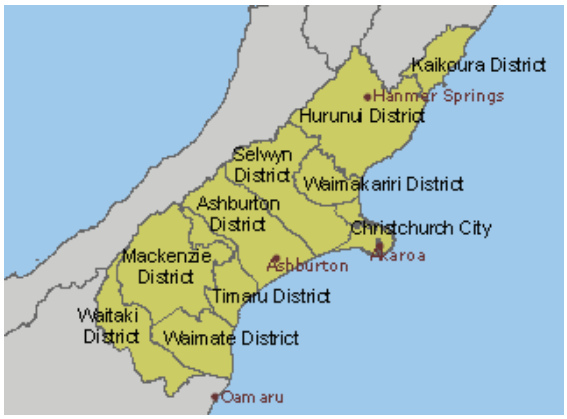
Safer Journeys identifies actions that address these priority areas though a "Safe System" approach. Selwyn supports this approach and the National Strategy but has altered the priorities to reflect regional and district areas of concern as follows.

Source: *Safer Journeys: New Zealand's Road Safety Strategy 2010–2020 (Ministry of Transport)*

AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
Areas of medium concern				
Improving the safety of the light vehicle fleet			✓	✓
Safe walking and cycling	✓	✓	✓	✓
Improving the safety of heavy vehicles	✓	✓	✓	✓
Reducing the impact of fatigue	✓	✓	✓	✓
Addressing distraction	✓		✓	✓
Reducing the impact of high risk drivers		✓	✓	✓
Areas of continued and emerging focus				
Increasing the level of restraint use			✓	✓
Increasing the safety of older New Zealanders	✓	✓	✓	✓

For some priorities (eg motorcycling), complementary action will be taken across all four areas of the Safe System. For others (eg reducing the impact of drink driving or safe roads), more effort would be focussed on one or two of the four Safe System areas.

6.2 Canterbury's Safety Priorities



The current 2012-2042 Regional Land Transport Strategy (RLTS) will be superseded by a new 2015 Regional Land Transport Plan (RLTP). The current joint approach to road safety in the Canterbury region will continue under the current or similar RLTS objective to:

"Increase transport safety for all users"

A Canterbury Road Safety Action Plan has been prepared by the Canterbury Regional Road Safety Working Group[4]. Its main purpose is to provide overarching coordination of road safety initiatives across the region to the common good of road safety, right down to even influencing individual Councils road safety plans.

The plan has also adopted a vision zero approach and **"Will work towards a Safe Road System increasingly free of death and serious injury".**

The plan reinforces the "Safe Systems" approach, and highlights the following challenges:

- State Highways and strategic transport networks
- Communities using the road environment
- Funding and prioritising
- Social cost of road crashes
- Active modes of transport
- Aging population and changing demographics

Both of these documents are reflected in this strategy and the action plans prepared by Selwyn District Council.

6.3 Selwyn's Safety Priorities

Road safety risk analysis[5] work undertaken by NZTA enables us to identify the key areas of concern for Selwyn District. This analysis compares Selwyn's crash data with other Councils across New Zealand, and considers the travel distances (vehicle kilometres travelled or VKT) together with other statistical comparisons to determine how Selwyn compares with other Councils and their communities.

[4] A committee under the Regional Transport Committee

[5] Published as "Communities at Risk Register" by the NZTA

This provides a 'proportional fit or ranking' of road safety concerns; in effect listing Councils from 1 (worst in the category) through to 65 (best in category).

The areas of greatest concern in 2014 were Rural Intersections, Older Road Users and Intersections; while in 2013 of greatest concern were Motorcyclist and Rural Intersection. While no categories were identified as being of 'high strategic fit' in 2013, in 2014 there were three 'high strategic fit' categories. This may indicate insufficient progress being made by Selwyn when compared to others or the variability of results over time.

Figure 6.2 below indicates the 'rank' in 2013 and 2014 along with the change in rank.

Figure 6.2: Selwyn Community at Risk 2013 and 2014

Category	2013		2014			
	Rank	Fatal & Serious Crashes /100MVKT	Rank	Fatal & Serious Crashes /100MVKT	Rank Change	Change in Fatal and Serious Crashes/ 100MVKT
LOCAL BODY all deaths & serious casualties	**60**	5.6	**38**	6.6	**Declining**	**1.0**
YOUNG DRIVERS of light vehicles aged 16-24yrs	**61**	10.9	**46**	12.4	**Declining**	**1.5**
ALCOHOL & DRUGS	**43**	1.5	**30**	1.6	**Declining**	**0.1**
SPEED too fast for conditions	**50**	1.4	**39**	1.5	**Declining**	**0.1**
URBAN INTERSECTIONS	**49**	2.0	**54**	1.8	**Similar**	**0.2**
RURAL INTERSECTIONS	**15**	1.8	**4**	2.5	**Declining**	**0.7**
INTERSECTIONS	**25**	1.9	**10**	2.4	**Declining**	**0.5**
RURAL ROADS loss of control & head-on	**56**	3.8	**48**	3.9	**Declining**	**0.1**
MOTORCYCLISTS	**12**	0.6	**9**	0.7	**Similar**	**0.1**
CYCLISTS	**48**	0.1	**50**	0.1	**Similar**	**n/a**
PEDESTRIANS	**47**	0.0	**45**	0.0	**Similar**	**n/a**
DISTRACTION	**41**	0.6	**55**	0.4	**Improving**	**0.2**
FATIGUE	**32**	0.7	**21**	0.9	**Declining**	**0.2**
OLDER ROAD USERS person aged 75year+	**21**	11.2	**5**	18.5	**Declining**	**7.3**
RESTRAINT USE	**71**	0.4	**56**	0.3	**Declining**	**0.1**

Pink indicates High Strategic fit

Yellow indicates Medium Strategic fit

At a local level, information is gathered including road crash statistics, Police enforcement information and feedback from the community.

Across Canterbury there are four key regional areas of concern; all of these priority areas require attention over this Strategy's period to 2020.

In combination this information is used to identify the greatest concerns for Selwyn. NZTA's high priorities are indicated in red and medium priorities in blue.

Figure 6.3: Combined Concerns for Selwyn

Factors Contributing to Crashes	Trends	Community at Risk Analysis	Canterbury Priorities
Poor handling Poor Observation Failed Giveway/Stop	Reduction in fatalities similar to national trend	2013: Motorcyclists Rural Intersections	Reducing motorcycle crashes Reduce rural intersection crashes Improve pedestrian safety Reduce fatigue related crashes Reduce crashes involving older road users Reduce incidence of heavy vehicle crashes
	Males have more crashes than females across all age groups For males, the 15-19 and females 20-24 year old age bracket is especially dangerous.	2014: Rural Intersection Intersections Older Road Users Motorcyclist	
		Getting worse: Rural Intersection Intersections Older Road Users Motorcyclists	
From Figure 4.7	*From Figures 4.8*	*From Figure 6.2*	*From Section 6.2*

Accordingly of the issues considered of the 13 areas, seven are of high concern and three are of medium concern

Figure 6.4: Selwyn's High and Medium Priority Road Safety Concerns

Areas of Concern we will address	Where we will take action across the safe system			
	Safer Roads, Roadsides and Intersections	Safer Speeds	Safer Vehicles	Safer Road Users
Selwyn's High Priority Road Safety Concerns				
Reducing alcohol impaired driving			✓	✓
Reducing loss of control - run off road and/head on crashes	✓	✓	✓	✓
Safer roads, roadsides and intersections	✓			
Rail Safety*	✓			✓
Addressing the risk of young drivers	✓	✓	✓	✓
Reducing the impact of high-risk drivers		✓	✓	✓
Reduce intersection crashes	✓	✓	✓	✓
Safer Speeds	✓	✓	✓	✓
Increasing the Safety of Motorcycling	✓	✓	✓	✓

Areas of Concern we will address	Where we will take action across the safe system			
	Safer Roads, Roadsides and Intersections	Safer Speeds	Safer Vehicles	Safer Road Users
Selwyn's Medium Priority Road Safety Concerns				
Safer walking and cycling	✓	✓	✓	✓
Reducing the impact of fatigue/tiredness and distraction	✓	✓	✓	✓
Continued and Emerging Focus				
Increase use of seatbelts**			✓	✓
Increasing the safety of older Selwyn drivers	✓	✓	✓	✓
Lower Focus				
Improved School road safety	✓	✓		✓
Canterbury Regional Road Safety Concerns				
Addressing distraction and poor observation	✓		✓	✓
Reducing motorcycle crashes	✓	✓	✓	✓
Reducing Alcohol Impaired Driving			✓	✓
Reducing Truck Crashes, especially on the State Highway Network	✓	✓	✓	✓

* Regarded as a subset of Safer roads, roadsides and intersections, but separately identified as implementation actions differ

** including child restraints

6.4 Key Challenges for Selwyn

The role of this Strategy hinges around achieving co-ordinated interaction between road users, roads and road sides, speed and vehicles to increase road safety overall. These are the cornerstones to the "Safe System" approach.

The challenge is how to direct any available resources to apply "Safe System" solutions to known road safety problems. Many of the road safety engineering treatments are expensive and not justifiable on many of Selwyn's low volume roads, but improvements to crash spot intersections and routes can be progressively achieved.

To date Selwyn road safety initiatives have centred on making the Selwyn community aware of the risks and consequences associated with driving, walking and cycling on our roads. Through this continued approach, road and transport system users will make better decisions about their behaviour such as:

- Wearing seatbelts
- Adhering to speed limits
- Driving to the conditions
- Stopping and taking another look at intersections
- Not drinking and driving
- Slowing down in urban areas and past schools
- Being responsible (taking personal responsibility for themselves and other at risk users)

There are five intersections in Selwyn District that have been identified by NZTA as 'high risk' as part of their analysis across New Zealand to identify the top 100 worst intersections. One of the key behaviour change agents is the combination of Police enforcement complementing education campaigns. This is an approach that will not be reduced with the "Safe Systems" approach, but further enhanced as a more co-ordinated approach develops.

The responsibility for improving road safety rests with each of us.

6.5 Assumptions and Risks

The Government through the 2020 *Safer Journeys* Road Safety Strategy has started the implementation of the "Safe Systems" approach to road safety. Already many of the first actions have been implemented that will assist in improving road safety throughout New Zealand. Over the coming years many more actions will be implemented.

To action this strategy effectively the Council, and the Government, has to commit through funding to continue:

- Advice and support for education and behaviour change campaigns
- Local enforcement programmes
- Road maintenance and renewals
- Minor (safety) improvement works
- Network and asset management planning
- Road safety engineering projects
- Major projects to cater for traffic growth

If just one of these areas has reduced funding then it will affect the success of Selwyn's "Safe Systems" implementation.

The funding for these types of activities on local roads is provided by Council, but is subsidised by central Government through the National Land Transport Programme (NLTP). The amount

of subsidy is based on the Financial Assistance Rate (FAR) applicable to an individual organisation. If the FAR is reduced then either activities have to be scaled back, or Council has to fund the difference. Selwyn's FAR will increase to is 52% in 2017/18 under the recently revised NZTA allocation system

Whilst Selwyn supports and will implement some of the Safer Vehicles actions, such as promoting the Right Car website, Government legislation such as car importing restrictions and possible tax rebates for purchasing new cars are most likely to achieve a safer fleet.

7. Strategy Elements

This section introduces the main elements that comprise this Strategy including its aspirational vision, goals, and objectives.

7.1 The Vision

"Zero road deaths and serious injuries on Selwyn roads"

To achieve zero road deaths and serious injuries applies an aspirational ultimate long-term vision for the implementation of a Safe System in Selwyn. It takes into consideration our unique roading infrastructure and environment (long straight rural 100 km/h roads, numerous intersections and bad weather).

It is acknowledged that it is probably not possible to prevent all crashes. However by taking a total view of all the factors involved; 'Vision Zero' aims to implement a change in culture that in the long-term will better protect road users and prevent crashes that result in death and serious injury.

To aspire towards 'Vision Zero" also means:

- Knowing humans make errors and take risks on Selwyn roads – such as not stopping at stop signs, not wearing a seatbelt, driving too fast round bends, and poor observation and judgement. There are physical limits to the amount of energy our bodies can absorb from crashes, beyond which survival and recovery are not possible
- Viewing the road transport systems and networks as holistic – working towards managing the interaction between the road user, the road, travel speed and the vehicle on a combined basis
- Continuing to encourage and support community individuals, schools, groups and organisations to develop innovative road safety initiatives
- Trying to deal with risk-taking by our drivers. Behavioural change will require evolving tactics over time to be effective, but road safety education and social marketing campaigns targeted at raising the awareness and consequences of risky behaviour need to continue
- Taking a sustainable approach – working towards a safe, integrated, well maintained, efficient and innovative transport network for a better quality of life for the Selwyn community
- Continue to implement evidence based initiatives striving for 'Vision Zero"

- Working collaboratively with all our key stakeholders and partners
- Consider new ideas, and be willing to go the extra mile to improve road safety

7.2 The Cornerstones to a Safe System

The four keystones to a "Safe System" approach are:

- ✓ **Safer Road Users**
- ✓ **Safer Roads, Roadsides and Intersections**
- ✓ **Safer Speeds**
- ✓ **Safer Vehicles**

The implications, problems and actions relating to introducing this are discussed fully in subsequent sections of this Strategy.

7.3 Goals and Objectives

The Overall Goal for this Strategy is to:

"Progressively Reduce the Number and Severity of Road Crashes in the Selwyn District"

This in turn is supported by ten individual goals, each with its own set of objectives, as follows:

Goal 1: A reduction in alcohol (and driver impaired) related crashes

Objectives

1. Encourage and promote safe transport options to Selwyn drivers, (such as pub courtesy vans).
2. Raise awareness of the consequences of drunk driving.

Goal 2: Safer Selwyn Roads and Roadsides

Objectives

1. Implement a "Safe System" approach to our local roads.
2. Implement a KiwiRAP or similar system for identifying at-risk local roads.
3. Promote KiwiRAP rating system for managing State Highways.
4. Action improvements suggested within Safety and other roading Technical Audits.
5. To promote Safety Management Systems.
6. Advocate being a demonstration Council for "Safe System" roads.

7. Target high risk intersections and routes for improvement (in collaboration with NZTA)

Goal 3: A reduction in young driver related crashes

Objectives

1. Promotion of "Practice" and "Safe Teen Driver" NZTA free learner driver resources.
2. Improve the skills and capabilities of young drivers – via the Selwyn Leading Learners programme.
3. Encourage 120 hours of supervised driving practice.

Goal 4: A positive change in all road user behaviour

Objectives

1. Continue social marketing campaigns in conjunction with the Police to raise awareness so that unsafe behaviours are exhibited less frequently.
2. Promote a positive attitude change to good driving behaviour.
3. Work towards a more safety conscious road safety community.

Goal 5: A reduction in intersection crashes

Objectives

1. Encourage and promote drivers to abide by the road rules and signage (e.g. stop at intersections)
2. Crash Reduction Studies/Road Safety Audits undertaken on high crash routes.
3. Implementation of intersection improvements along high crash routes.

4. Implementation of intersection improvements via CRETS and other strategies and plans.

Goal 6: A reduction in speed related crashes

Objectives

1. Advocate for changes in the penalty system to deter speeding.
2. Promote to drivers of the benefits of travelling at safe speeds for the environment – in urban areas and past schools, recreational areas, community centres.
3. Review speed related crashes and the appropriateness of speed restrictions in place.

4. Promote to drivers of the benefits of travelling at safe speeds for the conditions – e.g. during winter and at bends.
5. Advocate for the implementation of roading improvements along high risk rural roads with speed related crashes.
6. Co-ordinate with national initiatives relating to developing safer speeds on a "one network" basis

Goal 7: Increase the Safety of Motorcycling

Objectives

1. Integrate with NZTA and other regional safety programmes.
2. Provide education programmes in combination with other agencies.
3. Identify high risk routes for motorcycling and include in SMS improvement programme.

Goal 8: Improve Walking and Cycling Safety

Objectives

1. Integrate with NZTA and other regional safety programmes
2. Provide education programmes in combination with other agencies.
3. Co-ordinate outcomes of both. This Strategy and The Walking and Cycling Strategy to enhance safety for these modes.

Goal 9: Improve the safety of school children

Objectives

1. Utilise rural school zone advisory speed signs to reduce the speed past rural schools.
2. Raise awareness of the importance of slowing down around schools and school buses.
3. Continue to utilise the speed measuring devices around schools.

Goal 10: Improve the safety of the vehicle fleet (national goal)

Objectives

1. Raise awareness of the benefits of vehicle safety technology – e.g. electronic stability control and side curtain airbags.
2. Promote and encourage people to purchase vehicles with safety technology.
3. Promote the Right Car website.
4. Purchase Safe Vehicles for Councils vehicle fleet as a role model.

8. Selwyn's Safe System

8.1 Safer Selwyn Road Users

In Selwyn our guiding belief around having a Safe System is to be

"Working towards a more safety conscious road safety community in Selwyn"

A key means for improving the safety of road users is to encourage continual improvement in road user behaviour so that unsafe behaviours are exhibited less frequently. Unsafe behaviours are those where research has identified a close relationship with crashes. In Selwyn these behaviours include:

- Inappropriate speeds for the conditions (rain, snow, sun strike, fog)
- Driving drunk
- Failure to wear a seat belt
- Poor observation and judgement
- Driving while tired and driving while distracted
- Failure to give way or stop at intersections

Road users may be motivated to change their behaviour over short time periods by effective deterrent and publicity/social marketing measures such as a combination of Police enforcement and education campaigns.

This approach is dependent on road users being concerned with being 'caught' and having to deal with the consequences. Because many drivers believe their risk of crashing is very low, fear of penalties is often stronger than the fear of being involved in a crash.

However measures to inform and educate road users, including continual messaging about risk taking and its consequences, can motivate longer-lasting behaviour modification. This is what the Safer Road Users approach in Selwyn is working towards.

An emerging trend on Selwyn roads is an increase in motorcycle crashes. While the frequency of motorcycle crashes may be low, the consequences are typically higher than other vehicles.

As people search for alternatives, many people have purchased motorbikes for transport, while the baby boomers group (with more disposable income) have purchased motorbikes going into semi-retirement to ride as a leisure activity. Many do not have the skills in the beginning to handle a large and/or powerful bike. In both these areas crashes have the potential to rise without some intervention.

Concerns associated with older motorists remain, particularly as population and traffic numbers increase.

8.2 Safer Selwyn Roads, Roadsides and Intersections

Our roads are maintained and operated to best practice standards at a level of service that is considered affordable and sustainable by Council. Many of our lowly trafficked unsealed rural roads reflect their origins in the network of simple tracks that were constructed across the Plains for horses and carts in the past. While we have significantly improved these roads over time, they now have to cater for fast and/or heavy vehicles well beyond what they were originally intended for. As such they are more at risk of introducing safety risks, for example unexpected potholes or large vehicles on narrow rural roads.

All activities associated with Selwyn's transport network have an inherent road safety focus – from operational and maintenance activities to programmes associated with behaviour change.

Unfortunately it is not realistic to think that all Selwyn roads, even major arterials, can have all the safety improvements we would like e.g. wider sealed shoulders to reduce run off road crashes, wire barriers, and rumble edge lines etc. as this would not be affordable.

Even reducing roadside hazards, like removing power poles to create better clear zones, is not really possible as these are able to be co-located within road reserve under specific telecommunication legislation that allows for this that Council has no control over.

We do however have polices and bylaws that try to control the inappropriate use of roadsides to maintain clear zones in a rural areas, but this can compete with farming activities.

46% of Selwyn's local sealed network has a seal width of less than 6m wide. The Transportation Activity Management Plan has further identified that 25km needs to be widened as it carries over 500 vehicles per day. Even achieving this relatively short length would cost over $8 million, so it becomes obvious that it would be not be affordable to implement comprehensive network wide "Safe System" transformations. However, what we can do is that when any works do occur, we take the opportunity to apply a "Safe System" approach to achieve a progressive lift in standards over time.

State Highways will always need to be high quality, high standard roads as these usually carry the highest traffic volumes. The NZTA manages and operates state highways and it utilises the KiwiRAP rating system. Improvements to state highways can utilise safety treatments like wire median barriers, grade separation, red light and speed cameras, rumble strip edge and centrelines and wide sealed shoulders for improved safety of this network.

Local road treatments can be expensive so it is vital that road users continue to improve their behaviour and responsibility as a prime focus, while over time our roads, roadsides and especially intersections will be progressively improved using Safe System principles. This is

where our best investment can occur and will be done on a priority basis looking at crash rates, traffic volumes and overall safety deficiencies.

Council has a Deficiency Database where road safety projects (under max $250,000 each) are prioritised to utilise the funding available from the NZTA through Work Category 'Minor Improvements'. It also has developed a "SafetyNET" system which is similar to KiwiRAP, but for local roads to identify and predict those roads, intersections and routes that are considered higher risk that a further tool in the prioritisation process.

Crashes at intersections are among the worst occurrences in Selwyn District. There are five intersections within Selwyn District that are ranked within NZTA's 2014 list of the 100 worst intersections in New Zealand. These are:

- SH1/Alyesbury Road (ranked 91)
- SH1/Dawsons Road (ranked 92)
- Shands and Blakes Roads (ranked 96)
- Shands and Marshs Road (ranked 97 – on boundary with Christchurch City Council)
- Jones and Curraghs Roads (ranked 99)

Apart from the SH1/Alyesbury Road Intersection the remainder will be resolved through works related to Stage 2 of the Southern Motorway Extension by both the NZTA and SDC.

Rail level crossings are common in Selwyn District. Generally crashes involving trains have significant consequences and Council supports actions to reduce the likelihood of these events. KiwiRail has a programme of improvements to high risk sites, and education programmes are implemented nationally and locally. KiwiRail have recently assessed the risk of all its level crossing nationally and this is represented in their ALCAM Level Crossing Risk Report.

8.3 Safer Selwyn Speeds

There is clear evidence that lower speeds reduce the risk of death and serious injury when crashes occur, but is our community ready for lower speeds? There lies the problem! Selwyn has many rural 100km/h long straight roads. Drivers will not want to slow down when in reality it is perceived that you can safety travel those types of roads at more than the speed limit. For Selwyn to work towards 'Vision Zero', speed management is vital, and this will need to be led by the Government and NZTA who establish the relevant rules and criteria. This work has already started with the "Safe Speeds" initiative by the NZTA to develop nationally consistent speed on a one network basis.

Council has a Speed Limit Bylaw that contains a register of all speed limits. As our townships grow and expand so does the need to update the bylaw to bring in the new and amended speed limits on new subdivision roads, and also sections of existing roads that are transformed from 100 km/h rural roads to urban roads with property access, footpaths etc. Whilst Council has the ability to introduce and amend speed limits this has to be done in accordance with NZTA rules that don't always accommodate the wishes of our Community.

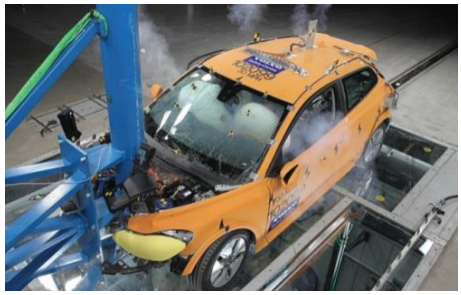
SDC has been actively involved in programmes to reduce speeds around schools through signage[6]. Selwyn is dedicated to lowering speed limits past Selwyn rural schools as part of implementing a Safe System approach to speed management. It is hoped that with reduced speeds past schools along with behaviour change campaigns and Police enforcement, the communities' attitudes and safety consciousness towards speed and its consequences will improve.

In urban areas, speed management is critical for encouraging more of the community to walk and cycle, because it makes sharing the roads safer and less stressful. Slower urban areas also encourage better community cohesions. Council has introduced new types of residential road classifications and standards into its District Plan to enable designers to use street designs and treatments that encourage slower speeds that are more self-regulating.

This can be achieved by using narrower streets and shared space concepts with more pedestrians and cyclists that make drivers have to slow down. Council has also developed a Subdivision Design Guide to demonstrate these principles to assist land developers and designers achieve these objectives. This over time will provide a more integrated transport system in urban areas for all modes, in conjunction with slower vehicle speeds.

[6] 40km/h Advisory Speed Rural School signs Trial 2012 and through education programmes "20 is plenty"

8.4 Safer Selwyn Vehicles



A key component to the "Safe System" approach is to encourage the purchase and use of modern vehicles that have a high level of safety features. This can assist in preventing death and serious injury when crashes occur.

Over the years there has been a significant advances in vehicle safety that protects occupants and other road users and improves our ability to avoid crashes. This includes improvements to vehicle active and passive safety systems such as self-tensioning seat belts, multiple air bags (front, side curtain, knee), anti-lock and assisted braking, and vehicle stability control systems.

However in most cases these are found on more modern vehicles that the majority of drivers cannot afford in NZ, for example the average age of the NZ light vehicle fleet is about 13 years old compared to Australia at 10 years and the USA at 8. Initiatives by Government are necessary to lower the average age of our fleet by reducing the age of used vehicles imported for sale here and offering incentives to dispose of older vehicles. Britain recently offered a "Cash for Clunkers" incentive for car owners to scrap their old car and buy a new car, a programme that has already proved very popular in other parts of Europe.

In Selwyn we will support NZTA's actions in educating and encouraging our community to purchase vehicles with safety features. Selwyn will also be a role model and will purchase and use safe cars in the Council fleet. We will also actively promote the Right Car website and work in collaboration with the ACC and NZTA on enhancing any social marketing campaign for this website.

RIGHTCAR.govt.nz

9. Strategy Implementation

This section sets out what methods will be used to implement the Strategy ranging from a specific Action Plan to other methods that manage and inform the process.

More specific details are provided within the Action Plan itself in Section 12.

Generally the Strategy will be updated every third year in combination with Activity Management Plan reviews and the preparation of Council's Long Term Plan.

9.1 Action Plan

The Road Safety Action Plan is a separate document to this Strategy. It is used to plan and implement specific road safety actions and initiatives that give effect to this Strategy and the overarching Canterbury Road Safety Action Plan.

As a separate document this improves flexibility to respond to more immediate requirements. Included are those actions that are more operationally focused to those more specific "one off" projects. The Action Plan is reviewed and updated at least every twelve months by Councils Road Safety Subcommittee. What it needs to achieve also needs to coordinate with funding allocations through Councils Long Term Plan and the National Land Transport Programme.

9.2 Safety Management System (SMS)

The Government has stated its commitment to the "Safe System" integrated approach. In Selwyn we support and fully embrace the key principles and have been playing our part for some time through our Safety Management System (SMS).

In 2006 Council adopted its first SMS, which was a requirement by the Land Transport Safety Authority (now NZTA) for all road controlling authorities (RCAs) to have an SMS in place by 2007. The SMS establishes a systematic approach to road safety that spans both Council operations and also those provided by externally contracted agencies – consultants and contractors working on Council's behalf.

Land Transport NZ
Ikiiki Whenua Aotearoa

Selwyn District Council
Safety Management System

The benefits to date of Council's SMS have been:

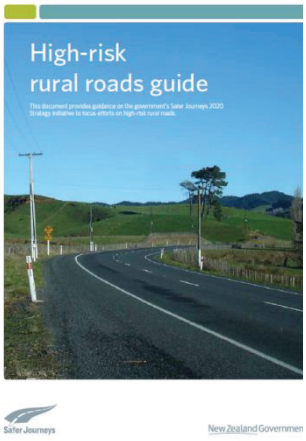
- ✓ Safety is considered in all decisions about construction, maintenance, planning and management of the road network
- ✓ Implementation of road management procedures is consistent and efficient
- ✓ Risk management is documented (deficiency database)
- ✓ Methods to address any gaps are in place
- ✓ Development and auditing of the roading network are undertaken in a systematic way
- ✓ Safety is improved for all road users
- ✓ Fostering a collaborative approach

The SMS approach was introduced to assist RCAs to better manage the safety of their roading networks more from an operational perspective, and to also ensure that consistent strategies, policies, standards and procedures were in place to support this on a collaborative basis. This included statements about what comprised Councils strategy towards road safety to guide these processes, as opposed to a specific road safety strategy document itself.

However now the roles have been reversed and we believe this Road Safety Strategy with its own vision, outcomes and objectives should be the main strategic document so that it can form a "one stop safety shop" for all main aspects associated with Councils approach to road safety.

The SMS is influenced by a range of guidance prepared by NZTA under the "Safe System" approach. These include:

- High Risk Rural Roads Guide
- High Risk Intersection Guide
- Safer Journeys for Motorcycling on NZ Roads
- Safer Journeys for Rural Schools



Suggested improvements and programmes out these documents will be implemented over time as funding allows, configured to Selwyn's own situation and circumstances.

9.2.1 Activities and Procedures

This section outlines the framework that the Council manages road safety on its network utilising the SMS approach now encompassed by this Strategy.

The SMS is developed through the preparation and implementation of:

1. The Safety Management Team
2. The Safety Implementation Plan
3. Road Safety Action Sheets

The Safety Management Team

The key function of the Safety Management Team is to oversee implementation of the SMS and ensure it is kept SMS up to date. The allocation of tasks and responsibilities should occur through the safety intervention plan.

Accordingly the team needs to include asset management, operations management and road safety personal.

The following table details the roles and responsibilities of the Safety Management Team, and those they are responsible for.

Transport Activity	Responsibility of			
	Asset Manager Transportation	Roading Engineer	Road Safety Coordinator	Council Contractors
Road Safety Education Programme			✓	
Transportation Planning	✓			
Capital Works	✓	✓		✓
Maintenance		✓		✓
Minor improvements		✓		✓
Supporting Systems and Processes (e.g. Safety Net, deficiency database)	✓	✓	✓	
Road Safety Strategy documentation	✓		✓	
Action and Monitor SMS Activities		✓		✓
Liaison with External Agencies	✓		✓	

Road Safety Action Sheets

The Road Safety Action Sheets within the SMS document how each of Council's roading and transport related activities are defined by its policies, standards and guidelines and what safety procedures are relevant to these.

These 'Activity Sheets' are expected to be referred to on a regular basis by those individuals, teams and agencies working in those areas. These are in Section 12 of this Strategy.

Briefly, the SMS activity sheets include:

- Inspection/Monitoring – inspection or monitoring of an activity, contractor performance, asset condition or performance, or any other factor that may affect safety
- Planning Procedures – for establishing and implementing safety requirements in the District Plan
- Development Standards – definition of the standards to which the roading network is to be developed, particularly subdivisions, but also applicable to new works as referenced in Councils Engineering Code of Practice
- Operational procedures – practices and processes relating to safety planning and assessments
- Emergency Maintenance – procedures and levels of service for urgent work, key response times impacting on safety
- Routine Maintenance – procedures and levels of service for maintenance activity which impact on safety
- Capital Works - procedures for capital projects, including design and construction standards, which impact on safety
- Audit requirement – specific safety auditing practice, such as network, capital works, road openings and maintenance

As part of the Road Safety Action Planning process there are at least six monthly meetings with the Safety Management Team and key Contractors to review and monitor content and compliance as well as the effectiveness of the SMS on the road.

9.2.2 Network Management

An important part of the SMS network management role is the identification of safety issues, concerns and deficiencies and prioritising them for investigation, improvement or mitigation, while recognising funding requirements and/or limitations.

To enable this Council has:

- A Deficiencies Database which includes a hazard register (directs and prioritises projects to be funded from the minor improvements fund)
- The SafetyNet GIS system that displays crash data
- Its Road Assessment & Maintenance Management System (RAMM) inventory and condition rating database of roading assets.
- Undertakes network inspections both day and night
- Undertakes Crash Reduction Studies and Road Safety Audits as needed
- Crash Analysis and Review of NZTA CAS data (also via RAMM)
- Implements recommendations from NZTA RISA Audits
- Development and implementation with the network maintenance contractor of the Safety Intervention Plan

9.2.3 Intervention and Improvement Plans

By far, the key to implementing a "Safe System" and supporting a SMS approach to the network is communication and partnerships with key Contractors such as for road maintenance, road marking, reseals and street lighting. Interventions such as reapplying faded and worn road markings, fixing potholes, to drainage maintenance and resurfacing all contribute to road safety on a daily basis. In essence, every intervention on the road has a direct and indirect safety aspect to it. Raising the level of safety consciousness of all teams involved in road maintenance is critical.

The SMS contains Implementation and Improvement Plans to assist with this and Council has made a lot of progress in achieving and implementing the majority of the actions of these to date. These are described as follows:

- **Safety Intervention Plan:** This plan seeks to set intervention levels that provide guidance to Maintenance Contractors for prompt detection of deficiencies that promote safety and efficiency so that a "no surprises" transport network is achieved. This approach is also integrated into Councils main Road Maintenance Contracts

- **Safety Improvement Plan:** The SMS has its own Improvement Plan which lists actions and timelines for the continued development and improvement of the SMS associated with the actual document itself and also actions that establish other specific safety orientated initiatives to be undertaken by Council and/or its Contractors

A regular action is the review and updating of the SMS Standards and Guidelines as well as the Activity Sheets. Auditing of elements of the SMS within the Road Safety Strategy will be undertaken as part of a whole of Strategy approach.

9.2.4 Road Safety Assessments and Audits

The NZTA has carried out regular safety and technical reviews on how Selwyn conducts its transport activities, of which NZTA subsidises. The last audit was in 2009.

Specific safety assessments[7] are no longer undertaken by NZTA and Council intends to undertake suitable audits to fulfil this useful role. This assists both Council and NZTA to identify any issues that can be targeted for improvement and possibly funding assistance to resolve based on risk and affordability.

NZTA Technical Audits

Technical audits can be undertaken by the NZTA on Councils overall road maintenance and renewal engineering and delivery programme. The objectives of the review are to:

- Review progress since the last technical review
- Assess whether the level and quality of road maintenance being carried out by the Council is realistic and acceptable
- Determine the extent to which the Council's structural and corridor maintenance programme is meeting (not exceeding) maintenance needs
- Determine the extent to which the Council's road assessment and maintenance management database is able to provide reliable reports and treatment selections
- Determine whether in light of answers to the above questions there is progress towards achieving a balanced whole of life maintenance programme

Any recommendations and suggestions by NZTA need to be considered by Council based on risk and affordability. Council also audits and validates pavement renewal works originating from its RAMM derived forward works programmes

[7] Road Infrastructure Safety Assessments (RISA)

9.3 SafetyNET

Council has implemented a tool to assist the understanding of crash data. The tool is used to understand issues and prioritise actions. It looks at not only actual crash rates but also provides a predictive capability. As embedded within the philosophies of a Safe Systems approach both collective and personal risk can be assessed. The following information provides an overview of the system.

SafetyNET is an innovative online interactive road safety tool Abley Transportation Consultants have developed for the New Zealand Transport Agency (NZTA).

SafetyNET is a nationwide State Highway GIS application that displays crash data and a number of attributes for each section of each State Highway. SafetyNET allows the NZTA and its consultants to readily identify those parts of the State Highway network where road safety performance is good or poor compared to national averages, where the road is out of character with its expected safety performance, and where the road has engineering and operational features that suggest it may be a high risk site in the future.

Enabling the display of this information in a spatial manner allows users of SafetyNET and funding agencies to effortlessly identify those high risk parts of the State Highway network that warrant attention, and then target their investigations and investments.

9.4 Funding

The Action Plan includes a 10 year financial forecast based on projects planned and estimated total expenditure. Under Council's subsidised Land Transport programme, this is currently funded through the NTZA Road Safety Work Category 432, Promotion, Education and Advertising. Engineering works are funded from the Work Category 341, Minor (safety) Improvements. Both these activities are also shown in the overall transport 10 year financial forecasts detailed in Councils Transportation Activity Plan. These are subsided at Councils Financial Assistance Rate (FAR) by the NZTA.

NZTA funding is generally provided for actions that have a high strategic fit (priority concerns), medium fit maybe supported, while low fit items need to be funded by Council alone if they are to be resourced. This is also used to support community initiatives and self-help programmes like "Car Fit" together with other road safety education activities.

Council currently spends in the order of $650,000 on Road Safety Activities, around two-thirds of this is on safety improvements (identified through the SMS), while the other one-third funds roads safety programmes as identified in the Road safety Action Plan.

Whist Selwyn has a stated commitment to the Safe System principles and will work towards this, we have to be realistic on what we can practically achieve based on the resources we have available at any one time. This then requires an understanding on the risks involved in delivering a Safe System so that we can target any available resources in the best possible way.

10. Progress Indicators and Targets

With every strategy there needs to be indicators and targets that indicate and measure the progress towards achievement of the goals and objectives this strategy is working towards.

The Overall Goal to:

"Progressively reduce the number of fatal and serious crashes on Selwyn Roads"

will be tracked and assessed across the individual goals and objectives relating to each of the four cornerstones of the Safe System approach based on indicators and targets as part of the review of the Road Safety Action Plan and the Safety Management System Action Sheets.

Information is collected and provided by NZTA which tracks crash data (CIAS). This forms the basis of the establishment of tracking of progress indicators and targets. Measures are also detailed in other strategies and strategic documents like the Regional Land Transport Strategy and Council's own Long Term Plan. Councils also will have a requirement to report a mandatory National Performance Measure relating to road safety from 2015 onwards as follows:

"Performance Measure 1 (Road Safety)

The change from the previous financial year in the number of fatalities and serious injury crashes on the local road network expressed as a "number".

Figure 9.1: Serious Casualties (Death and Serious Injuries) in Selwyn

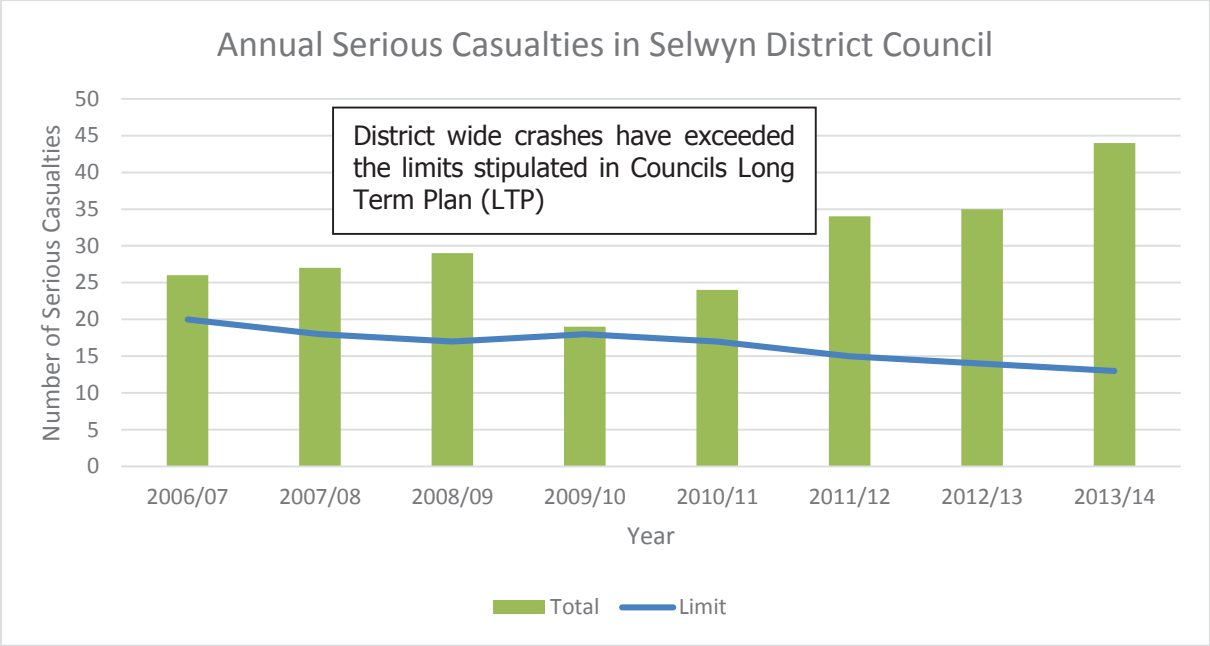
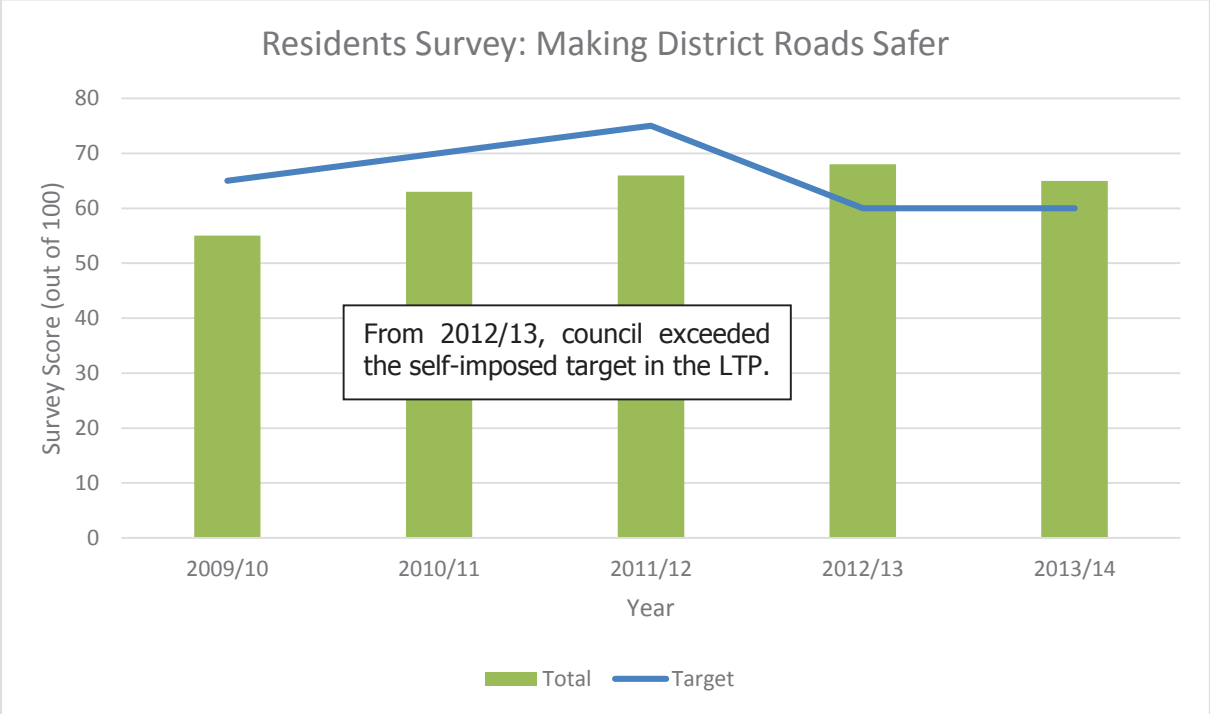


Figure 9.2: Road Safety related Service Request in Selwyn

Figure 9.3: Residents rating of Selwyn's Road Safety Initiatives

Figure 9.4: Residents rating of Selwyn's efforts to make District Roads Safer



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NZTA (various), Selwyn District Road Safety Report 2005 to 2009 – June 2010

iRAP (2010) How Safe are our Roads? –KiwiRAP

SafetyNET http://www.safetynet.org.nz/

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NZTA – various transport data
http://www.nzta.govt.nz/planning/data/
http://www.smartmovez.org.nz

12. Appendices – Implementation Documents

Road Safety Action Plan (separate document to be attached)

Safety Management System Action Sheets (separate document to be attached)