

Speed Management Plan



February 2024

Speed Management Plan (Policy)

REVISION HISTORY

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Approval Date:	February 2024
Department:	Roading
Responsible Officer:	Jordan King
Sponsor:	General Manager – David Adamson
Approved by:	Chief Executive Officer
New Review Date:	September 2027

1. Introduction and background



1.1. Purpose of this document

The purpose of this document is to outline a Speed Management Plan for Mackenzie District Council (MDC). Implementation of the speed limit changes will occur during the years 2024-2027. This plan also outlines the speed management plan strategy, guiding principles, and how the proposal aligns to the approach being taken within the rest of the Aoraki Roding Collaboration, and how it aligns to proposals from Waka Kotahi.

The final proposal, once adopted by the Council, will be submitted for certification by Waka Kotahi and subsequent inclusion in the National Speed Limit Register.

MDC is keen to hear from as many residents, ratepayers and road users as possible, on both the overarching principles in this consultation draft and also about specific roads that appear to be anomalies.

1.2. What is the Council proposing?

This Speed Management Plan details how MDC will implement safer and more appropriate speeds on the roads around schools, urban areas, and rural roads the Mackenzie district:

- All schools in the Mackenzie District have been included if they are located on local council roads. There are seven of them.
- The maximum speed limit for roads around schools is 30 km/h.
- For urban roads, the 50km/h speed limits will remain.
- For unsealed rural roads, the council is proposing to implement a speed of 80 km/h.
- For sealed rural roads, the 100km/h speed limits will remain.

Full details are described later in this document.

Where there are exceptions to these general guiding principles, they have been outlined later in this document.

1.3. Why is the Council reducing speed limits?

Reducing speed limits around areas such as schools is one way we can contribute to a safer road network. When vehicles are travelling slower around areas with higher density of pedestrians, they will feel safer and feel more inclined to walk or cycle. Slower vehicles will also reduce the amount of harm caused when accidents do happen. All these things are in alignment not only with our Council's strategy for transport, but also with the Government's road safety strategy. Council currently sees this as an important priority.

The outcome from this policy will feed into the Council's Transport Asset Management Plan which will then flow into the 2024-2034 Long Term Plan.

The Government's Road to Zero road safety strategy sets a target for at least 40% of all schools to be covered by a slower speed limit by 30 June 2024, and all schools to be covered by a slower speed by 30

June 2030. The Council is using this Speed Management Plan to propose speed limit reductions for all schools within the Mackenzie district, excluding schools within the Department of Conservation jurisdiction (Mount Cook Village), quicker than the Government's target as we have few schools, and our children are amongst the most vulnerable.

In the past, speed limits on roads were based mainly on speed and mobility, with less consideration of the safety benefits of slower speeds. The use of many roads in the Mackenzie District has evolved over time and they were not designed as high-speed roads. Speed limits need to reflect the type of road and their environment. Specific geometric constraints include width, camber, delineation and signage.

The council wants to increase safety throughout the network, so are targeting those areas that are at higher risk.

1.4. Our approach to speed management

MDC will be reviewing the speed management plan every three years, which ensures that the performance of the implemented speeds is assessed. It also allows us to adjust as our district grows and respond to new issues or opportunities as they arise.

1.4.1. Schools

It is now required by law for most schools to have a speed limit of 30 km/h on surrounding streets. Therefore, MDC is proposing permanent slow speed zones of 30 km/h around all schools in the Mackenzie District. This is to capture the walking catchment around the school, where there will be higher concentrations of vulnerable road users. These zones were determined based on the current look and feel of the road, and the intended purpose of the road. The average speed that drivers are travelling at were considered to assess current driver behaviour and perception of the road network. Most of the roads that have a 30 km/h possible speed, are roads where drivers are already travelling at or below this speed. Network consistency and drivability are also key considerations in the development of the school speed zones extents. Therefore, in some cases, the 30 km/h slow speed zones have been extended further where it will make sense to drivers. In these cases, drivers are already travelling at slow speeds on these roads.

1.4.2. Urban areas

Speed limits throughout urban areas and neighbourhoods will remain at 50km/h. Implementation of slower speed limits on these roads may be further investigated in the next speed management plan.

1.4.3. Rural roads

Unsealed rural roads in the Mackenzie district have been captured as part of the speed changes, and are proposed at 80 km/h. Although there are not many pedestrians present on these roads, the driver and passengers in the cars are just as vulnerable when driving at these high speeds. Council's rural roads are however being used increasingly by tourists, not only driving but also on cycles. Unsealed roads also run along the A20 cycle routes and long the Te Araroa trail routes. Locals are also utilising these roads on cycles for recreation and fitness. There are also other increased hazards and risks when driving on unsealed gravel

roads that slower speeds will mitigate such as increased dust generation, loose gravel flicking up, and skidding.



The speed limit on sealed rural roads, apart from some exceptions, will remain at 100km/h. Implementation of slower speed limits on these roads may be further investigated in the next speed management plan.

1.4.4. State Highways

State Highway speeds are controlled by Waka Kotahi. In the Mackenzie District, there are state highways running through Tekapo, Burkes Pass, Kimbell and Fairlie, and alongside Twizel and Albury. Communication with Waka Kotahi is necessary to ensure speeds are consistent through the network. As the opportunity arises Council does and will continue to submit on state highway speeds.

2. Policies and objectives

The goal of the Speed Management Plan is to create a safe and efficient road network that balances the needs of all road users while minimising the risk of crashes and fatalities. Overall, a Speed Management Plan can help improve road safety, build community engagement, use resources effectively, increase compliance with speed limits, and have a positive impact on the environment.

We believe the following principles could be used to guide the development of speed limits.

- Use the Speed Management Guide Road to Zero Edition published by Waka Kotahi to assess speed limits and to identify what speed limits are safe and appropriate for the Mackenzie District. This has formed the starting basis for our proposals.
- Prioritising people over vehicles. Slower speed limits around schools are about making these environments safer for pedestrians. We think we should balance the inconvenience for some motorists of a slower speed against the benefits of a slower speed environment for people walking or cycling.
- Consider how the area is used. For schools, we've identified the streets that are used by people getting to and from school, to work out where there should be slower speed limits. In some cases, there are many side streets which provide access to the school, and we need to consider slower speed limits on these roads too.
- Prioritising safety over perceived travel time. Severity of crashes between two vehicles decreases with speed, so MDC is considering decreasing all unsealed rural road speeds limits to 80 km/h. There is little difference in travel time with the drop in speed.

3. Risk assessment

3.1. Schools and urban areas

The risk of death and serious injury with crashes involving a vulnerable road user, is heavily dependent on the speed at which the vehicle is travelling at the time of the crash. This is illustrated in Figure 1.

- For vulnerable road users, the chance of surviving after being hit by a car driving at 50 km/h is 20%.
- For vulnerable road users, the chance of surviving after being hit by a car driving at 40 km/h is 68%.
- For vulnerable road users, the chance of surviving after being hit by a car driving at 30 km/h is 90%.

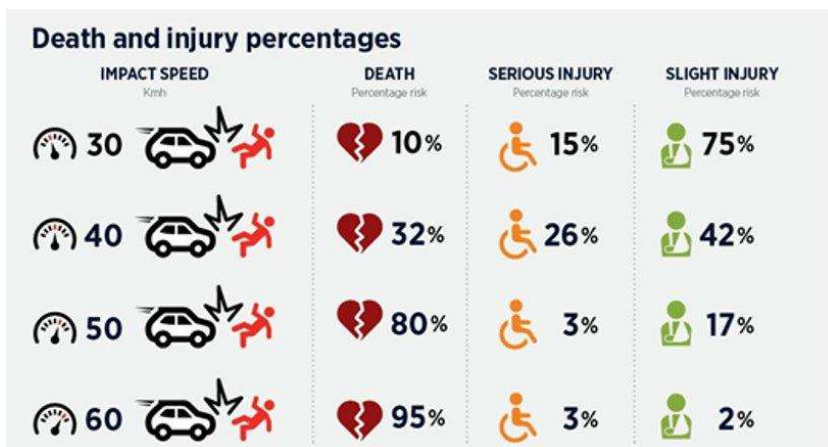


Figure 1 Showing death and injury percentages relative to impact speed for vulnerable road users. Figure based off data from Research Report AP-R560-18 published in March 2018 by Austroads – the Association of Australian and New Zealand Road Transport and Traffic Authorities.

3.2. Rural roads

The risk of death and serious injury between two vehicles is also dependent on the speed the vehicles are travelling at. This is demonstrated in Figure 2.

- The chance of surviving a crash when driving 100 km/h is 10%.
- The chance of surviving a crash when driving 80 km/h is 75 %.

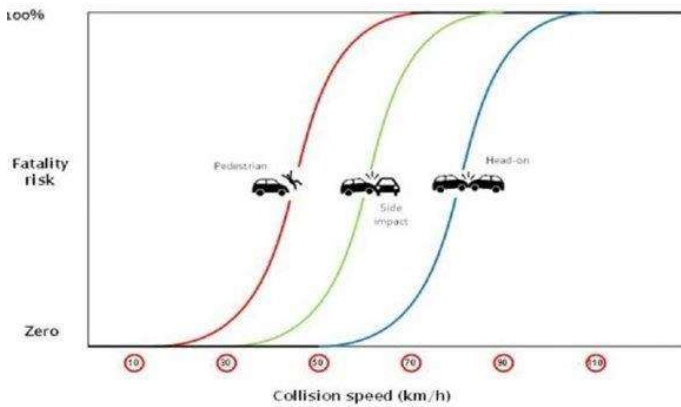


Figure 2 Showing fatality risk relative to impact speed for vulnerable road users and vehicle vs vehicle collisions. Figure based off data from Research Report AP-R560-18 published in March 2018 by Austroads – the Association of Australian and New Zealand Road Transport and Traffic Authorities.

4. Speed management measures and their rationale

4.1. Urban Areas

4.1.1. Fairlie

The existing and proposed speed limits for Fairlie are explained in Table 1. The proposed speed limits are shown in Figure 3.

Table 1 Existing and proposed speed limits for Fairlie.

	Current Speed Limits	Proposed Speed Limits	Explanations
Local Roads	50 km/h throughout township	30 km/h slow speed school zone west of SH8 and south of Regent Street. 30km/h on Riddle Street	SH8 and SH79 run through Fairlie. Slow speed school zone around the three schools in Fairlie, where operating speeds are already all below 30km/h. The road environment suits the lower speed with narrow streets. This is also to capture the walking catchment of students that will be walking from this area. Riddle Street has been proposed at 30km/h due to the higher level of on-street activity as a result of the surrounding shops and services. The existing 50km/h on Talbot Road has been extended past the water treatment plant. The rest of Fairlie will remain at 50 km/h.
SH8	80 km/h, 60 km/h, and 50 km/h	80 km/h and 50 km/h	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.
SH79	70 km/h and 50 km/h	80 km/h and 50 km/h	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.

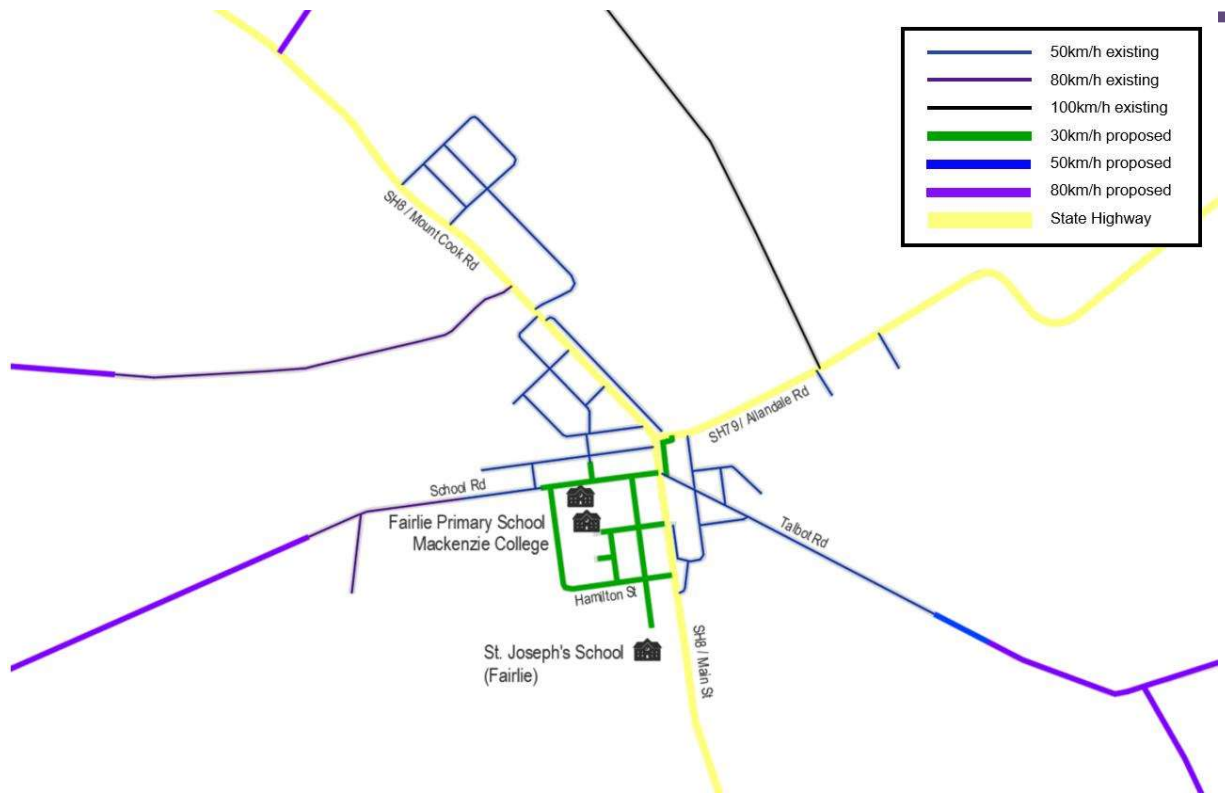


Figure 3 Proposed speed limits for Fairlie.

4.1.1. Lake Tekapo



The existing and proposed speed limits for Lake Tekapo are explained in Table 2. The proposed speed limits are shown in Figure 4.

Table 2 Existing and proposed speed limits for Lake Tekapo.

	Current Speed Limits	Proposed Speed Limits	Explanations
Local Roads	30 km/h on Domain Road, Simpson Lane, Motuariki Lane, Neil Anderson Way, and Rapuwai Lane. 50 km/h elsewhere throughout township 80 km/h on first 2 km of Lilybank Road.	30 km/h slow speed school zone outside school area and Pioneer Drive. 10km/h on Motuariki Lane, Rapuwai Lane, and Neil Anderson Way. 50 km/h on first 2 km of Lilybank Road.	SH 8 runs through Tekapo. Pioneer Drive is proposed at 30km/h due to a lot of pedestrian activity (high concentration of vulnerable road users). Motuariki Lane and Rapuwai Lane have been proposed at 10km/h due to the higher level of on-street activity as a result of the surrounding land use. The first 2 km of Lilybank Road runs through Takapō Regional Park which is used for recreational use, walking, cycling, and camping. A reduced speed limit of 50 km/h will support these road users.
SH8	80 km/h and 50 km/h	80 km/h and 50 km/h	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.

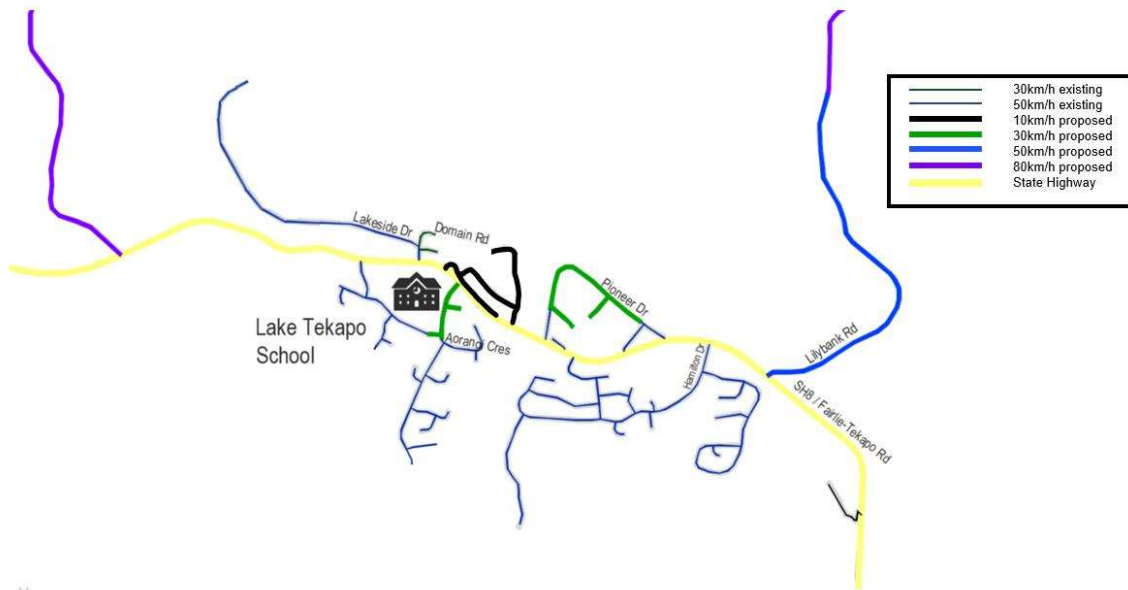


Figure 4 Proposed speed limits for Lake Tekapo.

4.1.2. Twizel

The existing and proposed speed limits for Twizel are explained in Table 3. The proposed speed limits are shown in Figure 5.

Table 3 Existing and proposed speed limits for Twizel.

	Current Speed Limits	Proposed Speed Limits	Explanations
Local Roads	<p>30 km/h Mount Cook Street, Tasman Road, and Two Thumbs Drive.</p> <p>50 km/h elsewhere throughout township.</p> <p>70 km/h on Ohau Road and Ostler Road</p> <p>80 km/h on Glen Lyon Road.</p> <p>20 km/h on Freda Du Faur Avenue, Kate Cameron Drive, and Lake Front Road.</p>	<p>30 km/h slow speed school zone surrounding Twizel Area School.</p> <p>50 km/h proposed on Ostler Road and Ohau Road.</p> <p>50 km/h proposed on Glen Lyon Road from SH8 to Old Glen Lyon Road.</p> <p>50km/h proposed on Max Smith Road from SH8 to Freda Du Faur Avenue.</p> <p>30 km/h slow speed zone on Morrison Terrace.</p>	<p>SH 8 runs alongside Twizel.</p> <p>Increase existing 30 km/h section to include the school zone. School zone does not extend further due to the high operating speeds on Mackenzie Drive (44 km/h). Drivers will not drive 30 km/h on these roads unless there is infrastructure to support this speed drop. There is little indication that there is a school further away so drivers will not feel inclined to drive slower.</p> <p>Morrison Terrace at 30 km/h due to recreational use on this street.</p> <p>The section of Glen Lyon Road from SH8 to Old Glen Lyon Road is used by walkers, cyclists, horses, and recreational use of the neighbouring reserve.</p> <p>There is community support to drop the speed limit on Max Smith Road to 50km/h from SH8 to Freda Du Faur Avenue.</p>
SH8	100 km/h on SH8	80 km/hr past Glenn Lyon Road and Ruataniwha Road for motorists turning and AO2 trail users.	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.

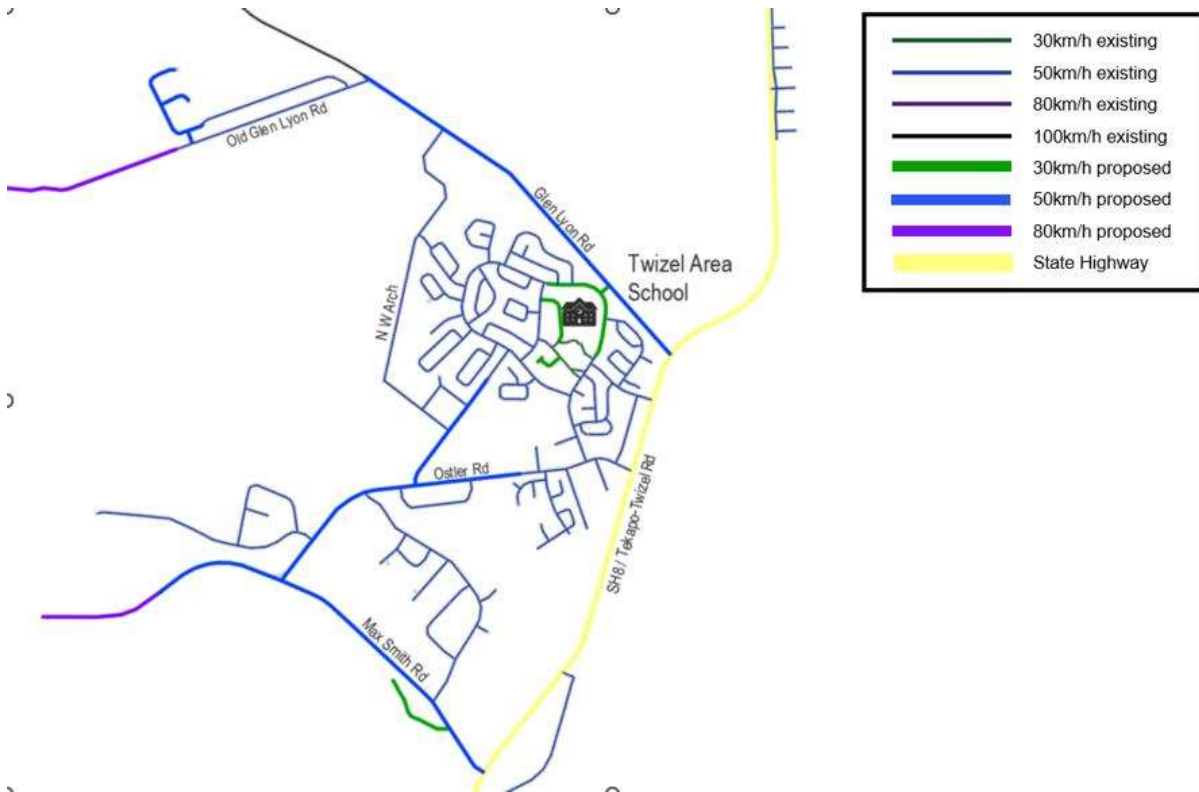


Figure 5 Proposed speed limits for Twizel.

4.2. Rural Residential

4.2.1. Albury

The existing and proposed speed limits for Albury are explained in Table 4. The proposed speed limits are shown in figure 6.

Table 4 Existing and proposed speed limits for Albury.

	Current Speed Limits	Proposed Speed Limits	Explanations
SH8	70 km/h	50 km/h	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.
Local Roads	60 km/h throughout township	30 km/h slow speed school zone on Duke Street, Station Street, and sections of Mount Nessing Road and Queen Street. 50 km/hr elsewhere, including the western end of Koorong Road.	30 km/h slow speed zone to include access roads and Duke Street – Operating speeds are incredibly low here at 16 km/h, so supports the 30 km/h slower speed. Existing 60 km/h to reduce to 50 km/h due to residential properties. All average operating speeds are below 32 km/h, so drivers are already travelling at these slower speeds anyway. The western end of Koorong Road was included due to feedback from residents.

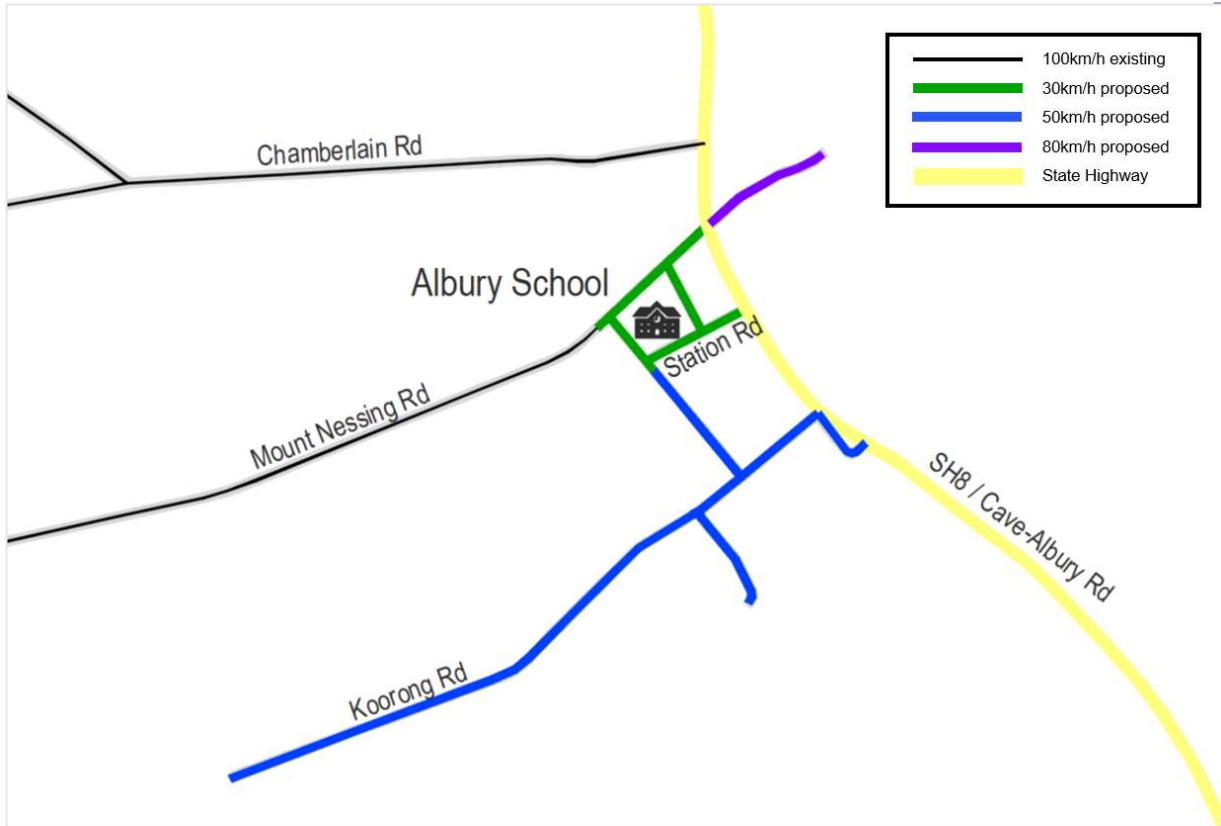


Figure 6 Proposed speed limits for Albury.

4.2.2. Cannington School

The existing and proposed speed limit for Cannington School are explained in Table 5. The proposed speed limits are shown in Figure 7.

Table 5 Existing and proposed speed limits for Cannington School.

	Current Speed Limits	Proposed Speed Limits	Explanations
Local Roads	100 km/h	30 km/h stretch in front of the school to cover the entrance and the car park.	Operating speeds are higher than 30 km/h here. Monitoring will be required to ensure drivers comply. Infrastructure may need to be considered for this section.

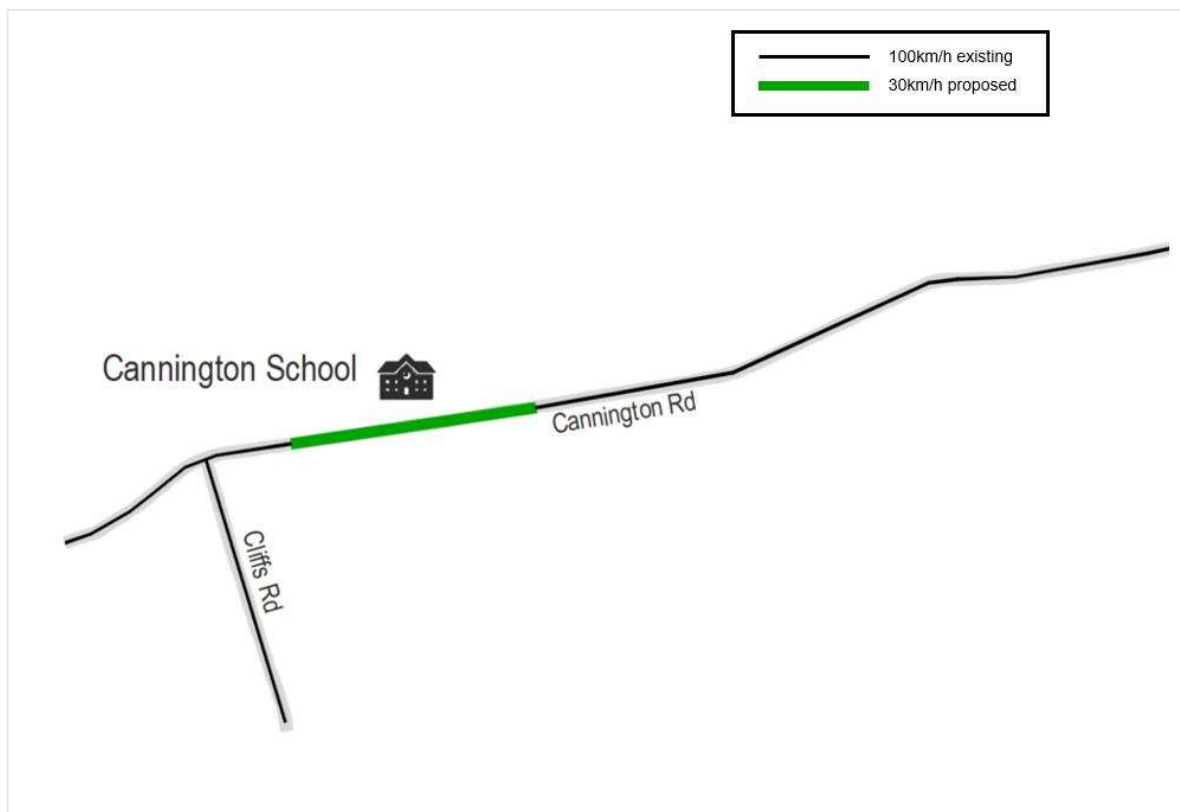


Figure 7 Proposed speed limits for Cannington School.

4.2.3. Kimbell

The existing and proposed speed limits for Kimbell are explained in Table 6. The proposed speed limits are shown in Figure 8.

Table 6 Existing and proposed speed limits for Kimbell.

	Current Speed Limits	Proposed Speed Limits	Explanations
SH8	80 km/h	50 km/h	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.
Local Roads	60 km/h through urban area 100 km/h on Stanton Road to the East.	50 km/h through urban area 80 km/h on Stanton Road to the East	The proposed slower speed will support the development here. Operating speeds are slower than 50 km/h here so drivers will comply with these slower speeds.

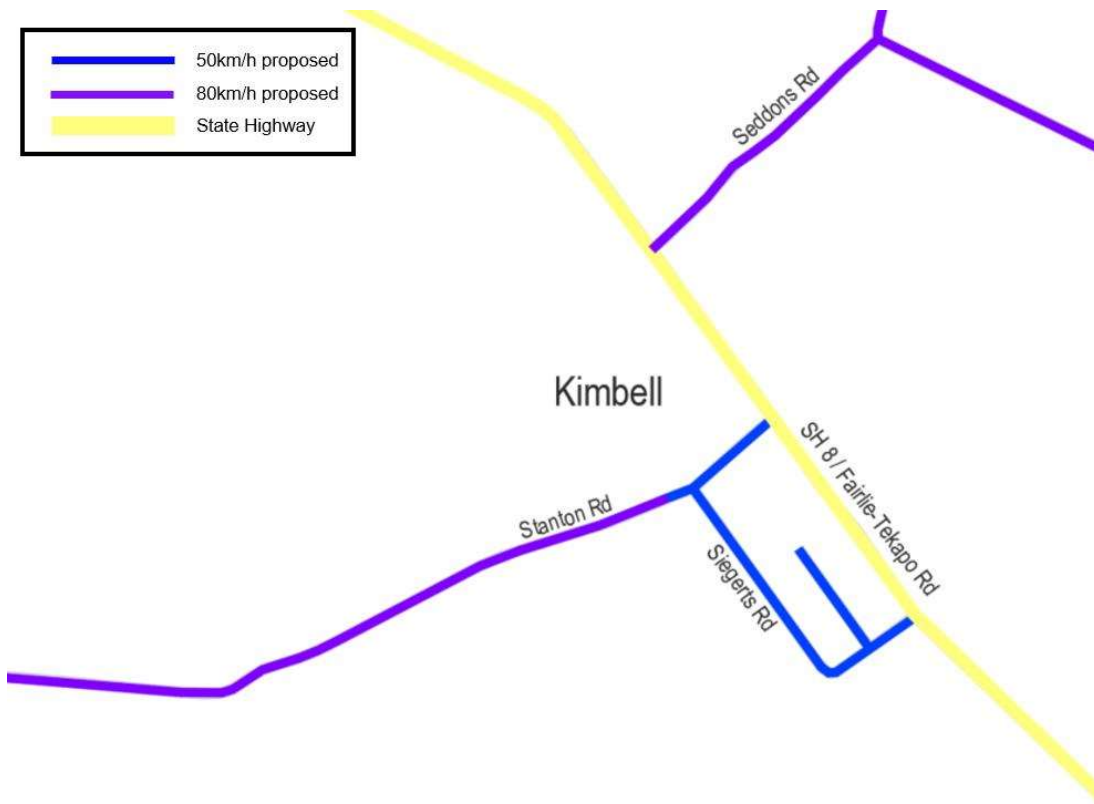


Figure 8 Proposed speed limits for Kimbell.

4.2.4. Burkes Pass

The existing and proposed speed limits for Burkes Pass are explained in Table 7. The proposed speed limits are shown in Figure 9.

Table 7 Existing and proposed speed limits for Burkes Pass.

	Current Speed Limits	Proposed Speed Limits	Explanations
SH8	60 km/h	50 km/h	Waka Kotahi is the RCA here, and communication with them is key to creating a consistent network.
Local Roads	100 km/h	80 km/h	Rollesby Valley Road will drop to 80 km/h for the entire section of the road.



Figure 9 Proposed speed limits for Burkes Pass.

4.3. Rural Roads

A table of all rural roads in the Mackenzie District, their current speed limit, average operating speeds, and proposed speeds are listed in the Appendix. Operating speeds have been obtained from MegaMaps RtZ Edition 2 tool¹ Mean Operating Speeds displays the average free-flow speed band for each road segment which is calculated from data provided by TomTom². TomTom data is no longer solely sourced from TomTom navigation devices, but aggregated from millions of anonymous, consumer GPS devices including mobile phones. The data used has been collected over two years from 2021 to January 2023, based on 24 hours of data.

The Mean Operating Speed represents the average person driving on the corridor. Half of drivers on the corridor experience faster speeds than average for reasons such as good weather and lighter traffic volumes. Equally half of drivers will travel at a lower speed because of higher traffic volumes, poor weather or a preference for travelling at lower speed.

Where the road was separated into more than segment, and therefore more than one operating speed, the highest operating speed was chosen for the table.

¹ [MegaMaps \(nzta.govt.nz\)](https://nzta.govt.nz/megamaps)

² [TomTom — Mapping and Location Technology](https://www.tomtom.com/en_gb/about-us)

Table 8 MDC rural roads current speed limits, average operating speeds, and proposed speeds.

Road Name	Current Speed Limit (km/h)	Current Average Operating Speed (km/h)	Proposed Speed (km/h)
Haldon Road (unsealed)	100	59	80
Haldon Road (sealed)	100	34	-
Mount Nething Road (unsealed)	100	36	80
Mount Nething Road (sealed)	100	56	-
Clayton Road (unsealed)	100	34	80
Clayton Road (sealed)	100	57	-
Lilybank Road (unsealed)	100	34	80
Lilybank Road – from SH8 to end of Takapō Regional park (sealed)	80	47	50*
Hayman Road (unsealed)	100	47	80
Hayman Road (sealed)	100	50	80*
Braemar Road (unsealed)	100	34	80
Braemar Road (sealed)	100	34	80*
Braemar Mount Cook Station Road (unsealed)	100	31	80
Cliffs Road (sealed)	100	60	-
Cannington Road (sealed)	100	57	-
Pareora Gorge Road (sealed)	100	92	-
Otama Road (unsealed)	100	17	80
Burnett Road (unsealed)	100	17	80
Greenhill Road (unsealed)	100	17	80
Gorge Road (unsealed)	100	33	80
Albert Road (unsealed)	100	17	80
Monavale Road (unsealed)	100	17	80
Monavale Road (sealed)	100	23	-
Rocky Gulley Road (unsealed)	100	17	80
Nelsons Road (unsealed)	100	46	80

Whiteman Road (unsealed)	100	34	80
Askins Road (unsealed)	100	33	80
Stoneleigh Road (unsealed)	100	26	80
School Road (unsealed)	100	20	80
School Road (sealed)	80	48	-
School Road (sealed)	100	48	80*
Rollesby Valley Road (unsealed)	100	38	80
Rollesby Valley Road (sealed)	100	38	80*
Spring Terrace Road (unsealed)	100	17	80
Kerrs Road (unsealed)	100	32	80
Opuha Gorge Road (unsealed)	100	29	80
O'Neills Road (unsealed)	100	34	80
Richardsons Road (unsealed)	100	27	80
Fraser Road (unsealed)	100	17	80
Wisely Road (unsealed)	100	17	80
Eskdale Road (unsealed)	100	34	80
Gudex Road (sealed)	100	63	-
Middle Valley Road (unsealed)	100	71	80
Middle Valley Road (sealed)	100	71	-
MacKenzie Pass Road (unsealed)	100	34	80
Rollesby Station Road (unsealed)	100	17	80
Chamberlain Road (unsealed)	100	18	80
Chamberlain Road (sealed)	100	38	-
Tekapo Powerhouse Road (unsealed)	60	No data available	-
Hakataramea Pass Road (unsealed)	100	34	80
Strathallan Road (unsealed)	100	17	80
Limestone Valley Road (unsealed)	100	30	80
Little Road (unsealed)	100	35	80
Clayton Settlement Road (unsealed)	100	23	80
Spur Road (unsealed)	100	34	80

Spur Road (sealed)	100	59	-
Stony River Road (unsealed)	100	17	80
McLeans Road (unsealed)	100	34	80
Jefcoates Road (unsealed)	100	17	80
Perry Road (unsealed)	100	38	80
Connors Road (unsealed)	100	32	80
Coal Pit Road (unsealed)	100	16	80
Oldfield Road (unsealed)	100	33	80
Cricklewood Road (unsealed)	100	32	80
Prohibition Road (sealed)	100	58	-
Raincliff Road (sealed)	100	88	-
Lochaber Road (unsealed)	100	34	80
Ben Ohau Road (unsealed)	100	17	80
Lake Alexandrina Road (unsealed)	100	27	80
Hunterslea Road (unsealed)	100	No data available	80
Hitches Road (unsealed)	100	17	80
Blainslie Road (unsealed)	100	17	80
Pusey Road (unsealed)	100	17	80
Bennets Road (unsealed)	100	19	80
Opuha Dam Road (unsealed)	100	51	80
Lake Alexandrina South Road (unsealed)	100	23	80
Mt Michael Road (sealed)	100	57	-
Hays Road (unsealed)	100	31	80
Old Glen Lyon Road – west of Merino Lane (unsealed)	100	34	80
Old Glen Lyon Road – from Merino Lane to Glen Lyon Road (sealed)	50	38	.*
Max Smith Drive (SH8 to Freda Du Faur Avenue)	80	64	50*
Max Smith Drive (Freda Du Faur Avenue to end)	100	64	80*
Camp Valley Road (unsealed)	100	58	80
Camp Valley Road (sealed)	100	42	-
Glen Lyon Road – from SH8 to Old Glen Lyon Road (sealed)	80	48	50*

Glen Lyon Road (sealed)	100	63	-
Manuka Terrace (unsealed)	100	33	80
Manuka Terrace (sealed)	70	No data available	80*
Bracefields Road (unsealed)	100	No data available	80
Ashwick Flat Road (unsealed)	100	17	80
Seddons Road (unsealed)	100	34	80
Hamilton Road (unsealed)	100	34	80
Hamilton Road (sealed)	100	34	-
Homebush Road (unsealed)	100	28	80
McMasters Road (unsealed)	100	No data available	80
Waratah Road (unsealed)	100	55	80
Waratah Road (sealed)	100	34	-
Pahau Downs Road (unsealed)	100	17	80
Plantation Road (unsealed)	100	30	80
Old Iron Bridge Road (unsealed)	50	25	-
Te Puke Road (unsealed)	100	19	80
Awarima Road (unsealed)	100	17	80
Lushman Road (unsealed)	100	No data available	80
Tondros Road (unsealed)	100	34	80
Butlers Road (unsealed)	100	17	80
Nixons Road (unsealed)	100	18	80
Nixons Road (sealed)	80	48	.*
Jack Lovelock Track (unsealed)	100	15	80
Stanton Road (unsealed)	100	21	80
Rockwood Road (unsealed)	100	34	80
Rockwood Road (sealed)	100	59	-
Brays Road (unsealed)	100	33	80
Trentham Road (sealed)	100	58	-
Blue Mountain Road (unsealed)	100	17	80
Mowbray Road (unsealed)	100	17	80
Trotters Road (unsealed)	100	33	80
Kidds Road (unsealed)	100	No data available	80
Rhoboro Downs Road (unsealed)	100	42	80

Haldon Arm Road (unsealed)	100	34	80
Wilfred Road (unsealed)	100	17	80
Braemar Mt Cook Station Road (unsealed)	100	31	80
Opihi Gorge Road (unsealed)	100	18	80
Ardmore Road (unsealed)	100	17	80
Monument Road (unsealed)	100	34	80
McPhersons Road (unsealed)	100	17	80
Rutherford Road (unsealed)	100	20	80
Bauchops Hill Road (unsealed)	100	17	80
Talbot Road (unsealed)	100	29	80
Talbot Road (unsealed)	50	41	-
Mt Michael Valley Road (unsealed)	100	34	80
Springs Road (unsealed)	100	17	80
Three Springs Road (unsealed)	100	34	80
Koorong Road (unsealed)	100	30	80
Godley Peaks Road (unsealed)	100	34	80
Godley Peaks Road (sealed)	100	54	80*
Morris Road (unsealed)	100	17	80
Middle Road (unsealed)	100	21	80

*Speed limit proposed is an exception to the guiding principle of 100km/h on sealed roads.



Mackenzie

DISTRICT COUNCIL