



Masterton District Council SPEED MANAGEMENT PLAN

March 2023



Table of Contents

1.	Why a Speed Management Plan?	1
1.1	Setting of Speed Limits Rule	1
1.2	Funding	2
1.3	Government Policy Statement on Land Transport	2
1.4	Road to Zero	3
1.5	Road Safety	3
2.	What is speed management?	3
2.1	Climate change	4
2.2	Crash survivability	6
2.3	Travel speed	7
2.4	Crash types	7
2.5	Pedestrians and Cyclists	8
3.	Speed Management Planning	10
3.1	Speed Management Plan	10
3.2	Speed Limits	10
3.3	Megamaps	11
3.4	Safe and appropriate speed	11
3.5	Consultation	12
3.6	Summary of Consultation	12
4.	2023 Speed Management Plan	15
4.1	Vision	15
4.2	Objectives and policies	16
4.3	Principles	16
4.4	Schools	16
4.5	High benefit / high risk roads	17
4.6	Engineering improvements	17
4.7	Treatment lengths and adjacent roads	18
4.8	Future reviews	18
5.	Implementation Plan	19
5.1	Speed limits around schools	19
5.2	Speed limit changes	22
5.3	Safety Infrastructure	27

Figure index

No table of figures entries found.

Table index

Table 1	Crash type: 2012 - 2021	7
Table 2	Local streets and urban connectors	195
Table 3	Speed Limits around schools	16
Table 4	Speed Limit changes.....	19
Table 5	Safety Infrastructure	25

1. Why a Speed Management Plan?

A Speed Management Plan sets out the legislative requirements¹ for why we need to have a plan; covers the rationale as to why speed management is important; the location and types of roads that have been reviewed as part of the development of this plan; and the proposed changes to speed limits and supporting engineering improvements.

This Speed Management Plan will support our short-term and long-term road safety goals for the Masterton District. To achieve the desired road safety goals of the Speed Management Plan, a range of initiatives are required to be implemented such as speed limit changes and future improvements to roads. These future improvements will support either existing speed limits or changes in speed limits if and when required. Any physical works will be undertaken in conjunction with education programmes and enforcement as required.

By ensuring that vehicle speeds are appropriate for the areas where we live, work and go to school, the Speed Management Plan will support Council's vision that, "Masterton/Whakaoriori offers the best of rural provincial living" and the aspirational community outcomes of:

A thriving and resilient economy: *Masterton/Whakaoriori has a strong, sustainable, low-carbon economy that supports our people and places.*

Efficient, safe and effective infrastructure: *Masterton/Whakaoriori has high-quality and cost-effective infrastructure that meets the current and future needs of our community.*

1.1 Setting of Speed Limits Rule

The Land Transport Rule: Setting of Speed Limits was updated in 2022 and came into effect on 19 May 2022. This removes the requirement for Territorial Local Authorities² to set speed limits through bylaws, enabling a whole of network approach that considers safety-related infrastructure improvements, speed limit changes and safety camera placement together.

Speed Management plans set out a 10-year vision with a 3-year implementation plan and are to be reviewed in line with the National Land Transport Programme funding timelines.

Any proposed speed limit changes and safety infrastructure improvements will be identified through the development and review processes for the Speed Management Plan.

There are deadlines for reviewing speed limits around schools, with the road controlling authority (Masterton District Council) having made all reasonable efforts to:

¹ Land Transport Rule: Setting of Speed Limits 2022

² Territorial Local Authorities means a city council or a district council. A Council controls local roads. Waka Kotahi is responsible for the State Highway roading network.

- reduce the speed limits in the vicinity of 40% of the schools directly accessed from their roading network by 30 June 2024 and
- ensure that all schools are compliant with speed limit changes by 31 December 2027.

All speed limit records are now held in the National Speed Limit Register (NSLR) and any change to an existing speed limit must conform to the changes proposed in a Speed Management Plan to enable it to be certified and become operative after the appropriate signage has been installed.

1.2 Funding

The implementation costs for road safety initiatives, including speed management, is shared between the Council and Waka Kotahi.

The guidelines for receiving funding from Waka Kotahi include meeting requirements for projects that have been identified that support speed management, and a reduction in death and serious injuries.

The outputs from the Speed Management Plan will be used to develop a forward works programme as part of the national Road to Zero strategy implementation. Funding will be sought for works to support speed management on these roads.

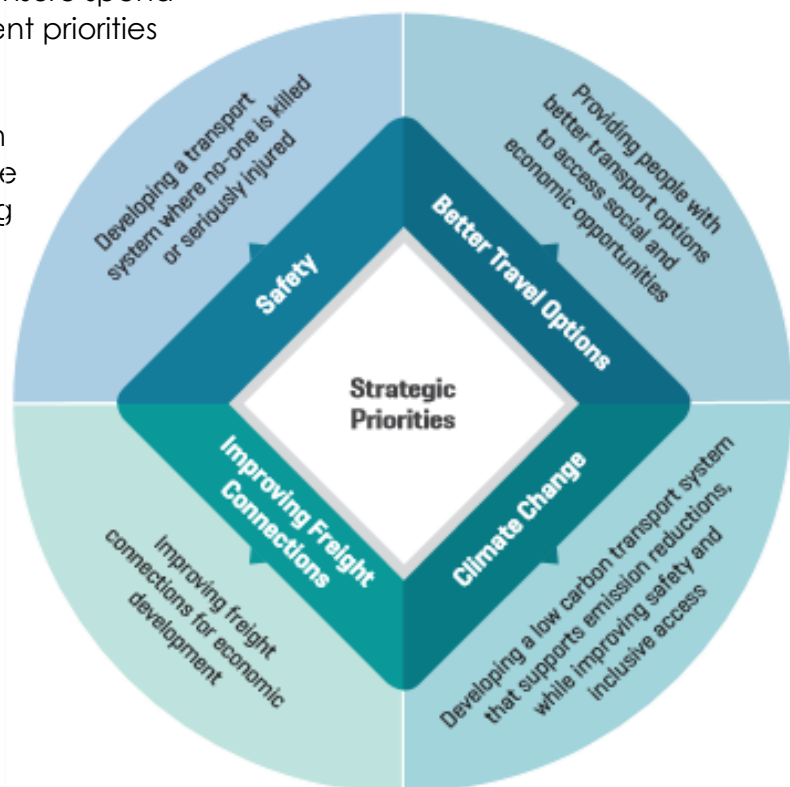
1.3 Government Policy Statement on Land Transport

The Government Policy Statement (GPS) on land transport (2021-2031) sets the Government's priorities for land transport investment over a 10-year period. It sets out how the National Land Transport Fund (NLTF) will support activities such as public transport, state highway improvements, local roads, and road safety. Waka Kotahi and local authorities need to ensure spend on transport reflects Government priorities outlined by the GPS.³

The GPS also provides direction and guidance to those who are planning, assessing and making decisions on Land Transport over the next 10 years.

The GPS has four strategic priorities (refer figure 1) that are expected to guide land transport investments.

Figure 1: GPS Priorities



³ <https://www.transport.govt.nz/assets/Uploads/Paper/GPS2021.pdf>

1.4 Road to Zero

The Government is committed to tackling unsafe speeds as part of the vision of a New Zealand where no one is killed or seriously injured in road crashes.

The risk of a crash occurring and the resulting severity of injury resulting from the crash depends significantly on the speed of vehicles involved.

Road to Zero is underpinned by the safe system approach for the which the fundamental principle is that we are all human and as such we will make mistakes however these mistakes should not cost us our lives.



1.5 Road Safety

Road safety goes beyond Council's obligation to prevent deaths and injuries to improving lives and lifestyles too. By ensuring that everyone feels safe to use our transport network we increase opportunities for a more diverse use of transport modes and enabling more active ways in how we get to where we need to go such as letting children walk, bike or scooter to school. The creation of road networks that allow for easy and multimodal transport use within our urban areas connect people and communities, and align with other Council priorities such as the Climate Change Action Plan and Wellbeing Strategy. The largely rural road network continues to be a challenge in balancing the desire for high vehicle speeds with constrained road cross sections and unforgiving roadside environments.

Influencing road user behaviour and improving our driving culture will continue to be critical to making significant gains in road safety. All users of our roads, streets and footpaths have a responsibility to make good choices and follow the rules, while central and local government have a responsibility to support and enforce that behaviour.

2. What is speed management?

Speed management is about achieving safe and appropriate vehicle speeds on roads which reflect each road's function, design, safety and use. People and goods need to move efficiently around our transport network; however, aligned to the

Road to Zero vision, we also need to see a reduction in deaths and serious injuries on the network.

Additional benefits gained from the implementation of appropriate vehicle speeds are a reduction in noise and air pollution which results in healthier and safer communities.

Vehicle speeds are a key variable in developing transport policy and strategies. Speed plays a dominant role in a number of transport related measurements such as mobility demand, fuel consumption and CO2 emissions, air pollution, noise, safety and congestion.

The Global Road Safety Facility – World Bank released a report in 2020 titled Road Crash Trauma, Climate Change, Pollution and the Total Costs of Speed: Six graphs that tell the story.

This report states that:

Reduced speeds of travel represent a major, yet under-appreciated, opportunity to improve safety, climate change impacts of travel, health, inclusion, the economy, and in some circumstances, congestion. Speed management can be achieved through a range of interventions including road infrastructure and vehicle technology, as well as enforcement and promotion.⁴

Speed management is more than just setting or adjusting speed limits. It requires input from policy makers, engineers, educators and the police to educate, encourage and influence road users to adopt safe and appropriate speeds.

2.1 Climate change

Climate change can be impacted by not only the number and types of vehicles being driven on the network, but also the speed at which vehicles are travelling.

Council currently provides footpaths, cycling lanes and networks that support alternative transport such as cycling and walking.

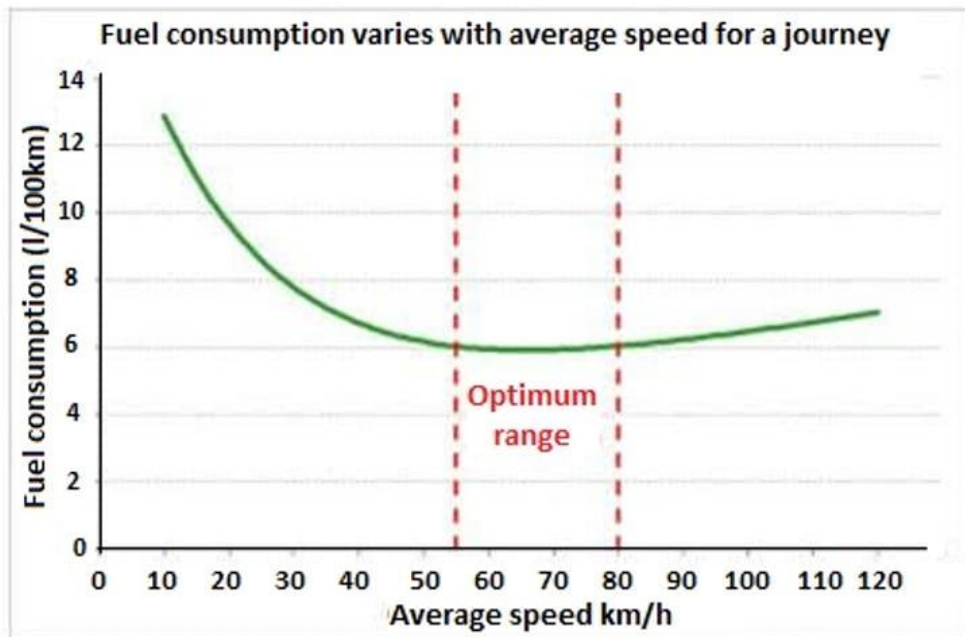
From the environmental development area of Council's Wellbeing Strategy, potential key actions have been identified which include:

- Enable and support the promotion of alternative transport e.g. biking, walking and ridesharing
- Advocate for better public transport links, noting that in a rural provincial environment public transport will never offer a complete solution
- Choose, and encourage our community to choose, cleaner and greener fuel options.

A key focus of the Masterton District Climate Action Plan (2022) is a 20-minute town – creating accessible, safe, and attractive local areas where people can access most of their everyday needs within a short walk, cycle, or local public transport trip – which generally have lower emissions.

⁴ [World Bank Document](#)

Due to the largely rural nature of Masterton District the reliance on personal vehicles will remain high. Every car has an optimal speed range that results in minimum fuel



per vehicle

Fuel consumption increases at lower speeds due to the typical start/stop nature of driving in these lower speed environments.

A recent publication from the Global Road Safety Facility – World Bank⁶ stated that the benefits of managing vehicles speeds were:

- *Saves lives and debilitating injuries*
- *Reduces GHG emissions and thus assists in the battle against climate change (in a recent meeting in Geneva, Sweden reported that the most effective tool they had for reducing GHGs was the speed camera programme)*
- *Reduces other air pollutants which harm health, including road traffic noise*
- *Increases efficiency, by vehicle maintenance costs and reducing fuel costs.*

Economic analysis of higher speeds often only consider travel time savings, omitting critical economic impacts through crash costs, emissions, fuel costs and vehicle maintenance. The total costs of speed are often overlooked because lobbying by transport companies and other road users is focused on their travel time, while the main costs of crashes, GHGs, and health effects of omissions are born by the society and government.

⁵ [Climate explained: does your driving speed make any difference to your car's emissions? \(theconversation.com\)](https://www.theconversation.com/climate-explained-does-your-driving-speed-make-any-difference-to-your-car-s-emissions/)

⁶ [World Bank Document](#)

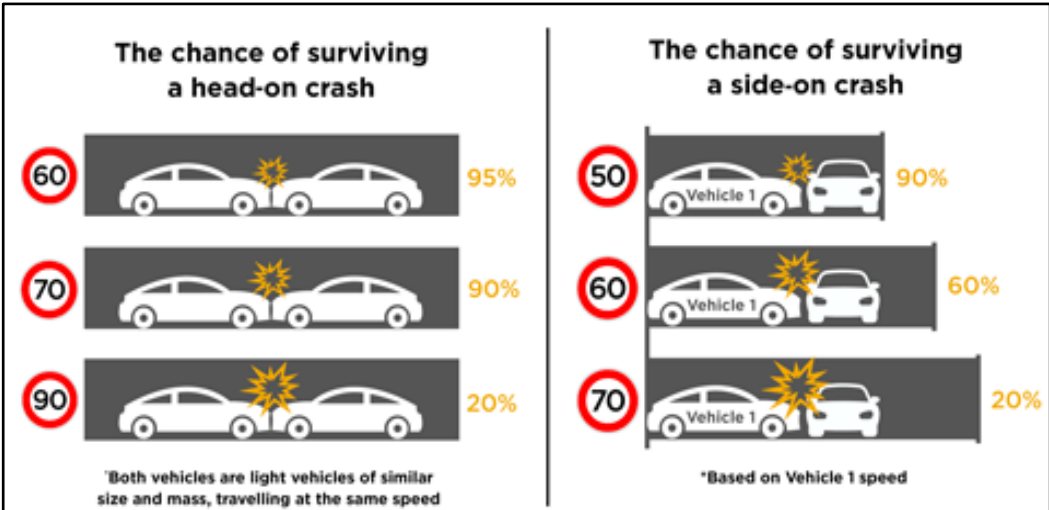
2.2 Crash survivability

The role and impact of speed in crashes is often underestimated, with the most common argument used against any reduction in speed limits being that “vehicle speeds don’t cause crashes poor drivers do”. This is correct in part.

The speed that a vehicle is traveling at does not cause the crash, however it has a direct effect on the severity of the crash and higher vehicle speeds increase the probability of a crash in several ways:

- by reducing the capacity of a driver/vehicle to stop in time;
- by reducing manoeuvrability in evading a problem;
- by making it impossible to negotiate curves and corners at speeds which are too high for the friction available;
- by reducing the driver's field of vision; and
- by causing others to misjudge gaps.
- Therefore, speed plays a significant role in the both the outcome of the crash as well as the potential for a crash to occur. The speed of the vehicle is the difference between a correctable mistake and a fatal error as illustrated in Figure 3.

Figure 3 Crash survivability⁷



The Waka Kotahi crash database (CAS) holds information on all crashes that have been reported to the Police. This data can be broken down into the various local authority regions and separated into local roads and state highways. Contributing factors and crash types are some of the features that are analysed to develop a picture of the crash history within the Masterton District.

⁷ Source - Centre for Road Safety – NSW Government

2.3 Travel speed

Travel speed was indicated as being a contributing factor in 35% of all fatal and serious crashes on the Masterton district local road network between 2012 and 2021. This indicates that inappropriate speed (not necessarily above the speed limit) plays a significant part in the number of crashes in this district.

2.3.1 Travel Time

A New Zealand Transport Agency Research Report (RR568) was produced in 2017 which the result of surveys undertaken to understand time saving as a motivation for New Zealand drivers' speeding⁸. The result of the research showed that:

“Drivers do not have a good understanding of how much time they would save by speeding. Some drivers choose to speed because they want to save time, but generally underestimate time savings from increasing low speeds and overestimate time savings from increasing high speeds.”

Drivers who choose to speed to save time are those whose speeding behaviour falls into the violation category, as opposed to accidental lapses and other speeding behaviour. They make a conscious decision that the benefit of increasing speed (arriving at their destination sooner) outweighs the costs of speeding (financial, safety, possible penalties). If that cost-benefit decision is based on incorrect information, providing correct information may result in a different outcome. For example, the driver's decision to speed may be based on an inflated estimate of the time they may save and an underestimate of the increased safety risk. If the driver instead has correct information about time saving and risk, they may make a different speed choice.

2.4 Crash types

A review of the crash data for the ten-year period 2012–2021, shows that there has been 13 fatal and 85 serious crashes on local roads within the Masterton District. The types of the crashes are shown in Table 1.

Table 1 - Crash type: 2012-2021

Crash Type	Fatal	Serious	Minor	Non-injury	Total
Lost Control - Bend	5	28	97	189	319
Lost Control - Straight Road	2	14	53	107	176
Manoeuvring		4	20	116	140
Crossing - Not turning		5	39	81	125
Obstruction		2	12	84	98
Crossing - One turning		6	12	41	59

⁸ [Research Report 568 Travel time savings and speed: actual and perceived \(nzta.govt.nz\)](https://nzta.govt.nz/research-reports/568-travel-time-savings-and-speed-actual-and-perceived)

Crash Type	Fatal	Serious	Minor	Non-injury	Total
Same Direction Turning	1	4	18	33	56
Rear End Crash		2	6	42	50
One Turns Right		3	11	28	42
Head On Crash	4	4	10	18	36
Merging		1	10	21	32
Pedestrian Crossing Road	1	8	19	3	31
Overtaking			6	8	14
Miscellaneous		1		12	13
Other Pedestrian		3	7	2	12
Total	13	85	320	785	1203

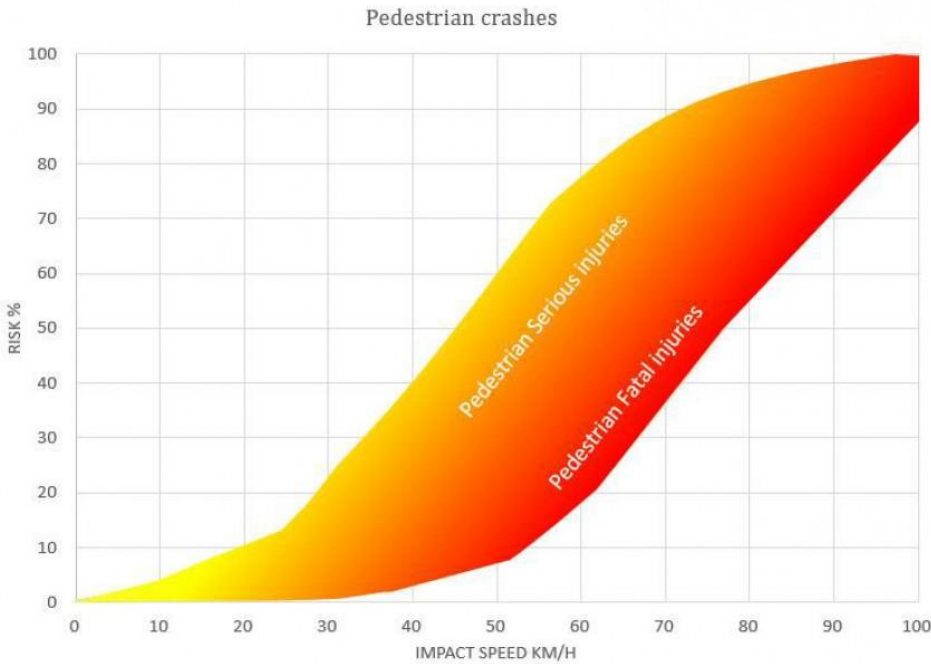
2.5 Pedestrians and Cyclists

Safer speed limits within town centres, around schools and other high pedestrian generating areas will help to support more liveable and thriving communities by improving safety and accessibility and encouraging more active modes of transport.

Pedestrian crashes can occur anywhere on the roading network, however there are opportunities to improve safety and accessibility, in particular around schools. Current speed limits within town centres and outside many schools do not make walking and cycling an appealing mode of transport and therefore increase the reliance on vehicles. Increased rates of children walking and cycling to school will reduce the level of congestion in the vicinity of schools, lowering the risk of crashes and stress to other road users. It may also have a range of co-benefits, including health and accessibility by helping people to feel safer to walk or bike to school which has benefits for the community as a whole, particularly in the areas of health and lowering emissions.

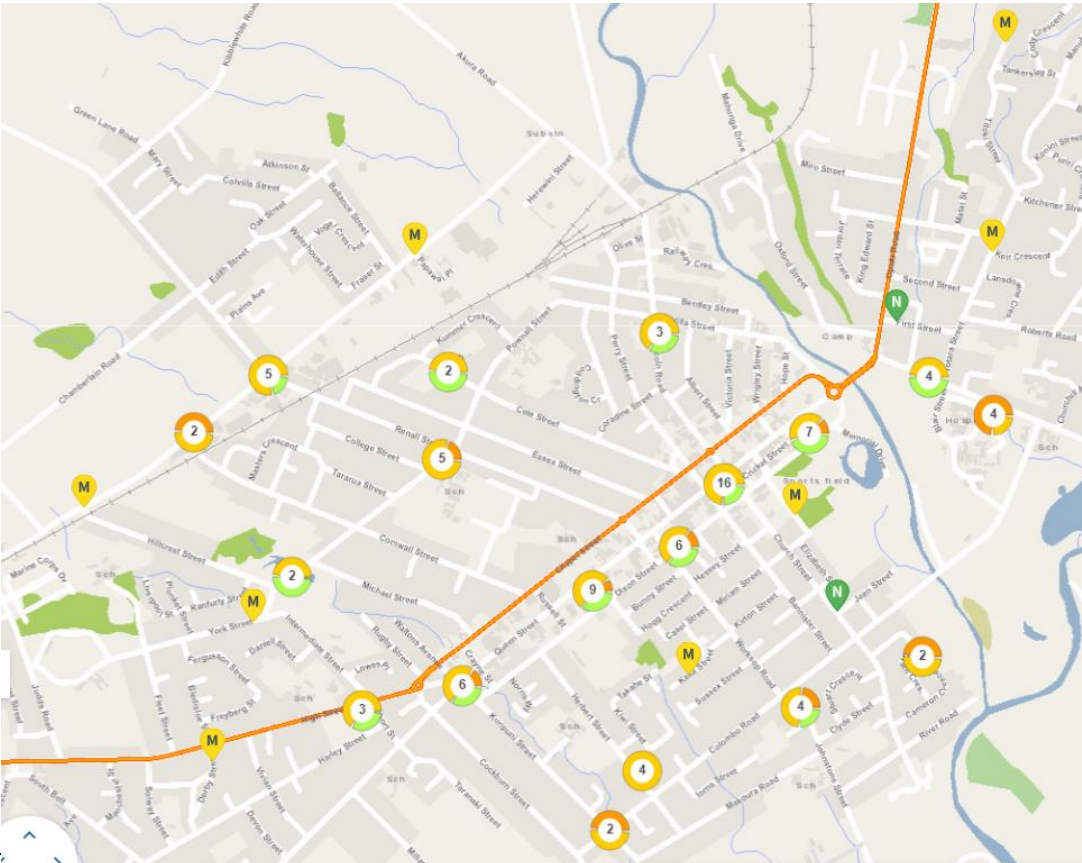
Pedestrians and cyclists are particularly vulnerable in crashes involving vehicles. A crash with an impact speed of 50km/h is 70% more likely to result in death or serious injury than one with an impact speed of 30km/h. Research conducted by Mackie Research Ltd for Waka Kotahi developed the chart shown in figure 4 for pedestrians struck by light vehicles. They also demonstrated that the severity curve for cyclist and pedestrians is very similar. The width of the bands indicates that the severity of injury in a pedestrian or bicycle crash is not just a function of collision speed, but the age of the person and the type of vehicle striking them also have major influences.

Figure 4 Pedestrian injury risk⁹



In the 10-year period of 2012 to 2021 inclusive there have been 101 crashes involving pedestrians or cyclists on local roads within the Masterton district. Of these, none have been fatal with fourteen resulting in serious injuries. A further 62 resulted in minor injuries and 25 have been reported as non-injury crashes. The majority of the crashes have occurred in the urban area as shown in Figure 5.

Figure 5 Urban pedestrian and cycle crashes



⁹ Source: Mackie Research Ltd

3. Speed Management Planning

3.1 Speed Management Plan

Speed Management Plans are required to be developed by Road Controlling Authorities¹⁰ to show their proposed short-term and long-term changes to the whole network with respect to speed management and identify future improvements to roads to support changes in speed limits if required. Due to the requirement for funding to support any engineering improvements that need to be implemented the plans are proposed to have a 10-year horizon. The plans will be reviewed every three years to ensure that they are being delivered as expected, are adapting to any network changes, and align with the Long-Term Planning process for funding.

The intention of the implementation of a Speed Management Plan is not to undertake wholesale changes to speed limits within the district.

The purpose of the Speed Management Plan is to provide a structured and methodological process for the review and change of speed limits and/or the implementation of engineering improvements to support speed management as required to reduce the risk to road users. Where the road environment needs to be modified to support the desired speed limit then physical works will need to be undertaken. The nature of these engineering improvements will depend on the road and the speed management goal to be achieved.

3.2 Speed Limits

Road Controlling Authorities currently have the ability to set speed limits in 10km/hr increments from 20km/hr to 100km/hr. This range of limits is significant, and guidance has been provided by Waka Kotahi on what speed limits should be used in which environments.

As a speed management tool, speed limits are used to align drivers' expectations with the reality of the road environment. Often lowering the speed limit will not significantly affect the travel time of vehicles but may stop a driver pushing the bounds on the speed that they think they can achieve on the road and hopefully reduce the risk of them losing control. This also works to provide better alignment of speeds between visitors (who are more cautious) and locals (who are more familiar with the roads by providing all drivers with a more accurate reflection of what speed they should be travelling at.

It is acknowledged that speed limits are an emotive topic and that the requirement for dramatic changes to speed limits from a risk management perspective is not fully understood by the community.

To this end the Council may look to take a staged approach to lowering speed limits in the district. The majority of changes proposed will result in a maximum of a 20km/hr drop in the speed limit being implemented on a road in a single year. Should a larger decrease in the speed limit be desired, from an engineering perspective, or where there is significant resistance from the community, this will be addressed on a case-by-case basis and may result in the speed limit being reduced

¹⁰ Road Controlling Authority – Council is the road controlling authority for local roads. Waka Kotahi manages the state highway network.

in stages. An initial drop in the speed limit with supporting engineering improvements would be implemented however, if the risks continue to be present or the situation changes, then a further reduction would be implemented as part of the next review or within three years, whichever is the earlier.

3.2.1 Zones of influence

To ensure that the lower speed limits are applied where they will offer the greatest protection to vulnerable road users in the vicinity of high pedestrian usage areas (such as schools) a 'zone of influence' is proposed to be used. This is to ensure that the length of any speed restriction is reasonable, and the purpose of the restriction is obvious to a driver so that there is a greater level of compliance. Imposing speed restrictions that appear unnecessary, or the justification is unclear, is likely to impact the acceptance of speed limit changes across the board.

Based on stopping distance calculations, the distances proposed ensures that the signs/restrictions are placed with sufficient distance from the likely area of conflict such that a driver can observe, react and stop prior to hitting the potential hazard.

3.3 Megamaps

Waka Kotahi have developed a Speed Management Guide and the Safer Journeys Risk Assessment Tool (known as MegaMaps) for use by Council Staff that provides a range of technical information on each road within the Masterton District. These metrics are used as a starting point to help assess the safe and appropriate speed for each road / section of road.

As a result of changing the speed limit, effects associated with a number of factors can be calculated. These include:

- Estimated death and serious injury savings per annum
- Travel time change per vehicle traversing the section of road
- Vehicle Operating Cost (VOC) change per vehicle traversing the section of road
- The change in CO2 emissions per annum.

It is important to note that these effects assume that the speed limit will be lowered to the safe and appropriate speed. For those sections of road where the decision is to invest in infrastructure improvements to bring the design and safety of the road to a level where the existing speed limit can be retained, then the travel time, vehicle operating, and CO2 emission changes will be zero. Safety savings from infrastructure improvements are expected to be greater than those achieved from lowering the speed limit alone.

3.4 Safe and appropriate speed

Due to the range of speed limits available for implementation by Councils, Waka Kotahi developed a process to determine the safe and appropriate speed (SAAS) for each road or section of road.

The SAAS for a section of road is derived from the:

- combination of the Safe System speed thresholds for crash survivability,
- One Network Framework: street categories,
- Infrastructure Risk Rating, and
- presence or planned implementation of safety infrastructure.

The Infrastructure Risk Rating is based on road stereotype, horizontal alignment, volume, carriageway width, access density and land use.

The SAAS is based on a speed limit being appropriate for the road function, design, safety and use (i.e. it takes both safety and efficiency into account).

The use of these speeds as a speed limit is not compulsory, however they do assist with ensuring that speed limits are consistent across the country.

3.5 Consultation

The development of the Speed Management Plan requires a formal consultation process with the community to assist with building public understanding and awareness of safe and appropriate speed limits, as well as providing an opportunity to provide feedback on our proposals.

Engagement with schools, Marae, kōhanga reo (within the vicinity of Marae), key stakeholders, and the wider community on the development of speed management plans helps to ensure that this Speed Management Plan supports the desires of the community, improves road safety outcomes and reduces the impacts of unsafe speed limits on all communities.

3.6 Summary of Consultation

Pre-engagement

Under the Land Transport Rule: Setting of Speed Limits 2022 councils are required to undertake pre-engagement with schools and Māori to inform the development of the Consultation Draft Speed Management Plan.

MDC commenced the pre-engagement process in late March 2023, running over a two-week period. All schools, kura, mara and kōhanga reo attached to marae were contacted via email with a personalised letter setting out the proposed changes in the vicinity and seeking feedback. Included in this information was an offer for a follow up telephone call or meeting.

Responses were received from three schools, with this feedback informing the draft for consultation.

Community Consultation

MDC consulted on the Consultation Draft Speed Management Plan from 31 March 2023 – 1 May 2023. The consultation was promoted via newspaper ads, Facebook, email and displays at the Masterton District Library and the Council Customer Service Centre. A number of opportunities were also provided for public to speak to Councillors and staff.

The consultation asked for feedback on:

- (1) We are taking a staged approach with our Speed Management Plan. Our initial focus will be on roads near schools, kōhanga reo and marae, as well as high risk routes. Do you agree with his approach?
- (2) Are there any high-risk roads (excluding State Highways) not included in the above that you believe should be included in the draft Speed Management Plan? Please include the reason these areas should be included.

Eighty-three submissions were received from the public in response to the consultation, with three submitters presenting their submissions to the Council. The demographics of the submitters are outlined below (note that not all categories add to 100% due to some questions not being answered):

Category	Number	Percentage
Individuals or Organisations		
Individuals	69	83.31%
Organisations	14	16.86%
Age		
Under 25	4	4.81%
25-34	6	7.22%
35-44	18	21.68%
45-54	11	13.25%
55-64	18	21.68%
65-74	14	16.86%
75+	8	9.63%
No response	4	4.81%
Gender		
Man	43	51.80%
Woman	29	34.93%
Non-binary	2	2.40%
Prefer not to answer	3	3.61%
No response	6	7.22%
Ethnicity		
Māori	8	9.09%
NZ European	58	65.59%
Pākehā	9	10.22%
Pacific Peoples	0	0.00%
Asian	1	1.13%
Other	12	13.63%
Disability		
Lives with impairments	11	13.25%
Does not live with impairments	66	79.51%
No response	6	7.22%

On the primary question of whether the submitter agreed with the Council's approach to speed management as set out in the draft Speed Management Plan:

- 41 submitters (49.93%) agreed with the Council's approach
- 40 submitters (48.19%) did not agree with the Council's approach

- 2 submitters (2.40%) selected that they both agreed and did not agree with the Council's approach.

Further analysis of the qualitative feedback provided more clarity on the views of those who submitted. While some respondents indicated yes or not to the first question, further reading indicated they agreed with aspects of the approach. From this further analysis:

- 27 submitters (32.53%) agree with the Council's proposed approach to roads near schools, kōhanga reo and marae and high-risk roads
- 24 submitters (28.91%) agree with the Council's approach to roads near schools, kōhanga reo and marae but not high-risk roads
- 29 submitters (34.93%) did not agree with the Council's approach to roads near schools, kōhanga reo and marae or with the approach to high-risk roads
- 3 submitters (3.61%) agreed to the changes around schools but stated that they should be timed variable limits.

The key themes that arose from the detailed analysis of the submissions were:

- (1) General support for speed management on roads around schools, kōhanga reo and marae
- (2) A lack of support for proposed changes on high-risk roads
- (3) Concerns around enforcement of speed limits (both of current speed limits and proposed speed limits)
- (4) Support for infrastructure that improves road safety

Follow-up Consultation

As part of their consideration of the community feedback, Council identified a potential change to the proposal outside Te Ore Ore Marae. Prior to Council deciding on this change, feedback was sought and received from the Te Ore Ore Marae committee.

Changes made to the plan following consultation

Following community consultation, and elected members deliberations on the Speed Management Plan, three changes to the draft plan were made. These are detailed below.

Retention of current speed limit on Lees Pakaraka Road

The Consultation Draft Speed Management Plan proposed the lowering of the speed limit on Lees Pakaraka Road from 80km/h to 60km/h, as well as infrastructure improvements. As part of the consultation process, a group of residents from Lees Pakaraka Road raised concerns around corner signage and suggested that improved signage would stop the need to reduce the speed limit on this Road. Following deliberations, Council resolved to remove the lowering of the speed limit from the Speed Management Plan, instead focusing on the improvement of safety infrastructure on Lees Pakaraka Road

Speed limit changes near Te Ore Ore Marae

In the Consultation Draft Speed Management Plan, a number of changes for Te Ore Ore Bideford Road were proposed including safety infrastructure improvements and a lowering of the speed limit to 80km/h for 2.3 kilometres.

Following the initial deliberations, Councillors directed staff to explore an alternative speed limit approach on the road near Te Ore Ore Marae, which included lowering the speed limit to 60km/h outside the Marae.

Council staff consulted with the Te Ore Marae Committee (as signalled above), who provided information on where the speed limit change should be extended too. Following consideration of this information, Council agreed to amend the Speed Management Plan to include a 60km/h speed limit on Te Ore Ore Bideford Road from the corner with Te Ore Ore Road until north of the marae (approximately 1.6 kilometres).

Pownall Street Speed Limit Changes

The Consultation Draft Speed Management Plan included the creation of a permanent 40km/h zone on Pownall Street from just south of Wairarapa College to just north of St Matthew's Collegiate.

Following consultation and initial deliberations, Council asked to further explore this change, including the potential utilisation of variable speed zones.

As a result of further consideration Council resolved to retain the 40km/h speed zone as set out in the Consultation Draft Speed Management Plan, but to extend the southern end of the speed zone for approximately 720 metres to the end of Pownall Street and the intersection with York Street.

Error! Bookmark not defined.The key documents associated with the community consultation are available on the Masterton District Council website.

- 17 May 2023 [Draft Speed Management Plan 2023: Full Set of Submissions](#)
- 17 May 2023 [Draft Speed Management Plan Hearings Report](#)
- 7 June 2023 [Draft Speed Management Plan Deliberations Report and Minutes of Hearings Meeting](#)
- 15 June 2023 [Speed Management Plan Further Deliberations and Minutes of Deliberations Meeting](#)
- 28 June 2023 [Speed Management Plan Minutes of Further Deliberations Meeting](#)

4. 2023 Speed Management Plan

4.1 Vision

This Speed Management Plan aligns with the vision for the Wellington Region of:

“Our vision for Wellington is a connected region, with safe, accessible and liveable places – where people can easily, safely and sustainably access the things that matter to them and where goods are moved efficiently, sustainably and reliably (RLTP 2021 vision).”

4.2 Objectives and policies

The objective of this Speed Management Plan is to:

“Create a roading network where residents and visitors can travel safely and efficiently around the district, no matter how they travel”.

People can move around the Wellington Region safely (RLTP 2021)

The policies underpinning this Speed Management Plan are:

- Ensure speed limits are appropriate to the movement and place function of the transport network
- Ensure safe speed limits around schools/kura, marae and other areas of local significance

4.3 Principles

Those roads considered as part of the development of the Speed Management Plan for Masterton District have been identified from the following sources:

- School locations
- Marae locations
- High benefit / high risk roads – Roads with three or more fatal or serious crashes in the previous 10 years.

Other areas for review such as town centres, residential speed limits and remote rural speed limits will be considered in subsequent reviews of the Speed Management Plan in conjunction with the development of the Regional Speed Management Plan for the Greater Wellington region to ensure that there is a consistent approach to the treatment of these areas.

Changes to speed limits will be ongoing as development in the district continues, and to achieve alignment with the Governments Road to Zero Action Plan with respect to speed management. This initial Speed Management Plan provides guidance on Council's approach to when, how and why speed should be managed on each of the roads identified.

Details on the technical assessment of each of the roads based on the above-mentioned criteria are included in the technical assessment document (this is in a separate document and will be available on our council website).

4.4 Schools

The current speed limit on roads in the vicinity of urban schools within the Masterton District is 50km/hr or 40km/hr and for rural schools either 70km/hr or 100km/hr depending on the location of the school.

By the end of 2027, the speed limits on roads in the vicinity of all schools must be reviewed and a reasonable effort have been made by the road controlling authority to have reduced the speed limits in the vicinity of all schools on local roads based on their category.

There are two categories of schools:

- Category 1 schools require a speed limit on the outside the school to be 30 km/h.
- Category 2 schools are those where the road controlling authority deems a safe and appropriate speed limit of 60 km/h or less is suitable for the roads outside the school.

For a school to be category 2, it is expected to have the appropriate level of entranceway design and supporting safety infrastructure that removes or manages potential pedestrian crash conflicts to align within Safe System injury tolerances.

The reduced speed limits can be either variable or permanent. Where schools are located on a no exit road or within residential neighbourhoods then permanent speed limits should be installed. For locations that are on through roads with higher speed limits, then a variable speed limit is considered to be the most appropriate form of treatment.

Coordination is required to ensure that schools with frontages to both local roads and state highways are treated the same and all work occurs simultaneously to avoid confusion for drivers.

4.5 High benefit / high risk roads

Megamaps has a series of algorithms that have been run to identify roads that are considered likely to achieve the greatest benefit from speed management. Each of the roads identified are then reviewed for appropriateness based on local knowledge of the area.

The crash data for the 10 year period 2012 – 2021 has been reviewed for all local roads within the Masterton District. Those roads that have had three or more fatal or serious crashes in this period have been considered as a high risk road. As crashes have already occurred on these routes, it indicates that the environment is not self-explaining to drivers.

Each of these high benefit / high risk routes have been reviewed to determine what improvements are appropriate to lower the risk to users. This included standard safety improvements as well as changes to speed limits.

4.6 Engineering improvements

Supporting engineering improvements will be required regardless of where and what changes are made to speed limits in an area. Some improvements will be standard layouts such as the signs and markings used at threshold locations or in the vicinity of schools, while others will be more bespoke designs depending on the location and outcomes sought.

Portions of the Masterton District roading network are straight sections of road which provide little topographical constraint to a driver's speed, however the presence of

power poles, trees and other roadside hazards poses an increased risk to drivers should they leave the road. In these situations, there are a number of engineering works that can be implemented to manage the speed of vehicles.

Some features such as the installation of barriers are proposed to be implemented to support the existing speed limit by improving the safety of the route rather than lower the speed limit to match the existing environment.

4.7 Treatment lengths and adjacent roads

The Masterton District roading network is interlinked and as a result speed limits and improvements that are applied to one section of a road should be consistent with the adjacent sections of road.

Schedule 1 of the Setting of Speed Limits Rule sets the minimum length of road over which a speed limit must apply. Where roads are directly connected consideration should be given to applying the same speed limit over both, especially where the adjacent road is a cul-de-sac.

Isolated sections of reduced speed limits are undesirable unless there is significant change in the environment and unless there are other factors such as a school in the vicinity to support the change.

4.8 Future reviews

Future reviews of the Speed Management Plan are likely to focus on the urban areas (local Streets) of Masterton with a view to lowering all local streets to 30km/h-40km/h.

The rural roading network will continue to be a balance between safety and efficiency with speed limits required across local authority and regional boundaries to be consistent to avoid confusion and driver frustration. This will be a longer-term project requiring collaboration across the Greater Wellington region with Waka Kotahi and neighbouring territorial authorities.

Table 2 – Local Streets and Urban Connectors

Category	Description	Safe and appropriate Speed Limit
Local Streets	These streets provide quiet and safe residential access for people of all ages and abilities and foster community spirit and local pride. They are part of the fabric of Aotearoa New Zealand neighbourhoods, and they facilitate local community access.	30-40 km/h
Urban Connectors	These streets provide safe, reliable and efficient movement of people and goods between regions and strategic centres and mitigate the impact on adjacent communities.	40-60 km/h

5. Implementation Plan

The technical review (of each road or section of road) identified a number of recommendations that have been collated to form an implementation plan. The full technical assessment is included in the Technical Assessment document (separate document available on our council website).

The initial 10 year plan for implementation will be reviewed every three years in alignment with the Long-Term Plan funding cycle to provide alignment with funding opportunities. The Speed Management Plan will also be reviewed when significant changes in development or funding occur, necessitating a change to the implementation plan.

Due to funding limitations those locations that require physical works will need to be prioritised. The initial ranking has been undertaken based on risk, however due to the legislative requirements for schools these locations are likely to be prioritised in the first instance.

5.1 Speed limits around schools

A summary of the proposed speed limits around schools in the Masterton District are shown in Table 3.

Table The National Land Transport Programme (NLTP11) dates gives an indicative implementation date which is based on the prioritisation undertaken for all speed limit changes on local roads in the district.

Table 3 - Speed Limits Around Schools

School Name	Category	Proposed Speed Limit	Comments	NLTP
Chanel College	Cat 1	30	Need to confirm scope of supporting engineering improvements. Maybe reprioritise to be implemented with transport choices CERF project 2021/24.	2021/24
Douglas Park School	Cat 1	30	Change existing speed limit signage. Co-ordinate with St Matthew's Collegiate and Wairarapa College.	2021/24
Fernridge School	Cat 2	80 / 40 variable	Existing 40km/hr variable to be maintained until speed limit in the wider area is reduced to 60km/hr.	2021/24

¹¹ NLTP – National Land Transport Programme is the funding period in which works are likely to be installed based in available funding.

School Name	Category	Proposed Speed Limit	Comments	NLTP
Hadlow Preparatory School	N/A	N/A	State Highway frontage only	N/A
Lakeview School	Cat 1	50 / 30 variable	Re-programme variable signs and change existing signs with stickers. Upgrade pedestrian crossing	2024/27
Masterton Intermediate School	Cat 1	30	Change existing speed limit signage. Upgrade pedestrian crossing	2021/27
Masterton Primary School	Cat 1	50 / 30 variable	Change existing speed limit signage. Upgrade pedestrian crossing	2021/24
Mauriceville School	Cat 2	40	Need to confirm scope of work of supporting engineering improvements.	2024/27
Opaki School	Cat 1	30	As soon as funding is available.	2021/24
Rathkeale College	Cat 2	60	Pedestrian and cycle access is minimal and on an off-road shared path.	2021/24
Solway College	Cat 2	50	School has limited interaction with road network.	2021/24
Solway School	Cat 1	50 / 30 variable	Co-ordinate with State Highway 2 safety improvements.	2021/24
St Matthew's Collegiate	Cat 2	40	Pownall Street speed limit and engineering improvements. Co-ordinate with Douglas Park School and Wairarapa College.	2024/27
St Patrick's School	N/A	N/A	State Highway frontage only	N/A
Tinui School	Cat 2	30	Need to confirm scope of work of supporting engineering improvements.	2024/27
Te Kura Kaupapa Māori o Wairarapa and Mākoura College	Cat 1	50 / 30 variable	Change existing speed limit signage. Upgrade pedestrian crossing	2024/27

School Name	Category	Proposed Speed Limit	Comments	NLTP
Wainuioru School	Cat 2	100 / 60 variable	60km/hr variable speed limit proposed. Remote rural site.	2021/24
Wairarapa College	Cat 2	40	Pownall Street speed limit and engineering improvements. Co-ordinate with St Patrick's School and Douglas Park School.	2024/27
Whareama School	Cat 2	60 / 40 variable	Existing 40km/hr variable speed limit to be maintained with additional speed management. Remote rural site.	2021/24

5.2 Speed limit changes

A summary of each road where a speed limit change has been recommended in the 2022 review process are tabled below. Due to funding limitations the locations have been prioritised for implementation with schools assigned the highest priority. Existing budgets have been used to determine a likely implementation time frame and these priorities will be reviewed each NLTP cycle as funding allocations are renegotiated.

The alignment between the speed limits proposed and the calculated Safe and Appropriate speed limit differs in some locations. In some instances the proposed speed limit is lower and this is generally in response to the presence of a school and the desire to protect vulnerable users in these areas. Where the proposed speed limit is higher this is typically as a result of the SAAS on a side road being lower than the main road. To assist with the step-change principle being applied by Council and to avoid multiple speed limit changes in an area, the decision has been made have the same speed limit on side roads as that on the main through routes.

Table 4 - Speed Limit Changes

Report Section	Road Name	Start RP	Start	End RP	End	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation timeframe (NLTP Period)	Safe and Appropriate Speed	Proposed = SAAS (Y/N)	Further Information	Dates / Times
8.2.1	Abbotsford Road	0	Masterton-Castlepoint Road	1451	End of Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
2.2.1	Akura Road	507		617		70	60	Permanent	2027/30	80	N	Lower speed limit to match adjacent section of road	
2.2.1	Akura Road	617		1960	Kibblewhite Road	100	80	Permanent	2027/30	80	Y	Co-ordinate with changes to SH2	
8.1.1	Blackhill Road	0	Manawa Road	300	End of Road	50	30	Permanent	2024/27	30	Y		
6.1.1	Camerons Road	0	Opaki/Kaiparoro Road	110	End of Road/Bridge	100	60	Permanent	2024/27	N/A	N/A	Speed limit to match adjacent road	
8.1.1	Charles Street	0	Masterton-Castlepoint Road	150		50	60	Permanent	2024/27	30	N	SAAS inappropriate for the function of the road and level of development	
8.1.1	Charles Street	150		275	Manawa Road	50	30	Permanent	2024/27	30	Y		
2.1.2	Cole Street	973	40m Northwest of Pownall Street	1511	20m Northeast of Essex Street	40	30	Permanent	2024/27	30	Y		
2.1.4	Colombo Road	0	Te Ore Ore Road	250	250m Southwest of Te Ore Ore Road	50 / 40 variable	50 / 30 variable	Variable	2021/24	40	N	School area	8:25-9:00am, 2:55-3:20pm, School Days
2.1.5	Daniell Street	0	Intermediate Street	387	End of Road	40	30	Permanent	2021/24	30	Y		
2.2.4	Gordon Street	967		1630		80	50	Permanent	2021/24	60	N	Lower speed limit due to	

Report Section	Road Name	Start RP	Start	End RP	End	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation timeframe (NLTP Period)	Safe and Appropriate Speed	Proposed = SAAS (Y/N)	Further Information	Dates / Times
												increased development	
2.2.4	Gordon Street	1630		3132	End of Road	80	60	Permanent	2021/24	60	Y		
2.2.5	Greenlane Road	0	Kibblewhite Road	385	End of Road	100	60	Permanent	2024/27	60	Y		
2.1.1	Herbert Street	0	Dixon Street	810	Colombo Road	50	30	Permanent	2021/24	30	Y	Co-ordinate with CERF project	
2.1.1	Huia Street	0	Kiwi Street	123	Weka Place	50	30	Permanent	2021/24	30	Y		
4.1.1	Ica Road	0	Waimimi Road	2685	End of Road/Cattlestop	100	60	Permanent	2024/27	60	Y		
2.1.5	Intermediate Street	0	38m Northwest of SH2 High Street	544	40m Northeast of Pownall/York Street	40	30	Permanent	2021/24	30	Y		
2.1.11	Johnstone Street	140	140m Southwest of Colombo Road	565	50m Southeast of River Road	50/40 variable	50 / 30 variable	Variable	2021/24	40	N	School area	8:10–8:50am, 2:55–3:20pm, School Days
8.2.1	Kahikatea Road	0	Morris Road	1048	End of Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
2.1.1	Kereru Place	0	Takahe Street	80	End of Place	50	30	Permanent	2021/24	30	Y		
2.2.5	Kibblewhite Road	650	Existing 50/100 limit	1552	Akura Road	100	80	Permanent	2027/30	80	Y		
2.1.1	Kiwi Street	0	Huia Street	268	Takahe Street	50	30	Permanent	2021/24	30	Y		
2.1.1	Kotuku Place	0	Takahe Street	88	End of Place	50	30	Permanent	2021/24	30	Y		
2.1.2	Kummer Crescent	0	Pownall Street	522	Cole Street	40	30	Permanent	2021/24	30	Y		
4.1.1	Langdale Road	0	Masterton-Castlepoint Road	2935	Post Office Road	100	60	Permanent	2021/24	60	Y		
4.1.1	Langdale Road	2935	Post Office Road	5860	555m north of Waimimi Road	100	80	Permanent	2021/24	60	N	SAAS inappropriate for the topography of the road	
4.1.1	Langdale Road	5860	555m north of Waimimi Road	5940	475m north of Waimimi Road	100	60	Permanent	2021/24	60	Y		
4.1.1	Langdale Road	5940	475m north of Waimimi Road	6340	25m north of Waimimi Road	100	60 / 40 variable	Variable	2021/24	60	Y	School area	8:25–9:00am, 2:55–3:15pm, School Days

Report Section	Road Name	Start RP	Start	End RP	End	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation timeframe (NLTP Period)	Safe and Appropriate Speed	Proposed = SAAS (Y/N)	Further Information	Dates / Times
4.1.1	Langdale Road	6340	25m north of Waimimi Road	6949	Blairlogie-Langdale Road	100	60	Permanent	2021/24	60	Y		
8.2.1	Letts Road	0	Masterton-Castlepoint Road	1588	End of Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
5.2.1	Loopline	0	SH2	1960	Paierau Road	100	80	Permanent	Co-ordinate with any changes to SH2	80	Y	Co-ordinate with any changes to SH2	
2.1.5	Lowes Place	0	Intermediate Street	235	End of Place	40	30	Permanent	2021/24	30	Y		
2.1.11	Mākoura Road	0	Johnstone Street	345	345m Southwest of Johnstone Street	50/40 variable	50 / 30 variable	Variable	2021/24	30	Y	School area	8:25–9:00am, 2:55–3:15pm, School Days
7.2.2	Manaia Road	0	South Road	3683	Te Whiti Road	100	80	Permanent	2024/27	80	Y		
8.1.1	Manawa Road	0	Charles Street	110		50	30	Permanent	2024/27	60	N	School area	
8.1.1	Manawa Road	110		360		50	60	Permanent	2024/27	60	Y		
8.2.1	Masterton Stronvar Road	0	Masterton-Castlepoint Road	1965	Lees Pakaraka Road	100	80	Permanent	2027/30	80	Y		
7.1.1	Masterton Stronvar Road	13100	145m north of Westmere Road	13620	270m south of Westmere Road	100	100 / 60 variable	Variable	2021/24	80	N	School area	8:25–9:00am, 2:55–3:15pm, School Days
8.2.1	Masterton-Castlepoint Road	135	30m northwest of the intersection with Mace Street	9645		100	80	Permanent	2027/30	80	Y		
8.2.1.1	Masterton-Castlepoint Road	9645	30m northwest of the intersection with Mace Street	11121	600m northeast of the intersection with Te Parae Road	80	60	Permanent	2027/30	60	Y		
8.2.1	Masterton-Castlepoint Road	11121	600m northeast of the intersection with Te Parae Road	15650		100	80	Permanent	2027/30	80	Y		
8.1.1	Masterton-Castlepoint Road	41380	185m south of Charles Street	41950	385m east of Charles Street	100	60	Permanent	2027/30	80	N	Intersection and one lane bridge safety	
8.2.1	Maungahina Road	0	Masterton-Castlepoint Road	185	End of Road/Seal	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	

Report Section	Road Name	Start RP	Start	End RP	End	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation timeframe (NLTP Period)	Safe and Appropriate Speed	Proposed = SAAS (Y/N)	Further Information	Dates / Times
8.2.1	McKinstry Avenue	0	Masterton-Castlepoint Road	945	Watsons Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
8.2.1	Morris Road	0	Watsons Road	2100	End of Road	100	80	Permanent	2027/30	80	Y		
2.2.4	Nikau Heights	0	Gordon Street	545	End of Road	80	60	Permanent	2021/24	60	Y		
2.2.6	Ngaumutawa Road	0	Akura Road	1323	330m Northeast of Upper Plain Road	70	60	Permanent	2027/30	40	N	SAAS inappropriate for the function of the road	
2.2.6	Ngaumutawa Road	1323	330m Northeast of Upper Plain Road	2200	75m Southwest of Cornwall Street	50	60	Permanent	2027/30	30	N	SAAS inappropriate for the function of the road	
2.2.6	Ngaumutawa Road	2200	75m Southwest of Cornwall Street	4035	100m northeast of Upper Manaiia Road	80	60	Permanent	2027/30	40	N	SAAS inappropriate for the function of the road	
2.1.8	Ngaumutawa Road	4171	67m South of Upper Manaiia Road	4447	130m north of SH2, High Street	50/40 variable	50 / 30 variable	Variable	2021/24	30	Y		8:20–9:05am, 2:55–3:20pm, School Days
2.1.6	Okato Place	0	Taranaki Street	117	End of Place	50	30	Permanent	2021/24	30	Y		
8.2.1	Olivers Road	0	Watsons Road	1240	Cattlestop #2	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
6.1.1	Opaki-Kaiparoro Road	12660	230m south of South Road	13535	420m north of turnoff at Mauriceville Lime Co	100	60	Permanent	2024/27	80	N	Lower speed limit to reflect development	
6.1.1	Opaki-Kaiparoro Road	13535	420m north of Cameron Road	14130	35m north of Railway Line	50	40	Permanent	2024/27	80	N	School area	
4.1.1	Otahome Road	0	Waimimi Road	11337	End of Road	100	60	Permanent	2024/27	60	Y		
5.2.1	Paierau Road	0	Akura Road	7746	SH2	100	80	Permanent	Co-ordinate with changes to SH2	80	Y	Co-ordinate with changes to SH2	
2.1.6	Patea Place	0	Taranaki Street	91	End of Place	50	30	Permanent	2021/24	30	Y		
4.1.1	Post Office Road	0	Langdale Road	465	End of Road	100	60	Permanent	2024/27	60	Y		
2.2.7	Pownall Street	040	107m southwest of Hillcrest Street	1910	209m northeast of Kummer Crescent	50	40	Permanent	2024/27	40	N	School area	

Report Section	Road Name	Start RP	Start	End RP	End	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation timeframe (NLTP Period)	Safe and Appropriate Speed	Proposed = SAAS (Y/N)	Further Information	Dates / Times
2.1.6	South Road	351	25m Northeast of Short Street	588	90m Northeast of Millard Avenue	50/40 variable	50 / 30 variable	Variable	2021/24	40	N	School area	8:10–8:50am, 2:55–3:25pm, School Days
2.1.1	Takahe Street	0	Kiwi Street	244	End of Street	50	30	Permanent	2021/24	30	Y		
2.1.6	Taranaki Street	0	South Road	615	End of Road	50	30	Permanent	2021/24	30	Y		
8.2.1	Te Kanuka Road	0	Masterton-Castlepoint Road	1870	End of Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
3.1.1	Te Ore Ore Bideford Road	0	Masterton-Castlepoint Road	1300		100	60	Permanent	2024/27	80	Y	Marae	
2.1.4	Te Ore Ore Road	721	60m Northwest of Colombo Road	955	85m Southeast of Churchill Avenue	50/40 variable	50 / 30 variable	Variable	2021/24	40		School area	8:20–9:05am, 2:55–3:20pm, School Days
8.2.1	Te Parae Road	0	Masterton Stronvar Road	10319	Masterton-Castlepoint Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
7.2.2	Te Whiti Road	1900	500m southwest of Homebush Road	5455	100m south of Lees-Pakaraka Road	100	80	Permanent	2027/30	80	Y		
2.1.1	Tui Street	0	Herbert Street	118	Kiwi Street	50	30	Permanent	2021/24	30	Y		
4.1.1	Waimimi Road	0	Langdale Road	6219	Otahome Road	100	60	Permanent	2021/24	80	N	Speed limit to match adjacent road	
5.1.2	Waipipi Road	0	State Highway 2	545	End of Road	100	30	Permanent	2021/24	80	N	School area	
8.2.1	Watsons Road	0	Te Ore Ore Road	3892	Masterton Stronvar Road	100	80	Permanent	2027/30	60	N	Speed limit to match adjacent road	
2.1.1	Weka Place	0	Huia Street	101	End of Place	50	30	Permanent	2021/24	30	Y		
7.1.1	Westmere Road	0	Masterton Stronvar Road	200		100	100 / 60 variable	Variable	2021/24	60	Y	School area	8:25–9:00am, 2:55–3:15pm, School Days
5.1.3	Willow Park Drive	0	State Highway 2	1960	End of Road	70	60	Permanent	2021/24	60	Y		

5.3 Safety Infrastructure

A summary of the initial safety infrastructure recommendations in the 2022 review process is tabled below. This summary includes locations where safety infrastructure including speed limit signage and threshold improvements is required on a road with a proposed speed limit change as well as locations where safety infrastructure is required to support the existing speed limit. Existing budgets have been used to determine a likely implementation time frame and these priorities will be reviewed each NLTP cycle as funding allocations are renegotiated.

Table 5 Safety Infrastructure

Report Section	Road Name	Proposed safety infrastructure	Implementation timeframe (NLTP Period)	Comments
2.2.1	Akura Road	Install Settlement speed limit thresholds at the 80/60 change in speed limit location.	2027/30	Co-ordinate with changes to SH2
2.2.1	Akura Road	Update and install other speed limit signage as required.	2027/30	Co-ordinate with changes to SH2
2.2.1	Akura Road	Install advance and directional marae signage for Akura Marae.	2027/30	Further consultation required
8.1.1	Charles Street	Install school threshold signs and markings on Charles Street at the 60/30 speed limit change location.	2024/27	
2.1.2	Cole Street	Install school threshold signs and markings on Cole Street.	2021/24	
2.1.2	Cole Street	Upgrade the existing kea crossing on Cole Street to a raised pedestrian crossing.	2021/24	
2.1.2	Cole Street	Consider providing cycle facilities on Cole Street as part of the wider Masterton cycle network.	2027/30 +	
2.1.4	Colombo Road	Update existing variable speed limit on Te Ore Ore Road and Colombo Road to 30 km/hr.	2021/24	
2.1.4	Colombo Road	Install school threshold signs and markings on Te Ore Ore Road on both approaches to the school and on Colombo Road to reinforce the presence of the school.	2021/24	
2.2.2	Colombo Road	Consider improvement works such as raised platforms along the route or urban roundabouts at the cross intersections.	2027/30 +	
2.2.2	Colombo Road	Consider providing cycle facilities as part of the wider Masterton cycle network.	2027/30 +	CERF Project 2021/24
2.1.5	Daniell Street	Update speed limit signage as required.	2021/24	
2.2.4	Gordon Street	Update and install speed limit signage as required.	2021/24	
2.2.5	Greenlane Road	Update and install speed limit signage as required.	2024/27	
2.1.1	Herbert Street	Update and install speed limit signage on side roads as required.	2021/24	
2.1.1	Herbert Street	Install school threshold signs and markings on Herbert Street on both approaches to the school.	2021/24	
2.1.1	Herbert Street	Consider providing cycle facilities on Herbert Street as part of the wider Masterton cycle network.	2027/30 +	
4.2.1	Homewood Road	Install advance and directional marae signage for Tūmapuhia Marae.	2024/27	Consultation needed around wayfinding signage
2.1.5	Intermediate Street	Update and install speed limit signage as required.	2021/24	
2.1.5	Intermediate Street	Install school threshold signs and markings on Intermediate Street on both approaches to the school.	2021/24	
2.1.5	Intermediate Street	Upgrade the existing zebra crossing on Intermediate Street to a raised pedestrian crossing.	2024/27	
2.1.11	Johnstone Street	Update existing variable speed signage as required.	2021/24	
2.1.11	Johnstone Street	Install school threshold signs and markings on Johnstone Street on both approaches to the schools.	2021/24	

Report Section	Road Name	Proposed safety infrastructure	Implementation timeframe (NLTP Period)	Comments
2.1.11	Johnstone Street	Upgrade the existing crossing point on Johnstone Street to a raised pedestrian crossing.	2024/27	
2.1.11	Johnstone Street	Consider providing cycle facilities on Johnstone Street as part of the wider Masterton cycle network.	2027/30 +	
2.2.5	Kibblewhite Road	Install Settlement speed limit thresholds at the 60/80 change in speed limit location.	2027/30	
2.2.5	Kibblewhite Road	Update and install side road speed limit signage (x1) as required.	2027/30	
2.1.2	Kummer Crescent	Update speed limit signage as required.	2021/24	
4.1.1	Langdale Road	Install school threshold signs and markings on Langdale Road on either side of the school.	2024/27	
4.1.1	Langdale Road	Update and install speed limit signage including on side roads (x4) as required.	2024/27	
7.2.1	Lees Pakaraka Road	Review curve warning signs and centre line on corners and update where warranted	2027/30	
2.1.5	Lowes Place	Update speed limit signage as required.	2021/24	
2.1.11	Mākoura Road	Update the existing variable speed limit as required.	2021/24	
2.1.11	Mākoura Road	Install school threshold signs and markings on Mākoura Road approach to the school.	2021/24	
2.1.11	Mākoura Road	Consider providing cycle facilities on Mākoura Road as part of the wider Masterton cycle network.	2027/30 +	
8.1.1	Manawa Road	Install speed threshold signage and markings on Manawa Road at the 100/60 speed limit change location.	2024/27	
8.1.1	Manawa Road	Install school threshold signs and markings on Manawa Road at the 60/30 speed limit change location.	2024/27	
8.2.1	Masterton-Castlepoint Road	Install speed limit thresholds at the change in speed limit locations with Settlement speed thresholds at the 60/80km/hr change east of Te Ore Ore Road for westbound vehicles.	2027/30	
8.2.1	Masterton-Castlepoint Road	Install speed thresholds at the Masterton Stronvar Road 100/80 speed limit change location.	2027/30	
8.2.1	Masterton-Castlepoint Road	Update and install speed limit signage including side roads as required.	2027/30	
8.2.1	Masterton-Castlepoint Road	Widen centreline and edgeline markings for the full length of the route.	2027/30	
8.1.1	Masterton-Castlepoint Road	Install speed threshold signage and markings on Masterton-Castlepoint Road at the 100/60 speed limit change locations.	2027/30	
8.2.1	Masterton-Castlepoint Road	Install centreline and edgeline ATP along the full length of the route.	2027/30	
7.1.1	Masterton Stronvar Road	Install variable school threshold signs and markings on Masterton Stronvar Road on the approaches to the school.	2024/27	
2.1.8	Ngaumutawa Road	Update the existing variable speed limit on Ngaumutawa Road as required.	2021/24	
2.1.8	Ngaumutawa Road	Install school threshold signs and markings on Ngaumutawa Road on both approaches to the school.	2027/30	
2.1.8	Ngaumutawa Road	Upgrade the existing crossing point on Ngaumutawa Road at Solway School to a raised pedestrian crossing.	2027/30	

Report Section	Road Name	Proposed safety infrastructure	Implementation timeframe (NLTP Period)	Comments
2.2.7	Ngaumutawa Road	Update and install speed limit signage including on side roads as required.	2027/30	
2.2.7	Ngaumutawa Road	Install speed limit thresholds at the change in speed limit locations.	2027/30	
2.2.7	Ngaumutawa Road	Install crossing points at pedestrian desired locations.	2027/30 +	
2.1.6	Okato Place	Update and/or install speed limit signage as required.	2021/24	
6.1.1	Opaki Kaiparoro Road	Install speed threshold signage and markings on Opaki Kaiparoro Road at the 100/60 speed limit change locations.	2024/27	
6.1.1	Opaki Kaiparoro Road	Install school threshold signs and markings on Opaki Kaiparoro Road either side of the school.	2024/27	
5.2.1	Paierau Road	Install speed threshold signs at the change in speed limit location.	2027/30	Co-ordinate with changes to SH2
5.2.1	Paierau Road	Widen centreline and edgeline markings for the full length of the route.	2027/30	
5.2.1	Paierau Road	Install centreline and edgeline ATP along the full length of the route.	2027/30	
2.1.6	Patea Place	Update and/or install speed limit signage as required.	2027/30	
2.1.12	Pownall Street	Install school threshold signs and markings on Pownall Street on both approaches to the school.	2024/27	
2.1.12	Pownall Street	Consider providing cycle facilities on Pownall Street as part of the wider Masterton cycle network.	2027/30 +	
2.1.2	Pownall Street	Upgrade the signs and markings for the patrolled zebra crossing on Pownall Street north of Cole Street.	2024/27	
2.1.9	Pownall Street	Install school threshold signs and markings on Pownall Street on both approaches to the school.	2024/27	
2.1.9	Pownall Street	Consider providing cycle facilities on Pownall Street as part of the wider Masterton cycle network.	2027/30 +	
2.2.6	Pownall Street	Install speed thresholds at both ends of the change in speed limit.	2024/27	
2.2.6	Pownall Street	Install repeater speed limit and school signage within the 40km/hr speed limit area.	2024/27	
4.2.2	Riversdale Road	Install advance and directional marae signage for Motuwairaka Marae.	2024/27	Consultation needed
2.1.6	South Road	Update the existing variable speed limit on South Road as required.	2021/24	
2.1.6	South Road	Install school threshold signs and markings on South Road on both approaches to the school.	2021/24	
2.1.6	South Road	Upgrade the existing zebra crossing on South Road to a raised pedestrian crossing.	2024/27	
2.2.9	South Road	Install urban roundabout at the intersection of South Road and Cockburn Street.	2027/30 +	
2.1.6	Taranaki Street	Update and/or install speed limit signage as required.	2021/24	
2.1.6	Taranaki Street	Install speed threshold signage on Taranaki Street at the change in speed limit location.	2021/24	
3.1.1	Te Ore Ore Bideford Road	Install speed limit thresholds at the change in speed limit locations at the 60/100km/hr change north of Te Ore Ore Road for southbound vehicles.	2024/27	
3.1.1	Te Ore Ore Bideford Road	Install advance and directional marae signage for Te Ore Ore Marae.	2024/27	Consultation needed
2.1.4	Te Ore Ore Road	Update the existing variable speed limit on Te Ore Ore Road and Colombo Road as required.	2021/24	

Report Section	Road Name	Proposed safety infrastructure	Implementation timeframe (NLTP Period)	Comments
2.1.4	Te Ore Ore Road	Install school threshold signs and markings on Te Ore Ore Road on both approaches to the school and on Colombo Road to reinforce the presence of the school.	2021/24	
2.2.10	Te Ore Ore Road	Install/upgrade pedestrian facilities along Te Ore Ore Road.	2027/30	
7.2.2	Te Whiti Road	Update speed limit signage including side roads as required.	2027/30	
7.2.2	Te Whiti Road	Mark edgelines review delineation for the full length of the route.	2024/27	
7.2.2	Te Whiti Road	Review and install curve warning signage.	2024/27	
5.1.1	Upper Plain Road	Install school threshold signs and markings on Upper Plain Road on either side of the school.	2024/27	
5.1.1	Upper Plain Road	Consider including the installation of a rural raised safety platform/s at the school threshold/s on Upper Plain Road to assist with speed management.	2027/30	
5.1.2	Waipipi Road	Install school threshold signs and markings on Waipipi Road on the approach to the school.	2024/27	
5.1.2	Waipipi Road	Install signs and road markings on Waipipi Road to delineate the crossing point between the school and the off-road path.	2024/27	
7.1.1	Westmere Road	Install variable school threshold signs and markings on Westmere Road on the approach to the school.	2024/27	
5.1.3	Willow Park Drive	Install signs and road markings on Willow Park Drive.	2024/27	
5.2.2	Willow Park Drive	Update and install speed limit signage as required.	2024/27	



Masterton District Council

Speed Management Plan Technical Assessments

August 2023



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Table of contents

1.	Purpose of this document	1
1.1	2022 Speed Management Reviews	1
1.2	Signs and roadmarking	1
2.	Masterton	3
2.1	Schools	3
2.1.1	Chanel College	3
2.1.2	Douglas Park School	5
2.1.3	Hadlow Preparatory School	7
2.1.4	Lakeview School	8
2.1.5	Masterton Intermediate	9
2.1.6	Masterton Primary School	10
2.1.7	Solway College	12
2.1.8	Solway School	13
2.1.9	St Matthew's Collegiate	15
2.1.10	St Patrick's Contributing School	16
2.1.11	TKKM o Wairarapa and Makoura College	17
2.1.12	Wairarapa College	19
2.2	Other roads	20
2.2.1	Akura Road	20
2.2.2	Colombo Road	21
2.2.3	Dixon Street	23
2.2.4	Gordon Street	24
2.2.5	Kibblewhite Road	26
2.2.6	Ngaumutawa Road	27
2.2.7	Pownall Street	29
2.2.8	Renall Street	32
2.2.9	South Road	33
2.2.10	Te Ore Ore Road	34
3.	Bideford	35
3.1	Other roads	35
3.1.1	Te Ore Ore-Bideford Road	35
4.	Homewood	37
4.1	Schools	37
4.1.1	Whareama School	37
4.2	Other roads	39
4.2.1	Homewood Road	39
4.2.2	Riversdale Road	40
5.	Masterton West	41
5.1	Schools	41
5.1.1	Fernridge School	41
5.1.2	Opaki School	42
5.1.3	Rathkeale College	43
5.2	Other roads	44
5.2.1	Paierau Road	44
5.2.2	Willow Park Road	46
6.	Mauriceville	47

6.1	Schools	47
6.1.1	<i>Mauriceville School</i>	47
7.	Ngahape	49
7.1	Schools	49
7.1.1	<i>Wainuioru School</i>	49
7.2	Other roads	51
7.2.1	<i>Lees Pakaraka Road</i>	51
7.2.2	<i>Te Whiti Road</i>	52
8.	Tinui	54
8.1	Schools	54
8.1.1	<i>Tinui School</i>	54
8.2	Other roads	56
8.2.1	<i>Masterton-Castlepoint Road</i>	56
9.	Summary	60

Appendices

Appendix A – Example threshold layouts

1. Purpose of this document

Masterton District Council (Council) is developing a 10-year speed management plan for the district, as is required by the government. The plan includes short-term and long-term road safety goals; speed limit changes for the whole network, and future improvements to roads to support changes in speed limits if and when required.

Changes to speed limits will be on-going as development in the district continues and to achieve alignment with the Governments Road to Zero Action Plan with respect to speed management. This initial plan will provide guidance on when, how and why speed should be managed on each of the roads identified.

The intention is for the plan to be reviewed every three years in alignment with the Long-Term Plan funding cycle to provide alignment with funding opportunities. The plan will also be reviewed when significant changes in development or funding occur necessitating a change to the implementation plan.

This document sets out the technical assessment undertaken on each of the roads identified for review in 2023.

1.1 2022 Speed Management Reviews

Those roads considered as part of the development of the inaugural speed management plan for Masterton District have been identified from the following sources:

- Roads within close proximity of a school
- Roads with a frontage to a Marae
- High benefit / high risk roads – Roads with three or more fatal or serious crashes in the previous 10 years.

Each of the roads / locations originally identified are listed below, with additional information and their assessment as well as details of any adjacent roads or sections of road that were included in the review.

The alignment between the speed limits proposed and the calculated Safe and Appropriate speed limit differs in some locations. In some instances the proposed speed limit is lower and this is generally in response to the presence of a school and the desire to protect vulnerable users in these areas. Where the proposed speed limit is higher this is typically as a result of the SAAS on a side road being lower than the main road. To assist with the step-change principle being applied by Council and to avoid multiple speed limit changes in an area, the decision has been made have the same speed limit on side roads as that on the main through routes.

1.2 Signs and roadmarking

Speed limit signs must be installed within 20m of the identified speed limit location. To support the management of vehicle speeds in these areas and provide a sense of place some general threshold treatments have been developed to assist with cost estimating. Typical layouts are provided in Appendix A.

Each location will require site specific design but is unlikely to vary significantly to provide a degree of consistency for drivers as they travel throughout the district.

Other supporting infrastructure improvements have been identified for each location as required and the installation of these will be dependent on the funding available for these types of works.

2. Masterton

2.1 Schools

There are 12 schools in Masterton for which the speed limit needs to be lowered in the vicinity of to assist with safety and accessibility as shown in Figure 1.

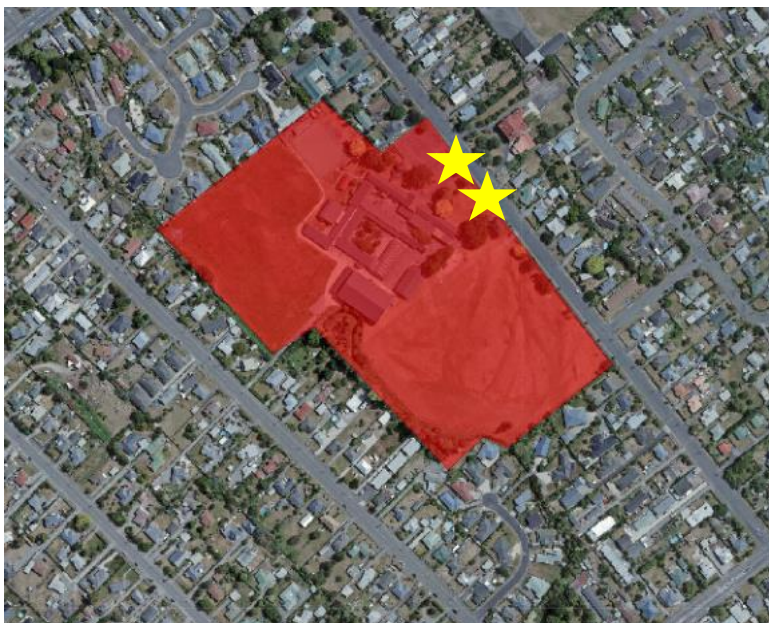
Figure 1 Masterton Schools



2.1.1 Chanel College

Chanel College is a secondary school (Year 7 -15) with the only vehicle and pedestrian access off Herbert Street. Footpaths are provided on both sides of Herbert Street with no specific crossing points provided. There are no cycle facilities in the area.

Figure 2 Chanel College



Speed information from MegaMaps shows the following.

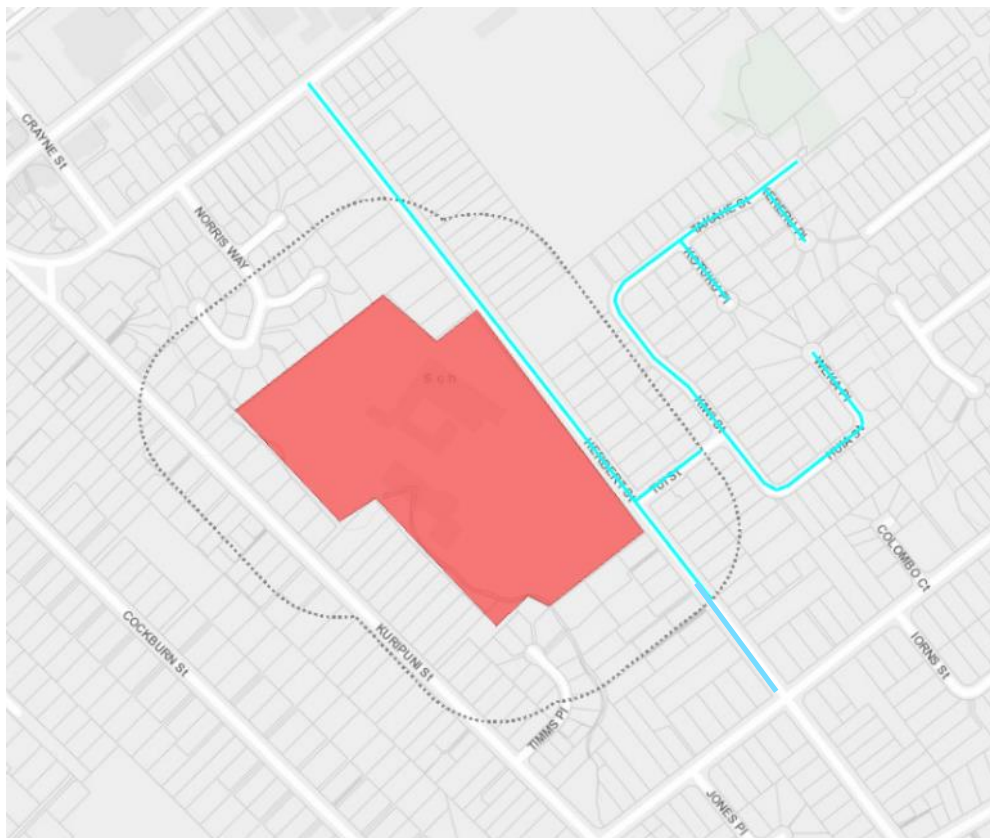
	Herbert Street
<i>AM Peak mean speed</i>	39 km/hr
<i>PM Peak mean speed</i>	37 km/hr
<i>Freeflow speed</i>	45 km/hr
<i>Posted speed limit</i>	50 km/hr

Herbert Street is a local street that runs parallel to Kuripuni Street and has a 12m road width. This results in a large expanse of seal and higher than desirable travel speeds as well as the road being used to cut between Dixon Street and Colombo Road.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for Herbert Street. Due to Chanel College being located in the middle of Herbert Street, the lower speed limit should be applied for the full length of Herbert Street to avoid multiple changes of speed limits. The existing speed limit can be reduced to this with no noticeable effect on travel times.

For consistency and to enhance the residential nature of the area the speed limit should also be lowered on the adjacent side roads of Kereru Place, Weka Place, Takahe Street, Kotuku Place, Tui Street, Huia Street and Kiwi Street as shown in Figure 3.

Figure 3 Herbert Street 30 km/hr area



School threshold signs and markings should be installed on both approaches to the school on Herbert Street to highlight the presence of Chanel College to drivers. To further assist with speed management, and provide opportunities for students to cycle to school, consideration should be given to providing cycle facilities on Herbert Street.

Recommendation

The following changes are recommended in the vicinity of Chanel College:

- Install a permanent 30 km/hr speed limit on the full length of the following roads:
 - Herbert Street,
 - Kereru Place,
 - Weka Place,
 - Takahe Street,
 - Kotuku Place,
 - Tui Street,
 - Huia Street and
 - Kiwi Street.
- Install speed threshold signs and markings at either end of Herbert Street at the change in speed limit locations.
- Install school threshold signs and markings on Herbert Street on both approaches to the school.
- Consider providing cycle facilities on Herbert Street as part of the wider Masterton cycle network.

2.1.2 Douglas Park School

Douglas Park School is a contributing school (Year 1 -6) with the main vehicle and pedestrian access off Cole Street.

Footpaths are provided on both sides of the road on all roads in the vicinity of the school and pedestrian access to the school is also available from Kummer Crescent. A kea crossing is provided on Cole Street, outside the school between Pownall Street and Kummer Crescent. The zebra crossing on Pownall Street north of Cole Street is also patrolled by the school. There are no cycle facilities in the area.

Figure 4 Douglas Park School



Speed information from MegaMaps shows the following:

	Cole Street	Kummer Crescent
<i>AM Peak mean speed</i>	27 km/hr	24 km/hr
<i>PM Peak mean speed</i>	22 km/hr	15 km/hr
<i>Freeflow speed</i>	39 km/hr	31 km/hr
<i>Posted speed limit</i>	40 km/hr	40 km/hr

A 40 km/hr speed limit is in effect on Cole Street, from a point 40m northwest of Pownall Street to a point 20m northeast of Essex Street and for the full length of Kummer Crescent.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. The existing speed limit can be reduced to this with no noticeable effect on travel times.

School threshold signs and markings should be installed on both approaches to the school on Cole Street to assist with speed management and highlight the presence of Douglas Park School to drivers.

The existing kea crossing should be upgraded with the installation of a raised safety platform to improve safety as well as provide additional speed management outside of school times.

The patrolled crossing on Pownall Street should be improved with additional red markings and signage to highlight the presence of the crossing. A 30 km/hr variable speed limit should be installed on Pownall Street to cover the patrolled crossing to improve its safety. The length of this variable speed limit will overlap with that recommended as part of the safety improvements for St Matthew’s Collegiate. Given this, consideration will need to be taken to ensure that the layout of all signage is consistent.

To support opportunities for students to cycle to school, consideration should be given to providing cycle facilities on Cole Street in conjunction with the Masterton cycle network.

Recommendations

The following changes are recommended in the vicinity of Douglas Park School:

- Lower the permanent speed limit on Cole Street, from Pownall Street to a point 20m northeast of Essex Street to 30 km/hr. Update signage as required.
- Lower the permanent speed limit to 30 km/hr speed limit on the full length of Kummer Crescent. Update signage as required.
- Install a 40 km/hr speed limit on Pownall Street - See Section 2.2.7 for more information
- Install school threshold signs and markings on Cole Street.
- Upgrade the existing kea crossing on Cole Street to a raised pedestrian crossing.
- Upgrade the signs and markings for the patrolled zebra crossing on Pownall Street north of Cole Street.
- Consider providing cycle facilities on Cole Street as part of the wider Masterton cycle network.

2.1.3 Hadlow Preparatory School

Hadlow Preparatory School is a full primary school (Year 1-8) with the only vehicle and pedestrian access off State Highway 2.

Masterton District Council has no jurisdiction on a State Highway, and speed management in this area is the responsibility of Waka Kotahi.

Figure 5 Hadlow Preparatory School



2.1.4 Lakeview School

Lakeview School is a full primary school (Years 1-8) with vehicle and pedestrian access primarily from Colombo Road with the staff carpark and a secondary pedestrian access off Te Ore Ore Road. The school can also be accessed from the Henley Park carpark to the east of the school.

Footpaths are provided on both frontages with a patrolled zebra crossing on Te Ore Ore Road. A raised platform has recently been installed on the Colombo Road approach to Te Ore Ore Road. A shared path and cycle lanes are provided on Colombo Road. There are no facilities on Te Ore Ore Road.

Figure 6 Lakeview School



Speed information from MegaMaps shows the following.

	Te Ore Ore Road	Colombo Road
<i>AM Peak mean speed</i>	48 km/hr	43 km/hr
<i>PM Peak mean speed</i>	46 km/hr	45 km/hr
<i>Posted speed limit</i>	50 km/hr / 40 km/hr variable	50 km/hr / 40 km/hr variable

A 40 km/hr variable speed limit is in effect on Te Ore Ore Road from a point 60m northwest of the intersection with Colombo Road to a point 85m southeast of the intersection with Churchill Ave and Colombo Road from the intersection with Te Ore Ore Road to a point 250m southwest of the intersection with Te Ore Ore Road.

To improve the survivability of crashes involving pedestrians in this area, 30 km/hr is considered to be the safe and appropriate speed for this locality. The existing variable speed limit can be reduced to this with no noticeable effect on travel times.

Te Ore Ore Road and Colombo Road are classified as urban connectors in the One Network Framework with a higher emphasis on movement than place. Changes to reduce vehicle

speeds below the existing 50 km/hr speed limit outside of school times are considered to be inappropriate in this location, and the variable speed limit should be retained.

Lakeview School is set back from the road and has very little interaction with Te Ore Ore Road. As a result, drivers are unlikely to be aware of the school except when the variable signage is active. To assist with speed management and highlight the presence of the school, school threshold signs and markings should be installed on both approaches to Lakeview School on Te Ore Ore Road.

Recommendation

The following changes are recommended in the vicinity of Lakeview School:

- Lower the existing variable speed limit on Te Ore Ore Road and Colombo Road to 30 km/hr. Update signage as required.
- Install school threshold signs and markings on Te Ore Ore Road on both approaches to the school and on Colombo Road to reinforce the presence of the school.

2.1.5 Masterton Intermediate

Masterton Intermediate is an Intermediate school (Year 7 -8) with the only vehicle and pedestrian access off Intermediate Street.

Footpaths are provided on both sides of the road on all roads in the vicinity of the school. A patrolled zebra crossing is provided on Intermediate Street, outside the school between Daniell Street and Lowes Place.

A short section of off-road cycle lane is provided between Pownall Street and Intermediate Street with cyclists then encouraged to use the path provided within the school for access.

Figure 7 Masterton Intermediate



Speed information from MegaMaps shows the following.

	Intermediate Street
<i>AM Peak mean speed</i>	31 km/hr
<i>PM Peak mean speed</i>	32 km/hr
<i>Freeflow speed</i>	40 km/hr
<i>Posted speed limit</i>	40 km/hr

A 40 km/hr speed limit is in effect on Intermediate Street, from a point 38m northwest of SH2 High Street to a point 40m northeast of Pownall/York Street. This speed limit also covers the side roads of Lowes Place and Daniell Street.

To improve the survivability of crashes involving pedestrians in this area, 30 km/hr is considered to be the safe and appropriate speed for this locality. The existing speed limit can be reduced to this with no noticeable effect on travel times.

The existing zebra crossing should be upgraded with the installation of a raised safety platform to improve safety as well as provide additional speed management outside of school times.

School threshold signs and markings should be installed on both approaches to the school on Intermediate Street to assist with speed management and highlight the presence of Masterton Intermediate School to drivers.

Recommendations

The following changes are recommended in the vicinity of Masterton Intermediate School:

- Lower the permanent speed limit to 30km/hr on Intermediate Street, from a point 38m northwest of SH2 High Street to a point 40m northeast of Pownall/York Street. Update speed limit signage as required.
- Lower the permanent speed limit to 30 km/hr speed limit on the full length of the following roads:
 - Lowes Place and
 - Daniell Street.
- Install school threshold signs and markings on Intermediate Street on both approaches to the school.
- Upgrade the existing zebra crossing on Intermediate Street to a raised pedestrian crossing.

2.1.6 Masterton Primary School

Masterton Primary School is a contributing school (Year 1-6) with the main vehicle and pedestrian access off South Road and pedestrian access available from Patea Place.

Footpaths are provided on both sides of all streets in the vicinity with a patrolled zebra crossing located on South Road to the north of the main access to the school. There are no cycle facilities in the area.

Figure 8 Masterton Primary School



Speed information from MegaMaps shows the following.

	South Road
<i>AM Peak mean speed</i>	41 km/hr
<i>PM Peak mean speed</i>	44 km/hr
<i>Freeflow speed</i>	48 km/hr
<i>Posted speed limit</i>	50 km/hr / 40 km/hr variable

A 40 km/hr variable speed limit is in effect on South Road, from a point 25m northeast of Short Street to a point 90m northeast of Millard Ave.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. The existing variable speed limit can be reduced to this with no noticeable effect on travel times.

South Road is classified as an urban connector in the One Network Framework with a higher emphasis on movement than place. Changes to reduce vehicle speeds below the 50 km/hr speed limit outside of school times is considered to be inappropriate in this location and the variable speed limit should be retained.

Masterton Primary School is set back from the road and has very little interaction with South Road and as a result drivers are unlikely to be aware of the school except when the variable signage is active. To assist with speed management and highlight the presence of the school to drivers, school threshold signs and markings should be installed on both approaches to Masterton Primary School.

For consistency and to improve safety for students using the rear access from Patea Place and enhance the residential nature of the area the speed limit should be lowered to 30 km/hr on the adjacent side roads of Taranaki Street, Okato Place, Patea Place as shown in Figure 9.

Figure 9 Taranaki Street 30 km/hr area



Recommendation

The following changes are recommended in the vicinity of Masterton Primary School:

- Lower the existing variable speed limit on South Road to 30 km/hr. Update signage as required.
- Install a permanent 30 km/hr speed limit on the full length of the following roads:
 - Taranaki Street
 - Okato Place and
 - Patea Place.
- Install speed threshold signs and markings on Taranaki Street at the change in speed limit location.
- Install school threshold signs and markings on South Road on both approaches to the school.
- Update and/or install speed limit signage as required.
- Upgrade the existing zebra crossing on South Road to a raised pedestrian crossing.

2.1.7 Solway College

Solway College is a secondary school (Year 7 -15) that is primarily a boarding school with limited day students. The site has no visible road frontage beyond the driveway. Vehicle access to the school is off Fleet Street and Hillcrest Street with the site operating a one-way system with the entry off Fleet Street and vehicles exiting via Hillcrest Street.

Footpaths are provided on all streets within the vicinity of the school however there are no pedestrian crossing facilities in the area. Walking does not appear to be encouraged to and

from the school due to the long driveways accessing the school site having no pedestrian paths. There are no cycle facilities in the area.

Figure 10 Solway College



Speed information from MegaMaps shows the following.

	York Street	Hillcrest Street
<i>AM Peak mean speed</i>	40 km/hr	45 km/hr
<i>PM Peak mean speed</i>	35 km/hr	42 km/hr
<i>Freeflow speed</i>	42 km/hr	49 km/hr
<i>Posted speed limit</i>	50 km/hr	50 km/hr

Solway College has limited interaction with the surrounding roading network as the majority of students board on site and there is little to no pedestrian activity at either of the accesses to the school.

Recommendations

No changes are recommended in the vicinity of Solway College.

2.1.8 Solway School

Solway School is a contributing school (Year 1 -6) with the only vehicle and pedestrian access off Ngaumutawa Road.

Footpaths are provided on both sides of Ngaumutawa Road between State Highway 2 and Edwin Feist Place. There is no footpath on the eastern side north of Edwin Feist Place while

the footpath on the western side terminates at the railway crossing approximately 90m north of Edwin Feist Place. A kea crossing is provided on Ngaumutawa Road, outside the school.

There are no cycle facilities in the area.

Figure 11 Solway School



Speed information from MegaMaps shows the following.

	Ngaumutawa Road
<i>AM Peak mean speed</i>	41 km/hr
<i>PM Peak mean speed</i>	43 km/hr
<i>Freeflow speed</i>	52 km/hr
<i>Posted speed limit</i>	50 km/hr / 40 km/hr variable

A 40 km/hr variable speed limit is in effect on Ngaumutawa Road from a point 67m south of the intersection with Upper Manaia Road to a point 130m north of the intersection SH2, High Street.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. The existing speed limit can be reduced to this with no noticeable effect on travel times.

Ngaumutawa Road is classified as an activity street and urban connector in the One Network Framework with a higher emphasis on movement than place. Changes to reduce vehicle speeds below the existing 50 km/hr speed limit outside of school times are considered to be inappropriate in this location and the variable speed limit should be retained.

School threshold signs and markings should be installed on both approaches to the school on Ngaumutawa Road to assist with speed management and highlight the presence of Solway School to drivers.

Should the proposed cycle/pedestrian improvements in the area proceed this is likely to increase the number of pedestrians/cyclists wishing to cross Ngaumutawa Road outside of the times when the kea crossing is operating and as such the crossing should be upgraded to a patrolled zebra crossing, noting that the existing Kea Crossing is patrolled.

Recommendations

The following changes are recommended in the vicinity of Solway School:

- Lower the existing variable speed limit on Ngaumutawa Road to 30 km/hr. Update signage on Ngaumutawa Road and Edwin Feist Place as required.
- Install school threshold signs and markings on Ngaumutawa Road on both approaches to the school.
- Upgrade the existing crossing point on Ngaumutawa Road at Solway School to a raised patrolled pedestrian crossing.

2.1.9 St Matthew's Collegiate

St Matthew's Collegiate is a secondary school (Year 7-15) with the only vehicle and pedestrian access off Pownall Street.

Footpaths are provided on both sides of all streets in the vicinity with no specific crossing facilities. There are no cycle facilities in the area.

Figure 12 St Matthew's Collegiate



Speed information from MegaMaps shows the following.

	Pownall Street
<i>AM Peak mean speed</i>	38 km/hr
<i>PM Peak mean speed</i>	41 km/hr
<i>Freeflow speed</i>	48 km/hr

	Pownall Street
<i>Posted speed limit</i>	50 km/hr

Pownall Street is classified as an urban connector in the One Network Framework with a higher emphasis on movement than place. Changes to reduce vehicle speeds below the 50 km/hr speed limit outside of school times are considered to be inappropriate in this location.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. A variable speed limit of 30 km/hr should be installed on Pownall Street from a point 60m northeast of Kummer Crescent to a point 100m northeast of Cole Street and the presence of the school highlighted by installing school threshold signs and markings. The length of this variable speed limit will overlap with that recommended as part of the safety improvements for Douglas Park School and as such care will need to be taken to ensure that the layout of all signage is consistent.

To provide opportunities for students to cycle to school consideration should be given to providing cycle facilities on Pownall Street in conjunction with the Masterton cycle network.

Recommendation

The following changes are recommended in the vicinity of St Matthew's Collegiate:

- Install a 40 km/hr speed limit on Pownall Street - See Section 2.2.7 for more information
- Install school threshold signs and markings on Pownall Street on both approaches to the school.
- Consider providing cycle facilities on Pownall Street as part of the wider Masterton cycle network.

2.1.10 St Patrick's Contributing School

St Patrick's Contributing School is a contributing school (Year 1 -6) with the only vehicle and pedestrian access off State Highway 2.

Masterton District Council has no jurisdiction on a State Highway, and speed management in this area is the responsibility of Waka Kotahi.

Figure 13 St Patrick's Contributing School



2.1.11 TKKM o Wairarapa and Makoura College

TKKM o Wairarapa is a composite school (Year 1 -15) with the main vehicle and pedestrian access from Johnstone Street. Makoura College is a secondary school (Year 9 – 15) with the main vehicle and pedestrian access off Makoura Road and a carpark accessing the sports ground off Johnstone Street.

Footpaths are provided on both sides of all roads in the vicinity of both schools. There is a patrolled zebra crossing on Johnstone Street on the western approach to the intersection with Makoura Road. There are no cycle facilities in the area.

Figure 14 TKKM o Wairarapa and Makoura College



Safety and speed information from MegaMaps shows the following.

	Johnstone Street	Makoura Road
<i>AM Peak mean speed</i>	47 km/hr	37 km/hr
<i>PM Peak mean speed</i>	46 km/hr	37 km/hr
<i>Posted speed limit</i>	50 km/hr / 40 km/hr variable	50 km/hr / 40 km/hr variable

A 40 km/hr variable speed limit is in effect on Johnstone Street from a point 140m southwest of the intersection on Colombo Road to a point 50m southeast of the intersection with River Road and on Makoura Road for 345m southwest of the intersection with Johnstone Street.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. The existing variable speed limit can be reduced to this with no noticeable effect on travel times.

The existing zebra crossing should be upgraded with the installation of a raised safety platform to improve safety as well as provide additional speed management outside of school times. School threshold signs and markings should also be installed on all approaches to TKKM o Wairarapa and Makoura College to highlight the presence of the schools to drivers.

Both Johnstone Street and Makoura Road have a road width that is greater than 12.5m. This results in a large expanse of seal and higher than desirable travel speeds. To assist with speed management and provide opportunities for students to cycle to school consideration should be given to providing cycle facilities on both Johnstone Street and Makoura Road.

Recommendation

The following changes are recommended in the vicinity of TKKM o Wairarapa and Makoura College:

- Lower the existing variable speed limit on Johnstone Street and Makoura Road to 30 km/hr. Update signage as required.

- Install school threshold signs and markings on Johnstone Street on both approaches to the schools and on Makoura Road.
- Upgrade the existing crossing point on Johnstone Street to a raised pedestrian crossing.
- Consider providing cycle facilities on Johnstone Street and Makoura Road as part of the wider Masterton cycle network.

2.1.12 Wairarapa College

Wairarapa College is a secondary school (Year 9-15) with the main vehicle and pedestrian access off Pownall Street. Additional vehicle and pedestrian access is available from Cornwall Street with the boarding facilities accessed from Renall Street.

Footpaths are provided on both sides of all streets in the vicinity with no specific crossing facilities except at the intersection with Renall Street and Cornwall Street. There are no cycle facilities in the area.

Figure 15 Wairarapa College



Speed information from MegaMaps shows the following.

	Pownall Street	Renall Street	Cornwall Street
<i>AM Peak mean speed</i>	39 km/hr	44 km/hr	34 km/hr
<i>PM Peak mean speed</i>	38 km/hr	43 km/hr	36 km/hr
<i>Freeflow speed</i>	45 km/hr	47 km/hr	42 km/hr
<i>Posted speed limit</i>	50 km/hr	50 km/hr	50 km/hr

Pownall Street is classified as an urban connector in the One Network Framework with a higher emphasis on movement than place. Changes to reduce vehicle speeds below the 50 km/hr speed limit outside of school times is considered to be inappropriate in this location.

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. Due to the urban connector nature of

Pownall Street a variable speed limit of 30 km/hr is considered to be the most appropriate and should be installed on Pownall Street between Renall Street and Tararua Street.

School threshold signs and markings should be installed on both approaches to the school on Pownall Street to highlight to drivers of the presence of Wairarapa College. To further assist with speed management and provide opportunities for students to cycle to school consideration should be given to providing cycle facilities on Pownall Street in conjunction with the Masterton cycle network.

Due to the layout of the school, there is little to no interaction with traffic on Renall Street and Cornwall Street and such no changes are proposed to these roads at this stage.

Recommendation

The following changes are recommended in the vicinity of Wairarapa College:

- Install a 40 km/hr speed limit on Pownall Street - See Section 2.2.7 for more information
- Install school threshold signs and markings on Pownall Street on both approaches to the school.
- Consider providing cycle facilities on Pownall Street as part of the wider Masterton cycle network.

2.2 Other roads

2.2.1 Akura Road

Akura Road runs between Lincoln Road and Paierau Road on the north-western side of Masterton and is 1961m long with three speed limits along its length. Between Ngaumutawa Road and Paierau Road this road forms part of the truck bypass around Masterton.

This road was identified for review as being a high benefit route, having an existing 70km/hr and providing access to Akura Marae.

Figure 16 Akura Road



Safety and speed information from MegaMaps shows the following.

Akura Road

<i>Posted speed limit</i>	70km/hr	<i>Mean Free Flow Speed</i>	77km/hr
<i>Safe and Appropriate Speed</i>	80km/hr	<i>Infrastructure Risk Rating</i>	Medium

MegaMaps indicates that the section of Akura Road between Ngaumutawa Road and Paierau Road should have a consistent speed limit of 80km/hr. This speed limit is recommended due to the lack of separation/barrier between opposing traffic flows. The risk associated with the flat topography, straight alignment and minimal side friction from adjacent activities does not support this lower speed limit.

There have been two reported crashes on this section of Akura Road both of which were non-injury.

The rural section of Akura Road forms an important link in the truck bypass around Masterton and its speed limit needs to be consistent with the adjacent sections of Ngaumutawa Road and Paierau Road and provide a suitable alternative to drivers to encourage its use. See Sections 2.2.6 and 5.2.1 for further info.

The Akura Marae is currently not identified and advance and directional signage should be installed to show the location of the marae.¹

Recommendation

The following changes are recommended on Akura Road:

- Lower the speed limit from 70km/hr to 60km/hr from the intersection with Ngaumutawa Road for a distance of 110m.
- Raise the speed limit from 70km/hr to 80km/hr from 110m north of Ngaumutawa Road to RP 1040 (500m north of Ngaumutawa Road).
- Lower the speed limit from 100km/hr to 80km/hr from 500m north of Ngaumutawa Road to Kibblewhite Road.
- Install Settlement speed limit threshold signs and markings at the 80/60 change in speed limit location.
- Update and install other speed limit signage as required.
- Install advance and directional marae signage for Akura Marae.

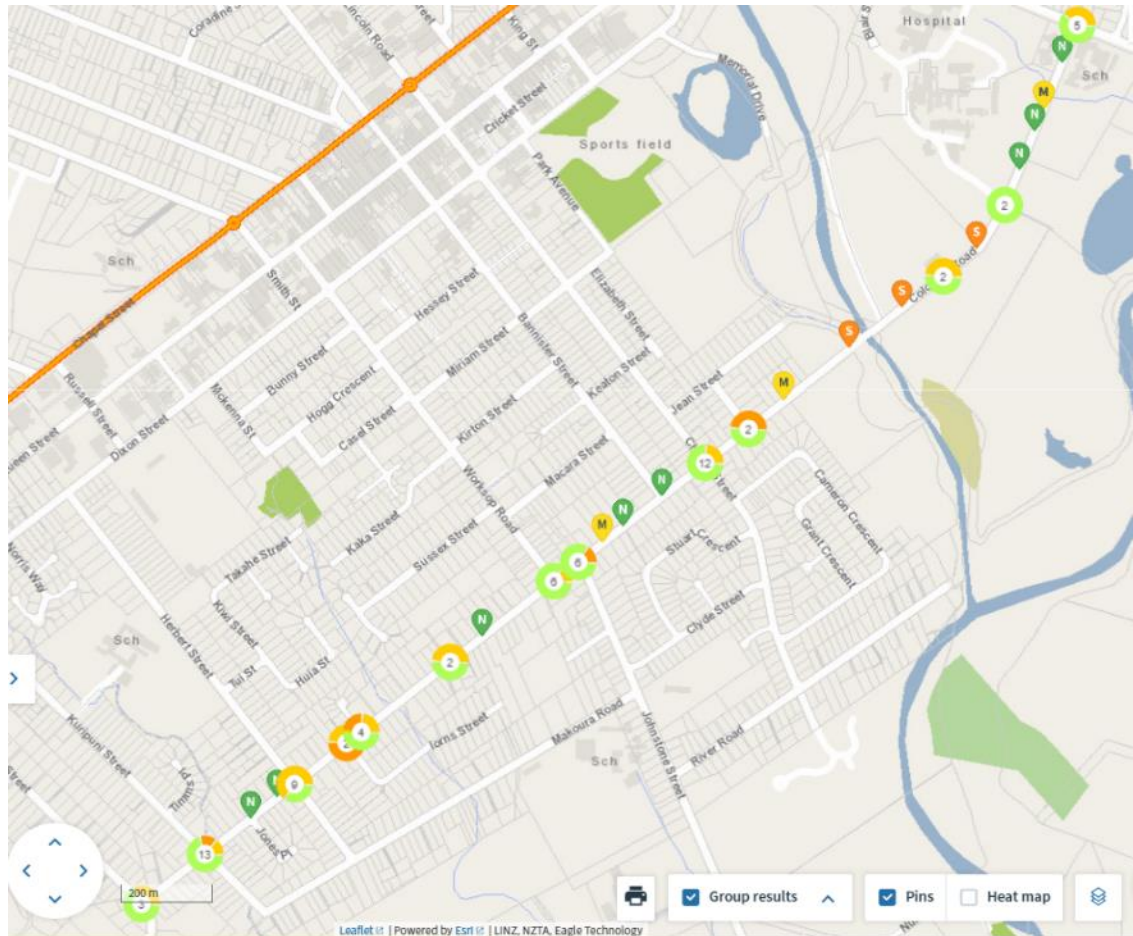
2.2.2 Colombo Road

Colombo Road runs between Te Ore Ore Road and Cockburn Street on the eastern side of Masterton and is 2876m long with a 50km/hr speed limit. There is a 40km/hr variable speed limit from the intersection with Te Ore Ore Road to a point 250m southwest of intersection with Te Ore Ore Road associated with Lakeview School. See Section 2.1.4 for further information.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been 8 serious, 21 minor and 51 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

¹ [Cultural marae sign | Waka Kotahi NZ Transport Agency \(nzta.govt.nz\)](https://www.nzta.govt.nz/cultural-marae-sign/)

Figure 17 Colombo Road crashes



The serious injuries have resulted from a variety of crash types with no commonalities between the crashes.

The majority of crashes have occurred at the intersections with crossing/turning (26) and rear end / obstruction (23) the most common type of crashes. The intersections with the most crashes are, Church Street (12), Kuripuni Street (12) and Herbert Street (8) with all three being the only cross type intersections along the route and T bone type crashes the most common in these locations.

Inappropriate speed was identified as a contributing factor in 20 instances with a further 9 crashes the result of a driver misjudging the speed of approaching vehicles. The mean operating speed is 47km/hr.

Safety and speed information from MegaMaps shows the following.

Colombo Road

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	47km/hr
<i>Safe and Appropriate Speed</i>	40km/hr	<i>Infrastructure Risk Rating</i>	Low medium

MegaMaps indicates that the safe and appropriate speed limit for Colombo Road is 40km/hr. Due to the collector role that Colombo Road plays in the road hierarchy, there should be some differential between the speed limits on Colombo Road and the adjacent network and any lowering of the speed limit on Colombo Road will require wholesale changes to speed limits on the adjacent networks.

At this stage no change to the speed limit is recommended for Colombo Road however to reduce the risk at the intersections and manage vehicle speeds along the route, improvement works such as raised platforms along the route or urban roundabouts at the cross intersections should be considered.

Recommendation

The following changes are recommended on Colombo Road:

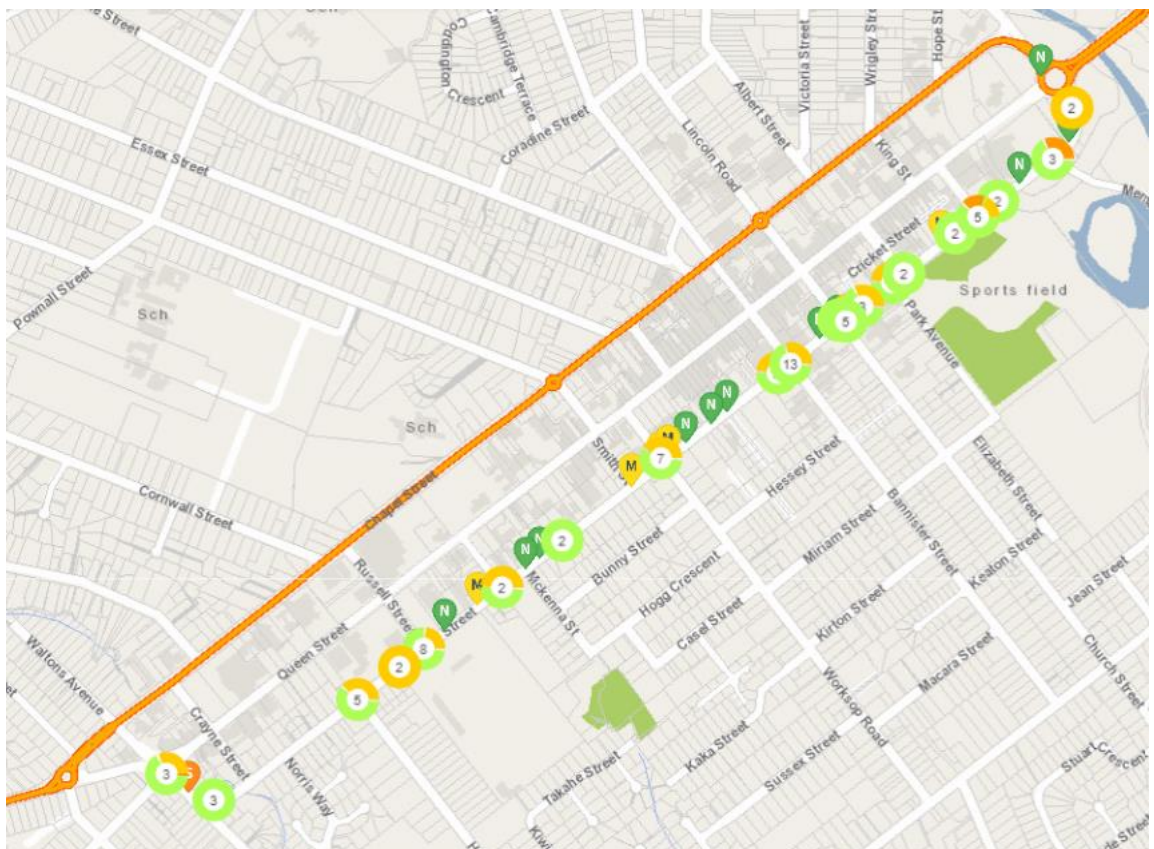
- Consider improvement works such as raised platforms along the route or urban roundabouts at the cross intersections.
- Consider providing cycle facilities as part of the wider Masterton cycle network.

2.2.3 Dixon Street

Dixon Street runs between State Highway 2 and High Street and is the eastern-most of the three parallel routes through the centre of Masterton and is 2267m long with a 50km/hr speed limit.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been 3 serious, 29 minor and 70 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

Figure 18 Dixon Street crashes



The serious injuries have resulted from a variety of crash types with no commonalities between the crashes. The last reported serious crash was in 2018 and involved a young child (6 years old) running into the path of an on-coming vehicle.

The majority of crashes have occurred at the intersections with crossing/turning (49) and rear end / obstruction (34) the most common type of crashes. The intersections with the most crashes are, Church Street (14), Bannister Street (10) and Worksop Road (9).

The mean operating speed is between 39km/hr and 49km/hr with the higher speeds south of Worksop Road.

Safety and speed information from MegaMaps shows the following.

Dixon Street

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	47km/hr
<i>Safe and Appropriate Speed</i>	30km/hr	<i>Infrastructure Risk Rating</i>	Medium

MegaMaps indicates that the safe and appropriate speed limit for Dixon Street is 30km/hr. This lower speed limit is currently in place on sections of Queen Street which runs parallel to Dixon Street and the connecting roads. Further reductions in the speed limit would need to be coordinated with Waka Kotahi to reduce the risk associated with traffic re-routing to the state highway to avoid a lower speed limit on Dixon Street.

At this stage no change to the speed limit is recommended for Dixon Street.

Recommendation

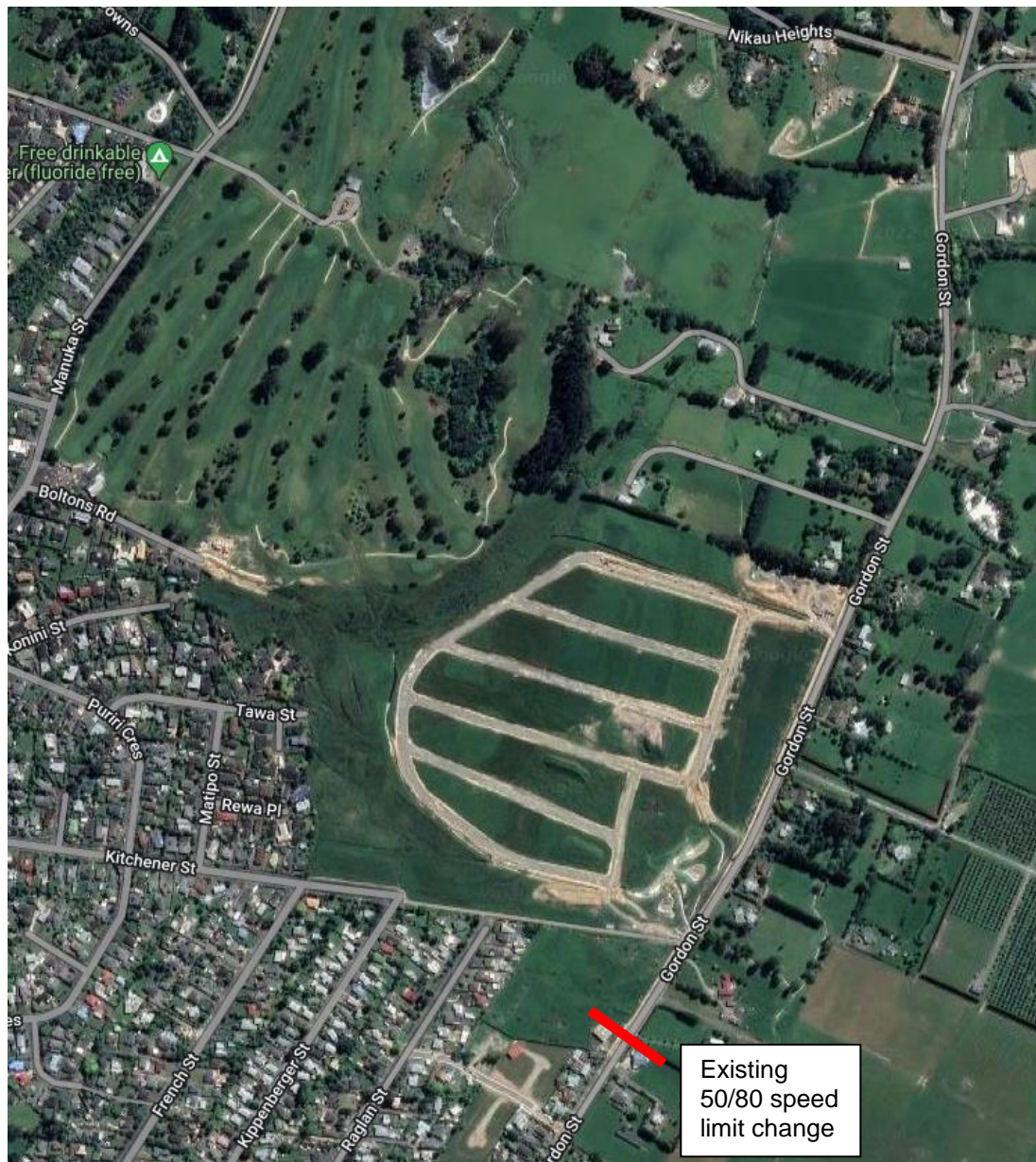
No changes are recommended for Dixon Street.

2.2.4 Gordon Street

Gordon Street runs north from Te Ore Ore Road and is 3132m long with a 50km/hr speed limit for the first 967m which then increases to 80km/hr.

This road was identified for review as there has been significant changes to development in the area and the 80km/hr speed limit is no longer considered appropriate.

Figure 19 Gordon Street development



Safety and speed information from MegaMaps shows the following.

Gordon Street – existing 80km/hr section

<i>Posted speed limit</i>	80km/hr	<i>Mean Free Flow Speed</i>	35km/hr
<i>Safe and Appropriate Speed</i>	60km/hr	<i>Infrastructure Risk Rating</i>	Low

Due to the increase in traffic and turning movements associated with the new subdivision on the western side of Gordon Street the 50km/hr speed limit should be extended to cover this area. The speed limit on the remaining section of Gordon Street should be lowered to 60km/hr to better reflect the narrow alignment of the northern section of the road. The speed limit should also be reduced on Nikau Heights to provide a consistent message to drivers.

Recommendation

The following changes are recommended on Gordon Street:

- Lower the speed limit between RP 967 and RP 1630 from 80km/hr to 50km/hr.

- Lower the speed limit between RP 1630 and the end of the road from 80km/hr to 60km/hr.
- Lower the speed limit on Nikau Heights to 60km/hr.
- Update and install speed limit signage as required.

2.2.5 Kibblewhite Road

Kibblewhite Road runs between Upper Plains Road and Akura Road and is 1552m long with a 50km/hr speed limit for the first 650m which then increases to 100km/hr.

This road was identified for review as there is a desire to reduce the number of vehicles using this route to short cut around town.

Figure 20 Kibblewhite Road



Safety and speed information from MegaMaps shows the following.

Kibblewhite Road – existing 100km/hr section

<i>Posted speed limit</i>	100km/hr	<i>Mean Free Flow Speed</i>	69km/hr
<i>Safe and Appropriate Speed</i>	80km/hr	<i>Infrastructure Risk Rating</i>	Medium High

To provide consistency for drivers with Akura Road the speed limit on the open road section of Kibblewhite Road should be reduced to 80km/hr.

The speed limit on Greenlane Road should be changed to be consistent with Kibblewhite Road.

Recommendation

The following changes are recommended on Kibblewhite Road:

- Lower the speed limit between RP650 and Akura Road to 80km/hr.
- Lower the speed limit on Greenlane Road to 50km/hr.
- Install settlement speed limit threshold signs and markings at the 50/80 change in speed limit location.
- Update and install other speed limit signage as required.

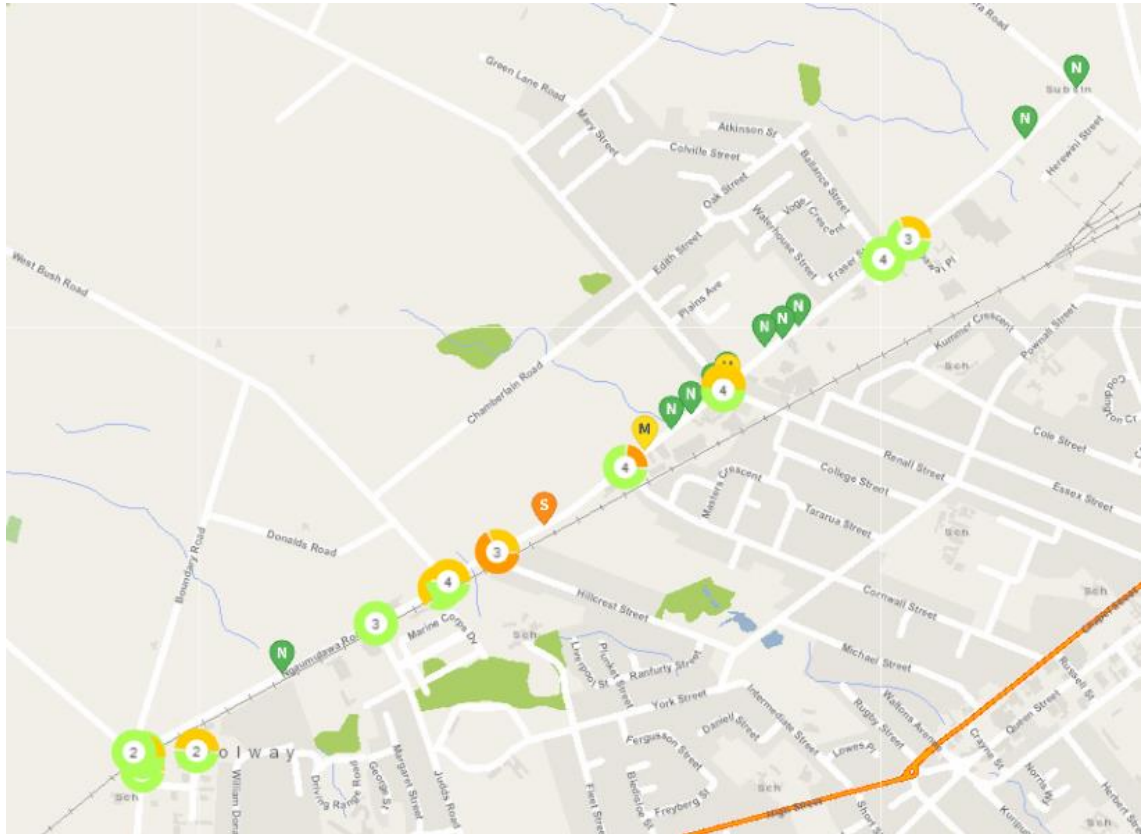
2.2.6 Ngaumutawa Road

Ngaumutawa Road runs between Akura Road and High Street (State Highway 2) and forms part of the truck bypass around Masterton on the north-western side of Masterton and is 4577m long with four speed limits along its length.

- From Akura Road to 330m northeast of Upper Plain Road - 70km/hr,
- Between 330m northeast of Upper Plain Road and 75m southwest of Cornwall Street – 50km/hr.
- Between 75m southwest of Cornwall Street and 100m northeast of Upper Manaia Road – 80km/hr
- From 100m northeast of Upper Manaia Road to High Street – 50km/hr

This road was identified for review as having an existing 70km/hr and a high number of fatal and serious crashes in the last 10 years. There have been 4 serious, 16 minor and 41 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

Figure 21 Ngaumutawa Road crashes



The serious injuries have resulted from a variety of crash types with no commonalities between the crashes aside from them all occurring within a 550m section of road between Cornwall Street and Hillcrest Street. The last reported serious crash was in 2020 and involved a cyclist that was swerving along the road and turned into a truck.

Safety and speed information from MegaMaps shows the following.

Ngaumutawa Road - Akura Road to Upper Plain Road

<i>Posted speed limit</i>	70km/hr	<i>Mean Free Flow Speed</i>	61km/hr
<i>Safe and Appropriate Speed</i>	40km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

Ngaumutawa Road - Upper Plain Road to Cornwall Street

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	50km/hr
<i>Safe and Appropriate Speed</i>	30km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

Ngaumutawa Road - Cornwall Street to Upper Manaia Road

<i>Posted speed limit</i>	80km/hr	<i>Mean Free Flow Speed</i>	70km/hr
<i>Safe and Appropriate Speed</i>	40km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

Ngaumutawa Road - Upper Manaia Road to High Street

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	51km/hr
<i>Safe and Appropriate Speed</i>	30km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

MegaMaps indicates that the four differing sections of speed limits should be maintained along Ngaumutawa Road with the speed limit to alter between 40km/hr and 50km/hr. As Ngaumutawa Road forms an important part of the truck bypass around Masterton its speed limit needs to be consistent with its intended purpose and provide a suitable alternative to drivers to encourage its use. See Sections 2.2.1 and 5.2.1 for further info.

The majority of residential properties along this route do not access Ngaumutawa Road with vehicle access from the parallel local roads. The commercial and business activities are well set back from the road with a flush median along the length of the road with active frontages providing for safe turning and also separation between the opposing traffic lanes. The main intersection of Ngaumutawa Road / Upper Plains Road / Renall Street is controlled by a roundabout.

To reduce the effect of Ngaumutawa Road severing the community specific crossing points should be identified and infrastructure installed to support pedestrians and cyclists to cross the road.

Due to the presence of Solway School and the railway crossing in the section between Upper Manaia Road and High Street it is recommended that the 50km/hr speed limit be maintained in this area, with the speed limit on the remaining length of Ngaumutawa Road to be 60km/hr. This will provide a consistent message for drivers and avoids the constantly changing speed limits that currently exist.

Recommendation

The following changes are recommended on Ngaumutawa Road:

- Change the speed limit between Akura Road and 100m northeast of Upper Manaia Road to 60km/hr.
- Install speed limit threshold signs and markings at the change in speed limit locations.
- Update and install other speed limit signage as required.
- Install crossing points at pedestrian desire locations.

2.2.7 Pownall Street

Pownall Street runs between York Street and Villa Street and is 1959m long with a 50km/hr speed limit.

This road was identified for review as there are three schools that access Pownall Street with a number of sections of speed limits proposed and concern was raised regarding the possibility for too many speed limits changes. See Sections 2.1.2, 2.1.9 and 2.1.12 for further information.

Figure 22 Pownall Street



Safety and speed information from MegaMaps shows the following.

Pownall Street

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	43km/hr
<i>Safe and Appropriate Speed</i>	40km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

Three options have been considered for the speed limit on Pownall Street:

Option 1: - Maintain the 50km/hr speed limit on Pownall Road and install 30km/hr variable speed limits in the vicinity of each school as shown below.



Option 2: - Change the speed limit proposed for Pownall Street associated with Douglas Park School, St Matthew's Collegiate and Wairarapa College to permanent 30 or 40km/hr, with the remaining sections of Pownall Street to retain its current 50km/hr speed limit. This option results in two speed limit changes along Pownall Street.

Option 3: - Lower the speed limit for the full length of Pownall Street permanent 30 or 40km/hr. this option also provides safety benefits to Masterton Intermediate School and Solway College. A route treatment may also encourage more cyclist along Pownall Street.



In our experience Option 1 will result in up to five different speed limits along Pownall Street with the speed limit varying on different sections of the road at different times of the day. This will be confusing for drivers to remember which speed limit area they are in depending on the time of day that they are travelling. Option 2 creates two speed limits on Pownall Street. The lower speed limit area also covers the intersection of Renall Street and Pownall Street which has recently been upgraded to a roundabout to manage vehicle speeds on the approach to the intersection. Option 3 provides for a single speed limit for the complete length of Pownall Street however compliance is likely to be poor at either end of Pownall Street.

Reducing the speed limit to 30km/hr permanently is considered to be a stretch at this stage as the schools with a frontage to Pownall Street are secondary students and there is only one controlled crossing point. A 40km/hr speed limit is considered to a suitable compromise as Council looks to extend the areas of lower speed limits in Masterton. Subsequent reviews will consider lowering the speed limit further and/or extending the length of the 40km/hr speed limit.

Recommendation

The following changes are recommended on Pownall Street:

- Lower the speed limit from 50km/hr to 40km/hr between 80m southwest of Tararua Street (RP720) and 100m northeast of Kummer Crescent (RP1795).
- Install school threshold signs and markings at both ends of the change in speed limit.
- Install repeater speed limit and school signage within the 40km/hr speed limit area.

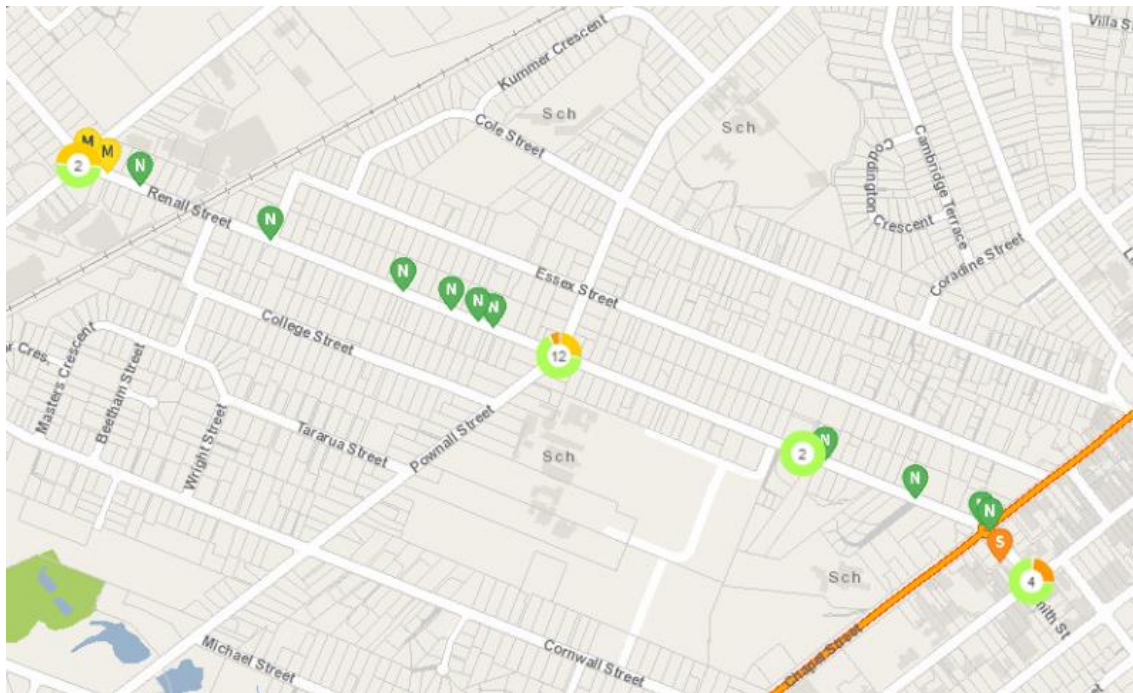
Following the council meeting on June 15th 2023, the Council voted by majority to change Pownall Street to a 40km speed limit for its entire length. Option 3.

2.2.8 Renall Street

Renall Street runs between Queen Street and Ngaumutawa Road and is 1837m long with a 50km/hr speed limit.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been 3 serious, 6 minor and 24 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive. Crashes occurring at the intersection with Chapel Street / State Highway 2 have been excluded as Masterton District Council does not have jurisdiction in this area.

Figure 23 Renall Street crashes



The serious injuries have all occurred in 2018 and resulted from a variety of crash types with no commonalities between the crashes. One involved a pedestrian who fell over on the road, one was a driver falling asleep and the last was a cyclist who was hit at night at the Renall / Pownall intersection.

The majority of crashes have occurred at the intersections with most crashes occurring at the Renall / Pownall intersection, however, there have been no crashes reported at this location since 2018.

Safety and speed information from MegaMaps shows the following.

Renall Street

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	46km/hr
<i>Safe and Appropriate Speed</i>	40km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

MegaMaps indicates that the safe and appropriate speed limit for Renall Street is 40km/hr. This lower speed limit is not considered to be appropriate for the connector role that this road provides within the roading network. Significant changes to speed limits will be required to the adjacent roads to reduce the risk associated with traffic re-routing to avoid a lower speed limit on Renall Street

At this stage no change to the speed limit is recommended for Renall Street.

Recommendation

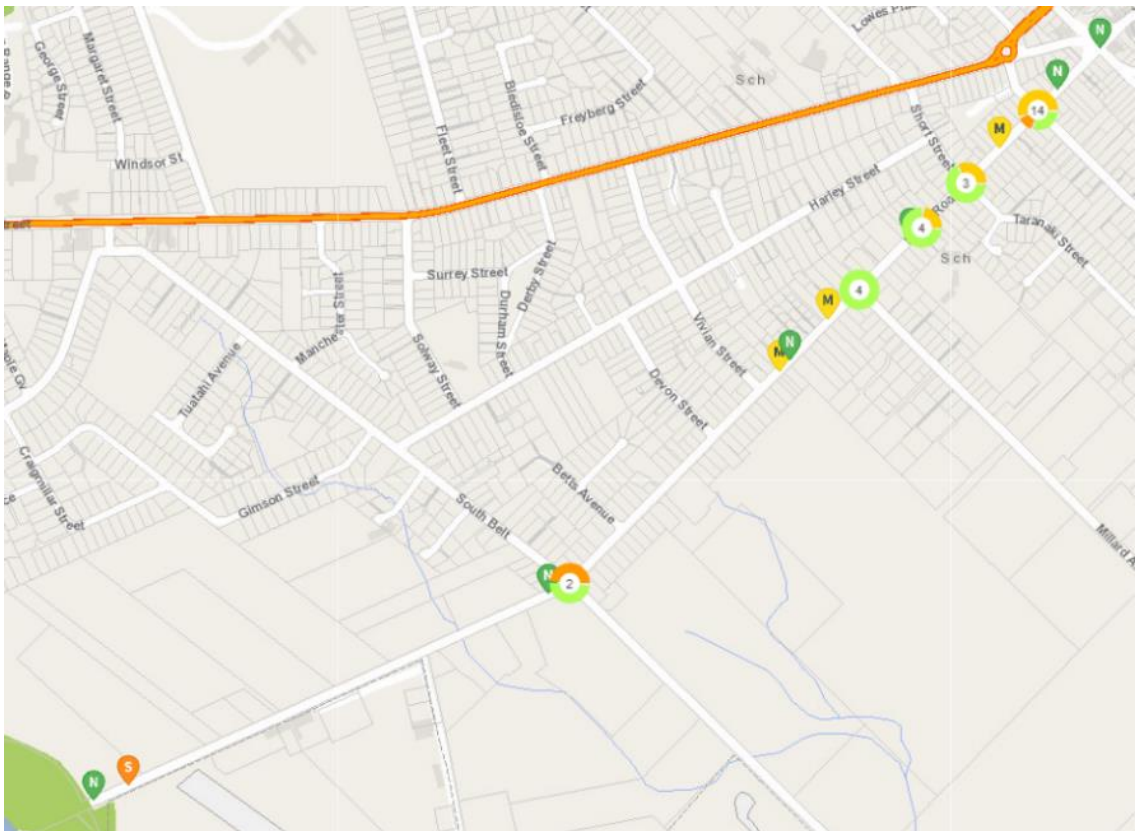
No changes are recommended for Renall Street.

2.2.9 South Road

South Road is a dead-end road that runs between High Street and the Waingawa River and is 2.5km long with a 50km/hr speed limit for the majority of the length of the street. A 40 km/hr variable speed limit is in effect on South Road, from a point 25m northeast of Short Street to a point 90m northeast of Millard Ave for Masterton Primary School and the southern section of the road between South Belt and the road end has a 60km/hr speed limit.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been 4 serious, 13 minor and 20 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

Figure 24 South Road crashes



Three of the serious injuries have occurred as a result of intersection type crashes with two occurring at the intersection with Cockburn Street. The fourth crash resulted from a passenger being thrown from the tray of a Ute on the riverbank.

Safety and speed information from MegaMaps shows the following.

South Road – High Street to South Belt

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	43km/hr
<i>Safe and Appropriate Speed</i>	40/30km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

MegaMaps indicates that the safe and appropriate speed limit for South Road should vary with 40km/hr between High Street and Millard Avenue, before dropping to 30km/hr for the section to South Belt. The 60km/hr section south of South Belt is to be maintained. Significant changes to

speed limits will be required to the adjacent roads to reduce the risk associated with traffic re-routing to avoid a lower speed limit on South Street.

At this stage no change to the speed limit is recommended for South Road.

Due to the high number of crashes and high severity of crashes at the South Road / Cockburn Street intersection consideration should be given to installing an urban roundabout in this location to manage vehicle speeds. This would also assist with speed management for Masterton Primary School – see Section 2.1.6 for further information.

Recommendation

The following changes are recommended on South Road:

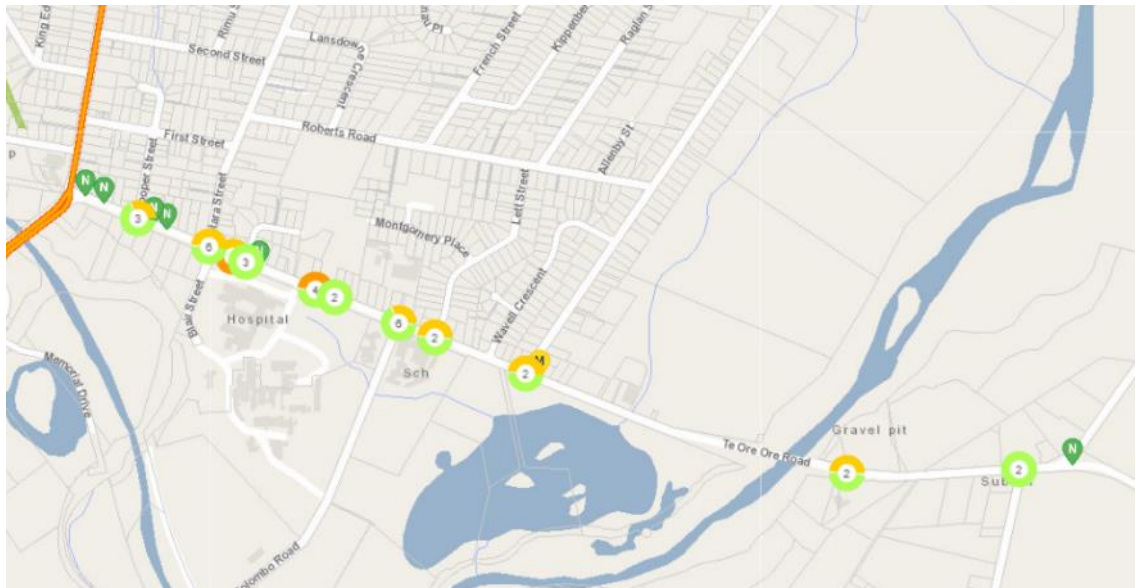
- Install an urban roundabout at the intersection of South Road and Cockburn Street.

2.2.10 Te Ore Ore Road

Te Ore Ore Road runs between State Highway 2 and Masterton-Castlepoint Road on the eastern side of Masterton and is 2347m long with a 50km/hr speed limit for the majority of the length of the road. There is a 40 km/hr variable speed limit in effect on Te Ore Ore Road from a point 60m northwest of Colombo Road to a point 85m southeast of Churchill Ave for Lakeview School and a 60km/hr speed limit is in effect from a point 240m southeast of Gordon Street to Masterton-Castlepoint Road.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been 3 serious, 11 minor and 27 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

Figure 25 Te Ore Ore crashes



All serious crashes have involved pedestrians, with no serious crashes reported since 2017.

The majority of crashes have been rear end/obstruction (17) type crashes with crossing /turning crashes (9) the next most common.

Safety and speed information from MegaMaps shows the following.

Colombo Road

<i>Posted speed limit</i>	50km/hr	<i>Mean Free Flow Speed</i>	46km/hr
<i>Safe and Appropriate Speed</i>	40km/hr	<i>Infrastructure Risk Rating</i>	Medium

MegaMaps indicates that the safe and appropriate speed limit for Te Ore Ore Road is 40km/hr. Due to the collector role that Te Ore Ore Road plays in the road hierarchy, there should be some differential between the speed limits on Te Ore Ore Road and the adjacent network and any lowering of the speed limit on Te Ore Ore Road will require wholesale changes to speed limits on the adjacent networks.

At this stage no change to the speed limit is recommended for Te Ore Ore Road however to reduce the risk and manage vehicle speeds along the route, improvement works to pedestrian facilities along the route should be considered. This would also assist with speed management for Lakeview School – see Section 2.1.4 for further information.

Vehicle speeds in the 60km/hr section between 240m southeast of Gordon Street to Masterton-Castlepoint Road are high, with a mean vehicle speed of 67km/hr. The introduction of an 80km/hr speed limit to the east of Masterton Castlepoint Road will assist with reducing vehicle speeds in this area – see Section 8.2.1 for more information.

Recommendation

The following changes are recommended on Te Ore Ore Road:

- Install / upgrade pedestrian facilities along Te Ore Ore Road.

3. Bideford

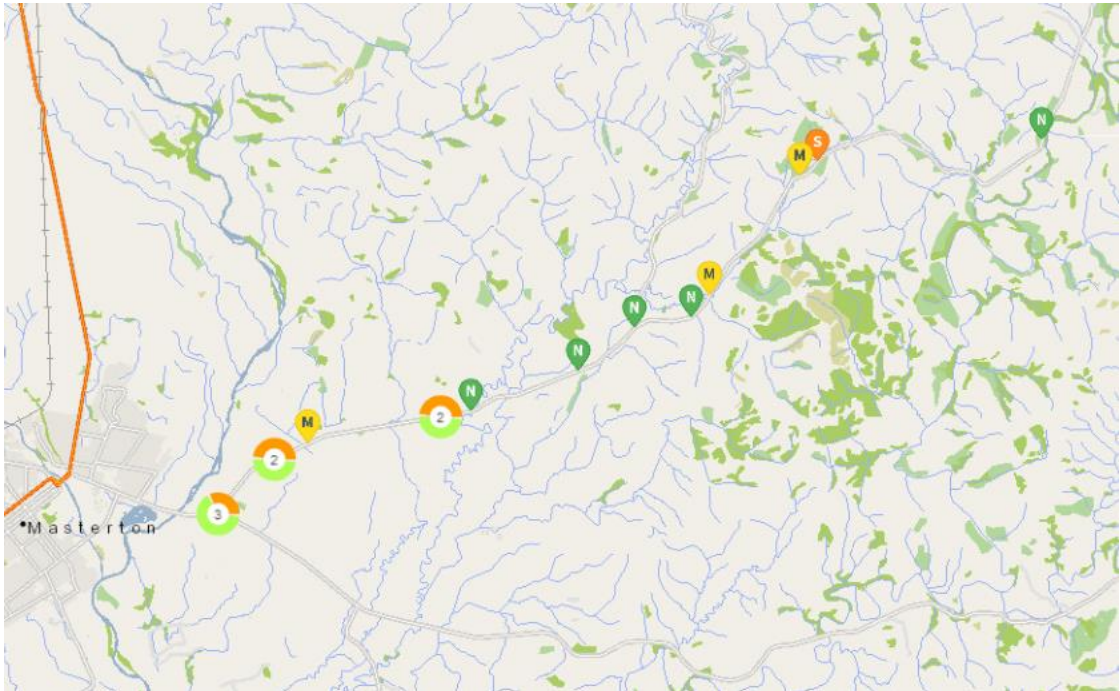
3.1 Other roads

3.1.1 Te Ore Ore-Bideford Road

Te Ore Ore-Bideford Road runs between Masterton and Bideford and is 23.2km long with an open road speed limit.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years and providing access to Te Ore Ore Marae. There have been four serious, three minor and nine non-injury crashes reported in the 10-year period 2012 – 2021 inclusive. There have been no serious crashes reported since 2017.

Figure 26 Te Ore Ore Bideford Road crashes



The majority of the crashes have been loss of control with one serious head-on crash. The remaining serious crashes have been a variety of crash types with no commonalities between them.

Safety and speed information from MegaMaps shows the following.

Te Ore Ore Bideford Road

<i>Posted speed limit</i>	100km/hr	<i>Mean Free Flow Speed</i>	85km/hr
<i>Safe and Appropriate Speed</i>	80km/hr	<i>Infrastructure Risk Rating</i>	Medium

MegaMaps indicates that Te Ore Ore-Bideford Road should have a speed limit of 80km/hr. This speed limit is recommended due to the lack of separation/barrier between opposing traffic flows. The risk associated with the flat topography, straight alignment and minimal side friction from adjacent activities along significant lengths of the road does not support this lower speed limit from a driver’s perspective.

The majority of crashes on this road are loss of control which indicates that additional edgeline treatments such as the installation of ATP on edgelines and/or centreline would be beneficial to reduce risk associated with fatigued and or distracted drivers.

Consideration should be given to lowering the speed limit on Te Ore Ore-Bideford Road from Te Ore Ore Road to RP2300 which covers the section of road with the highest risk and most roadside activity including access to Te Ore Ore Marae to provide consistency for drivers. Extension of the 80km/hr speed limit needs to be considered as part of the wider changes to rural speed limits across the district.

The location of the Te Ore Ore Marae is currently not identified and advance and directional signage should be installed to show the location of the marae.

Recommendation

The following changes are recommended on Te Ore Ore Bideford Road:

- Lower the speed limit from 100km/hr to 80km/hr from Te Ore Ore Road to RP2300.

- Install speed limit threshold signs and markings at the change in speed limit locations with Settlement speed threshold signs and markings at the 80/100km/hr change north of Te Ore Ore Road for southbound vehicles.
- Widen centreline and edgeline markings for the full length of the route.
- Install centreline and edgeline ATP along the full length of the route.
- Install advance and directional marae signage for Te Ore Ore Marae.

Following the council meeting on June 15th 2023, the Council voted by majority to Lower the speed limit on Te Ore Ore Bideford Road from 100km/hr to 60km/hr from Te Ore Ore Road to RP2300.

4. Homewood

4.1 Schools

There is one rural school in Homewood for which the speed limit needs to be lowered in the vicinity of to assist with improved accessibility.

4.1.1 Whareama School

Whareama School is a full primary school (Year 1-8) with a current roll of 54. The only vehicle and pedestrian access to the school is off Langdale Road.

An off-road shared path is provided on the western side of Langdale Road from the community hall to the school. There is no marked crossing point providing a connection between the school and the shared path.

Figure 27 Whareama School



Speed information from MegaMaps shows the following.

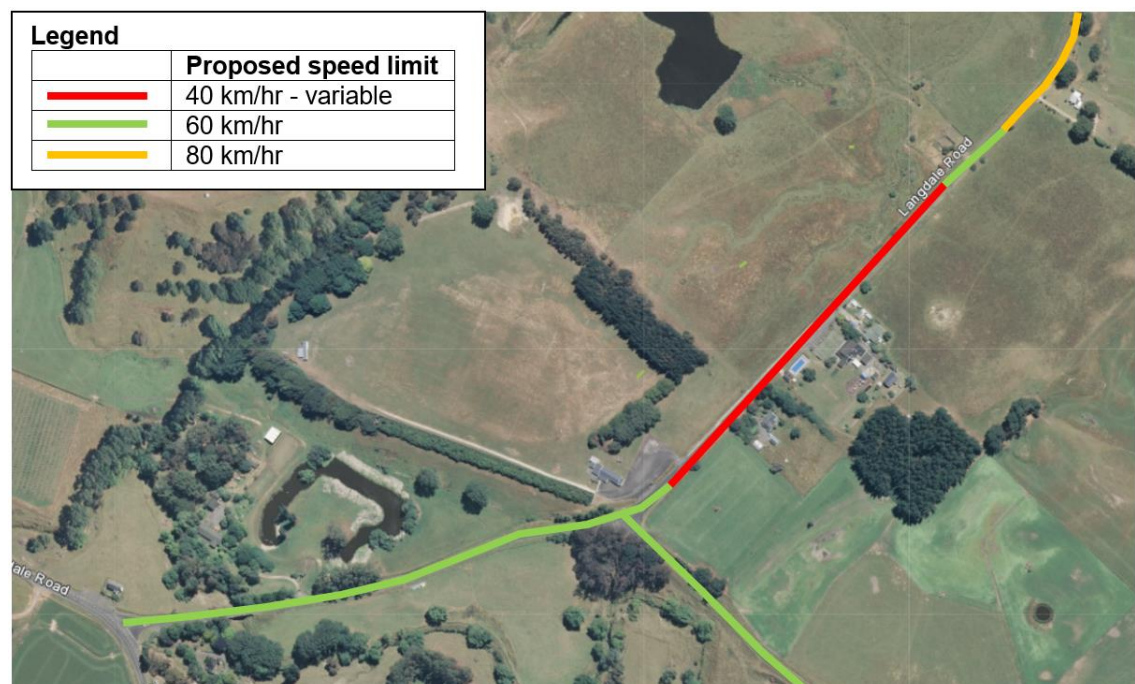
	Langdale Road
<i>AM Peak mean speed</i>	76 km/hr
<i>PM Peak mean speed</i>	75 km/hr
<i>Freeflow speed</i>	80 km/hr
<i>Posted speed limit</i>	100 km/hr / 40 km/hr variable

A variable 40 km/hr speed limit is in place on Langdale Road between RP 5940 and RP 6520 with the posted speed limit being 100 km/hr outside of school times.

Drivers are not reducing their speeds to the desired 40 km/hr outside the school during school times as shown by the mean speeds above. This could be due to the lack of visibility of the school and therefore the need for the lower speed limit. Research has also shown that a 60 km/hr drop in speed is difficult for drivers to achieve and unlikely to be complied with. A 30 – 40 km/hr speed reduction is considered to be more achievable.

A better alignment between risk and vehicle speeds can be achieved with changes to the existing speed limit and additional signage and marking including school threshold signs and markings on either side of the school. To provide a better alignment with the topography and use of Langdale Road the speed limit should be reduced as shown below.

Figure 28 Whareama School – proposed speed limits



Changes to the speed limit on this section would require a similar change on the side roads of Post Office Road, Waimimi Road, ICA Road and Otahome Road to provide consistency to road users.

Recommendation

The following changes are recommended in the vicinity of Whareama School:

- Reduce the speed limit on Langdale Road to:

- 60km/hr from Masterton-Castlepoint Road to RP2940,
 - 80km/hr from RP 2940 to RP5860 and
 - 60km/hr from RP5860 to Blairlogie-Langdale Road.
- Reduce the length of the variable 40km/hr speed limit on Langdale Road to between RP5940 and RP6340.
 - Lower the speed limit to 60km/hr on the full length of the adjacent side roads of Post Office Road, Waimimi Road, ICA Road and Otahome Road.
 - Install school threshold signs and markings on Langdale Road on either side of the school.
 - Update and install speed limit signage as required.

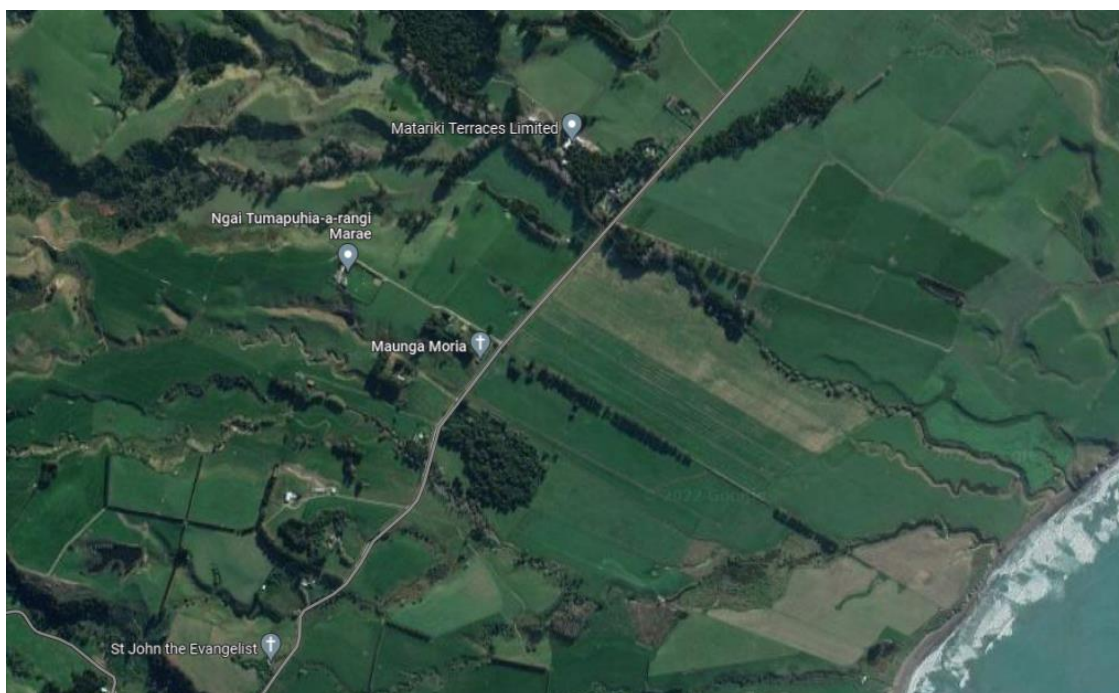
4.2 Other roads

4.2.1 Homewood Road

Homewood Road runs between Langdale Road and Kaiwhata Road providing access to Homewood and Kaiwhata and is 27km long with an open road speed limit. The last 7km of the road is unsealed from Waiorong Road to Kaiwhata Road.

This road was identified for review as it provides access to Ngāi Tūmapuhia-a-Rangi ki Okautete Marae.

Figure 29 Homewood Road



Safety and speed information from MegaMaps shows the following.

Homewood Road

<i>Posted speed limit</i>	100km/hr	<i>Mean Free Flow Speed</i>	77km/hr
<i>Safe and Appropriate Speed</i>	60km/hr	<i>Infrastructure Risk Rating</i>	High

The default speed limit for all unsealed roads in MegaMaps is 60km/hr. Changes to the speed limit in this area needs to be considered as part of the wider changes to rural speed limits across the district.

The Ngāi Tūmapuhia-a-Rangi ki Okautete Marae is currently not identified and advance and directional signage should be installed to show the location of the marae.

Recommendation

The following changes are recommended on Homewood Road:

- Install advance and directional marae signage for Ngāi Tūmapuhia-a-Rangi ki Okautete Marae.

4.2.2 Riversdale Road

Riversdale Road runs between Homewood Road and Blue Pacific Parade providing access to Riversdale Beach and is 3159m long with a 30km/hr speed limit from 400m west of Pinedale Crescent. Speed humps have been installed on the approach to the Riversdale Beach Settlement to manage vehicle speeds in the area.

This road was identified for review as it provides access to Motuwairaka Marae.

Figure 30 Motuwairaka Marae



Safety and speed information from MegaMaps shows the following.

Riversdale Road

<i>Posted speed limit</i>	30km/hr	<i>Mean Free Flow Speed</i>	29km/hr
<i>Safe and Appropriate Speed</i>	30km/hr	<i>Infrastructure Risk Rating</i>	Medium High

No change to the speed limit is required in this area as it already meets the safe and appropriate speed limit.

The Motuwairaka Marae is currently not identified and advance and directional signage should be installed to show the location of the marae.

Recommendation

The following changes are recommended on Riversdale Road:

- Install advance and directional marae signage for Motuwairaka Marae.

5. Masterton West

5.1 Schools

There are three rural schools in the surrounding western district of Masterton for which the speed limit needs to be lowered in the vicinity of to assist with improved accessibility.

5.1.1 Fernridge School

Fernridge School is a contributing school (Year 1-6) with the only vehicle and pedestrian access off Upper Plains Road.

An off-road shared path is provided on the southern side of Upper Plains Road from the intersection with Kibblewhite Road. A crossing point has recently been constructed outside the school to provide a connection to the shared path.

Figure 31 Fernridge School



Speed information from MegaMaps shows the following.

	Upper Plains Road
<i>AM Peak mean speed</i>	54 km/hr
<i>PM Peak mean speed</i>	52 km/hr
<i>Freeflow speed</i>	65 km/hr
<i>Posted speed limit</i>	80 km/hr / 40 km/hr variable

A variable 40 km/hr speed limit Upper Plain Road (Fernridge School) from a point 1000m northwest of Kibblewhite Road to a point 530m southeast of Evans Road. The posted speed limit is 80 km/hr.

The safe and appropriate speed for Upper Plains Road is 80 km/hr, however drivers are not reducing their speeds to the desired 40 km/hr outside the school as shown by the mean speeds above.

To assist with the management of vehicle speeds the installation of a rural raised safety platform should be considered in conjunction with school threshold signs and markings on either side of the school.

Recommendation

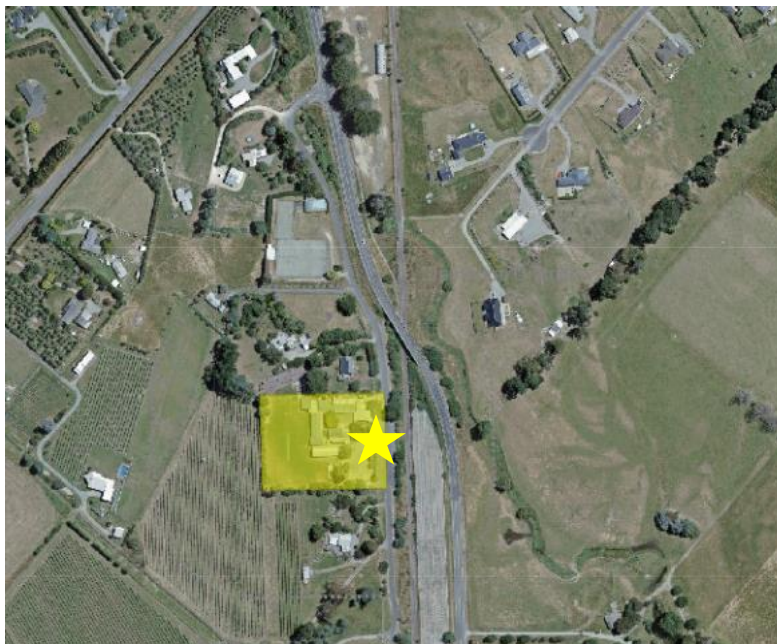
The following changes are recommended in the vicinity of Ferridge School:

- Install school threshold signs and markings on Upper Plains Road on either side of the school.
- Consider including the installation of rural raised safety platform at the threshold signs and markings on Upper Plains Road to assist with speed management.

5.1.2 Opaki School

Opaki School is a full primary school (Year 1-8) with the only vehicle and pedestrian access off Waipipi Road. There are no footpaths or cycle facilities on Waipipi Road. There is a shared path that passes under the state highway and across the railway line to provides access to the residents on the eastern side of the state highway.

Figure 32 Opaki School



Speed information from MegaMaps shows the following.

	Waipipi Road
<i>AM Peak mean speed</i>	21 km/hr
<i>PM Peak mean speed</i>	21 km/hr
<i>Freeflow speed</i>	22 km/hr
<i>Posted speed limit</i>	100 km/hr

To improve the survivability of crashes involving pedestrians in this area 30 km/hr is considered to be the safe and appropriate speed for this locality. Due to the narrow road width and short length of Waipipi Road a 30 km/hr speed limit is recommended for the full length of the road.

To assist with the management of vehicle speeds and pedestrian safety a crossing point should be developed between the school and the off-road path with appropriate marking and signage.

Recommendation

The following changes are recommended in the vicinity of Opaki School:

- Lower the speed limit on the full length of Waipipi Road to 30 km/hr.
- Install school threshold signs and markings on Waipipi Road on the approach to the school.
- Install signs and road markings on Waipipi Road to delineate the crossing point between the school and the off-road path at the eastern end of the school.
- Improve bus turning area and parking.
- Improve crossing location.

5.1.3 Rathkeale College

Rathkeale College is a secondary school (Year 9-15) with the only vehicle and pedestrian access off Willow Park Road.

An off-road shared path is provided one side of Willow Park Road from the intersection with State Highway 2 to the college at the end of the road. The path crosses the road in two locations.

Figure 33 Rathkeale College



Speed information from MegaMaps shows the following.

	Willow Park Road
<i>AM Peak mean speed</i>	43 km/hr
<i>PM Peak mean speed</i>	43 km/hr
<i>Freeflow speed</i>	43 km/hr
<i>Posted speed limit</i>	70 km/hr

As part of the speed management plan Council is required to review and remove any existing 70 km/hr speed limits. To improve the survivability of crashes in this area 60 km/hr is considered to be the safe and appropriate speed for this locality. Due to the narrow road width of Willow Park Road a 60 km/hr speed limit is recommended for the full length of the road.

To assist with the management of vehicle speeds and pedestrian safety additional signage and road marking should be installed at the crossing points.

Recommendation

The following changes are recommended in the vicinity of Rathkeale College:

- Lower the speed limit on the full length of Willow Park Road to 60 km/hr.
- Update and install speed limit signage as required.
- Install signs and road markings to delineate the existing crossing points on Willow Park Road.

5.2 Other roads

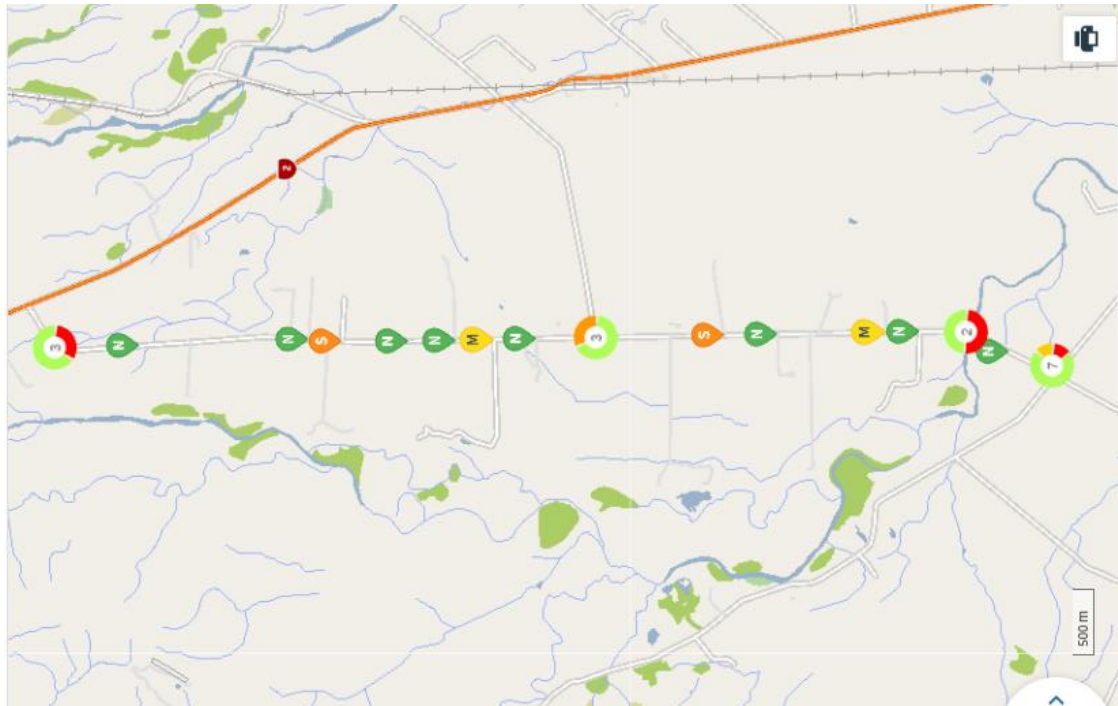
5.2.1 Paierau Road

Paierau Road runs between Akura Road and State Highway 2 on the north-western side of Masterton and is 7746m long. This road forms part of the truck bypass around Masterton in conjunction with Ngaumutawa Road and Akura Road.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years and being a high benefit route.

There have been 3 fatal, 3 serious, 3 minor and 18 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

Figure 34 Paierau Road



The fatal and serious injuries have resulted from a variety of crash types with no commonalities between the crashes. The last reported fatal crash was in 2018 and involved a driver losing control and crashing into the watertable drain. This was a single vehicle crash which is consistent with the majority of crashes on this road.

Safety and speed information from MegaMaps shows the following.

Paierau Road

<i>Posted speed limit</i>	100km/hr	<i>Mean Free Flow Speed</i>	92km/hr
<i>Safe and Appropriate Speed</i>	80km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

MegaMaps indicates that Paierau Road should have a speed limit of 80km/hr. This speed limit is recommended due to the lack of separation/barrier between opposing traffic flows. The risk associated with the flat topography, straight alignment and minimal side friction from adjacent activities does not support this lower speed limit.

Due to the high existing mean travel speeds additional speed management features will be required such as the use of wide edgeline and centreline markings (150mm – 200mm) to narrow the traffic lanes.

The majority of crashes on this road are loss of control which indicates that additional edgeline treatments such as the installation of ATP on edgelines and/or centreline would be beneficial to reduce risk associated with fatigued and distracted drivers.

This road also forms an important link in the truck bypass around Masterton and its speed limit needs to be consistent with the adjacent sections of Ngaumutawa Road and Akura Road and provide a suitable alternative to drivers to encourage its use. See Sections 2.2.1 and 2.2.6 for further info. Waka Kotahi are proposing to lower the speed limit on State Highway 2 from south of Paierau Road to Masterton to 80km/hr.

The lowering of the speed limit on State Highway 2, Kibblewhite Road and Akura Road would make a higher speed limit on the full extents of Paierau Road out of context with the surrounding network.

There are two options to manage speed on Paierau Road:

Option 1 – Lower the speed limit for the full length of Paierau Road to 80km/hr.

Option 2 – Lower the speed limit to 80km/hr from Kibblewhite Road to Loopline.

The decision on which option is implemented will depend on the extent of the changes that occur on State Highway 2 to ensure that vehicles do not move to Paierau Road to avoid the state highway.

For consistency the speed limit on Loopline should be reduced at the same time as Paierau Road.

Recommendation

The following changes are recommended on Paierau Road:

- Lower the speed limit to 80km/hr on Paierau Road and Loopline when the speed limit on the parallel section of State Highway 2 is reduced..
- Install speed threshold signs and markings signs at the change in speed limit location.
- Widen centreline and edgeline markings for the full length of the route.
- Install centreline and edgeline ATP along the full length of the route.

5.2.2 Willow Park Road

Willow Park Road is a no exit road that runs east from State Highway 2 and is 1960m long and provides access to Rathkeale College.

This road was identified for review as having an existing 70km/hr.

Figure 35 Willow Park Road



Safety and speed information from MegaMaps shows the following.

Willow Park Road

<i>Posted speed limit</i>	70km/hr	<i>Mean Free Flow Speed</i>	40km/hr
<i>Safe and Appropriate Speed</i>	60km/hr	<i>Infrastructure Risk Rating</i>	Low Medium

MegaMaps indicates that the safe and appropriate speed limit for this road is 60km/hr. Due to the presence of Rathkeale College at the end of the road this speed limit is considered to be appropriate. See Section 5.1.3 for further information.

Recommendation

The following changes are recommended on Willow Park Road:

- Lower the speed limit from 70km/hr to 60km/hr for the full length of the road.
- Update and install speed limit signage as required.

6. Mauriceville

6.1 Schools

There is one rural school in Mauriceville for which the speed limit needs to be lowered in the vicinity of to assist with improved accessibility.

6.1.1 Mauriceville School

Mauriceville School is a full primary school (Year 1-8) with a current roll of 17 students. The only vehicle and pedestrian access to the school is off Opaki-Kaiparoro Road.

Due to the rural location of the school there are no pedestrian or cycle facilities in the area.

Figure 36 Mauriceville School



Speed information from MegaMaps shows the following.

	Opaki-Kaiparoro Road
<i>AM Peak mean speed</i>	63 km/hr
<i>PM Peak mean speed</i>	63 km/hr
<i>Freeflow speed</i>	68 km/hr
<i>Posted speed limit</i>	50 km/hr

The speed data provided shows very poor compliance with the existing speed limit in this area which creates a higher than desirable risk to all users. The very low traffic volume (240 vehicles per day) and the remoteness of the site indicates that the majority of drivers are local to the area and which supports the evidence that the lack of compliance generally stems from the drivers' perception that the speed limit does not match the environment and/or the risks.

To improve safety in Mauriceville there are three options:

Option 1 – Maintain the status quo (50 km/hr) and install threshold signs and markings at the change in speed locations and school threshold signs and markings either side of the school with a 30 km/hr permanent school speed limit.

Option 2 – Raise the existing speed limit to 60 km/hr and extend it to cover the railway crossing at the northern end of the settlement and install a 30 km/hr variable school speed limit. Install threshold signs and markings at the change in speed locations and school threshold signs and markings either side of the school.

Option 3 – Create a 60km/hr speed limit area covering the railway crossing to the south of Mauriceville and the area in the vicinity of the lime works. Lower the speed limit in the more residential area and within the vicinity of the school to 40km/hr. Install threshold signs and

markings at the change in speed locations and school threshold signs and markings either side of the school.

In our experience Option 1 will have little to no effect as signs do not significantly alter a driver's behaviour and the existing speed information shows that drivers are not adjusting their speeds to the location at the moment. Option 2 will be expensive and difficult to justify on very low volume road, as the existing electronic signs cannot be reused and any replacement would be a long-term project. Option 3 would provide better alignment between the road environment and drivers perception of the risks in the area. The use of the differing speed limits to support the differing road side activities improves the likelihood of compliance by drivers as it is seen as being targeted and appropriate.

Recommendation

The following changes are recommended in the vicinity of Mauriceville School:

- Lower the speed limit to 60 km/hr on Opaki-Kaiparoro Road between RP12660 and RP13535.
- Install a 40 km/hr speed limit on Opaki-Kaiparoro Road from RP 13535 to RP14130.
- Install settlement speed threshold signs and markings on Opaki-Kaiparoro Road at the 60/40 speed limit change location.
- Install school threshold signs and markings on Opaki-Kaiparoro Road either side of the school.
- Lower the speed limit to 60km/hr on the full length of Camerons Road.

7. Ngahape

7.1 Schools

There is one rural school in Ngahape for which the speed limit needs to be lowered in the vicinity of to assist with improved accessibility.

7.1.1 Wainuioru School

Wainuioru School is a full primary school (Year 1-8) with a current roll of 75 students. The school is located on the corner of Masterton Stronvar Road and Westmere Road with vehicle and pedestrian access off both road frontages.

Due to the rural location of the school there are no pedestrian or cycle facilities in the area.

Figure 37 Wainuioru School



Speed information from MegaMaps shows the following.

	Masterton Stronvar Road	Westmere Road
<i>AM Peak mean speed</i>	58 km/hr	38 km/hr
<i>PM Peak mean speed</i>	58 km/hr	41 km/hr
<i>Freeflow speed</i>	65 km/hr	59 km/hr
<i>Posted speed limit</i>	100 km/hr	100 km/hr

Due to Masterton Stronvar Road being a rural connector route a variable speed limit is considered to be the most appropriate in this location. As the school is located at the intersection with Westmere Road the variable speed limit should be extended to include the school frontage on Westmere Road as well.

Recommendation

The following changes are recommended in the vicinity of Wainuioru School:

- Install a 60 km/hr variable speed limit on Masterton Stronvar Road from RP 13210 to RP 13620.
- Install a 60 km/hr variable speed limit on Westmere Road from RP 0 to RP 200.
- Install school threshold signs and markings on Masterton Stronvar Road and Westmere Road on the approaches to the school.

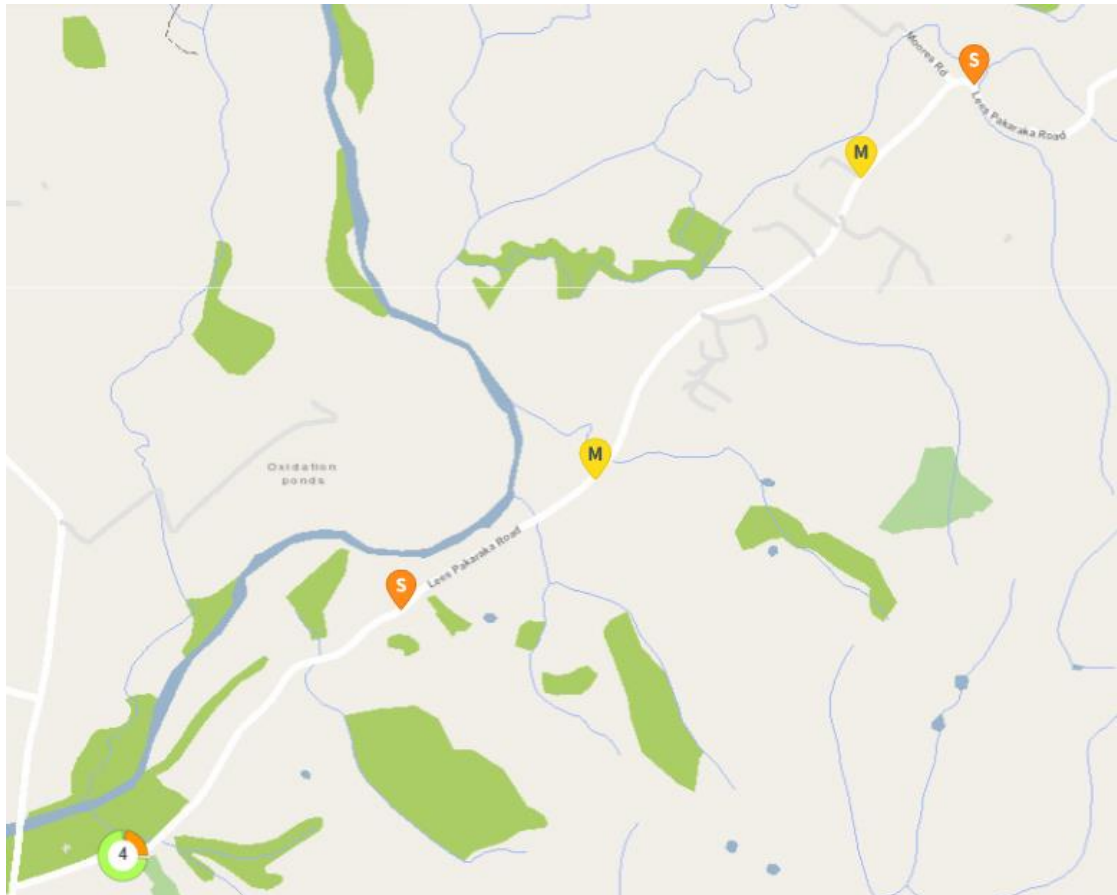
7.2 Other roads

7.2.1 Lees Pakaraka Road

Lees Pakaraka Road runs between Masterton Strovnar Road and Masterton Martinborough Road and is 6066m long with an open road speed limit.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been three serious, two minor and three non-injury crashes reported in the 10-year period 2012 – 2021 inclusive. All reported crashes have occurred since 2016 with five of the crashes including all the serious crashes occurring in the last two years.

Figure 38 Lees Pakaraka Road crashes



The majority of the crashes have been loss of control with one serious head-on crash.

Safety and speed information from MegaMaps shows the following.

Lees Pakaraka Road

<i>Posted speed limit</i>	80km/hr	<i>Mean Free Flow Speed</i>	69km/hr
<i>Safe and Appropriate Speed</i>	60km/hr	<i>Infrastructure Risk Rating</i>	Medium

The speed limit was lowered on Lees Pakaraka Road to 80km/hr in 2013. The road is currently marked with edgelines only and to assist with the management of vehicle speeds it is recommended that a centreline be marked for the full length of the road. The road should be monitored and if crashes continue then consideration should be given to installing ATP on the centreline and edgelines and installing curve warning signage along the route.

Recommendation

The following changes are recommended on Lees Pakaraka Road:

- Lower the speed limit to 60km/hr for the full length of Lees Pakaraka Road.
- Update speed limit signage as required.
- Mark a centreline for the full length of the road.
- Monitor the site and consider using ATP on the centreline markings and install curve warning signage.

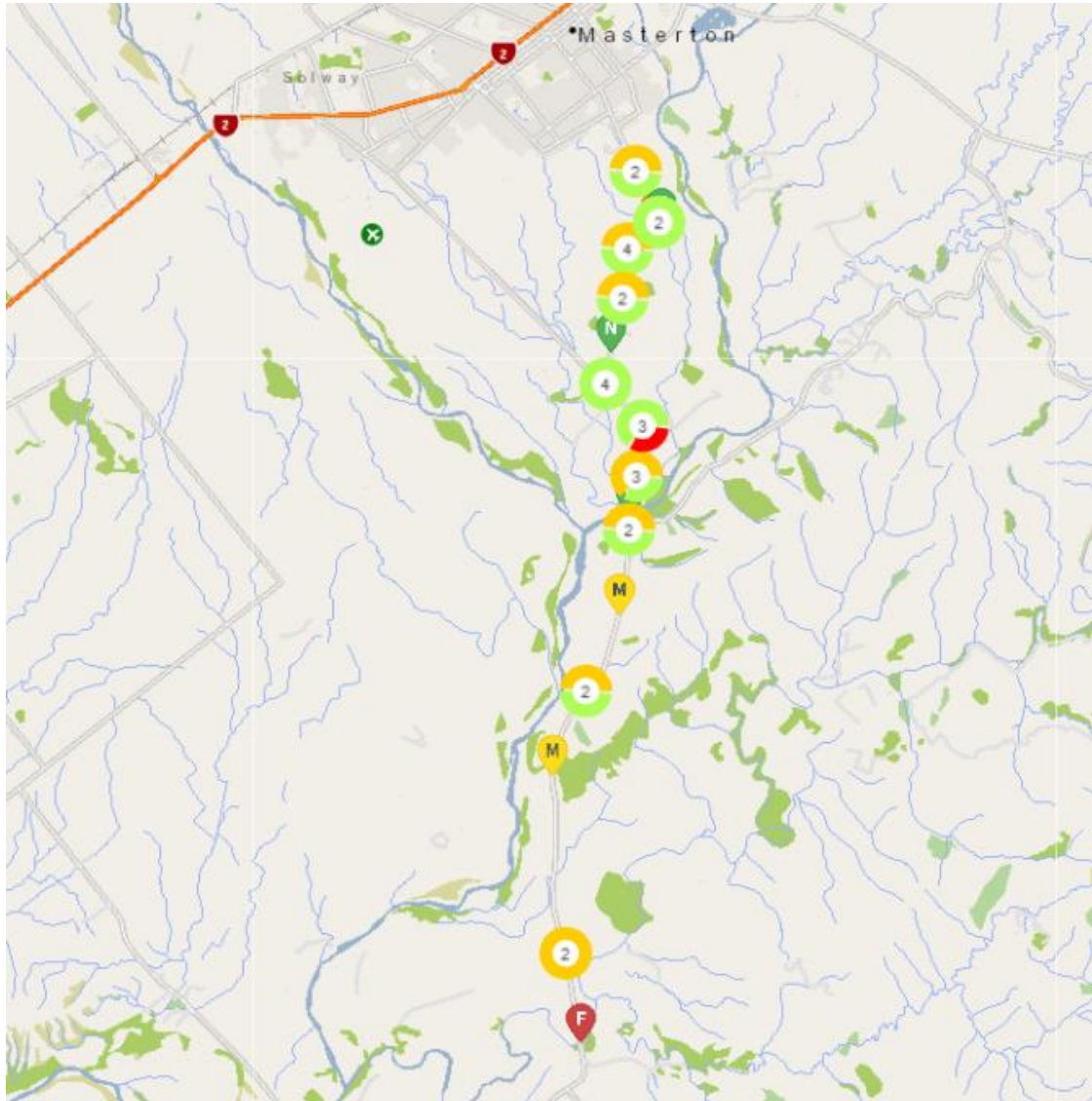
Following the council meeting on June 15th, the Council voted by majority to not change the speed limit on Lees Pakaraka Road.

7.2.2 Te Whiti Road

Te Whiti Road runs between Johnstone Street and the South Wairarapa District boundary and is 11.8km long with an open road speed limit except for the first 1900m which has a speed limit of 80km/hr.

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years. There have been two fatal, two serious, thirteen minor and eighteen non-injury crashes reported in the 10-year period 2012 – 2021 inclusive. All fatal and serious crashes have been reported in the last four years.

Figure 39 Te Whiti Road crashes



The majority of the crashes are loss of control on bends (20) and loss of control on a straight (7). Both fatalities were single vehicle crashes and appear to be fatigue as both vehicles have simply carried on straight ahead with no corrective action taken by the drivers.

Safety and speed information from MegaMaps shows the following.

Te Whiti Road

<i>Posted speed limit</i>	100km/hr	<i>Mean Free Flow Speed</i>	88km/hr
<i>Safe and Appropriate Speed</i>	80km/hr	<i>Infrastructure Risk Rating</i>	Medium

As the majority of the crashes have occurred in the section between Johnstone Street and Lees Pakaraka Road a lower speed limit through this area is considered appropriate to reduce the risk to users. Changes to the speed limit on this section will require a similar change to the side road of Manaia Road to provide consistency to road users.

Any further changes would need to be considered as part of a wider strategy for rural roads in the district.

The majority of crashes on this road are loss of control which indicates that additional edgeline treatments and the installation of ATP on edgelines and/or centreline would be beneficial to

reduce risk associated with fatigued and distracted drivers. Due to the high number of crashes on curves consideration should be given to reviewing and installing curve warning signage along the route.

Recommendation

The following changes are recommended on Te Whiti Road:

- Extend the 80km/hr speed limit on Te Whiti Road to Lees-Pakaraka Road.
- Lower the speed limit on Manaia Road to 80km/hr.
- Update and install speed limit signage as required.
- Mark edgelines for the full length of the route.
- Install ATP on the centreline and edgeline markings
- Review and install curve warning signage.

8. Tinui

8.1 Schools

There is one rural school in Tinui for which the speed limit needs to be lowered in the vicinity of to assist with improved accessibility.

8.1.1 Tinui School

Tinui School is a full primary school (Year 1-8) with a current roll of 39 students. The only vehicle and pedestrian access to the school is off Charles Street.

Due to the rural location of the school there are no pedestrian or cycle facilities in the area.

Figure 40 Tinui School



Speed information from MegaMaps shows the following.

	Charles Street	Manawa Road	Blackhill Road
<i>AM Peak mean speed</i>	43 km/hr	40 km/hr	39 km/hr
<i>PM Peak mean speed</i>	43 km/hr	40 km/hr	39 km/hr
<i>Freeflow speed</i>	44 km/hr	41 km/hr	39 km/hr
<i>Posted speed limit</i>	50 km/hr	50 km/hr	50 km/hr

The recorded vehicle speeds in Tinui are low, however they are likely to be constrained by the sharp bend (25 km/hr) at the intersection of Charles Street and Manawa Road rather than any conscious decision by drivers.

There are no urban features that are typically present in urban, 50 km/hr, areas to provide clues to drivers as to purpose of the lower speed limit or what speed they should be driving at if they miss seeing the signs. The presence of the café at the intersection of Charles Street and Masterton-Castlepoint Road extends the area over which a lower speed limit should apply. The lower speed limit in the vicinity of the school also assists with the management of vehicle speeds at the Charles Street and Manawa Road intersection. Due to the low volumes and the topography in this location a permanent school speed limit is considered appropriate.

A better alignment between risk and vehicle speeds can be achieved with changes to the existing speed limit and further reductions around the school. The creation of the 60km/hr speed limit to the east of Tinui reduces the risks associated with the T intersection the one lane bridge. Recommended changes to the speed limits in Tinui are shown in Figure 41.

Figure 41 Tinui - proposed speed limits



Recommendation

The following changes are recommended in the vicinity of Tinui School:

- Lower the speed limit on Masterton-Castlepoint Road to 60 km/hr from 185m south of Charles Street (RP 41380) to 385m east of Charles Street (RP 41950)
- Raise the speed limit on Charles Street from 50km/hr to 60km/hr from Masterton-Castlepoint Road (RP 0) to RP 150.
- Lower the speed limit on Charles Street from 50km/hr to 30km/hr from RP150 to the intersection with Manawa Road (RP 275).
- Lower the speed limit on Manawa Road from 50 km/hr to 30 km/hr from the intersection with Charles Street (RP 0) for a distance of 110m (RP 110).
- Raise the speed limit to 60 km/hr on Manawa Road from RP 110 to RP 360.
- Lower the speed limit on the full length of Blackhill Road to 30 km/hr.
- Install speed threshold signs and markings on Masterton-Castlepoint Road at the 100/60 speed limit change locations.
- Install speed threshold signs and markings on Manawa Road at the 100/60 speed limit change location.
- Install school threshold signs and markings on Charles Street at the 60/30 speed limit change location.
- Install school threshold signs and markings on Manawa Road at the 60/30 speed limit change location.

8.2 Other roads

8.2.1 Masterton-Castlepoint Road

Masterton-Castlepoint Road runs between Masterton and the settlement of Castlepoint and is 66km long with the majority of the road having an open speed limit. The exceptions to this are:

- From Te Ore Ore Road for 135m - 60km/hr,
- Between 30m northwest of the intersection with Mace Street to a point 678m northeast of the intersection with Te Parae Road – 80km/hr.
- 200m prior to the intersection with Jetty Road – 50km/hr

This road was identified for review as having a high number of fatal and serious crashes in the last 10 years, being a High Benefit route, and providing access to Whakataki (Te Hika o Papauma) Marae.

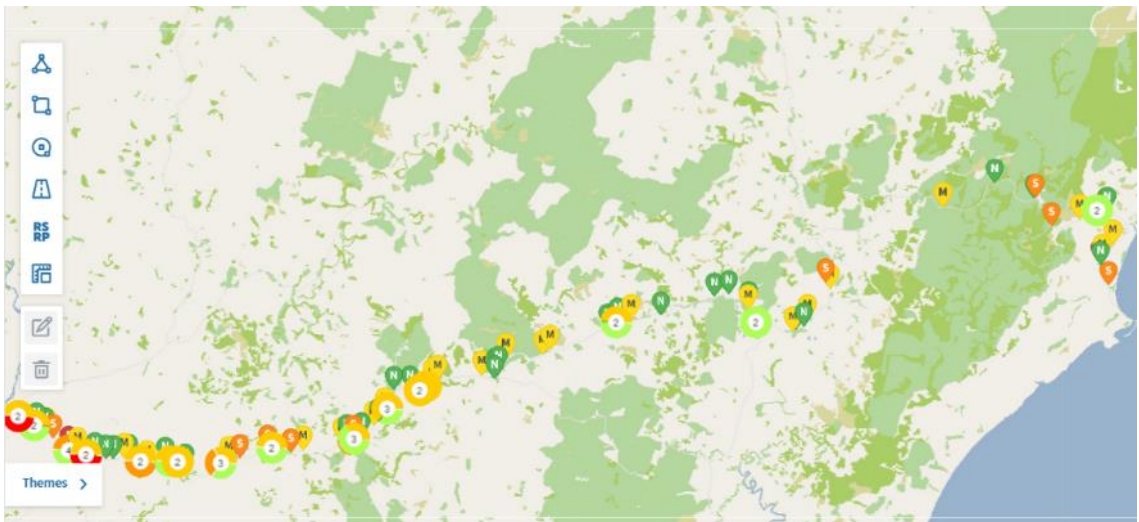
MegaMaps has identified the high benefit section as being between McKinstry Avenue and Maungahina Road. The section between Te Ore Ore – Bideford Road and McKinstry Avenue has been identified as being appropriate to raise the speed limit from 60km/hr to 80km/hr.

Figure 42 Masterton Castlepoint Road – high benefit section



There have been 4 fatal, 16 serious, 44 minor and 44 non-injury crashes reported in the 10-year period 2012 – 2021 inclusive.

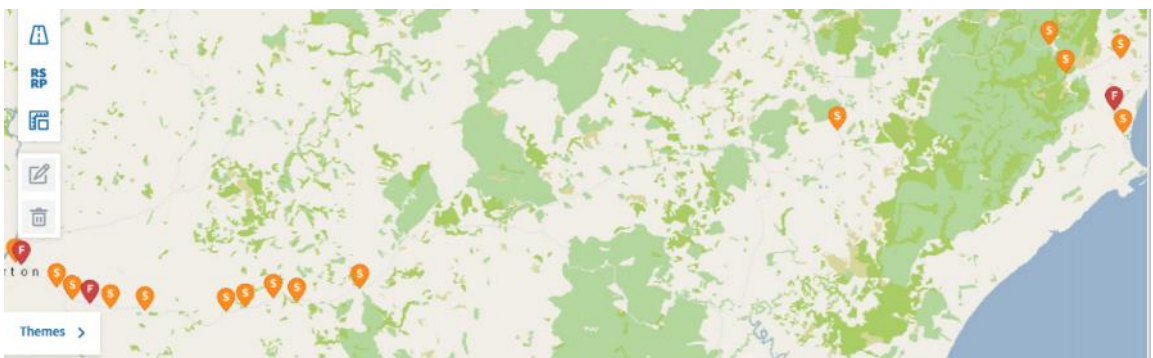
Figure 43 Masterton Castlepoint Road crashes



The majority of the crashes are loss of control on bends (68), loss of control on a straight (22) and head on (8).

Most of the fatal and serious crashes have occurred in the first 15km of the route with 3 fatal and 11 serious crashes in this section. The remaining fatal and 4 serious crashes have occurred in the last 8km prior to Castlepoint.

Figure 44 Fatal and serious crashes - Masterton Castlepoint Road



Of the 54 crashes reported in the first 15km, 35 involved vehicles travelling westbound (towards Masterton) with the remaining 19 crashes involving vehicles travelling eastbound. The majority of crashes in the last 8km prior to Castlepoint have involved eastbound vehicles.

Safety and speed information from MegaMaps shows the following.

Masterton Castlepoint Road

<i>Posted speed limit</i>	100km/hr	<i>Mean Free Flow Speed</i>	93km/hr
<i>Safe and Appropriate Speed</i>	80km/hr	<i>Infrastructure Risk Rating</i>	Medium

Due to the high number of crashes in the initial 15km of Masterton-Castlepoint Road a lower speed limit through this area is considered appropriate to reduce the risk to users. Changes to the speed limit on this section will require a similar change to the side roads to provide consistency to road users.

The side roads identified are; Abbotsford Road, Kahikatea Road, Letts Road, Maungahina Road, McKinstry Road, Morris Road, Olivers Road, Te Kanuka Road, and Watson Road. The speed limit should also be dropped on Masterton Stronvar Road between Masterton-Castlepoint Road and Lees Pakaraka Road.

While some side roads have a Safe and Appropriate speed less than the 80km/hr proposed for Masterton-Castlepoint Road to reduce confusion for drivers and to assist with the step-change approach that Council has adopted it is proposed to maintain a consistent speed limit through this area of 80km/hr.

Any further changes would need to be considered as part of a wider strategy for rural roads in the district.

Due to the high existing mean travel speeds additional speed management features will be required such as the use of wide edgeline and centreline markings (150mm – 200mm) to narrow the traffic lanes.

The majority of crashes on this road are loss of control which indicates that additional edgeline treatments such as the installation of ATP on edgelines and/or centreline would be beneficial to reduce risk associated with fatigued and distracted drivers. While the majority of crashes have occurred at each end of the route the treatment should extend along the full length of the route to avoid crash migration and provide a consistent message to drivers.

The Whakataki (Te Hika o Papauma) Marae is currently not identified. The original wharenui was destroyed by fire in 1960 and the hapu intend to build a new wharenui when funding allows. Once the new wharenui has been built advance and directional signage should be installed to show the location of the marae.

Recommendation

The following changes are recommended on Masterton Castlepoint Road:

- Lower the speed limit from 100km/hr to 80km/hr from 135m east of Te Ore Ore Road to RP15650.
- Lower the speed limit to 80km/hr on the full length of the adjacent side roads of Abbotsford Road, Kahikatea Road, Letts Road, Maungahina Road, McKinstry Road, Morris Road, Olivers Road, Te Kanuka Road, Te Parae Road and Watson Road.
- Lower the speed limit to 80km/hr on Masterton Stronvar Road between Masterton-Castlepoint Road and Lees Pakaraka Road.

- Install speed limit threshold signs and markings at the change in speed limit locations with Settlement speed threshold signs and markings at the 60/80km/hr change east of Te Ore Ore Road for westbound vehicles.
- Update and install speed limit signage as required.
- Widen centreline and edgeline markings for the full length of the route.
- Install centreline and edgeline ATP along the full length of the route.

9. Summary

A summary of the recommendations for each road or section of road identified above is tabled below.

Report No.	School / Road Name	Recommendations
2.1.1	Chanel College	<p>Install a permanent 30 km/hr speed limit on the full length of Herbert Street, Kereru Place, Weka Place, Takahe Street, Kotuku Place, Tui Street, Huia Street and Kiwi Street.</p> <p>Install speed threshold signs and markings at either end of Herbert Street at the change in speed limit locations.</p> <p>Install school threshold signs and markings on Herbert Street on both approaches to the school.</p> <p>Consider providing cycle facilities on Herbert Street as part of the wider Masterton cycle network.</p>
2.1.2	Douglas Park School	<p>Lower the permanent speed limit on Cole Street, from Pownall Street to a point 20m northeast of Essex Street to 30 km/hr.</p> <p>Lower the permanent speed limit to 30 km/hr speed limit on the full length of Kummer Crescent.</p> <p>Install a 40 km/hr speed limit on Pownall Street - See Section 2.2.7 for more information.</p> <p>Install school threshold signs and markings on Cole Street.</p> <p>Upgrade the existing kea crossing on Cole Street onto a raised pedestrian crossing.</p> <p>Upgrade the signs and markings for the patrolled zebra crossing on Pownall Street north of Cole Street.</p> <p>Consider providing cycle facilities on Cole Street as part of the wider Masterton cycle network.</p>
2.1.3	Hadlow Preparatory School	Road frontage is state highway – See Waka Kotahi for further information

Report No.	School / Road Name	Recommendations
2.1.4	Lakeview School	<p>Lower the existing variable speed limit on Te Ore Ore Road and Colombo Road to 30 km/hr.</p> <p>Install school threshold signs and markings on Te Ore Ore Road on both approaches to the school and on Colombo Road to reinforce the presence of the school.</p>
2.1.5	Masterton Intermediate	<p>Lower the permanent speed limit on Intermediate Street, from a point 38m northwest of SH2 High Street to a point 40m northeast of Pownall/York Street</p> <p>Lower the permanent speed limit to 30 km/hr speed limit on the full length of Lowes Place and Daniell Street.</p> <p>Install school threshold signs and markings on Intermediate Street on both approaches to the school.</p> <p>Upgrade the existing zebra crossing on Intermediate Street to a raised pedestrian crossing.</p>
2.1.6	Masterton Primary School	<p>Lower the existing variable speed limit on South Road to 30 km/hr.</p> <p>Install a permanent 30 km/hr speed limit on the full length of Taranaki Street; Okato Place and Patea Place.</p> <p>Install speed threshold signs and markings signage on Taranaki Street at the change in speed limit location.</p> <p>Install school threshold signs and markings on South Road on both approaches to the school.</p>
2.1.7	Solway College	No changes are recommended in the vicinity of Solway College.

Report No.	School / Road Name	Recommendations
2.1.8	Solway School	<p>Lower the existing variable speed limit on Ngaumutawa Road to 30 km/hr.</p> <p>Install school threshold signs and markings on Ngaumutawa Road on both approaches to the school.</p> <p>Upgrade the existing crossing point on Ngaumutawa Road at Solway School to a raised pedestrian crossing.</p>
2.1.9	St Matthew's Collegiate	<p>Install a 40 km/hr speed limit on Pownall Street - See Section 2.2.7 for more information</p> <p>Install school threshold signs and markings on Pownall Street on both approaches to the school.</p> <p>Consider providing cycle facilities on Pownall Street as part of the wider Masterton cycle network.</p>
2.1.10	St Patrick's Contributing School	Road frontage is state highway – See Waka Kotahi for further information
2.1.11	TKKM o Wairarapa and Makoura College	<p>Lower the existing variable speed limit on Johnstone Street and Makoura Road to 30 km/hr.</p> <p>Install school threshold signs and markings on Johnstone Street on both approaches to the schools and on Makoura Road.</p> <p>Upgrade the existing crossing point on Johnstone Street to a raised pedestrian crossing.</p> <p>Consider providing cycle facilities on Johnstone Street and Makoura Road as part of the wider Masterton cycle network.</p>

Report No.	School / Road Name	Recommendations
2.1.12	Wairarapa College	<p>Install a 40 km/hr speed limit on Pownall Street - See Section 2.2.7 for more information</p> <p>Install school threshold signs and markings on Pownall Street on both approaches to the school.</p> <p>Consider providing cycle facilities on Pownall Street as part of the wider Masterton cycle network.</p>
2.2.1	Akura Road	<p>Lower the speed limit from 70km/hr to 60km/hr from the intersection with Ngaumutawa Road for a distance of 110m.</p> <p>Raise the speed limit from 70km/hr to 80km/hr from 110m north of Ngaumutawa Road to RP 1040 (500m north of Ngaumutawa Road).</p> <p>Lower the speed limit from 100km/hr to 80km/hr from 500m north of Ngaumutawa Road to Kibblewhite Road.</p> <p>Install Settlement speed limit threshold signs and markings at the 80/60 change in speed limit location.</p> <p>Update and install other speed limit signage as required.</p> <p>Install advance and directional marae signage for Akura Marae.</p>
2.2.2	Colombo Road	<p>Consider improvement works such as raised platforms along the route or urban roundabouts at the cross intersections.</p> <p>Consider providing cycle facilities as part of the wider Masterton cycle network.</p>
2.2.3	Dixon Street	No changes are recommended for Dixon Street.

Report No.	School / Road Name	Recommendations
2.2.4	Gordon Street	<p>Lower the speed limit between RP 967 and RP 1630 from 80km/hr to 50km/hr.</p> <p>Lower the speed limit between RP 1630 and the end of the road from 80km/hr to 60km/hr.</p> <p>Lower the speed limit on Nikau Heights to 60km/hr.</p> <p>Update and install speed limit signs as required.</p>
2.2.5	Kibblewhite Road	<p>Lower the speed limit between RP650 and Akura Road to 80km/hr.</p> <p>Lower the speed limit on Greenlane Road to 50km/hr.</p> <p>Install settlement speed limit threshold signs and markings at the 60/80 change in speed limit location.</p> <p>Update and install other speed limit signage as required.</p>
2.2.6	Ngaumutawa Road	<p>Change the speed limit between Akura Road and 100m northeast of Upper Manaia Road to 60km/hr.</p> <p>Install speed limit threshold signs and markings at the change in speed limit locations.</p> <p>Update and install other speed limit signage as required.</p> <p>Install crossing points at pedestrian desire locations.</p>
2.2.7	Pownall Street	<p>Lower the speed limit from 50km/hr to 40km/hr between 80m southwest of Tararua Street and 100m northeast of Kummer Crescent.</p> <p>Install school threshold signs and markings at both ends of the change in speed limit.</p> <p>Install repeater and side road speed limit and school signage within the 40km/hr speed limit area.</p>

Report No.	School / Road Name	Recommendations
2.2.8	Renall Street	No changes are recommended for Renall Street.
2.2.9	South Road	Install urban roundabout at the intersection of South Road and Cockburn Street.
2.2.10	Te Ore Ore Road	Install / upgrade pedestrian facilities along Te Ore Ore Road.
3.1.1	Te Ore Ore Bideford Road	<p>Lower the speed limit from 100km/hr to 80km/hr from Te Ore Ore Road to RP2300.</p> <p>Install speed limit threshold signs and markings at the change in speed limit locations with Settlement speed threshold signs and markings at the 80/100km/hr change north of Te Ore Ore Road for southbound vehicles.</p> <p>Widen centreline and edgeline markings for the full length of the route.</p> <p>Install centreline and edgeline ATP along the full length of the route.</p> <p>Install advance and directional marae signage for Te Ore Ore Marae.</p>

Report No.	School / Road Name	Recommendations
4.1.1	Whareama School	<p>Reduce the speed limit on Langdale Road to 60km/hr from Masterton-Castlepoint Road to RP2940, 80km/hr from RP 2940 to RP5860 and 60km/hr from RP5860 to Blairlogie-Langdale Road.</p> <p>Reduce the length of the variable 40km/hr speed limit on Langdale Road to between RP5940 and RP6340.</p> <p>Lower the speed limit to 60km/hr on the full length of the adjacent side roads of Post Office Road, Waimimi Road, ICA Road and Otahome Road.</p> <p>Install school threshold signs and markings on Langdale Road on either side of the school.</p> <p>Update and install speed limit signage as required.</p>
4.2.1	Homewood Road	Install advance and directional marae signage for Ngāi Tūmapuhia-a-Rangi ki Okautete Marae.
4.2.2	Riversdale Road	Install advance and directional marae signage for Motuwairaka Marae.
5.1.1	Fernridge School	<p>Install school threshold signs and markings on Upper Plains Road on either side of the school.</p> <p>Consider including the installation of rural raised safety platform at the thresholds on Upper Plains Road to assist with speed management.</p>

Report No.	School / Road Name	Recommendations
5.1.2	Opaki School	<p>Lower the speed limit on the full length of Waipipi Road to 30 km/hr.</p> <p>Install school threshold signs and markings on Waipipi Road on the approach to the school.</p> <p>Install signs and road markings on Waipipi Road to delineate the crossing point between the school and the off-road path at the eastern end of the school.</p> <p>Improve the bus turning area and parking.</p> <p>Improve the crossing location.</p>
5.1.3	Rathkeale College	<p>Lower the speed limit on the full length of Willow Park Road to 60 km/hr.</p> <p>Install signs and road markings to delineate the existing crossing points on Willow Park Road.</p>
5.2.1	Paierau Road	<p>Lower the speed limit to 80km/hr on Paierau Road and Loopline when the speed limit on the parallel section of State Highway 2 is reduced.</p> <p>Install speed threshold signs and markings signs at the change in speed limit location.</p> <p>Widen centreline and edgeline markings for the full length of the route.</p> <p>Install centreline and edgeline ATP along the full length of the route.</p>
5.2.2	Willow Park Road	<p>Lower the speed limit from 70km/hr to 60km/hr for the full length of the road.</p>

Report No.	School / Road Name	Recommendations
6.1.1	Mauriceville School	<p>Lower the speed limit to 60 km/hr on Opaki-Kaiparoro Road between RP12660 and RP13535.</p> <p>Install a 40 km/hr speed limit on Opaki-Kaiparoro Road from RP 13535 to RP14130.</p> <p>Install settlement speed threshold signs and markings on Opaki-Kaiparoro Road at the 60/40 speed limit change location.</p> <p>Install school threshold signs and markings on Opaki Kaiparoro Road either side of the school.</p> <p>Lower the speed limit to 60km/hr for the full length of Camerons Road.</p>
7.1.1	Wainuioru School	<p>Install a 60 km/hr variable speed limit on Masterton Stronvar Road from RP 13210 to RP 13620.</p> <p>Install a 60 km/hr variable speed limit on Westmere Road from RP 0 to RP 200.</p> <p>Install school threshold signs and markings on Masterton Stronvar Road and Westmere Road on the approaches to the school.</p>
7.2.1	Lees Pakaraka Road	<p>Lower the speed limit to 60km/hr for the full length of Lees Pakaraka Road.</p> <p>Update speed limit signage as required.</p> <p>Mark a centreline for the full length of the road.</p> <p>Monitor the site and consider using ATP on the centreline markings and install curve warning signage.</p>

Report No.	School / Road Name	Recommendations
7.2.2	Te Whiti Road	<p>Extend the 80km/hr speed limit on Te Whiti Road to Lees-Pakaraka Road.</p> <p>Lower the speed limit on Manaia Road to 80km/hr.</p> <p>Update and install speed limit signage as required.</p> <p>Mark edgelines for the full length of the route.</p> <p>Install ATP on the centreline and edgeline markings.</p> <p>Review and install curve warning signage.</p>

Report No.	School / Road Name	Recommendations
8.1.1	Tinui School	<p>Lower the speed limit on Masterton-Castlepoint Road to 60 km/hr from 185m south of Charles Street to 385m east of Charles Street.</p> <p>Raise the speed limit on Charles Street from 50km/hr to 60km/hr from Masterton-Castlepoint Road to RP 150.</p> <p>Lower the speed limit on Charles Street from 50km/hr to 30km/hr from RP150 to the intersection with Manawa Road (RP 275).</p> <p>Lower the speed limit on Manawa Road from 50 km/hr to 30 km/hr from the intersection with Charles Street (RP 0) for a distance of 110m (RP 110).</p> <p>Raise the speed limit from 50km/hr to 60 km/hr on Manawa Road from RP 110 to RP 360.</p> <p>Lower the speed limit on the full length of Blackhill Road to 30 km/hr.</p> <p>Install speed threshold signage and markings on Masterton-Castlepoint Road at the 100/60 speed limit change locations.</p> <p>Install speed threshold signage and markings on Manawa Road at the 100/60 speed limit change location.</p> <p>Install school threshold signs and markings on Charles Street at the 60/30 speed limit change location.</p> <p>Install school threshold signs and markings on Manawa Road at the 60/30 speed limit change location.</p>

Report No.	School / Road Name	Recommendations
8.2.1	Masterton Castlepoint Road	<p>Lower the speed limit from 100km/hr to 80km/hr from 135m east of Te Ore Ore Road to RP15650.</p> <p>Lower the speed limit to 80km/hr on the full length of the adjacent side roads of Abbotsford Road, Kahikatea Road, Letts Road, Maungahina Road, McKinstry Road, Morris Road, Olivers Road, Te Kanuka Road, Te Parae Road and Watson Road.</p> <p>Lower the speed limit to 80km/hr on Masterton Stronvar Road between Masterton-Castlepoint Road and Lees Pakaraka Road.</p> <p>Install speed limit threshold signs and markings at the change in speed limit locations with Settlement speed threshold signs and markings at the 60/80km/hr change east of Te Ore Ore Road for westbound vehicles.</p> <p>Install speed threshold signs and markings at the Masterton Stronvar Road 100/80 speed limit change location.</p> <p>Widen centreline and edgeline markings for the full length of the route.</p> <p>Install centreline and edgeline ATP along the full length of the route.</p>

Appendices

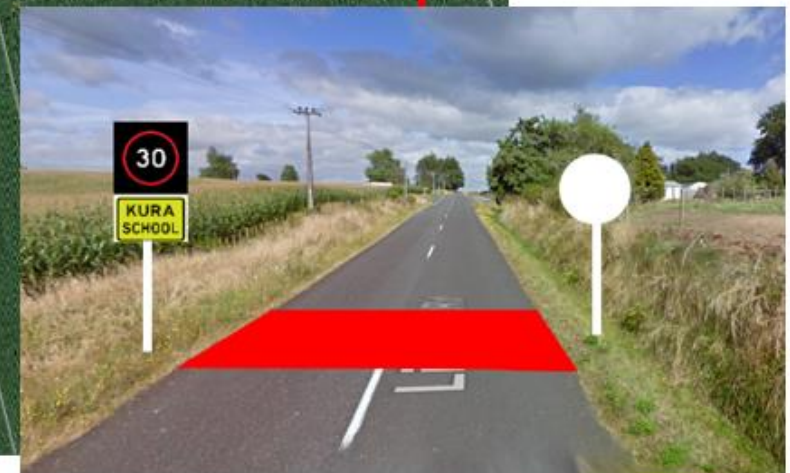


Appendix A – Example threshold layouts

Settlement thresholds



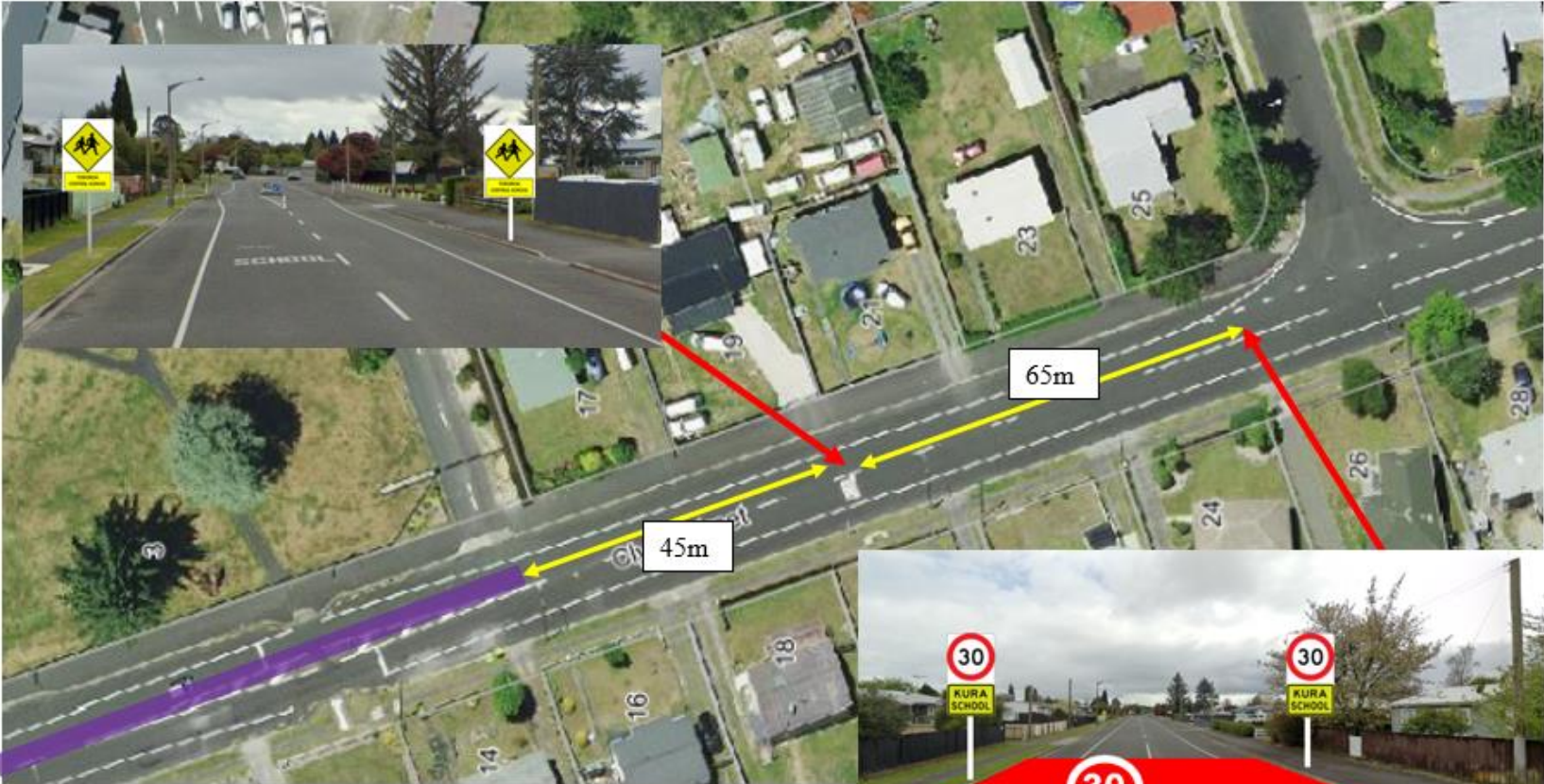
Rural school sign layout



Assume 100km/hr approach speed.
Speed limit signs @ 200m from school boundary
Children signs @ 80m from school boundary

Allows for 120m deceleration from 100km/hr to 60km/hr (school signs)
and 80m deceleration from 60km/hr to stop (school frontage)
Add school name supplementary plate to children sign.

Urban school – permanent speed sign layout

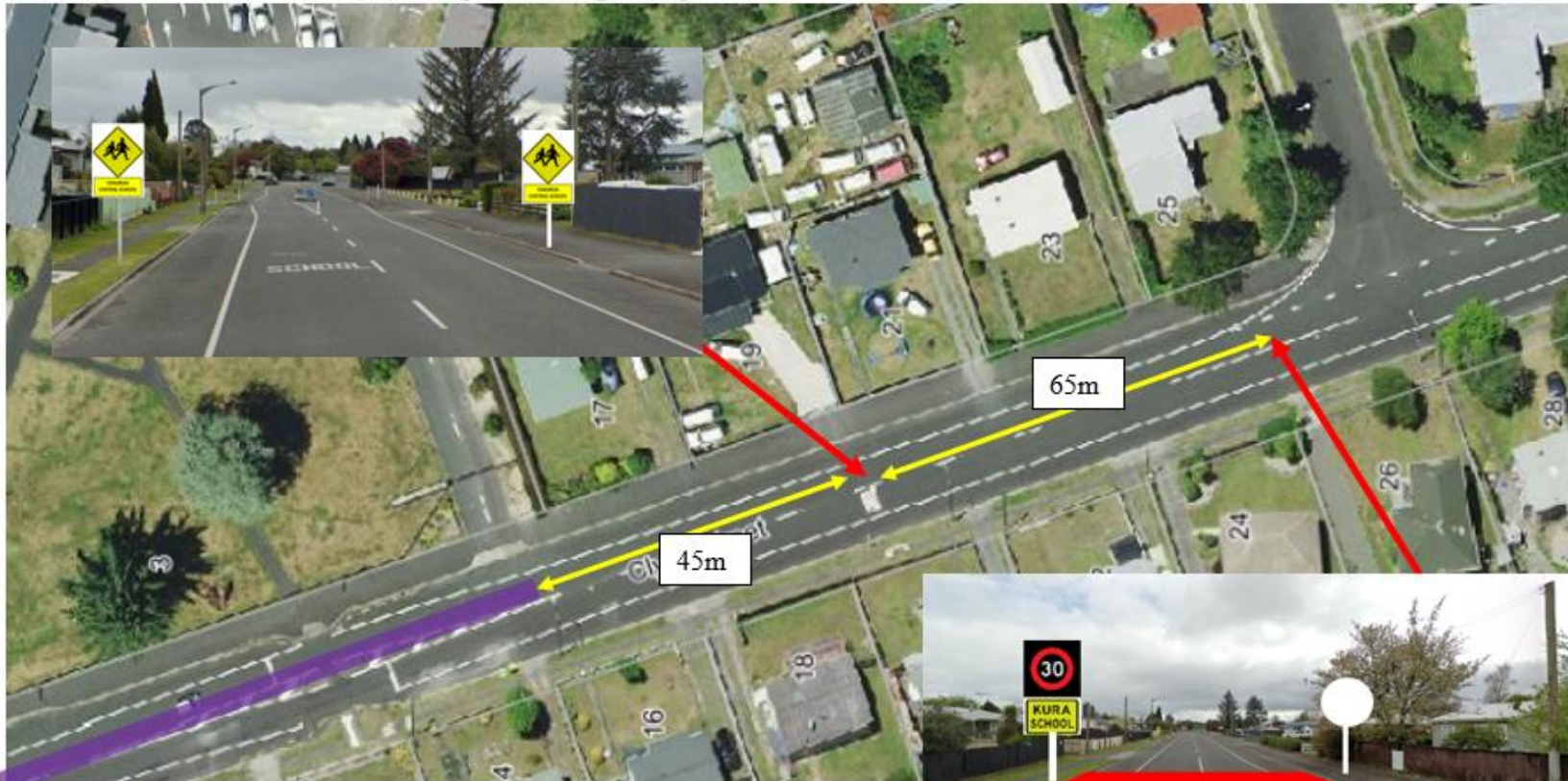


Assumed 50km/hr approach speed.
 Speed limit signs @ 110m from school boundary
 Children signs @ 45m from school boundary

Allows for 65m deceleration from 50km/hr to 30km/hr (school signs) and 45m deceleration from 30km/hr to stop (school frontage)
 Add school name supplementary plate to children sign.
 If there is a zebra crossing present, use crossing sign in place of children sign.



Urban school – variable speed sign layout



Assumed 50km/hr approach speed.

Speed limit signs @ 110m from school boundary

Children signs @ 45m from school boundary

Allows for 65m deceleration from 50km/hr to 30km/hr (school signs) and 45m deceleration from 30km/hr to stop (school frontage)

Add school name supplementary plate to children sign.

If there is a zebra crossing present, use crossing sign in place of children sign.

Marae signs



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