

**To** Kane Patena, Director of Land Transport  
**CC:** Anna Cleary, Acting Senior Manager Regulatory Standards and Implementation  
**From** Brian Nijman, Principal Technical Advisor, Regulatory Technical, Regulatory Standards and Implementation, on behalf of the Speed Management Assessment Panel  
**Date** 16 December 2022  
**Subject** **Setting of Speed Limits Rule: certification of Interim Speed Management Plan submitted by the Hauraki District Council**

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### Purpose

To seek Director certification of an Interim Speed Management Plan (the Plan) submitted by the Hauraki District Council (Council).

Attachment 1 outlines your powers under the Land Transport Rule: Setting of Speed Limits 2022 (the Rule) to certify and publish plans.

### Background

The Plan was consulted on from 20 May to 20 June 2022, subsequent to the Rule coming into effect on 19 May 2022. Although the Plan was developed under the settings provided for under the Land Transport Rule Setting of Speed Limits 2017 (the 2017 Rule) it references the new framework. Attachment 2 outlines content requirements for speed management plans consulted on under the 2017 Rule.

### Assessment

#### *Speed Management Assessment Panel*

The Waka Kotahi Speed Management Assessment Panel (the Panel) meet on 1 November 2022 to consider the Plan. Its members and their primary areas of contribution were:

Anna BraySharpin (Principal Advisor - Infrastructure, Speed and Urban Mobility)	Road Safety
Dulcie Tauri (Project Manager Road Safety)	Road safety, Māori contribution
Junine Stewart (Area Programme Manager, Transport Services)	Regional relationships
Brian Nijman (Principal Advisor, Policy, Standards and Network)	Facilitator, Regulatory Services
Jo Thornton (Project Coordinator – Speed Management, Corporate Support-Business Support)	Secretariat

#### ***The Plan meets the content requirements for speed management proposals consulted on under the Rule***

The content requirements for interim speed management plans consulted after the Rule came into effect are summarised in Table 1, overleaf.

#### *Plan assessed against criteria*

The Plan was assessed against the Rule's content requirements and in line with the Panels' Terms of Reference (Attachment 4). On this basis, the Plan is recommended for certification. The certificate, included as Attachment 5, is included for signature.

To inform subsequent engagement with Council on Plan implementation, the Panel also discussed:

- sequencing of speed management activity
- timelines for and progression to lower speed limits outside schools; and
- how speed management and safety infrastructure investments are best considered in the context of area-wide speed management approaches (such as moves to uniformly lower speed limit in urban areas and a general move to safe and appropriate speed implementation).

The assessment of the Plan, including criteria, is summarised as follows:

### Hauraki District Council

(the Plan as submitted is included as Attachment 6):

<b>Table 1: Content and form requirements for interim speed management plans consulted upon <i>after</i> the Rule coming into effect</b>		Required / Optional	Addressed
2022 Rule  Clause 12.12(1)	The plan has regard to—		
	(a) the road safety aspects of the GPS on land transport and any Government road safety strategy; and	required	Yes
	(b) the desirability of taking a whole-of-network approach to changing speed limits, safety cameras, and safety infrastructure, including considering a range of speed management interventions; and	required	Yes
	(c) Waka Kotahi guidance and information, including on the use of mean operating speed when setting speed limits	required	Yes
Clause 12.13(1)	The plan identifies changes proposed to speed limits, outlining—		
	(a) information on the type of speed limit, speed expressed in km/h, applicable geographical area, and—for a seasonal or variable speed limit—the applicable conditions applying; and	required	Yes
	(b) the timeframe within which the change is proposed to occur	required	Yes
Clause 12.13(2)	The plan includes—		
	(a) an explanation for any changes proposed to a speed limit that do not align with Waka Kotahi’s confirmed assessment of the safe and appropriate speed limit; and	required	Yes
	(b) a designation for a category 2 school; and in such instances:	optional	Yes
	(c) an explanation for why, having regard to Waka Kotahi’s guidance, the speed limit outside the category 2 school is safe and appropriate	required	Yes
Clause 12.13(3)	The plan proposes a speed limit outside a school that complies with Section 5	required	Yes
Clause 12.13(7)	The plan includes discussion of other matters related to speed management on the relevant roads, including matters regarding safety infrastructure changes, temporary speed limits, and safety cameras.	optional	Yes
Clause 12.13(8)	The plan is in the form (if any) set by Waka Kotahi	optional	N.A.

### Panel comment on the Plan

#### *General discussion on Plan content and presentation*

- This is a comprehensive plan, presented in three volumes. It provides a good overview, highlighting safety considerations and interventions with reference to risk profile, the Rule’s targets for maximum speed limits outside schools and consultation feedback.
- As public consultation commenced the day after the Rule came into effect, the Plan references the requirements of both the 2022 Rule and its 2017 predecessor—as such, it doesn’t always address the former accurately (e.g., Appendix A of Volume 2, which outlines speed limit changes consulted upon, categorises speed limits according to the One Network Road Classification which have since been superseded by the One Network Framework).

### *Māori engagement [What/How Māori engagement has taken place and any identified outcomes]*

- The Panel was aware Council had engaged with Mana Whenua on speed limits proposals, but this was not sufficiently conveyed in the Plan. Council will be advised to be explicit about Māori engagement and contribution to the Plan's implementation and the development of the subsequent ten-year Plan (noting this will be a required element for that Plan).

### *Implementation (sequencing, prioritisation, categorisation and targets)*

- Some of the proposals are timed for implementation in 2024-26, possibly indicating proposals are contingent on a successful application to the National Land Transport Fund. The Area Programme Manager concerned will follow up with Council on dedicated funding available for speed management and safety infrastructure around schools, provided for under the Road to Zero Activity Class.

### *Technical assessment (safety infrastructure, variable speed signs, etc).*

#### Prioritisation

- The new speed management framework for New Zealand introduced in the Rule and Guidance shifts away from the 'Top 10%' of roads for speed management intervention, towards high benefit corridors, areas, and schools. [The Panel acknowledges the previous version of MegaMaps, which was the basis for consultation, included the Top 10% layer]
- The Plan cites information on crash survivability ('personal risk' for occupants of powered vehicles), but nothing on active road users. Again, this is largely a legacy issue. Notwithstanding, good summary information on local crashes is used to inform proposals.
- Some assumptions around the need for safety infrastructure are now outdated, in light of the new framework and approach to applying Safe System principles.

#### Schools

The proposals for schools were developed under the 2017 Rule. As such, we will provide the following feedback to Council for future consideration in their next plan:

- 'School Zones' as cited are not applicable to the new framework where a wider set of parameters and interventions are recognised, including area-based approaches to speed limits which can reduce the need for dedicated speed limit interventions outside schools.
- Permanent speed limit changes around schools no longer have to be located at an 'obvious change in road environment', as the Rule cites the presence of a school in itself as being sufficient reason.
- The new guidance recommends a permanent alignment with the safe and appropriate speed limit on roads outside schools. This may be supported by a variable speed limit if the permanent speed limit is still higher than the maximum speed limit permitted under the relevant school category.
- Permanent speed limits outside schools are encouraged over variable speed limits—the Panel will recommend Council adds a 'Permanent / Variable' column to the summary table in Appendix A of Volume 2.

#### Cyclists

- Some proposals cited the reason for dropping a speed limit from 100-80 km/h was due to the presence of cyclists on the road. 80 km/h is still too high for such rural roads .
- 40 km/h for residential streets is a good step but under Road to Zero, 30 km/h is the safe and appropriate speed for residential streets.

#### Peri-urban areas

- The proposed reductions from 100 km/h to 60 km/h represent a significant safety improvement, but 60 km/h is still not a Safe System speed if there are pedestrians and cyclists present.

#### Unsealed roads

- The proposed drop from 100 km/h to 80 km/h on unsealed roads is positive, although 60 km/h is considered to be the safe and appropriate speed for unsealed rural roads.

#### *Speed limit changes proposed that are different to Safe and Appropriate Speed?*

- There is one proposal for a 90km/h speed limit. Under the Rule, this speed limit will need to be reviewed in Council's next plan, to either confirm it is safe and appropriate or reduce the speed limit further.

#### *Discussion on Speed Management Plans: comments/feedback, Examples of good practice, Opportunities for improvement (to be signalled to other RCAs developing their plans) etc.*

- The relevant Area Programme Manager will facilitate a discussion with Council on how the Plan can be implemented to address the new framework and inform Council's 10-year plan scheduled to come into effect in 2024.
- These discussions will also suggest linking speed management to climate change co-benefits and address issues such as mode shift, active transport options and vibrant and safe communities.

#### *Proposed Director comment on the Plan*

The Panel recommends the Director **certifies** the Plan and **publishes** it with the following comments:

*"The Hauraki District Council is commended for its Interim Speed Management Plan which adapts the Waka Kotahi template for Speed Management Plans. In doing so it has presented an easy-to-follow and clear roadmap for increasing the number of safe and appropriate speed limits across the region.";* and

*"The Hauraki District Council is commended for recognising the needs of people walking and using other active modes in its Interim Speed Management Plan".*



Brian Nijman  
Principal Advisor  
Regulatory Technical  
Regulatory Standards and Implementation  
16/12/2022

#### **Endorsed**



Anna Cleary  
Acting Senior Manager Regulatory Standards and Implementation  
19/12/2022

## Attachments

- Attachment 1 2022 Rule extract—Director powers to certify and publish interim speed management plans
- Attachment 2 2022 Rule extract—plan requirements for speed limit proposals consulted upon prior to the Rule coming into effect
- Attachment 3 Speed management plan content requirements—comparison of plan types
- Attachment 4 Speed Management Assessment Panel—Terms of Reference
- Attachment 5 Interim Speed Management Plan certificate for signature
- Attachment 6 Interim Speed Management Plan submitted by Hauraki District Council

## Recommendations

It is recommended you:

1. **certify** and **publish** the Interim Speed Management Plan (the Plan) submitted by the Hauraki District Council: Yes No
2. **include with the published Plan the following 'Director comment':** Yes No  
*“The Hauraki District Council is commended for its Interim Speed Management Plan which adapts the Waka Kotahi template for Speed Management Plans. In doing so it has presented an easy-to-follow and clear roadmap for increasing the number of safe and appropriate speed limits across the region.”; and*  
*“The Hauraki District Council is commended for recognising the needs of people walking and using other active modes in its Interim Speed Management Plan”.*
3. **sign** the attached Interim Speed Management Plan certificate for the Hauraki District Council: Yes No

Signed



**Neil Cook**

Acting Director of Land Transport

/ December /2022

## Attachment 1: 2022 Rule extract—Director powers to certify and publish interim speed management plans

### Rule extract from Section 2—Speed Limits (emphasis added)

#### 12.14 Certification of, and comment on, interim plans

- (1) For the purpose of clauses 12.15(2), 12.16(5) and 12.17(2), the requirements are—
  - (a) the Agency (as RCA), the regional transport committee or territorial authority (as the case may be) has confirmed that—
    - (i) consultation has been carried out in accordance with clause 3.9; and
    - (ii) the interim plan includes an explanation of how the plan is consistent with the road safety aspects of the GPS on land transport and any Government road safety strategy; and
    - (iii) the interim plan includes a general explanation of how a whole-of-network approach was taken to changing speed limits by considering a range of speed management interventions; and
  - (b) the interim plan includes the content required by clause 12.13.
- (2) When assessing a final draft interim plan, the Director may also provide comment in writing on the extent to which, in their view, the plan—
  - (a) is consistent with the road safety aspects of the GPS on land transport and any Government road safety strategy; and
  - (b) takes a whole-of-network approach by including consideration of a range of speed management interventions.
- (3) The Director may, after providing comments under subclause (2) and giving the Agency (as RCA), the regional transport committee or the territorial authority (as the case may be) a reasonable time to consider those comments, publish the comments on an Internet site.
- (4) However, if a territorial authority has published before the commencement of this Rule a proposal to change a speed limit or speed limits and that proposal has been consulted on in accordance with clause 3.9, then—
  - (a) the proposal published may be treated as a consultation draft of an interim territorial authority speed management plan; and
  - (b) for the purpose of clause 12.17(2), the requirements are that—
    - (i) the territorial authority has confirmed that consultation has been carried out in accordance with clause 3.9; and
    - (ii) the interim territorial authority speed management plan identifies changes being proposed to speed limits (other than temporary speed limits) on the relevant roads; and
  - (c) subclauses (1) to (3) do not apply.

**Rule extract from Schedule 3—Transitional provisions**  
*(emphasis added)*

**12.17 Process for interim territorial authority speed management plan**

- (1) To create an interim territorial authority speed management plan for roads in its area, a territorial authority must—
  - (a) prepare a consultation draft interim plan to include—
    - (i) the content required by clause 12.13; and
    - (ii) any relevant information received from road controlling authorities that are not the Agency (as RCA) or a territorial authority and that control roads in the area; and
  - (b) subject to clause 12.10(3), publish the consultation draft interim plan on an Internet site; and
  - (c) consult on the consultation draft interim plan in accordance with clause 3.9 as if the interim plan were the territorial speed management plan; and
  - (d) consider any submissions received on the consultation draft interim plan; and
  - (e) prepare a final draft interim plan and submit it to the Director for certification.
- (2) The Director must consider whether they are satisfied that the final draft interim plan meets the requirements in clause 12.14(1) or (4) (as the case may be) and—
  - (a) if they are satisfied, they must certify the plan and provide a certificate to that effect; and
  - (b) if they are not satisfied—
    - (i) they must refer the final draft interim plan back to the territorial authority with recommendations for how to meet the requirements in clause 12.14(1) or (4) (as the case may be); and
    - (ii) the territorial authority must repeat the step at subclause (1)(e), after having regard to the Director’s recommendations.
- (3) Once the Director has certified the final draft interim plan, the Agency must publish, on an Internet site—
  - (a) the interim plan; and
  - (b) the certificate provided under subclause (2)(a).
- (4) An interim territorial authority speed management plan ceases to be **current** when—
  - (a) a territorial authority speed management plan for the territory is published under clause 3.5(5); or
  - (b) an interim regional speed management plan that includes the territory is published under clause 12.16(6); or
  - (c) a regional speed management plan that includes the territory is published under clause 3.4(13).
- (5) In this clause, **territorial authority** excludes a unitary authority, Auckland Council and Auckland Transport.

## Attachment 2: 2022 Rule extract— plan requirements for speed limit proposals consulted upon after the Rule coming into effect

### Rule extract: Schedule 3, Clause 12.13

- 12.13 Content and form of interim plans**
- (1) An interim plan must identify changes being proposed to speed limits (other than temporary speed limits) on the relevant roads, and for each proposed change must include—
    - (a) to the extent practicable, information on the geographical area of the proposed speed limit, the type of speed limit, the proposed speed limit expressed in kilometres per hour, and, for a seasonal or variable speed limit, the conditions under which each speed limit will apply (*see also* Section 4); and
    - (b) the timeframe within which the change is proposed to occur.
  - (2) An interim plan—
    - (a) must also include, for any changes being proposed to a speed limit that do not align with the Agency’s confirmed assessment of what is the safe and appropriate speed limit for the road, an explanation for why, after considering the matters in clause 3.2(1), the road controlling authority proposes a speed limit that differs from the Agency’s confirmed assessment (unless subclause (4) applies); and
    - (b) may include a designation for a category 2 school; and
    - (c) in relation to any designation of a category 2 school, must include an explanation for why, having regard to any guidance provided by the Agency about speed limits outside schools, the speed limit outside the category 2 school is safe and appropriate for the road.
  - (3) If an interim plan proposes to change the speed limit on a road outside a school, the road controlling authority must propose to set a speed limit outside the school that complies with Section 5.
  - (4) However, a plan does not need to include an explanation of where a proposed change to a speed limit does not align with the Agency’s confirmed assessment of what is the safe and appropriate speed limit for the road in the following cases:
    - (a) where the proposed speed limit is 70 km/h and the Agency’s assessment of the safe and appropriate speed limit for the road is 80km/h;
    - (b) where the proposed speed limit is 90 km/h and the Agency’s assessment of the safe and appropriate speed limit for the road is 100km/h;
    - (c) where the proposed speed limit is to a road outside a school and complies with Section 5.
  - (5) In this clause, **confirmed assessment** has the same meaning as in clause 3.8(4).
  - (6) However, if a territorial authority has published before the commencement of this Rule a proposal to change a speed limit or speed limits and that proposal has been, is or will be consulted on in accordance with clause 3.9, then—
    - (a) the proposal published may be treated as a consultation draft of an interim territorial authority speed management plan; and
    - (b) the interim territorial authority speed management plan must only identify changes being proposed to speed limits (other than temporary speed limits) on the relevant roads (and may also include further information); and
    - (c) clause 12.12(1) and clause 12.13(1), (2), (3) and (8) do not apply to the interim territorial authority speed management plan; and
    - (d) the territorial authority may (despite anything else in this Rule), in the interim plan, propose a change to a speed limit on a road outside a school that does not comply with Section 5.
  - (7) An interim plan may include discussion of other matters related to speed management on the relevant roads, including matters regarding safety infrastructure changes, temporary speed limits, and safety cameras.
  - (8) An interim plan must be in the form (if any) set by the Agency.



## Attachment 3: Speed management plan content requirements—comparison of plan types

**Table: Content and form—requirements for State highway, regional and territorial authority speed management plans**

Full plans		Interim plans
Clause 3.8 Content and form of full plans		Clause 12.13 Content and form of interim plans
<p>(1) A plan <b>must</b>—</p> <p>(a) set out objectives, policies and measures for managing speed on relevant roads for at least 10 financial years from the start of the plan; and</p> <p>(b) include an explanation of how the plan is consistent with the road safety aspects of the GPS on land transport and any Government road safety strategy; and</p> <p>(c) include a general explanation of how a whole-of-network approach was taken to changing speed limits, safety cameras and safety infrastructure, including the approach when deciding whether to invest in making a road safer at higher speeds or to set a lower speed limit.</p> <p>(2) A plan <b>must</b> also—</p> <p>(a) identify the changes (if any) being proposed to speed limits (other than temporary speed limits) and safety infrastructure on the relevant roads; and</p> <p>(b) include an implementation programme for at least 3 financial years from the start of the plan that sets out—</p> <p>(i) (A) speed limits on the relevant roads, including, to the extent practicable, information on each proposed speed limit relating to the geographical area of the proposed speed limit, the type of speed limit, the proposed speed limit expressed in kilometres per hour, and, for a seasonal or variable speed limit, the conditions under which each speed limit will apply (see also Section 4); and (B) safety infrastructure on the relevant roads; and</p> <p>(ii) the timeframe within which each change is proposed to occur; and</p> <p>(c) for speed limits of 70 km/h or 90 km/h, include any content required by clause 4.3(2); and</p> <p>(d) in relation to schools, include—</p> <p>(i) any content required by clause 5.2(4); and</p> <p>(ii) any designation of a category 2 school; and</p> <p>(iii) if required by clause 5.3, an explanation for why, having regard to any guidance provided by the Agency about speed limits outside schools, the speed limit outside the category 2 school is safe and appropriate for the road; and</p> <p>(e) include, for any changes being proposed to a speed limit that do not align with the Agency's confirmed assessment of what is the safe and appropriate speed limit for the road, an explanation for why, after considering the matters in clause 3.2(1), the road controlling authority proposes a speed limit that differs from the Agency's confirmed assessment (unless subclause (3) applies); and</p> <p>(f) include comment on any review relevant to the roads or region that has been completed under clause 3.17 since the previous plan published under clause 3.3(8) or 3.4(13).***</p>		<p><b>Proposals consulted upon under the Land Transport Rule: Setting of Speed Limits 2022 (i.e., from 19 May 2022)</b></p> <p>(1) An interim plan <b>must</b> identify changes being proposed to speed limits (other than temporary speed limits) on the relevant roads, and for each proposed change <b>must</b> include—</p> <p>(a) to the extent practicable, information on the geographical area of the proposed speed limit, the type of speed limit, the proposed speed limit expressed in kilometres per hour, and, for a seasonal or variable speed limit, the conditions under which each speed limit will apply (see also Section 4); and</p> <p>(b) the timeframe within which the change is proposed to occur.</p> <p>(2) An interim plan—</p> <p>(a) <b>must</b> also include, for any changes being proposed to a speed limit that do not align with the Agency's confirmed assessment of what is the safe and appropriate speed limit for the road, an explanation for why, after considering the matters in clause 3.2(1), the road controlling authority proposes a speed limit that differs from the Agency's confirmed assessment (unless subclause (4) applies); and</p> <p>(b) <b>may</b> include a designation for a category 2 school; and</p> <p>(c) in relation to any designation of a category 2 school, <b>must</b> include an explanation for why, having regard to any guidance provided by the Agency about speed limits outside schools, the speed limit outside the category 2 school is safe and appropriate for the road.***</p> <p>(3) If an interim plan proposes to change the speed limit on a road outside a school, the road controlling authority <b>must</b> propose a speed limit outside the school that complies with Section 5.</p> <p>(7) An interim plan <b>may</b> include discussion of other matters related to speed management, including safety infrastructure changes, temporary speed limits, and safety cameras.</p>
State highway Speed Management Plan	Regional Speed Management Plans	<p><b>Proposals consulted upon under the Land Transport Rule: Setting of Speed Limits 2017 (i.e., prior to 19 May 2022)</b></p> <p>* Clause 12.13(6) states that if a territorial authority has <b>published before the commencement of the Rule</b> a proposal to change a speed limit or speed limits and that proposal has been, is or will be consulted on in accordance with clause 3.9, then—</p> <p>(a) the proposal published <b>may</b> be treated as a consultation draft of an interim territorial authority speed management plan; and</p> <p>(b) the interim territorial authority speed management plan <b>must</b> only identify changes being proposed to speed limits (other than temporary speed limits) on the relevant roads (and <b>may</b> also include further information); and</p> <p>(c) (clauses 12.12(1), 12.13(1), (2), (3) and (8) do not apply to the interim territorial authority speed management plan; and</p> <p>(d) the territorial authority <b>may</b> (despite anything else in the Rule), in the interim plan, propose a change to a speed limit on a road outside a school not complying with Section 5.</p>
Clause 3.8(5)	Clause 3.8(6)	
<p>(5) A <b>State highway speed management plan</b>—</p> <p>(a) <b>must</b> also include a general explanation of how the Agency (as RCA) has, when proposing a change to a speed limit, had regard under clause 3.2(2) to the desirability of a road under its control and an adjoining road under the control of another road controlling authority having the same speed limit, unless there is good reason for different speed limits; and</p> <p>(b) <b>may</b> also include changes to safety cameras on roads that are not State highways.</p>	<p>(6) A <b>regional speed management plan</b> <b>must</b>—</p> <p>(a) identify, for any proposed change to a speed limit for a road under the control of a territorial authority (the <b>first road</b>) that adjoins a road under the control of another territorial authority (the <b>second road</b>), any instances where the speed limit for the first road is different or is proposed to differ from the speed limit for the second road; and</p> <p>(b) include information from the State highway speed management plan (either the consultation draft or the published copy, depending on which is most recently available) that relates to State highways in the region.</p>	
<p>(7) A plan <b>may</b> include discussion of other matters related to speed management on the relevant roads, including temporary speed limits.</p>		
<p>(8) A plan <b>must</b> be in the form (if any) set by the Agency.</p>		

\*\* A territorial authority must not publish a consultation draft territorial authority speed management plan if the regional transport committee has notified its intention to publish, within the next 28 days, a consultation draft regional speed management plan—the territorial authority must instead join in the process for a consultation draft regional speed management plan. [clauses 3.5(2) and 12.10(3) refer]

\*\*\* Clauses 3.8(3) and 12.1(4): A plan does not need to include explanation of where a proposed change to a speed limit does not align with the Agency's confirmed assessment of what is the safe and appropriate speed limit for the road in the following cases: (a) where the proposed speed limit is 70km/h and the Agency's assessment of the safe and appropriate speed limit for the road is 80km/h; (b) where the proposed speed limit is 90km/h and the Agency's assessment of the safe and appropriate speed limit for the road is 100km/h; (c) where the proposed speed limit is to a road outside a school and complies with Section 5.

# TERMS OF REFERENCE FOR SPEED MANAGEMENT PLAN ASSESSMENT PANEL REVISION 1.3 OCTOBER 2022

## Purpose

The assessment panel (the Panel) supports the Regulatory Technical team in providing a balance of advice to the Director of Land Transport regarding the certification of speed management plans submitted by Road Controlling Authorities (RCAs) and/or Regional Transport Committees (RTCs).

The panel ensures both regulatory processes are followed and principles from the Road to Zero strategy are incorporated in the advice.

## Frequency of Panel meetings

Panel meetings are coordinated by the Regulatory Technical team at an appropriate frequency, to assess speed management plans submitted for certification. The frequency of panel meetings in September and October 2022 is fortnightly.

## Speed Management Plans Assessed

It is anticipated that the panel will primarily assess interim and full speed management plans submitted by Road Controlling Authorities and Regional Transport Committees.

To support RCAs in developing their first speed management plans, the panel may agree to review early draft speed management plans and provided guidance, where this is requested by RCAs.

The panel may assess speed limit change requests submitted by RCAs in an alternative pathway to speed management plans, where this is requested by the Facilitator.

The panel may also assess the interim State Highway Speed Management Plan for 2021-2024, should the Speed Management Committee not be up and running at the time.

## Panel Details

The assessment panel is cross functional and is made up of the following members:

Role	Team represented	Number
Facilitator	Regulatory Technical team	1
Secretariat	Regulatory Technical team	1
Panel member	Speed and Urban Mobility	1
Panel member	Safe System Support	1
Panel member	Road Safety team (to address Māori contributions to speed management planning)	1

The facilitator is responsible for facilitating healthy discussion at panel meetings.

The minimum number of members for a panel meeting is two - the facilitator and one panel member.

Panel decisions may only be made by the facilitator and panel members.

## Panel Invitees

The facilitator may invite subject matter experts from across Waka Kotahi, as appropriate. In keeping with taking a no surprises approach and bringing together representatives to inform the assessment, examples include:

- Area programme managers or directors of regional relationships may be invited to provide deeper background information on submitted speed management plans or RCs/RCAs.
- Speed management programme members or senior regulatory technical team members may be invited to observe the assessment panel process.

While panel invitees may contribute to panel meetings, they do not participate in panel decisions.

## Panel Responsibilities

- Review panel documentation prior to the panel meeting.
- Assess interim and full speed management plans in a consistent manner, following a robust and transparent assessment process.
- Provide a technical assessment of speed management plan content regarding speed limits, road safety infrastructure and signage.
- Provide advice to the Director of Land Transport based on its' speed management plan assessment. This advice is provided (to the Director) in a coordinated and consistent way, with respect to Road Controlling Authorities and Regional Councils.
- The facilitator has overall responsibility for providing advice to the Director of Land Transport. Comments regarding plan content or presentation may also be provided as appropriate.
- The panel can comment on whether a speed limit change proposal submitted for Director approval through a pathway other than a speed management plan, should be considered a plan for certification purposes.
- Capturing issues with the current setting of speed limits rule 2022, or with information and guidance provided, to inform potential refinements in Agency speed management guidance and regulatory practice.

## Running of Panel Meetings

The Secretariat and the Facilitator are responsible for agreeing the panel meeting agenda

- Meeting agenda example:
  - General discussion on speed management plan content and presentation.
  - Comments from technical assessment (infrastructure, variable speed signs etc.).
  - Are any proposed speed limit changes different to Safe and Appropriate Speeds?
  - Panel advice to Director, regarding assessed plans.
  - Any other business eg discussion on speed management plans comments/feedback, Opportunities for improvement (to be signalled to other RCAs developing their plans) etc.

The Secretariat is responsible for distributing the meeting papers to attendees in advance. Where possible, papers should be distributed three days before the panel meeting.

Key points and recommendations from the panel discussion are recorded. Panel meeting records are maintained in InfoHub.

## Turnaround time for Speed Management Plan certification

- Waka Kotahi aims to assess and certify speed management plans within a 5-week (25 working day) timeframe. This timeframe starts when plans are received by Waka Kotahi and ends when RCAs or RTCs are notified of the publishing of their certified plan. It assumes sufficient time for the panel to meet and provide advice to the Director of Land Transport, the Director to assess the speed management plan & panel advice and for speed management plan certification and publishing.
- Speed management plans, submitted by RCAs should be acknowledged within 2 working days.

## Assessment of Speed Management Plan content

1. The Panel should be satisfied that the speed management plans:
  - Address the Rules' content and form requirements for plans
  - (Full speed management plans) set out the objectives, policies and measures for managing speed on relevant roads for at least 10 financial years from the start of the plan.
  - Are consistent with the road safety aspects of the current Government Policy Statement on Land Transport and any current Government road safety strategy.
  - Take a whole-of-network approach by including consideration of a range of speed management interventions [e.g., changing speed limits, safety cameras and safety infrastructure].
  - Take heed of the desirability of a road under the control of one RCA and an adjoining road under the control of another RCA having the same speed limit, unless there is good reason for different speed limits.
  - Include an implementation programme for at least three financial years from the start of the SMP setting out the changes (if any) being proposed to speed limits (including, to the extent practicable, the information that would need to be submitted to the Registrar to set the proposed speed limit), safety cameras and safety infrastructure on the relevant roads and the timeframe within which each change is proposed to occur.
  - Consider any:
    - explanation required under the Setting of Speed Limits Rule 2022 for speed limits proposed of 70 km/h or 90 km/h which are higher than the Agency's estimate of safe and appropriate speed, and
    - plan content provided in relation to any designation of a category 2 school, must include an explanation for why, having regard to any guidance provided by the Agency about speed limits outside schools, the speed limit outside the category 2 school is safe and appropriate for the road.
    - discussion provided of other matters related to speed management on the relevant roads, including matters regarding safety infrastructure changes, temporary speed limits, and safety cameras.
  - For any changes being proposed to a speed limit that do not align with the Agency's confirmed assessment of what is the safe and appropriate speed limit for the road, an explanation for why the road controlling authority proposes a speed limit that differs from the Agency's confirmed assessment, and
  - Comment on any review relevant to the region that has been completed since the previous plan published.
2. The Panel should be satisfied with an RCAs' confirmation that it has undertaken appropriate consultation on their speed management plan, including Māori contribution to plan development.
  - a) Demonstrate and/or reference an understanding of Māori interests in speed management identifying which iwi (tribe), hāpu (subtribe), hāpori (community) and kura (schools) may be affected.
  - b) Overview of how Māori have been included and/or an outline of the reasons why they may not have been included.
  - c) Comment on any capacity challenges for including Māori contributions and how Māori may contribute in future.

3. Where potential refinements in Agency speed management guidance and regulatory practice are identified, these should be communicated to the relevant Waka Kotahi teams, by the Facilitator.
4. Where agreed with the panel, Area Programme Managers may informally share panel feedback regarding "good practice", with other RCAs developing their speed management plans, to improve the consistency across speed management plans.

## Attachment 5: Interim Speed Management Plan certificate

Hauraki District Council

# Speed management plan certificate

Pursuant to clause 12.17(2)(a) of the Setting of Speed Limits Rule 2022, the interim territorial authority speed management plan, reference 'Hauraki District Council Interim Speed Management Plan, August 2022', submitted by Hauraki District Council and applicable to the 2021 – 2024 National Land Transport Programme period, is hereby certified.

Date December 2022

  
Director of Land Transport

**Attachment 6:  
Hauraki District Council—Interim Speed Management Plan**

**Hauraki District Council**  
Interim Speed Management Plan  
Volume 1 – Speed Management Principles  
August 2022



## Table of contents

1.	Purpose of this document	1
2.	What is speed management?	1
2.1	Government Policy Statement on Land Transport	1
2.2	Road to Zero	2
2.3	Funding	2
2.4	Road Safety	2
2.5	Crash probability	3
2.6	Climate change	4
3.	Crash Data	5
3.1	Travel speed	5
3.2	Crash types	5
3.3	Road types	6
3.4	Pedestrians and Cyclists	7
3.4.1	ONRC Performance Measures – Policy and Network Management	9
4.	Safer Journeys Risk Assessment Tool	9
4.1.1	High benefit roads	9
4.1.2	Safe and appropriate speed	10
4.1.3	CO2 Changes	10
5.	District Speed Management	10
5.1	Speed Management Plan	10
5.2	Speed Limits	11
5.2.1	Schools	13
5.2.2	Town centres and High-volume pedestrian areas	13
5.2.3	Residential areas	14
5.2.4	Peri-Urban areas	14
5.2.5	Unsealed Roads	14
5.3	Engineering treatments	15
5.4	Treatment lengths and adjacent roads	15
6.	2021 Speed Management Review	16
6.1	Implementation Plan	16
7.	Future reviews	16

## Table index

Table 1	Crash type: 2011 - 2020	6
Table 2	Road type: 2011 - 2020	6
Table 3	Speed limit options	11



## Figure index

Figure 1 Crash survivability .....	3
Figure 2 Correlation between vehicle speed and fuel consumption .....	4
Figure 3 Crashes with vehicle speed factor 2011 - 2020 .....	5
Figure 4 Pedestrian injury risk .....	8
Figure 5 Pedestrian and Cycle Crashes .....	8
Figure 6 Schools within Hauraki District .....	13

## 1. Purpose of this document

Hauraki District Council are committed to reducing deaths and serious injury on the District roads and reducing its carbon footprint. To support this, a range of initiatives are required to be implemented to ensure that vehicle speeds are appropriate for the areas where we live, work and go to school. 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.

This document sets out the goals and objectives of Hauraki Districts speed management plan and the process that will be followed for this interim review.

## 2. What is speed management?

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.

Speed management is about achieving safe and appropriate vehicle speeds on roads that reflect the roads 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 our road network. Additional benefits gained from the implementation of appropriate vehicle speeds is a reduction in noise and air pollution which results in healthier and safer communities.

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.<sup>1</sup>*

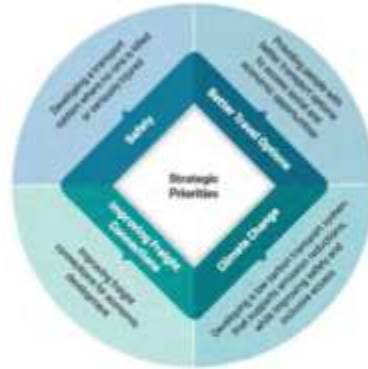
Speed management is more than just setting or adjusting speed limits. It requires input from policy makers, engineers, educators and the police to educate, encourage and influence road users to adopt safe and appropriate speeds.

### 2.1 Government Policy Statement on Land Transport

The Ministry of Transport has released the Government Policy Statement (GPS) on land transport 2021/22 – 2030/31<sup>2</sup>. The GPS provides direction and guidance to those who are planning, assessing and making decisions on Land Transport over the next 10 years. Safety and climate change are two of the four strategic priorities for investment in Land Transport which speed management can have an effect on.

<sup>1</sup> [World Bank Document](#)

<sup>2</sup> <https://www.transport.govt.nz/assets/Uploads/Paper/GPS2021.pdf>



## 2.2 Road to Zero

The NZ Government is committed to tackling unsafe speeds as part of their 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.

To underline the commitment to safety and speed management the following Intervention Indicators have been proposed in the NZ Governments Road to Zero Initial Action Plan 2020-2022:

- *Percentage of the highest risk roads addressed through speed management*
- *Percentage of urban schools with 30-40km/h speed limits (40 percent by 2024; 100 percent by 2030)*
- *Percentage of rural schools with 60km/h speed limits or lower (40 percent by 2024; 100 percent by 2030)*
- *Mobile speed camera deployment activity (hours) (increase to 80,000 in 19/20; 100,000 in 20/21)*
- *Number of police operations targeting speed*

## 2.3 Funding

The costs of implementing of speed management and road safety initiatives is a shared between Hauraki District and Waka Kotahi as the agent for the NZ Government. The guidelines for receiving this funding include the requirements for projects identified to support speed management and a reduction in death and serious injuries from road trauma. A number of high priority roads were identified as part of the Road to Zero programme, and funding was made available specifically for speed management on these roads.

## 2.4 Road Safety

Road safety goes beyond our obligation to prevent deaths and injuries to improving lives and lifestyles too. By ensuring that everyone feels safe to use our transport network we open up

2 | Report for Hauraki District Council | HaurakiDC\_Interim Speed Management Plan\_Vol 1\_FINAL

opportunities for a more diverse use of modes and opportunities for improvement in health such as letting children walk, bike or scooter to school. This creation of road networks that allow for easy and multimodal transport use connect people and communities rather than dividing them. This in turn gives effect to the Council Outcome - Vibrant and safe communities | Te Oranga pai o te Hapori.

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 has a responsibility to support and enforce that behaviour.

## 2.5 Crash probability

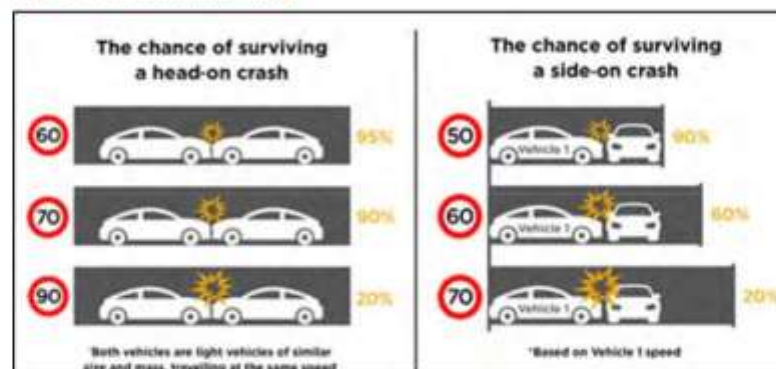
The role and impact of speed in crashes is often underestimated with the most common argument used against any reduction in speed limits being that "vehicle speeds don't cause crashes poor drivers do". This is correct in part.

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 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 1.

**Figure 1 Crash survivability<sup>3</sup>**

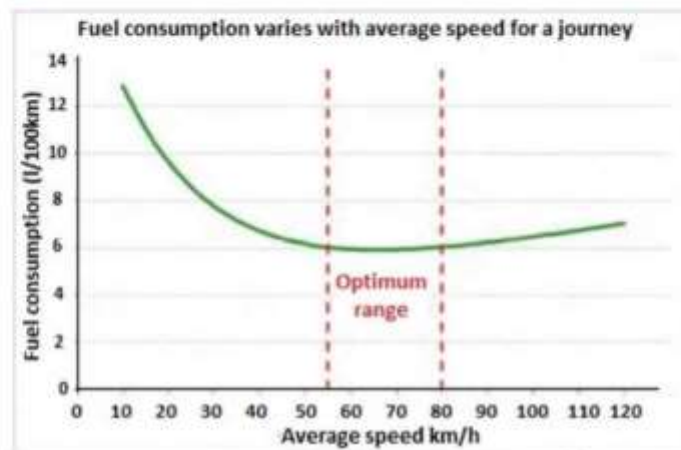


<sup>3</sup> Source - Centre for Road Safety – NSW Government

## 2.6 Climate change

Climate change can be impacted by not only the types of vehicles being driven on the network but also the speed at which vehicles are travelling. Every car has an optimal speed range that results in minimum fuel consumption and therefore emissions. The typical correlation between vehicle speed and fuel consumption is shown in Figure 2.

**Figure 2 Correlation between vehicle speed and fuel consumption<sup>4</sup>**



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 Bank<sup>5</sup> 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 recent meeting in Geneva, Sweden reported that the most effective tool they had for reducing GHGs was the speed camera program)
- Reduces other air pollutants which harm health, including road traffic noise
- Increases efficiency, by vehicle maintenance costs and reducing fuel costs

*Economic analyses 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.*

In response to feedback received during the development of the 2021-31 Long Term Plan with respect to climate change Hauraki District has made a commitment to proactively plan for the effects of climate change. The Zero Carbon Promise sets out the pathway for Hauraki District to achieve its goal of being a zero carbon district.

<sup>4</sup> [Climate explained: does your driving speed make any difference to your car's emissions? \(theconversation.com\)](#)

<sup>5</sup> [World Bank Document](#)

Reductions in vehicle speeds and the associated reductions in CO2 will assist HDC in achieving its desired move to being a zero carbon district and support the desired community outcome – Healthy environment | Te Mauri o te Taiao.

### 3. Crash Data

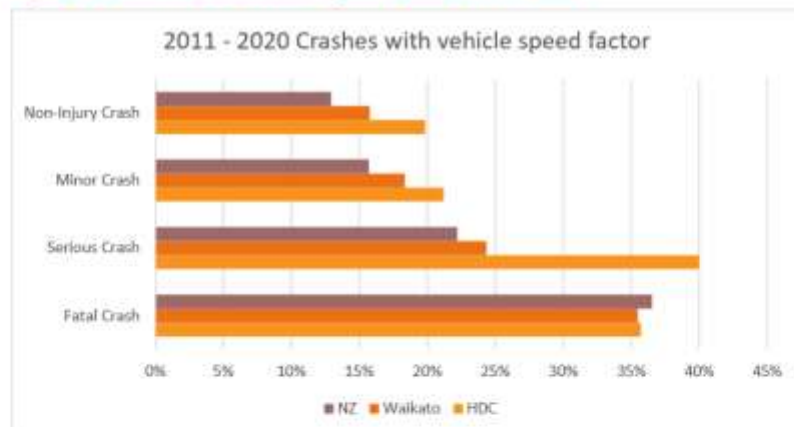
The Waka Kotahi crash database (CAS) holds information on all crashes that have been reported to the Police. This data can be broken down into the various local authority regions and separated into local roads and state highways. Contributing factors and crash types are some of the features that are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

#### 3.1 Travel speed

Travel speed was indicated as being a contributing factor in 39% of all fatal and serious crashes on the Hauraki local road network between 2011 and 2020. This indicates that inappropriate speed (not necessarily above the speed limit) plays a significant part in the number of crashes in this district.

Comparison between the regional and national data, for local roads only, is shown in Figure 3 and shows that speed is overrepresented in all crashes on the Hauraki local road network.

**Figure 3 Crashes with vehicle speed factor 2011 - 2020**



#### 3.2 Crash types

A review of the crash data for the ten year period 2011 – 2020, shows that there has been fourteen fatal and fifty serious crashes on local roads within the Hauraki District. The types of the crashes are shown in Table 1.

**Table 1 Crash type: 2011 - 2020**

Crash Type	Fatal	Serious	Minor	Non-Injury	Total
Lost Control - Bend	5	20	59	133	217
Lost Control - Straight Road	1	10	38	82	131
Manoeuvring	1	1	8	50	60
Obstruction		1	8	33	42
Crossing not turning		3	9	25	37
Rear end crash	1	1	5	18	25
Same direction turning		4	8	12	24
Head on crash	2	1	7	11	21
Crossing one turning		3	8	9	20
Pedestrian crossing road	1	3	4	1	9
Merging			3	6	9
Overtaking			1	8	9
One turns right		2	3	3	8
Other pedestrian	3	1	2		6
Miscellaneous			2	2	4
Total	14	50	165	393	622

A review of the crash data for the Waikato region and nationally on local roads for the same period shows that the top crash factors are the same indicating that the issues in Hauraki District are not dissimilar to those elsewhere in the country.

### 3.3 Road types

The type of road and its urban or rural locality was reviewed to determine which type featured predominantly in the crash data. Fatal and serious crashes occurred primarily on rural roads as shown in Table 2.

**Table 2 Road type: 2011 - 2020**

Road Type	Fatal	Serious	Minor	Non-injury	Total
Rural - Arterial	2	11	29	51	93
Rural - Medium	7	17	67	139	230
Rural - Minor	2	10	16	39	67
Rural - Access			1		1

Road Type	Fatal	Serious	Minor	Non-injury	Total
Urban - Arterial			3	7	10
Urban - Major				1	1
Urban - Medium		9	31	99	139
Urban - Minor	2	3	15	55	75
Urban - Access				2	2
Not identified	1		3		4

### 3.4 Pedestrians and Cyclists

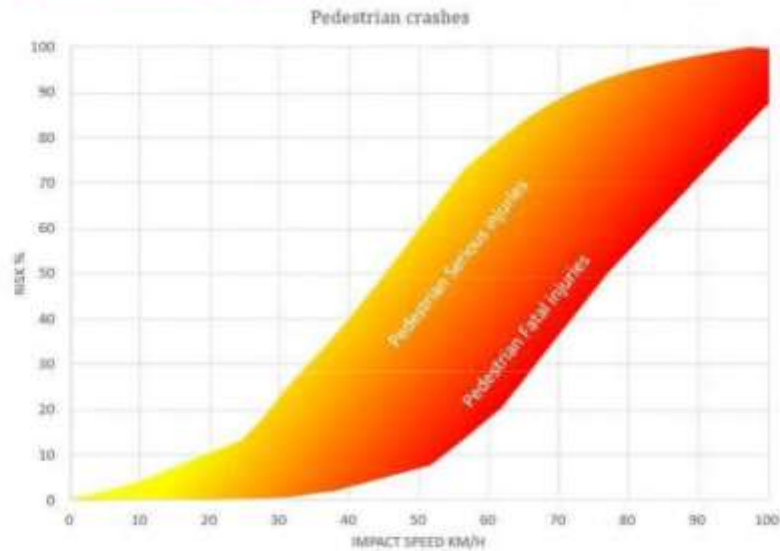
Safer speed limits within town centres, around schools and other high pedestrian generating areas will help to support more liveable and thriving communities by improving safety and accessibility and encouraging more active modes of transport.

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.

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.

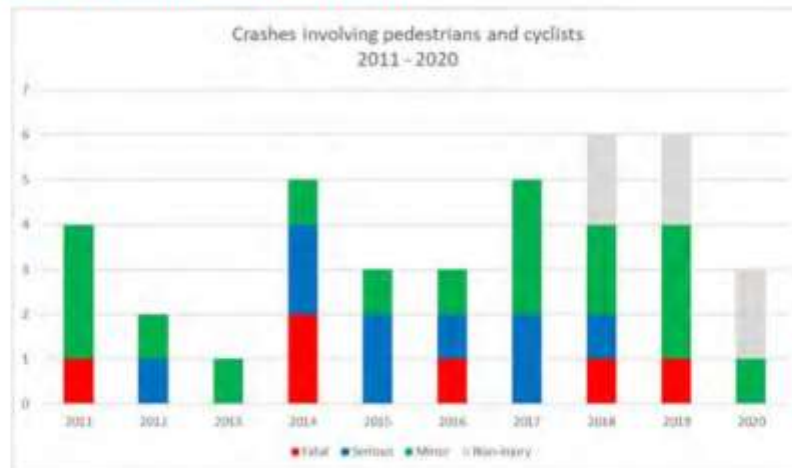


**Figure 4 Pedestrian injury risk<sup>6</sup>**



In the 10-year period of 2011 to 2020 inclusive there have been thirty-eight crashes involving pedestrians or cyclists on local roads within the Hauraki district as shown in Figure 5. Of these, six have been fatal, with nine resulting in serious injuries. A further seventeen resulted in minor injuries and six have been reported as non-injury crashes. 21% of the crashes have involved school aged children with a another 21% involving persons over the age of 65.

**Figure 5 Pedestrian and Cycle Crashes**



<sup>6</sup> Source: Mackie Research Ltd

<sup>8</sup> | Report for Hauraki District Council | HaurakiDC\_Interim Speed Management Plan\_Vol 1\_FINAL

### **3.4.1 ONRC Performance Measures – Policy and Network Management**

Of the fifty-four fatal and serious injury crashes that have been reported in the last 10 years, objects have been struck in thirty-seven (57%) of these crashes. This shows that unsafe roadsides is a major factor in a high percentage of DSI crashes on the network. Additional Performance Measures have been taken on in 2021 in order to track progress on the following:

- Reducing the number of permanent hazards that are not marked in accordance with national standards
- Reducing the number of locations where sight distance or signs are obstructed by vegetation, unauthorised signs or other items placed within the road reserve
- Reducing the number of locations where there are unauthorised items placed within the road reserve

## **4. Safer Journeys Risk Assessment Tool**

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 Hauraki District. These metrics are used as a starting point to help to identify roads that are considered high risk and are likely to achieve the greatest benefit from speed management and assess the safe and appropriate speed for them. Each of the roads identified by the tool are then reviewed for appropriateness based on local knowledge of the area.

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 changing of the speed limit, however 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.

### **4.1.1 High benefit roads**

Each road within the district has been reviewed by Waka Kotahi and an Infrastructure Risk Rating (IRR) developed for each based on the following eight key features that impact on road safety: Road Stereotype; Alignment; Carriageway width; Roadside hazards; Land use; Intersection density; Access density; and Traffic volume.

This IRR score is assessed by coding the eight influencing factors for each road and combining them to give an IRR score, which is then classified into five risk categories: low, low-medium, medium, medium-high and high.

To assist Council staff, High Benefit roads or sections of road have been identified that treatment with speed management is likely to result in the greatest benefits. These roads have been ranked to provide a list of First and Second 10% Intervention locations.

#### **4.1.2 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. The SAAS for a road is derived from the combination of the Infrastructure Risk Rating score and the collective and personal risk for each road and has been performed for the complete network. The safe and appropriate speed is based on a speed 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.

#### **4.1.3 CO2 Changes**

The basis for determining the change in CO2 emissions is dictated by the expected change in travel speed resulting from a change in the speed limit and is calculated as a function of vehicle operating costs.

The existing mean free-flow travel speeds for each road have been derived from a TomTom dataset purchased by Waka Kotahi specifically for Mega Maps. Future mean free-flow speeds have then been estimated differently for rural and urban environments. In rural areas, these are based on modelled relationships between existing travel speeds and future travel speeds on the Waikato roading network using the Austroads Operating Speed Model. In urban areas, the relationship between the change in speed limit and change in travel speed was developed collaboratively with Waka Kotahi and agreed to be a linear relationship.

The Waka Kotahi's EEM states that for road links CO2 emissions (in tonnes) can be estimated as 0.09% of VOC (in \$) for light vehicles and 0.16% of VOC for heavy vehicles. Mega Maps uses a value of 0.0935% of VOC on the assumption that light vehicles typically comprise 95% of all traffic and the change in CO2 emissions expressed in tonnes per year.

## **5. District Speed Management**

### **5.1 Speed Management Plan**

Speed Management Plans are required to be developed by Road Controlling Authorities 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 treatments that need to be implemented the plans are proposed to have a 10-year horizon. The plans will be reviewed every 3 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 plan is to provide a structured and methodological process for the review and change of speed limits and/or the implementation of speed management treatments 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 treatments will depend on the road and the speed management goal to be achieved.

## 5.2 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 push the limits) by providing all drivers with a more accurate reflection of what speed they should be travelling at.

To ensure that there is better alignment between a driver's expectations and the road environment and being cognisant of the influence of movement and place on the use of a road the following categories have been broadly created to describe the type of road and the speed limit to be applied. The base speed limit for each is shown in Table 3 along with the criteria for the consideration of a reduction in speed limit and also what that speed limit may be.

**Table 3 Speed limit options**

One Network Framework	Base speed limit	Considerations for change	Alternative speed limit
Activity Streets	50 km/hr	Significant pedestrians and manoeuvring vehicle movements  and/or History of manoeuvring or intersection crashes	30 km/hr
Urban Connectors and/or Local Streets	50 km/hr	Presence of a school Identification of shared use (pedestrian and/or cyclists)	30 km/hr
Local Streets	50 km/hr	Residential areas that are primarily for access and form a natural enclave of housing  Not on a through route.	40 km/hr
Peri-Urban Roads	100 km/hr	Rural areas with a higher density of residential dwellings on roads that are primarily for access and form a natural enclave of housing.  Not on a through route.	60 km/hr
Rural Connectors and/or Rural Roads	100 km/hr	Presence of a school Topographical features constraining vehicle speeds	60 km/hr 80 km/hr

One Network Framework	Base speed limit	Considerations for change	Alternative speed limit
		<i>and/or</i> History of fatal or serious injury crashes Identification of shared use (pedestrian and/or cyclists)	

**Use of 90km/hr and 70km/hr speed limits**

Safe and appropriate speeds are considered to be 10, 20, 30, 40, 50, 60, 80, 100 and 110km/hr, with 90km/hr and 70km/hr speed limits considered to be interim interventions only.

These speed limits can only be implemented with support of Waka Kotahi and in situations where:

- The crash risk is sufficiently high to justify a temporary change in the speed limit until safety improvements or perceptual countermeasures can be made.
- Investment cannot be justified and if existing speeds are sufficiently high that a drop to 80km/hr (from 100km/hr) cannot be practically achieved in the short-term.

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 Hauraki District 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 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 in two stages. An initial 20km/hr drop in the speed limit with supporting engineering treatments 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 3 years whichever is the earlier.

**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 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.

Based on stopping distance calculations<sup>7</sup> the distance of 110m for 50km/hr areas and 179m for 100km/hr areas will be used. This ensures that the signs/restrictions are placed sufficient distance from the likely area of conflict such that a driver can observe, react and stop prior to hitting the potential hazard.

**Shared use**

Pedestrians and cyclists are particularly vulnerable in crashes involving vehicles and as such are a key focus area for Hauraki District Council.

<sup>7</sup> Zone of influence calculated distances: Safe Intersection stopping distance @ 50km/hr = 97m (R=2sec) – 123m @ 60km/hr – Assumed a 55km/hr design speed to get the 110m distance.

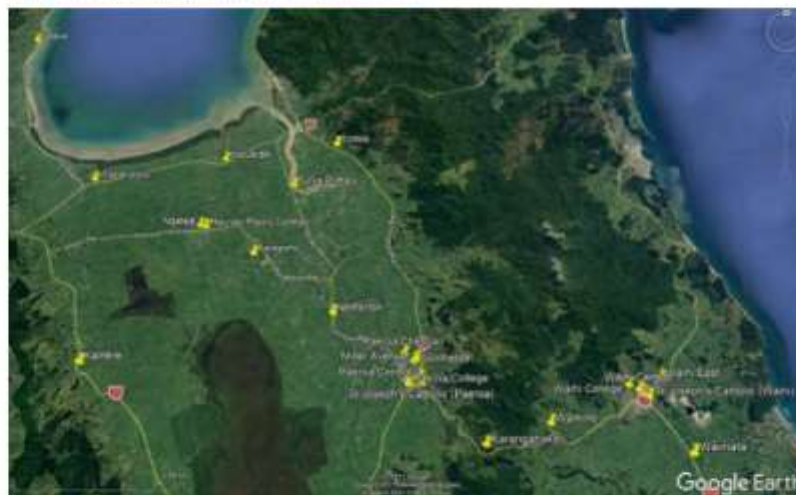
In urban areas the ability to reduce the speed environment to 40km/hr is achievable and will be implemented where practical, however this is not possible in the rural environment due the competing requirements of users of these roads.

To reduce the risk to users and provide additional reaction and stopping time for drivers, should they come upon a cyclist unexpectedly an 80km/hr speed limit is proposed to be installed. This restriction would apply only on those roads where there are regular cyclists, and they cannot be accommodated safely within the existing shoulder or on an off-road path.

### 5.2.1 Schools

The current speed limit on roads in the vicinity of urban schools within the Hauraki District is 50km/hr and for rural schools either 70km/hr or 100km/hr depending on the location of the school. By 2030 Hauraki District Council will be required to have reduced the speed limits in the vicinity of all twenty-two schools within its District as shown in Figure 6 to either 30 km/hr for urban schools or 60km/hr for rural schools. These 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 would be installed. For locations that are on through roads with higher speed limits then a variable speed limit would be installed.

**Figure 6 Schools within Hauraki District**



The extension of speed management to address areas in the vicinity of daycare centres/kindergartens or aged care facilities will be considered in future reviews of the speed management plan.

### 5.2.2 Town centres and High-volume pedestrian areas

Currently the default speed limit for all urban areas is 50km/hr, for locations such as town centres and other areas with high volumes of pedestrians or manoeuvring vehicles such as tourist spots this speed is considered to be too high. Areas where pedestrians are likely to cross the road in multiple locations increase the risk of conflict, however often it is not practical to contain pedestrians to specific crossing points. Due to the high likelihood of pedestrians in these areas vehicles speeds should be in the order of 30km/hr to reduce the risk that a crash

involving a pedestrian would be fatal. Crashes involving manoeuvring vehicles are not typically fatal however they do result in considerable cost and inconvenience to the parties involved. By reducing the speed limit in areas where these factors occur it creates a more inclusive atmosphere which then encourages further pedestrian use which is desired by retailers.

The use of 'zones of influence' will be applied in these areas to ensure that the extents of the reduced speed limit is appropriate.

When considering the implementation of this speed limit the presence and effect on adjacent roads and the presence of an alternative route needs to be addressed. The provision of an alternative route can be positive in that it reduces the risk of conflict by redirecting/removing vehicles from the identified road that do not need to be there. However, it could result in issues being transferred from one road to another if the area included in the change is not large enough to encompass all those of a similar nature. Vehicles will simply shift to using the next available road rather than being redirected to the preferred alternative route.

### **5.2.3 Residential areas**

The default speed limit for all urban residential areas is 50km/hr. Consideration is being given to the use of 40km/h speed limits in residential neighbourhoods or areas that have a high 'place' value within the Hauraki District. These areas are those that are well developed and provide destinations for all traffic. The neighbourhood roading layout will typically include cul-de-sacs or roads that are interconnected within but not beyond the neighbourhood. The use of 40km/hr provides a balance between lowering the risk to pedestrians and cyclists in the area while not noticeably impacting on travel speeds. These areas typically have lower vehicle speeds due to the short road lengths and multiple driveways and any reduction in speed limit is to align users' expectations of the area. The lower speed limit would not be applied to through-routes to ensure that a clear demarcation is maintained between the differing road hierarchy and uses.

The creation of 40km/hr residential areas would also assist the management of vehicle speeds in the vicinity of schools and/or daycare centres/kindergartens within these areas. As the speed limit would be consistent, no changes would be required reducing frustration regarding knowing what speed limit applies and when.

### **5.2.4 Peri-Urban areas**

Peri-urban areas typically have an open road speed limit as they have resulted from previously rural areas on the edge of an urban area being intensified. Consideration is being given to the use of 60km/h speed limits in peri-urban areas within the Hauraki District. These areas are those that have a higher density of dwellings than typical rural areas and have little to no pedestrian facilities which result in users walking on the road. The use of 60km/hr provides a balance between lowering the risk to pedestrians and cyclists in the area and aligning users' expectations of the area while not noticeably impacting on travel speeds. The lower speed limit would not be applied to through-routes unless there are clearly noticeable differences in the level of development to ensure that a clear demarcation is maintained between the differing uses of the section of road.

These neighbourhoods may also contain schools and/or daycare centres/kindergartens. The implementation of a 60km/hr speed limit in an area would assist with enabling the speed limit in the vicinity of these schools to be lowered further to the desired urban speed limit of 40km/hr. This would further reduce the risk to users of the school.

### **5.2.5 Unsealed Roads**

Sections of the Hauraki District roading network is hilly to mountainous, windy, and unsealed with steep banks or drops and narrow carriageways. These roads cannot be safely driven at

the open road speed. Waka Kotahi have provided Hauraki District Council with data showing the current operating speeds and the calculated safe and appropriate speeds<sup>8</sup> for all roads within the district.

This data indicates that operating speeds on these types of roads are often well below the safe and appropriate speed for the route, which is significantly below the open road speed limit of 100km/hr. To facilitate a reduction in the risk associated with driving these roads at an inappropriate speed and to assist with achieving the required target of addressing the highest risk roads through speed management, those rural roads identified as being within the Top 10% of high risk roads will be considered for a reduction in speed limit to 80km/hr.

The reduction in speed limits on these roads is unlikely to have any effect on the current travel time, however it will reduce the risk associated with drivers attempting to drive faster than the alignment and surface allows for. These roads are referred to as self-explaining and as such a change in the speed limit is the most appropriate treatment of the area.

Sealing of these roads to remove the risk associated with the surface will not necessarily result in the open speed limit being maintained as other topographical constraints are likely to continue to pose a risk to users.

### **5.3 Engineering treatments**

Supporting engineering treatments will be required regardless of where and what changes are made to speed limits in an area. Some treatments 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.

Large portions of the Hauraki District roading network are long straight sections of road which provide little topographical constraints to a driver's speed, however the presence of large side drains, power poles, trees and other hazards pose 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. Features range from signs and roadmarking to vertical and horizontal displacement devices and their use will depend on the location and the safe and appropriate speed that is desired to be achieved.

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.

### **5.4 Treatment lengths and adjacent roads**

The Hauraki District roading network is interlinked and as a result speed limits and treatments 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 then 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 speed limit are undesirable unless there is significant change in the environment excluding road surface to identify to drivers the purpose of the change. The lengths are between 500m for 50 and 60km/hr sections and 800m for an 80km/hr speed limit. There is no minimum length specified for 40km/hr speed limits.

Isolated sections of unsealed road will not be considered for a speed limit reduction unless there are other factors such as a school in the vicinity to support the change.

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<sup>8</sup> Waka Kotahi Safer Journeys Risk Assessment Tool - <https://MegaMaps.abley.com/Maps/>



## 6. 2021 Speed Management Review

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

- High benefit roads – MegaMaps First and Second 10% Intervention locations
- High risk roads / DSI routes – Roads with 2 or more fatal or serious crashes in the previous 10 years including at least 1 fatal crash.
- Schools/daycares/kindy's/old age care locations
- Peri-urban locations
- Customer complaints/queries

Details on the technical assessment of each of the roads based on the above mentioned criteria are included in Hauraki District Council – Interim Speed Management Plan, Volume 2, Technical Assessments

### 6.1 Implementation Plan

The roads that have currently been reviewed have been divided into those that are self-explaining and therefore can be implemented without the need for physical works and those that require works to be undertaken either to manage the existing speeds or to support a change in speed limit.

Due to funding limitations those locations that require physical works will need to be prioritised. Priority will be given in the following order:

1. Schools
2. High Risk / DSI routes

The initial 10 year plan for implementation will be developed following public consultation and details of the proposed implementation plan will be collated in the Hauraki District Council – Interim Speed Management Plan, Volume 3, Implementation Plan.

## 7. Future reviews

This interim plan provides guidance on why, how and when speed should be managed on each of the roads identified based on the initial criteria selected. It is anticipated that the criteria will alter in future reviews depending on the areas to be targeted such as the inclusion of popular cycling routes.

Changes to speed limits will be on going as development in the district continues and to achieve alignment with the NZ Governments Road to Zero Action Plan with respect to speed management.

The Land Transport Rule Setting of Speed Limits 2022 requires Council's to review their speed management plans every three years. This will enable the plan to adapt to changes in development in the district and be consistent with the Long Term Plan funding cycle and provide alignment with funding opportunities.

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**Hauraki District Council**  
Interim Speed Management Plan  
Volume 2 – Technical Assessments

August 2022





## Table of contents

1.	Purpose of this document	1
2.	2021 Speed Management Reviews	1
2.1	Awaiti	1
2.1.1	Awaiti Road	1
2.2	Hikutaia	3
2.2.1	Alley Memorial Road	3
2.2.2	Maratoto Road	3
2.3	Kaiaua	4
2.3.1	East Coast Road	4
2.3.2	Ebner Place	9
2.3.3	Kaiaua Road	10
2.3.4	Miranda Road	11
2.3.5	Toft Road	12
2.4	Kaihere	13
2.4.1	Kaihere Road	13
2.4.2	Ohinewai Road	14
2.5	Karangahake	16
2.5.1	School Road (Karangahake)	16
2.6	Kerepehi	16
2.6.1	Dagger Road	16
2.6.2	Kerepehi Town Road	17
2.6.3	McGowan Avenue	18
2.6.4	Wharepou Road West	19
2.7	Komata	20
2.7.1	Komata Reefs Road	20
2.7.2	Strange Road	21
2.8	Mackaytown	22
2.8.1	Rahu Road	22
2.9	Mangatarata	22
2.9.1	Church Road	22
2.9.2	Coxhead Road	23
2.9.3	Mahuta Road North	24
2.9.4	North Road	25
2.9.5	South Road	25
2.10	Netherton	26
2.10.1	School Road (Netherton)	26
2.11	Ngatea	27
2.11.1	Darlington Street	27
2.11.2	Hayward Road	28
2.11.3	McDuff Lane	29
2.11.4	McMillan Street	29
2.11.5	Puhunga Island Road North	29
2.11.6	River Road	30
2.12	Paeroa	31
2.12.1	Ainslie Road	31
2.12.2	Alpha Road	31

2.12.3	Aorangi Road	32
2.12.4	Colin Drive	32
2.12.5	Corbett Street	33
2.12.6	Coronation Street	33
2.12.7	Junction Road	34
2.12.8	Keeps Avenue	34
2.12.9	Miller Avenue	35
2.12.10	Norwood Road	35
2.12.11	Nowra Crescent	36
2.12.12	Papaturua Road	36
2.12.13	Railway Street	37
2.12.14	Rotokohu Road	38
2.12.15	Shaw Avenue	38
2.12.16	Te Moananui Flats Road	39
2.12.17	Waimaree Avenue	39
2.12.18	Wood Street	40
2.13	Patetonga	41
2.13.1	Mangawhero Road	41
2.14	Pipiroa	41
2.14.1	Arawa Street	41
2.14.2	Buchanan Road	42
2.14.3	Bush Road	42
2.14.4	Moehau Street	43
2.14.5	Pipiroa Road	44
2.15	Turua	44
2.15.1	Hauraki Road	44
2.15.2	Huirau Road	49
2.15.3	Oparia Road	50
2.15.4	Piako Road	51
2.15.5	Raratuna Street	52
2.15.6	Rata Street	53
2.15.7	Raupoti Street	54
2.16	Waihi	54
2.16.1	Amaranth Street	54
2.16.2	Baber Street	55
2.16.3	Bradford Street	55
2.16.4	Clarke Street	56
2.16.5	Consols Street	56
2.16.6	Donnelly Street	57
2.16.7	Galbraith Street	57
2.16.8	Gilmour Street	58
2.16.9	Gladstone Road	59
2.16.10	Heard Road	59
2.16.11	Heath Road	60
2.16.12	Kenny Street	60
2.16.13	Kensington Road	62
2.16.14	Lawrence Road	63
2.16.15	Mataura Road	63
2.16.16	Moresby Avenue	64
2.16.17	Mueller Street	64
2.16.18	Ngatitangata Road	65
2.16.19	Orokawa Heights Road	66
2.16.20	Poets Corner Road	66
2.16.21	Reservoir Road	67
2.16.22	Russell Street	67
2.16.23	Seddon Street	68
2.16.24	Somerset Street	69
2.16.25	Thorn Road	69

2.16.26	Toomey Street	70
2.16.27	Victoria Street	71
2.16.28	Waitete Road	73
2.16.29	Waitete Road North	73
2.16.30	Wigley Street	74
2.17	Waihi Beach	75
2.17.1	Waihi Beach Road	75
2.18	Waikino	77
2.18.1	Abbott Road	77
2.18.2	Farrelly Road	77
2.18.3	Larsen Road	78
2.18.4	Old Waitekauri Road	79
2.19	Waitakaruru	80
2.19.1	Canal West Road	80
2.19.2	Penrhys Close	81
2.20	Waitawheta	81
2.20.1	Ford Road	81
2.20.2	Old Tauranga Road	82
2.20.3	Pukekauri Road	83
2.20.4	Pukewera Road	84
2.20.5	Swetman Road	85
2.20.6	Taieri Road	86
2.20.7	Waitawheta Road	87
2.21	Whiritoa	89
2.21.1	Whiritoa Beach Road	89
3.	Summary	90

## Appendices

### Appendix A – 2021 Road Data





## 1. Purpose of this document

Hauraki District 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 NZ 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 3 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 2021.

## 2. 2021 Speed Management Reviews

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

- High risk roads – MegaMaps First and Second 10% Intervention locations
- DSI routes – Roads with two or more fatal and/or serious crashes in the previous 10 years.
- Schools/daycares/kindy's/old age care locations
- Peri-urban locations
- Customer complaints/queries
- Existing transport project list

There were 106 roads that were identified for review based on the selection criteria above. A further 56 roads were identified as roads adjacent to those selected for review and are considered to be of a similar environment to support a speed limit change if required.

Each of the roads identified are listed below, with additional information and their assessment.

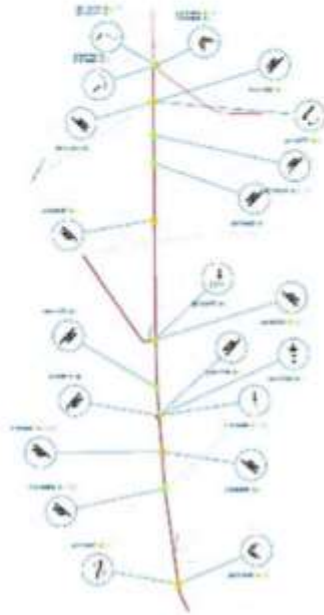
### 2.1 Awaiti

#### 2.1.1 Awaiti Road

Awaiti Road is a rural road in Awaiti that runs between State Highway 2 and Paeroa-Tahuna Road and is part of an alternative route for vehicles traveling between Netherton and Tirohia and beyond which avoids Paeroa. The road is within two local authority boundaries and the length of the road within the Hauraki District boundary is 8024m.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years.

There have been twenty-four reported crashes on this road in the last 10 years. One fatal, two serious, nine minor and twelve non-injury crashes. The majority of the crashes are loss of control or head on crashes with only 5 crashes intersection related.



The type and factors involved in the fatal and serious crashes all vary with the only commonality being that the vehicles were northbound. The fatal crash occurred in 2012 and involved a drunk driver than was travelling too fast and missed the right hand turn into the property access and rolled a number of times. One of the serious crashes occurred at the intersection with State Highway 2 in 2012 with the vehicle being T boned as they turned right out of Awaiti Road. The other serious crash involved a vehicle that drifted too far left and the driver lost control as they attempted to re-enter the traffic lane.

Overall, the Collective Risk for the road is Low-Medium, while the Personal Risk is Medium.

The majority of crashes are loss of control which indicates that edgeline treatments and the removal or protection of hazards within close proximity of the road would be beneficial.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	93.61 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for Awaiti Road is 80/hr with the governing factor being the function of the road.

Due to the high existing mean travel speed of 94km/hr and the straight alignment of the road it is unlikely that this lower speed limit will be complied with creating greater differential between vehicle speeds.

**Recommendations**

- Lower the speed limit to 80km/hr.
- Install ATP on edgelines along the route.

Any physical works and/or changes to speed limit will need to be coordinated with Matamata-Piako District Council to ensure consistency along the route.

## **2.2 Hikutaia**

### **2.2.1 Alley Memorial Road**

Alley Memorial Road is a sealed no exit road off State Highway 26 in Hikutaia. The full length of the road is 83m and ends at the entry to the Alley Memorial Park and a private property.

This road was identified for review as being of a peri-urban nature on the edge of Hikutaia.

There have been no report crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	21.6 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for this road is 80km/hr which is higher than the existing speed limit. There is no desire to increase the speed limit on Alley Memorial Road.

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Alley Memorial Road should be consistent with that on the adjacent state highway.

### **2.2.2 Maratoto Road**

Maratoto Road is a rural road off State Highway 26 in Hikutaia of which the first 7610m is sealed and the remaining 2131m unsealed.

The unsealed portion of this road from RP7610 was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been two reported crashes on this road in the last 10 years. A non-injury crash in 2015 and a minor crash in 2020 as a result of a driver losing control on the sealed section of the road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	36.79 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

**2.3 Kaiaua**

**2.3.1 East Coast Road**

East Coast Road is a sealed road that runs between Waharau and Miranda along the coast of the Firth of Thames and is within two local authority boundaries. The section of road within the Hauraki District boundary is approximately 19km long.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years and from a customer query regarding excessive vehicle speeds at Waharau. The road also passes through areas of peri-urban and a school, Kaiaua.

Due to the long length of road and varying conditions along the route it has been broken into six sections for review.

**Section 1 – RP 0 – 8028 Waikato DC Boundary to Kaiaua Township**

This section of the road runs between Pukorokoro Stream and the southern edge of Kaiaua and is 8028m long and has no side roads.

There have been seven reported crashes on this section of the road in the last 10 years resulting in one serious, three minor and three non injuries. All crashes were loss of control with the last reported crash in 2018. Three of the crashes involved motorcycles.

Safety and speed information from MegaMaps shows the following.

4 | Report for Hauraki District Council | HaurakiDC\_Interim Speed Management Plan\_Vol 2\_FINAL

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	87.79 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of East Coast Road is 80/hr with the governing factor being the function of the road.

Due to the high existing mean travel speed of 87.79km/hr and the straight alignment of the road any attempt to lower the speed limit is likely to result in poor compliance creating a larger differential in vehicle speeds and increased risk to users.

To assist with risk management on the largely rural nature of this section of East Coast Road additional delineation features such as edgelines, with or without ATP, centreline ATP and additional edge marker posts should be considered along the route.

These features will also assist with speed management should a reduction in the speed limit along the route be considered appropriate.

#### **Section 2 – RP 8028 – 9553      *Kaiaua Township***

This section of the road is the existing 50km/hr speed limited area that runs through Kaiaua and is 1525m long and has four side roads; Kowhai Avenue, Kaiaua Road, Pohutukawa Avenue and Puriri Avenue.

There have been three reported crashes on this section of the road in the last 10 years resulting in one serious, one minor and one non injury. Two of the crashes were loss of control while the serious crash involved a driver turning right into a driveway in front of a motorcyclist.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	57.17 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of East Coast Road is 50km/hr with the primary reason given as "Aligns with framework". This also matches the existing speed limit.

Due to the high existing mean travel speed of 51.17 km/hr speed management features such as threshold treatments should be installed to reduce the risk to users in this area. Kerb and channel should be installed to provide a more urban environment however additional edgelines could be used as an interim measure to assist with speed management.

#### **Section 3 – RP 9553 - 12313      *Kaiaua Township to Whakatiwai***

This section of the road is the existing 70km/hr speed limited area that runs from the northern end of the Kaiaua Township to Whakatiwai and is 2760m long and has four side roads; Rua One Place, Mylindas Road, F Lowery Road and Rata Road.

Kaiaua School is located within this section of East Coast Road and Kaiaua Marae is located on the corner of Rata Road and East Coast Road.

There have been six reported crashes on this section of the road in the last 10 years resulting in one serious, three minor and two non injuries. The majority of the crashes were loss of control and occurred prior to 2016, with only two crashes in the last 5 years. The serious crash occurred in 2014 and involved a speeding drunk driver who lost control on a curve.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	72.18 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of East Coast Road is 50km/hr with the primary reason given as "Function/Feature". Due to the high existing mean travel speed of 72.18 km/hr any attempt to lower the speed limit is likely to result in poor compliance creating a larger differential in vehicle speeds and increased risk to users.

The largely rural nature of this section of East Coast Road means that speed management features to achieve a 50km/hr speed environment are likely to unachievable initially, however, additional delineation such as edgelines, with or without ATP, centreline ATP and additional edge marker posts should be considered along the route. Requests have been received to provide a footpath in the area which would assist with the 'urbanisation' of the area.

Consideration should be given to lowering the speed limit to 60km/hr in conjunction with engineering improvements.

The use of threshold treatments with or without speed limit signage at the entry to the various settlement areas to enhance a sense of community could be considered to assist with managing vehicle speeds.

As a result of the presence of Kaiawa School on the western side of the road a 60km/hr speed limit must be installed within the vicinity of the school. This will require the installation of a threshold style treatment at the extents of the speed limit. Due to the low number of movements likely outside of school hours and high numbers of through traffic it is recommended that a variable speed limit be installed rather than a permanent speed limit. The variable speed limit should extend sufficient distance either side of the school to ensure that there is sufficient forward sight distance.

If the speed limit is lowered to 60km/hr then the variable speed limit associated with the school may not be required.

#### **Section 4 – RP 12313 - 16100 Whakatwai to Waharau**

This section of the road runs between Whakatwai and Waharau and is 3787m long and has no side roads.

There have been six reported crashes on this section of the road in the last 10 years resulting in two serious, one minor and three non injuries. The two serious crashes occurred in 2016 and 2017. The 2016 crash involved a driver traveling through roadworks at greater speed than the temporary speed limit and losing control on the unsealed surface, while the 2017 crash involved a motorcyclist who lost control in a strong gust of wind when riding a farm bike on the road.



Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	80.05 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of East Coast Road is 60/hr with the governing factor being "Road Safety". This is driven from the two serious crashes however further investigation has shown that these crashes are random occurrences or the result of driver error and changes to the speed limit or environment will not address these crashes.

Due to the high existing mean travel speed of 80.05km/hr any attempt to lower the speed limit below 80km/hr is likely to result in poor compliance creating a larger differential in vehicle speeds and increased risk to users.

#### **Section 5 – RP 16100 - 18678 Waharau Settlement**

This section of the road runs through the settlement of Waharau and is 2578m long and has one side road, Pukekereru Lane as well as several accesses into the Waharau Regional Park.

This section has been identified from a customer query regarding excessive speeds in the area and the mix with high numbers of pedestrians and also as being of a peri-urban nature.

There has been one minor injury crash reported on this section of the road in the last 10 years which was a loss of control crash involving a motorcyclist in 2015.

Safety and speed information from MegaMaps shows the following.



<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	72.89 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of East Coast Road is 80/hr which is higher than the existing speed limit in the area. There is no desire to raise the speed limit in this area.

Due to the high existing mean travel speed of 72.89km/hr and concerns raised regarding the high numbers of pedestrians in the area over summer additional features such as the use of threshold treatments with speed limit signage at the entry to the settlement area and repeater signs could be considered to assist with managing vehicle speeds.

Key pedestrian crossing locations should be reviewed for the appropriateness of additional signage and markings to raise drivers' awareness of the presence of pedestrians.

Consider reducing the speed limit to 60km/hr to be consistent with the adjacent section to the north.

#### **Section 6 – RP 18678 - 19067 Waharau Settlement to Auckland Boundary**

This section of the road runs from the north of the settlement of Waharau to the boundary with Auckland Council and is 389m long and has no side roads.

There has been one non-injury crash reported on this section of the road in the last 10 years which was a loss of control crash in 2015.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	56.91 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of East Coast Road is 80/hr which is higher than the existing speed limit in the area. There is no desire to raise the speed limit in this area.

Auckland Transport are proposing to reduce the speed limit on the section of East Coast Road to the north to 60km/hr with an implementation date of 31/05/2022.

As a result, the speed limit on this section should be reduced to provide consistency along the route.

#### **Recommendations**

##### **Section 1 – RP 0 – 8028 Waikato DC Boundary to Kaiaua Township**

- Lower the speed limit to 80km/hr.
- Consider installing edgelines, with or without ATP, centreline ATP and additional edge marker posts

##### **Section 2 – RP 8028 – 9553 Kaiaua Township**

- Install threshold treatments at each end of Kaiaua
- Install edgelines throughout the area
- Consider installing kerb and channel to create a more urban environment.

**Section 3 – RP 9553 - 12313 Kaiaua Township to Whakatiwai**

- Lower the speed limit to 50km/hr.
- Consider installing edgelines, with or without ATP, centreline ATP and additional edge marker posts
- Install threshold treatments with or without speed signage at each of the settlements
- Apply a 30km/hr variable speed limit in the vicinity of Kaiaua School.
- Install variable school threshold style treatment at the change in speed limit points.

**Section 4 – RP 12313 - 16100 Whakatiwai to Waharau**

- Lower the speed limit to 60km/hr.

**Section 5 – RP 16100 - 18678 Waharau Settlement**

- Lower the speed limit to 60km/hr.
- Install threshold treatments with speed signage.
- Install additional repeater speed limit signs.
- Install additional pedestrian warning signage as appropriate.

**Section 6 – RP 18678 - 19067 Waharau Settlement to Auckland Boundary**

- Lower the speed limit to 60km/hr
- Install threshold treatments with speed signage.

**2.3.2 Ebner Place**

Ebner Place is a sealed no exit road off Kaiaua Road in Kaiaua that is 336m long. This road was identified for review as being of a peri-urban nature. There have been no report crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	22 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The metrics used for this road were reviewed for appropriateness and altered to better reflect the road which reduced the Infrastructure Risk Rating to Medium and raised the Safe and Appropriate Speed to 80km/hr.

Due to the length of this road and its higher density of dwellings, it can be considered in isolation to the adjacent road, Kaiaua Road.

**Recommendations**

- Lower the speed limit to 80km/hr in keeping with increased level of development.
- Install speed threshold treatment at intersection with Kaiaua Road.

Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.

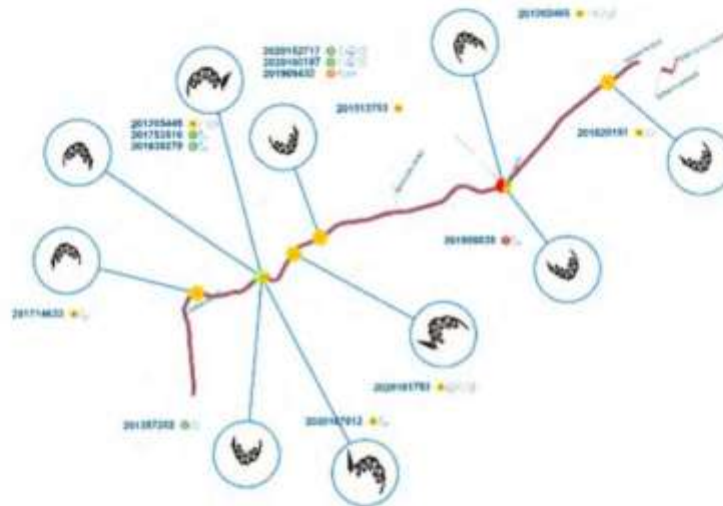
Following the Council hearing on the 13th July 2022 it was resolved to lower the speed limit on Ebner Place to 60km/hr.

### 2.3.3 Kaiaua Road

Kaiaua Road is a sealed rural road in Kaiaua that runs between Mangatangi to Kaiaua. The road is within two local authority boundaries and the length of the road within the Hauraki District boundary is 5723m.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years.

There have been fifteen reported crashes on this road in the last 10 years with ten in the last 4 years indicating an increasing crash risk. One fatal, one serious, eight minor and five non-injury crashes. All of the crashes are loss of control with no crashes reported within the urban area of Kaiaua.



Overall, the Collective Risk for the road is Low Medium, while the Personal Risk is Medium High.

Nearly all (93%) of the crashes occurred in overcast or dark conditions which would indicate that the night-time delineation is insufficient. Weather has not contributed significantly to crashes with the majority occurring in fine conditions. The primary area of concern is between RP 4210 and 5038 where ten of the fifteen crashes have occurred.

Works have previously been undertaken including the installation of edgeline treatments and additional curve warning signs, however crashes have continued to occur. Further investigation is required to determine what additional works can be implemented to address the continuing crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	77.42 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The recommended safe and appropriate speed from MegaMaps for Kaiarau Road is 60/hr with the governing factor being the Infrastructure Risk Rating.

Due to the high existing mean travel speed of 77 km/hr compliance with a speed limit less than 80km/hr is unlikely creating greater differential between vehicle speeds.

#### Recommendations

- Lower the speed limit to 60km/hr.
- Install ATP on edgelines along the route.
- Further investigation is required to determine additional treatments required.

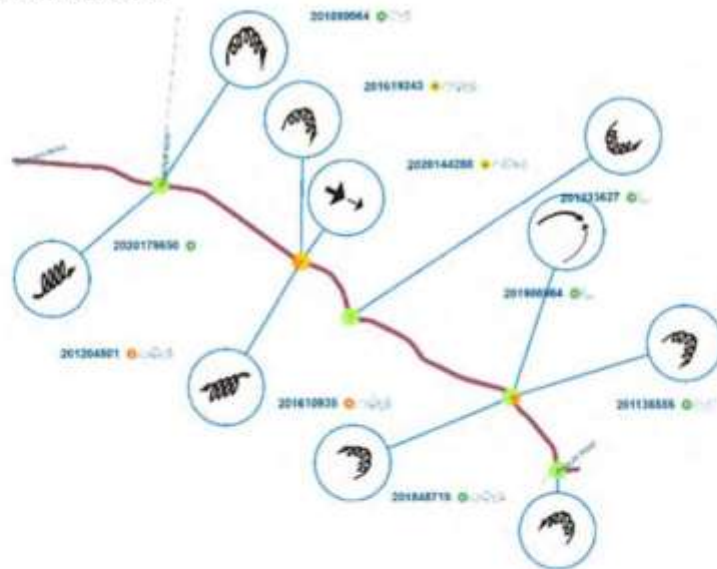
Any physical works and/or changes to speed limit will need to be coordinated with Waikato District Council to ensure consistency along the route.

### 2.3.4 Miranda Road

Miranda Road is a sealed rural road in Miranda that runs between Mangatangi and East Coast Road. The road is within two local authority boundaries and length of the road within the Hauraki District boundary is 4602m.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years.

There have been two serious, two minor and six non-injury crashes reported on this road in the last 10 years. The majority of crashes have been loss of control, with one head on and one rear end crash also reported.



Overall, the Collective Risk for the road is Low medium, while the Personal Risk is Medium.

All of the crashes occurred in overcast or dark conditions which would indicate that the night-time delineation is insufficient. Weather has contributed to crashes with those occurring in overcast light conditions occurring in wet conditions. The crashes are spread along the route, however they all occur on curves

The predominance of loss of control crashes indicates that edgeline and curve warning treatments and the removal or protection of hazards within close proximity of the road would be beneficial.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	76.07 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

**Recommendations**

- Install ATP on edgelines along the route.
- Install additional edge marker posts and curve warning signage at out of context curves.

Any physical works and/or changes to speed limit will need to be coordinated with Waikato District Council to ensure consistency along the route.

**2.3.5 Toft Road**

Toft Road is an unsealed no exit rural road off Kaiarau Road in Kaiarau that is 2143m long.

This road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed". This road has the appearance of a rural property access.



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	21.07 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit would need to be considered as part of a wider strategy for rural roads.

## 2.4 Kaihere

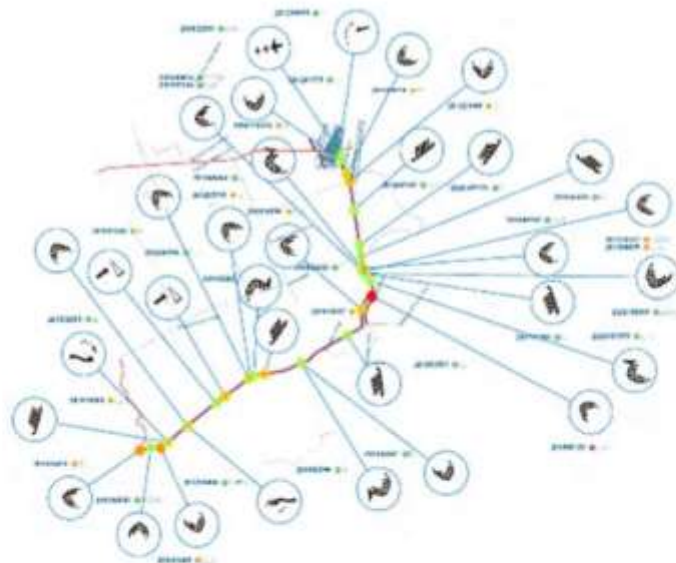
### 2.4.1 Kaihere Road

Kaihere Road is a sealed rural road that runs between State Highway 2, Ngatea and State Highway 27 in Kaihere and is 15.72km long. The initial section of the road is within the urban area of Ngatea before changing to a rural road. The road has been reviewed in two sections:

- 1) State Highway 2 to Brenner Drive a distance of approximately 450m;
- 2) Brenner Drive to State Highway 27 a distance of 15.27km.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years and a school. The school, Hauraki Plains College, is located within the urban area of Ngatea.

There have been thirty-four reported crashes on this road in the last 10 years. One fatal, five serious, eight minor and twenty non-injury crashes. The majority of crashes, thirty, are loss of control with two intersection and two hitting objects.



Nearly all (79%) of the crashes occurred in overcast or dark conditions which would indicate that the night-time delineation is insufficient. Weather has not contributed significantly to crashes

with the majority occurring in fine conditions. The primary area of concern is between RP 3730 and 5860 where the fatal crash and three of the serious crashes have occurred.

The predominance of loss of control crashes indicates that edgeline treatments and the removal or protection of hazards within close proximity of the road would be beneficial. The clustering of crashes in the vicinity of the out of context curves indicates that additional and consistent delineation is required along the route.

Safety and speed information from MegaMaps is on two section and shows the following.

*Section 1 – State Highway 2 to Brenner Drive*

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	52.09 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

*Section 2 – Brenner Drive to State Highway 27*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	86.73 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

Due to the high existing mean travel speed on the rural section Kaihere Road of 86 km/hr and the predominantly straight alignment of the road it is unlikely that a lower speed limit will be complied with creating greater differential between vehicle speeds.

The presence of Hauraki Plains College on the western side of the road requires a 30km/hr speed limit to be installed within the vicinity of the school. This will require the installation of a threshold style treatment at the extents of the speed limit and due to the already high mean travel speed in this area is likely to require the installation of speed management features such as raised platforms.

**Recommendations**

- Lower the speed limit to 30km/hr on Kaihere Road from State Highway 2 to Hayward Street.
- Install school threshold style treatments at the change in speed limit locations
- Install slow street treatments within the vicinity of the school. Consider the use of raised platforms to manage vehicle speeds.
- Lower the speed limit to 80km/hr between Brenner Drive and State Highway 27.
- Install edgelines along the rural section of the road especially at out of context curves:
  - RP 3800 – 6600
  - RP10700 – 11000
  - RP14500 - 15500
- Install additional edge marker posts and curve warning signage at out of context curves.

Consideration should be given to implementing a 40km/hr speed limit in the urban area of Ngatea if supported by the local community. However physical works will be required to support the existing or lower speed limit along the full length of the road.

**2.4.2 Ohinewai Road**

Ohinewai Road is a no exit rural road off State Highway 27 in Kaihere. The full length of the road is 6140m with the first 743m sealed and the remaining 5397m unsealed. This road

continues across the Waikato District Council boundary, however it changes name to Matahuru Road.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed". This is incorrect as the first section of the road is sealed.



There have been two reported crashes on this road in the last 10 years with both crashes as a result of drivers losing control and resulting in no injuries.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	39.28 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

#### **Recommendations**

- No change to speed limit or works proposed.

Any physical works and/or changes to speed limit will need to be considered as part of a wider strategy for rural roads and coordinated with Waikato District Council to ensure consistency along the route.



## 2.5 Karangahake

### 2.5.1 School Road (Karangahake)

School Road is a sealed no exit road in Karangahake off State Highway 2 that is approximately 306m long and accesses a small number of properties and a school.

This road was identified for review as having a school, Karangahake, on its southern side.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	33 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Karangahake School a 30km/hr speed limit must be installed on both roads within the vicinity of the school. Due to the narrow road and low traffic volumes it is recommended that a permanently reduced speed limit apply to the full length of the road.

#### *Recommendations*

- Install a 30km/hr speed limit for the full length of the road.
- Install threshold treatment at the change in speed limit location.

## 2.6 Kerepehi

### 2.6.1 Dagger Road

Dagger Road is a no exit unsealed rural road that runs off Ferry Road, Kerepehi that is approximately 1540m long.

This road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	37.29 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit proposed.

Any changes to the speed limit on Dagger Road would need to be considered as part of a wider strategy for unsealed rural roads.

**2.6.2 Kerepehi Town Road**

Kerepehi Town Road is a sealed road that runs between State Highway 2 and Ferry Road and provides connection and access into the residential and industrial areas of Kerepehi and the rural area beyond. The total length of the road is approximately 2000m and it has three distinct sections:

- 1) State Highway 2 to Reta Crescent provides access into industrial area,
- 2) Reta Crescent to Thompson Road is within the Kerepehi township and
- 3) Thompson Road to Ferry Road provides connection to the rural areas beyond.

This road was identified for review from a list of sites previously identified as potentially requiring speed management due to the high numbers of pedestrians in the area.

There have been four non-injury crashes reported in the last 10 years with the last crash reported in 2018.

Safety and speed information from MegaMaps is in three sections and shows the following.

*Section 1 – State Highway 2 to Reta Crescent*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	44 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

*Section 2 – Reta Crescent to Thompson Road*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	50.91 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

*Section 3 – Thompson Road to Ferry Road*

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	60.07 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The current mean travel speed through Kerepehi township is higher than desirable at 50.91km/hr. Traffic calming measures should be considered to lower the mean travel speed and assist with improving safety of pedestrians and cyclists in the area.

To distinguish between the differing uses of the various sections of road a targeted approach should be taken to both the speed limit and use and location of threshold treatments and other speed management features.

**Recommendations**

- Lower the speed limit to 60km/hr from State Highway 2 to 40m east of Ponui Avenue
- Retain the 50km/hr speed limit from 40m east of Ponui Avenue to 100m west of Fernleigh Street
- Lower the speed limit to 80km/hr from 100m west of Fernleigh Street to Awaiti Canal Road
- Install threshold style treatments at the change in speed limit locations.
- Consider putting the existing zebra crossings onto raised platforms.

Consideration should be given to implementing a 40km/hr speed limit through the township and across the wider residential area if supported by the local community. This will require the speed limit to be reduced on Ponui Avenue, Rakino Drive, Pakatoa Street, Kaikahu Road, Matai Street, Miro Street, Rimu Street, Rata Street, McGowan Avenue, Stanley Street, Thompson Road, Pah Road and Wharf Road.

**2.6.3 McGowan Avenue**

McGowan Avenue is a sealed no exit street in Kerepehi that runs off Kerepehi Town Road and provides access to a mix of residential and rural properties, a school, a childcare and Kerepehi Marae. The road is approximately 536m long with sporadic development along the road.

This road was identified for review as there is Kerepehi school, and a childcare centre, Te Kohanga Reo o Kerepehi and the Kerepehi Marae on this road.

There has been one non-injury crash reported in the last 10 years which occurred in 2013 and involved a manoeuvring vehicle.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	29.72 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Kerepehi School on the western side of the road a 30km/hr speed limit must be installed within the vicinity of the school. This will require the installation of a threshold style treatment at the extents of the speed limit. Due to the low traffic volumes it is recommended that a permanently reduced speed limit apply to the section of the road within the vicinity of the school.

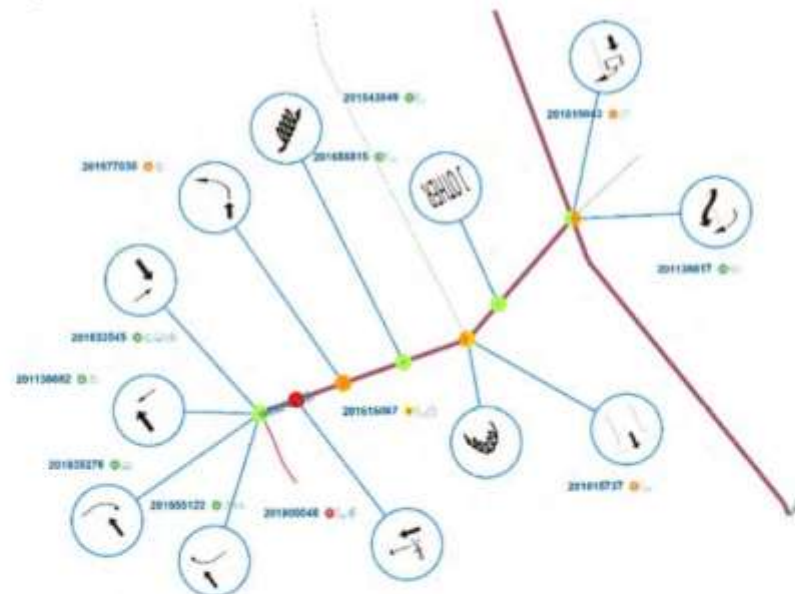
#### **Recommendations**

- Lower the speed limit to 30km/hr within the vicinity of the school frontage.
- Install threshold style treatments at the change in speed limit locations.

#### **2.6.4 Wharepoa Road West**

Wharepoa Road west is a sealed rural road in Kerepehi that runs between State Highway 2 and Hauraki Road with one side road, Hamilton Road, and is approximately 3398m long.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years.



The fatal crash involved a drunk driver that hit a pedestrian while the majority of all the other crashes including the serious crashes are primarily intersection type crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	63.67 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The primary reason given for the recommended safe and appropriate speed in MegaMaps is "Road Safety Metric" due to a high personal risk.

Due to the difficulty in widening the road due to geotechnical issues further investigation is required to determine what improvement works can be undertaken, to address the number of rear end and crashes involving turning vehicles by allowing following vehicles to safely undertake those waiting to turn.

RIAWS treatments should also be considered at the intersection with Hauraki Road as part of improvement works on Hauraki Road to reduce the risk to turning vehicles.

**Recommendations**

- Undertake further investigation on feasible treatment options.

Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.

**2.7 Komata**

**2.7.1 Komata Reefs Road**

Komata Reefs Road is a rural road off State Highway 26 in Komata of which the first 1130m to Bradshaw Road is sealed and the remaining 5238m unsealed.

The section of the unsealed portion of this road between Bradshaw Road and Goble Road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been three reported crashes on this road in the last 10 years with the last crash occurring in 2017. There were no commonalities between the crashes, with the serious crash in 2014 the result of a driver attempting to U turn at the intersection with State Highway 26 and being hit by a through vehicle.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	36.63 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr. Any changes to this road would require a similar treatment to Bradshaw Road and Goble Road to provide consistency to road users.

**Recommendations**

- No change to speed limit proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

**2.7.2 Strange Road**

Strange Road is a no exit rural road off State Highway 26 in Komata. The full length of the road is 2160m with the first 430m and last 1472m sealed and the centre 258m unsealed.

Only the last portion of this road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining. The rationale for the categorisation is “Road stereotype is Unsealed”. This is incorrect as this section of the road is sealed.



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	34 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

## 2.8 Mackaytown

### 2.8.1 Rahu Road

Rahu Road is a no exit rural road off State Highway 2 in Karangahake. The full length of the road is 3440m with the first 1445m sealed and the remaining 1995m unsealed.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this section of the road in the last 10 years.

The adjacent section of Rahu Road has a 70km/hr speed limit.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	34.28 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

#### *Recommendations*

- Lower speed limit to 70km/hr to be consistent with the remaining section of Rahu Road.
- Install repeater speed signs.

## 2.9 Mangatarata

### 2.9.1 Church Road

Church Road is a no exit sealed rural road in Mangatarata that runs off North Road and provides access into a number of residential properties and a café and church. The full length of the road is 159m.

This road was identified for review as being of a peri-urban nature with a small settlement of houses and from a resident request regarding the risk to pedestrians.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	42 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

Due to the high number of parked vehicles and pedestrian movements associated with the café and church a lower speed limit is considered to be appropriate.

#### **Recommendations**

- Lower the speed limit to 60km/hr in keeping with increased level of development.

This road is accessed off North Road which also has increased vehicle and pedestrian movements between State Highway 27 and Church Road and a lower speed limit should be installed on this section of North Road for consistency and to reduce the risk to all users in the area.

### **2.9.2 Coxhead Road**

Coxhead Road is an unsealed rural road that runs between State Highway 25 and State Highway 2 in Mangatarata. The full length of the road is 1795m with the majority of the road unsealed 1520m and the remaining 275m sealed.

This road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years with four crashes occurring at the intersection with State Highway. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.



<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	37 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit proposed.

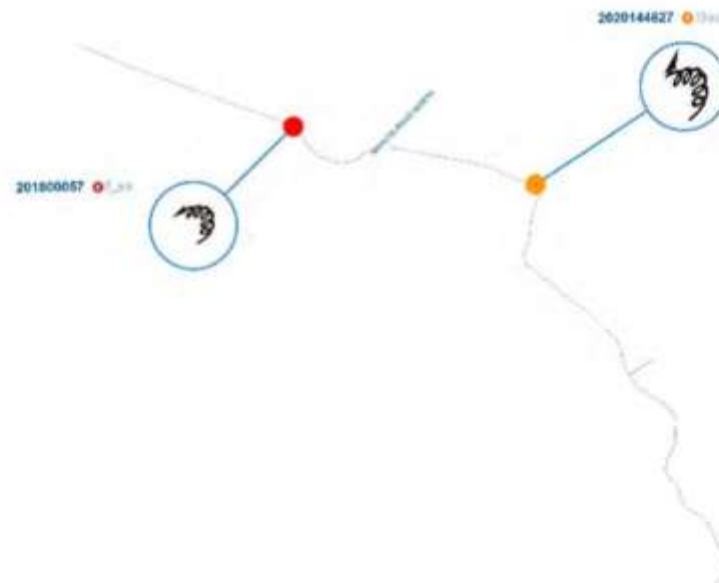
Any changes to the speed limit on this road would need to be considered as part of a wider strategy for unsealed rural roads.

**2.9.3 Mahuta Road North**

Mahuta Road north is a sealed rural road in Mangatarata that runs between State Highway 25 and State Highway 2 and is approximately 4820m long.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years.

There have been one fatal and one serious crash reported on this road in the last 10 years, both of which involved motorcyclists losing control on a curve.



Overall, the Collective Risk for the road is Low, while the Personal Risk is Medium.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	59.93 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

**2.9.4 North Road**

North Road is a no exit rural road off State Highway 27 in Mangatarata. The full length of the road is 4307m with the first 897m sealed and the remainder unsealed.

This road was identified for review from a customer query.

There has been one non-injury crash reported on this road in the last 10 years. The crash was a head-on as a result of a driver losing control on the gravel surface.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	27.61 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is 60km/hr and Megamaps has assumed that the full length of the road is unsealed, which is incorrect.

The initial section of the road between State Highway 27 and North Road is subject to high numbers of pedestrians and manoeuvring vehicles due to the presence of a café.

**Recommendations**

- Reduce the speed limit to 60km/hr on the section of North Road from State Highway 27 to RP120.
- Install threshold style treatments at the change in speed limit locations.

Any changes to the speed limit on the rest of the road would need to be considered as part of a wider strategy for unsealed rural roads.

**2.9.5 South Road**

South Road is a no exit rural road off State Highway 27 in Mangatarata. The full length of the road is 3963m with the first 688m sealed and the remainder unsealed.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	36.84 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is 60km/hr.

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for unsealed rural roads.

**2.10 Netherton**

**2.10.1 School Road (Netherton)**

School Road is a sealed rural road in Netherton that runs between State Highway 2 and Fisher Road and is approximately 2065m long.

This road was identified for review as having a school, Netherton, at the intersection with State Highway 2.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	84.82 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

As a result of the presence of Netherton School on the corner of State Highway 2 and School Road a 60km/hr speed limit must be installed on both roads within the vicinity of the school. This will require the installation of a threshold style treatment at the ends of the treatment and coordination with Waka Kotahi for the installation of the speed reduction on State Highway 2. Due to the low number of movements likely outside of school hours it is recommended that a variable speed limit be installed rather than a permanent speed limit. The variable speed limit should extend to RP 230 to ensure that there is sufficient stopping distance to the school entrance.

#### **Recommendations**

- Apply a variable speed of 60km/hr on the first 230m of School Road.
- Install variable sign and threshold style treatment at the change in speed limit point.

The installation of the variable speed limit will need to be coordinated with Waka Kotahi to ensure consistency of treatment within the vicinity of Netherton School.

Any changes to the speed limit on the remainder of this road would need to be considered as part of a wider strategy for rural roads.

## **2.11 Ngatea**

### **2.11.1 Darlington Street**

Darlington Street is a sealed residential street in Ngatea that runs between State Highway 2 and Benner Drive and provides access and connection into a wider residential neighbourhood. The road is approximately 910m long with seven side roads, Bratlie Place, Walton Place, Hayward Road, Madgwick Place, Parfitt Place, Harris Place and Benner Drive. The layout of the road changes significantly south of Madgwick Place with the presence of a central median, roundabout and other traffic calming measures.

This street was identified for review from a customer query regarding the excessive vehicle speeds, primarily on the section between State Highway 2 and Hayward Road. This indicates that compliance, not the speed limit is the issue for this road. There is also a childcare centre located on the corner of Darlington Street and Hayward Road.

There have been two reported crashes in the last 10 years, with a non-injury crash in 2015 and a minor injury crash in 2012.

Safety and speed information from MegaMaps is on two section and shows the following.

#### *Section 1 – State Highway 2 to Bratlie Place*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	36 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

#### *Section 2 – Bratlie Place to end*

<i>Infrastructure Risk Rating</i>	Low	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.46 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

### Recommendations

- Install slow street treatments between State Highway 2 and Hayward Road to match the environment of the rest of the road.
- Install a mini roundabout at the Hayward Road intersection.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.

Any changes to the speed limit on this road will require a similar reduction on the side roads of Bratlie Place, Walton Place, Hayward Road, Madgwick Place, Parfitt Place, Harris Place and Benner Drive.

### 2.11.2 Hayward Road

Hayward Road is a sealed residential street in Ngatea that runs between Kaihere Road and Darlington Street that provides access to residential properties. The road is approximately 700m long with two side road, McMillan Street and Miller Place.

This street was identified for review as having a childcare centre located on the corner of Darlington Street and Hayward Road and also from a customer query regarding the excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road. Hauraki Plains College also backs on to Hayward Road with a pedestrian path to the main school building and access to the sports grounds.

There has been one reported crash in the last 10 years, with a non-injury crash in 2012.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.46 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Hauraki Plains College on the northern side of the road a 30km/hr speed limit should be installed within the vicinity of the school frontage on Hayward Road. This will require the installation of a threshold style treatment at the extents of the speed limit. As the area is predominantly residential and there is likely to be high numbers of pedestrians and cyclists at the school even outside of school hours it is recommended that a permanent speed limit be installed rather than a variable speed limit. Any speed limit reduction on this road will need to be consistent with the speed limit on Kaihere Road and Darlington Street.

### Recommendations

- Lower the speed limit to 30km/hr on Hayward Street in conjunction with the school zone on Kaihere Road.
- Install school threshold style treatments at the change in speed limit locations
- Install a mini roundabout at the Darlington Street intersection

Any changes to the speed limit on this road will require a similar reduction in speed limit on the side roads of McMillan Street and Miller Place and will need to be consistent with Kaihere Road and Darlington Street.

Consideration should be given to implementing a 40km/hr speed limit in the area if supported by the local community. However physical works will be required to support the existing or lower speed limit along the full length of the road.

### 2.11.3 McDuff Lane

McDuff Lane is a sealed no exit commercial street in Ngatea off State Highway 2 that provides access to a number of commercial properties and the exit from the local supermarket. The road is approximately 60m long and is very wide to accommodate the heavy commercial vehicles accessing the site.

This road was identified for review from a customer query regarding excessive vehicle speeds and conflicts between vehicles and pedestrians. This indicates that vehicle speeds are considered to be incompatible with the environment.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Due to the high number of pedestrians and turning vehicles in this area additional roadmarking, in a long-life product, should be considered to better manage the flow of traffic in the area.

#### **Recommendations**

- Considering installing additional roadmarking in the area in a long-life product.

Any changes to the speed limit on McDuff Lane would be the result of changes to other adjacent roads in the area to provide consistency to road users.

### 2.11.4 McMillan Street

McMillan Street is a sealed no exit residential street in Ngatea that runs off Hayward Road and is 112m long.

This road was identified for review as there is a childcare centre located on the street.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.46 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

#### **Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on McMillan Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.

### 2.11.5 Puhunga Island Road North

Puhunga Island Road North is a no exit rural road off Kaihere Road in Ngatea. The full length of the road is 3034m with the first 1620m sealed and the last 1414m unsealed.

Only the last portion of this road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	37 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

#### **Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

#### **2.11.6 River Road**

River Road is a sealed road in Ngatea that runs from State Highway 2 to Rawerawe Road East and provides access to a number of residential and rural properties. The full length of the road is 3520m while the section of road under review is from State Highway 2 to Leonard Street and is 530m long. This section has three side roads: Hammond Lane, Factory Lane and Leonard Street and has single sided development as it runs parallel to the Piako River.

This road was identified for review as there is a childcare centre located at Number 27 on the western side of the road and from a customer query regarding the excessive vehicle speeds in the urban section of the road. This indicates that compliance, not the speed limit is the issue for this road.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.03 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.

**2.12 Paeroa**

**2.12.1 Ainslie Road**

Ainslie Road is a sealed residential street in Paeroa that runs between Aorangi Road and Logan Road and provides access into a wider residential neighbourhood. The full length of the road is 440m with one side road, Porritt Street.

This road was identified for review as there is a childcare centre located on the eastern side of the road between Porritt Street and Raroa Road.

There have been no reported crashes on this road since 2017 after which speed humps were installed in two locations to manage vehicle speeds.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	33.69 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Ainslie Road would require a similar change to other roads in the area to provide consistency to road users.

**2.12.2 Alpha Road**

Alpha Road is a sealed no exit road off State Highway 26 in Paeroa. The full length of the road is 310m with one side road, Colin Drive.

This road was identified for review as being of a peri-urban nature on the northern edge of Paeroa.

There have been no report crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	28.14 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The recommended safe and appropriate speed from MegaMaps for this road is 50km/hr which matches the existing speed limit.



### Recommendations

- No change to speed limit proposed. Existing speed limit is appropriate.

### 2.12.3 Aorangi Road

Aorangi Road is a sealed no exit residential street in Paeroa that runs off State Highway 26 and provides access and connection into a wider residential neighbourhood. The full length of the road is 1149m with two side roads, Shaw Avenue and Ainslie Road.

This road was identified for review as there is a playcentre located at 58 Aorangi Road and from a customer query regarding excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There have been four non-injury crashes reported in the last 10 years. Three of the crashes were the result of driver inattention and one was a loss of control crash. Only one crash has occurred in the section of road with the playcentre.

Safety and speed information from MegaMaps is on two section and shows the following.

#### Section 1 – State Highway 26 to Ainslie Road

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	37 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

#### Section 2 – Ainslie Road to end

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	33.69 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

### Recommendations

Possible works to be undertaken:

- Install slow street treatments at multiple locations. Due to the alignment of the road consider the use of side islands to narrow the road and one way sections to manage vehicle speeds.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.

Any changes to the speed limit on Aorangi Road will require a similar treatment to Shaw Avenue and Ainslie Road.

### 2.12.4 Colin Drive

Colin Drive is a sealed no exit road off Alpha Road in Paeroa that is 161m long.

This road was identified for review as being of a peri-urban nature due to the lot sizes and its location on the northern edge of Paeroa.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	39.13 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The safe and appropriate speed for this road is 60km/hr which is higher than the existing speed limit. There is no desire to increase the speed limit on Colin Drive.

**Recommendations**

- No change to speed limit proposed. Existing speed limit is appropriate.

**2.12.5 Corbett Street**

Corbett Street is a sealed residential street in Paeroa that runs between State Highway 2 and King Street and provides access and connection into a wider residential neighbourhood. The total length of the road is approximately 340m long while the section of road under review is between Willoughby Street and King Street and is approximately 232m long.

This road was identified for review from a customer query regarding excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There has been one minor injury crash in the last 10 years in the section of Corbett Road under review. The crash involved a drunk disqualified driver hitting multiple parked vehicles.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	28.45 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Corbett Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.

**2.12.6 Coronation Street**

Coronation Street is a sealed no exit street in Paeroa that runs off Brenan Street and provides access to a mix of industrial and residential properties, a school and the Paeroa Saleyards. The road is approximately 686m long with three side roads, Meyers Street, Stewart Street and Opukeko Road. The road has development primarily on only the western side of the road with farm land on the eastern side of the road.

This road was identified for review as there is a school, Paeroa Christian, located between Stewart Street and Opukeko Road.

There have been two non-injury crashes reported in the last 10 years and occurred in 2013 and 2017. One involved a speeding vehicle that lost control, while the most recent crash involved a driver hitting a parked car.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	33.88 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Paeroa Christian School on the western side of the road a 30km/hr speed limit must be installed within the vicinity of the school. This will require the installation of a threshold style treatment at the extents of the speed limit. Due to the amount of through traffic in the area it is recommended that a permanently reduced speed limit apply in the vicinity of the school.

**Recommendations**

- Lower the speed limit to 30km/hr within the vicinity of the Paeroa Christian School frontage.
- Install school threshold style treatments at the change in speed limit locations.

**2.12.7 Junction Road**

Junction Road is a predominantly sealed no exit road in Paeroa that runs off Railway Street and provides access to a number of residential and rural properties. The total length of the road is approximately 1483m long, while the section of road under review between Railway Road and Menzies Place is approximately 405m long with two side roads, Opatito Road and Menzie Place.

This road was identified for review from a customer query regarding excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There have been five crashes reported in the last 10 years on this road with one serious crash in 2017 involving an intoxicated driver hitting a pedestrian and four non-injury crashes. Three of the five crashes have noted inappropriate speed as a contributing factor.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	37 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- Install slow street treatments at multiple locations between Railway Street and Menzie Place. Due to the straight alignment of the road consider the use of side islands to narrow the road and one way sections to manage vehicle speeds.
- Install mini roundabout at the intersection with Opatito Road.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.

Any changes to the speed limit on Junction Road will require a similar reduction in the speed limit to Menzie Place, and Opatito Road.

**2.12.8 Keepa Avenue**

Keepa Avenue is a sealed no exit residential street in Paeroa that runs off Shaw Avenue and is part of a contained residential neighbourhood. The full length of the road is 295m.

This street was identified for review as having an aged care facility at its end.

There has been one reported crash on this road in the last 10 years which was a non-injury crash at the intersection with Shaw Avenue in 2020.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	33.92 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. Due to the short length of road physical works are unlikely to be required to support a lower speed limit.

Any changes to the speed limit on this road will be as a result of changes to Shaw Avenue.

**2.12.9 Miller Avenue**

Miller Avenue is a sealed no exit residential street in Paeroa that runs off Tower Street and provides access to a number of residential properties and Miller Avenue School. The road is approximately 310m long with a crossroad intersection with Kennedy Street midway and Miller Avenue School located at the end of the road.

This road was identified for review as there is school, Miller Avenue, located on the northern side of the road.

There have been two reported crashes on this road in the last 10 years, both of which were non-injury crashes that occurred at the intersection with Towers Street. The last crash occurred in 2018 which involved an unaccompanied learner driver traveling too fast for the conditions and losing control on the curve.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	26.8 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Miller Avenue School on the northern side of the road a 30km/hr speed limit must be installed within the vicinity of the school. This will require the installation of a threshold style treatments at the extent of the reduced speed limit. Due to the predominantly residential area, low traffic volumes and no exit nature of the street in the vicinity of the school it is recommended that a permanent 30km/hr speed limit be installed from Kennedy Street to the end of the road.

**Recommendations**

- Lower the speed limit to 30km/hr on Miller Avenue from Kennedy Street to the end.
- Install threshold style treatments at the change in speed limit location.

**2.12.10 Norwood Road**

Norwood Road is a sealed residential street in Paeroa that runs between State Highway 26 and Station Road and provides access into a largely undeveloped residential area and a school. The full length of the road is 1176m long while the section of road under review is between McDonald Place and Station Road and is approximately 661m long.

This road was identified for review as there is a school, Goldfields, located on the western side of the road, in addition there is a rear pedestrian access to Miller Avenue School off the same section of road.

There have been no crashes reported in this section of Norwood Road in the last 10 years and two crashes reported to the east of McDonald Place.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	48.55 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Goldfields School and Miller Avenue School on the western side of the road a 30km/hr speed limit must be installed within the vicinity of both of the school frontages. It is recommended that a lower permanent speed limit be applied in this area to provide certainty to drivers and avoid confusion. This will require the installation of a threshold style treatment at the extents of the speed limit and due to the already high mean travel speed in this area is likely to require the installation of speed management features such as raised platforms.

**Recommendations**

- Lower the speed limit to 30km/hr within the vicinity of the school frontage.
- Install school threshold style treatments at the change in speed limit locations.
- Consider replacing the existing kea crossing with a patrolled zebra crossing on a raised platform.

**2.12.11 Nowra Crescent**

Nowra Crescent is a sealed residential street in Paeroa, that creates a loop off Shoalhaven Street and is 204m long.

This road was identified for review as there is a childcare centre located on the street.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Norwa Crescent would be the result of changes to other adjacent roads in the area (Shoalhaven Street) to provide consistency to road users.

**2.12.12 Papaturoa Road**

Papaturoa Road is a sealed no exit road off State Highway 26 on the southern side of Paeroa. The road is approximately 171m long.

This road was identified for review as being of a peri-urban nature due to the number of dwellings along the length of the road. The marae is located on the southern side of the road.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The posted speed limit on Papaturoa Road has been entered as 50km/hr into MegaMaps which is incorrect as it is 80km/hr from the speed limit bylaw maps.

Due to the very short length of road the speed limit should be the same as the adjacent section of road to provide consistency to drivers.

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Papaturoa Road would be the result of changes to State Highway 26 to provide consistency to road users.

**2.12.13 Railway Street**

Railway Street is a sealed residential street in Paeroa that runs between State Highway 2 and William Street and provides access and connection into a wider residential neighbourhood. The road is approximately 498m long with four side roads; Dearle Street, George Street, Junction Road and Lee Avenue. The road has development on the western side only as it runs parallel to Paeroa Park which has three pedestrian access points from Railway Road.

This road was identified for review from a customer query regarding excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There have been six crashes reported in the last 10 years. Three of the crashes were loss of control crashes, two were manoeuvring crashes and the last crash involved a vehicle hitting a parked car. The loss of control crashes all occurred on the curve north of Dearle Street.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	32.7 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Any changes to this road would require a similar treatment to the other roads in the area.

**Recommendations**

- Install slow street treatments at multiple locations. Consider realigning the pedestrian access points to enable raised platforms to be installed.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.

Any changes to the speed limit on Railway Street will require a similar reduction on the speed limit to Opatito Road, Dearle Street, George Street, Junction Road and Lee Avenue.

#### 2.12.14 Rotokohu Road

Rotokohu Road is a no exit rural road off State Highway 26 in Paeroa, the first 6420m of the road is sealed with two side roads: Te Moananui Flats Road and Thorp Road, the remaining 1300m of the road is unsealed.

This road was identified for review as being of a peri-urban nature.

There have been five crashes reported on this road in the last 10 years, two minor and three non-injury. Three of the crashes were loss of control and two involved vehicles turning into driveways being hit trailing vehicles.

Safety and speed information from MegaMaps for the two sections of Rotokohu Road shows the following.

NOTE: The first 200m of the road has a 50km/hr speed limit and there is no desire to change this speed limit.

*RP200 to RP6420*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	61.78 km/hr 55.04 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

*RP6420 to end of road*

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	46 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is 60km/hr.

The Hauraki Rail Trail runs the length of Rotokohu Road between State Highway 26 and Te Moananui Flats Road, where it crosses Rotokohu Road and continues along Te Moananui Flats Road.

If changes are made to this road then similar changes will be required on Te Moananui Flats Road and Thorp Road for consistency.

#### **Recommendations**

- Lower the speed limit to 60km/hr in keeping with increased level of development, narrow carriageway and presence of cyclists along the road.
- Install threshold treatment and repeater signs.

Any changes to the speed limit on Rotokohu Road will require a similar reduction in speed limit to the side roads of Te Moananui Flats Road and Thorp Road.

#### 2.12.15 Shaw Avenue

Shaw Avenue is a sealed no exit residential street in Paeroa that runs off Aorangi Road and is part of a contained residential neighbourhood with the following side roads: Kinsella Place, Keepa Avenue and Sarjant Place. The full length of the road is 700m.

This street was identified for review from a customer query regarding the excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There have been three reported crashes on this road in the last 10 years all of which have been non-injury crashes. Two of the crashes were loss of control and one was an intersection crash. This supports the concerns regarding inappropriate speed in the area.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	33.92 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- Install slow street treatments at multiple locations. Due to the alignment of the road consider the use of side islands to narrow the road and one way sections to manage vehicle speeds.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.

Any changes to the speed limit on this road will require a similar reduction in the speed limit to the side roads of.

**2.12.16 Te Moananui Flats Road**

Te Moananui Flats Road is a sealed no exit rural road off Rotokohu Road in Paeroa that is 989m long.

This road was identified for review as being of a peri-urban nature with a small settlement of houses and the Ngahutoitoi marae at the end of the road. The rail trail also crosses the road near the intersection with Rotokohu Road.

There has been one non-injury crash reported on this road in the last 10 years, which occurred in 2019 and involved a driver losing control on a curve in wet weather.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	43.7 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

This road has a higher level of development than other roads off Rotokohu Road and therefore can be considered in isolation.

**Recommendations**

- Lower speed limit to 80km/hr in keeping with increased level of development.
- Install speed signs.

Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.

**2.12.17 Waimarei Avenue**

Waimarei Avenue is a sealed residential street in Paeroa that runs off Norwood Road and provides access to a small residential neighbourhood. The road is approximately 400m long and has one side road, Taniwha Street.



This road was identified for review as there is an aged care facility located at the end of the street.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	29.74 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

The road is wide with limited side friction which is likely to result in compliance issues. Any changes to this road would require a similar treatment to other similar type roads.

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.

**2.12.18 Wood Street**

Wood Street is a sealed no exit residential street in Paeroa that runs off State Highway 26 and provides connection and access into a wider residential neighbourhood. The full length of the road is 684m while the section of road under review is between Victoria Street and Thorp Street and is approximately 180m long.

This road was identified for review as there is school, Paeroa Central, located on the northern side of the road.

There has been one reported non-injury crash on this road in the last 10 years which occurred in 2016 and involved a driver hitting at parked car.

Safety and speed information from MegaMaps shows the following

<i>Infrastructure Risk Rating</i>	Low medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	30.64 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Paeroa Central School on the corner of Wood Street and Thorp Street a 30km/hr speed limit must be installed on both streets within the vicinity of the school. This will require the installation of a threshold style treatment at the ends of the treatment. Due to the predominantly residential area and likely high numbers of pedestrians and cyclists at the school even outside of school hours it is recommended that a permanent speed limit be installed rather than a variable speed limit.

**Recommendations**

- Lower the speed limit to 30km/hr on the section of Wood Street and Thorp Street adjacent to the school.
- Install threshold style treatments at the change in speed limit points.

## 2.13 Patetonga

### 2.13.1 Mangawhero Road

Mangawhero Road is a rural road off State Highway 27 in Patetonga of which the first 3161m is sealed and the remaining 3204m unsealed.

The unsealed portion of this road from RP3616 was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years with the only crash in the area occurring at the intersection with State Highway 27.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	37 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

#### *Recommendations*

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

## 2.14 Pipiroa

### 2.14.1 Arawa Street

Arawa Street is a sealed no exit rural road off State Highway 25 in Pipiroa. The road is approximately 4.2m wide and 685m long.

This road was identified for review as being of a peri-urban nature.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	42 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

Due to the length of this road and its higher density of dwellings, it can be considered in isolation to the adjacent road, State Highway 25.

**Recommendations**

- Lower the speed limit to 80km/hr in keeping with increased level of development and narrow carriageway.
- Install speed threshold at intersection with State Highway 25.

Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.

**2.14.2 Buchanan Road**

Buchanan Road is a sealed no exit rural road off State Highway 25 in Pipiroa. The road is approximately 2018m long and has a single side road of Moehau Street. The road is used as part of the Kaiaua to Thames section of the Hauraki Rail Trail.

This road was identified for review as being of a peri-urban nature with a small settlement of houses in the first 400m of the road.

The only crash reported on this road in the last 10 years occurred at the intersection with State Highway 25.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	31.73 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

**Recommendations**

- Lower speed limit to 80km/hr in keeping with increased level of development, narrow carriageway and presence of cyclists along the road.
- Install threshold signage at intersection with State Highway 25 and repeater signage along the route.

Any changes to the speed limit on Buchanan Road will require a similar treatment to the side roads of Moehu Street and Scott Street for consistency.

**2.14.3 Bush Road**

Bush Road is a sealed rural road in Pipiroa that runs between State Highway 25 and Orchard East Road and is a parallel route to Hauraki Road. The road is approximately 6259m long with four side roads, of which three are no exit, Horahia Road, Opua Road, and Shellbank Road, while Piako Road provides connection between Hauraki Road and Bush Road.

This road was identified for review as having a school, Kopuarahi, at the intersection with State Highway 25 and being the subject of a request for speed management through the curves at the northern end of the road.

There have been eighteen reported crashes on this road in the last 10 years. One serious, three minor and fourteen non-injury crashes. The majority of the crashes are loss of control crashes with only three crashes intersection related.

The serious crash involved a motorcyclist hitting the rear of a vehicle slowed to turn into a driveway in 2018. Overall, the Collective Risk for the road is Low, while the Personal Risk is Low-Medium.

The majority of crashes are loss of control which indicates that edgeline treatments and the removal or protection of hazards within close proximity of the road would be beneficial. There are also crashes at each of the curves indicating that signage should be reviewed for consistency.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	84.82 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

As a result of the presence of Kopuarahi School on the corner of State Highway 25 and Bush Road a 60km/hr speed limit must be installed on both roads within the vicinity the school. This will require the installation of a threshold style treatments at the ends of the reduced speed limit area and coordination with Waka Kotahi for the installation of the speed reduction on State Highway 25. Due to the low number of movements likely outside of school hours and coordination with the likely treatment on State Highway 25 it is recommended that a variable speed limit be installed rather than a permanent speed limit. The variable speed limit should extend to RP 230 to include the curves and ensure that there is sufficient forward sight distance.

#### **Recommendations**

- Apply a variable speed limit of 60km/hr within the vicinity of Kopuarahi School extending for 230m along Bush Road.
- Install variable sign and threshold style treatment at the change in speed limit point.
- Install ATP on edgelines along the route.
- Review curve warning signage and install new signs as required.

The change to the speed limit will need to be coordinated with Waka Kotahi to ensure consistency of treatment within the vicinity of Kopuarahi School.

#### **2.14.4 Moehau Street**

Moehau Street is a sealed no exit rural road in Pipiroa that runs off Buchanan Road and is approximately 1030m long with a single side road of Scott Street.

This road was identified for review as being of a peri-urban nature with a small settlement of houses in the first 150m of the road and a collection of rural properties along the rest of the road.

The have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	38.11 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

### Recommendations

- Lower the speed limit to 80km/hr in keeping with changes proposed on Buchanan Road.
- Install repeater speed signage.

Any changes to the speed limit on Moehau Steet will be driven by changes on Buchanan Road and require a similar treatment to the side road of Scott Street.

### 2.14.5 Pipiroa Road

Pipiroa Road is a sealed primarily rural road that runs between State Highway 25 and State Highway 2 in Ngatea. The full length of the road is 6749m with the section under review from RP5490 to Mahana Road being 800m which has a 70km/hr speed limit.

This road was identified for review from a customer query regarding the excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There have been three reported crashes on this section of Pipiroa Road in the last 10 years all of which have all been minor injury crashes. One of the crashes was a loss of control and two were intersection crashes at Mahana Road. Speed was not a factor in any of the crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	62.24 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The current mean speed is 62km/hr which will require the installation of speed management features to support any reduction in the speed limit.

### Recommendations

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on this section of Pipiroa Road would be the result of changes to the adjacent roads in the area to provide consistency to road users.

Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Pipiroa Road from 70km/hr to 50km/hr on the section from RP5490 to Mahana Road.

## 2.15 Turua

### 2.15.1 Hauraki Road

Hauraki Road is a sealed road in Turua that runs between State Highway 25 and Orchard East Road and is a parallel route to Bush Road. Full length of the road is approximately 14km.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years and from a customer query regarding excessive vehicle speeds within Turua. The road also has a school, Turua Primary, and childcare centre within the settlement of Turua. The rural sections of the road have also been identified from the MegaMaps as a First 10% Interventions and Second 10% Interventions.

Due to the roading environment being divided by the settlement of Turua it has been broken into three sections for review.

**Section 1 – RP 0 – 4160 State Highway 25 to Turua**

This section of the road runs between State Highway 25 and the northern edge of Turua and is 4160m long and has two side roads, Old Ferry Road and Ngataipua Road.

This road was identified for review from the MegaMaps as a Second 10% Interventions – Challenging Conversation and a Top 10% DSI Saving Network Work Section. The rationale for the categorisation is "Infrastructure Risk Rating".



Excluding the sixteen crashes at the State Highway 25 intersection there have been fourteen crashes reported on this section of the road in the last 10 years resulting in six minor and eight non-injuries. There are a range of crash types on this section with seven loss of control, four rear-end, one hitting an object, one intersection and one manoeuvring.

The treatment of the State Highway 25 / Hauraki Road intersection is outside of the control of Hauraki District Council and will require discussions with Waka Kotahi.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	89.39 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of Hauraki Road is 80/hr with the governing factor being the Infrastructure Risk Rating (IRR) is medium.

Overall, the Collective Risk for this section of the road is Low Medium, while the Personal Risk is Low Medium.

Due to the high existing mean travel speed of 89.93km/hr and the straight alignment of the road any attempt to lower the speed limit is likely to result in poor compliance creating a larger differential in vehicle speeds and increased risk to users.

To assist with risk management on this largely rural nature of this section of Hauraki Road additional delineation features such as edgelines, with or without ATP, centreline ATP and additional edge marker posts should be considered along the route.

**Section 2 – RP 4160 – 5425 Turua Township**

This section of the road is the existing 50km/hr speed limited area that runs through Turua and is 1265m long and has seven side roads; Rata Street, Bagnall Square, Piako Road, Matai Street, Awa Street, Waihou Street and Raratuna Road.

This section was identified for review as having a childcare centre located at 437 Hauraki Road and also from a customer query regarding the excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road. Turua Primary School also fronts Hauraki Road in this section of the road.

There have been ten reported crashes on this section of the road in the last 10 years resulting in one serious, two minor and eight non injuries. There are a range of crash types on this section with three loss of control, four hitting an object, two intersection and one rear-end.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	60.92 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of Hauraki Road is 60km/hr with the primary reason given as "Aligns with framework". This is higher than the existing speed limit and there is no desire to raise the speed limit in this area.

Due to the high existing mean travel speed of 60.92 km/hr speed management features such as threshold treatments should be installed to reduce the risk to users in this area. Consideration should be given to installing a roundabout at the intersection with Piako Road to assist with slowing vehicle speeds in the area.

Due to the presence of Turua Primary School on the corner of Raratuna Road and Hauraki Road a 30km/hr speed limit must be installed within the vicinity of both of the school frontages. It is recommended that a lower permanent speed limit be applied in this area to provide certainty to drivers and avoid confusion. This will require the installation of a threshold style treatment at the extents of the speed limit. Due to the already high mean travel speed in this area consideration should be given to replacing the existing kea crossing with a patrolled zebra crossing on a raised platform. This will improve safety for pedestrians and assist with speed management in the area.

**Section 3 – RP 5425 - 14135 Turua to State Highway 2**

This section of the road runs between southern edge of Turua and State Highway 2 and is 8710m long and has four side roads, Huirua Road, Orchard East Road, Wharepoa Road West, and Captain Cook Road.

This road was identified for review from the MegaMaps as a First 10% Interventions – Engineer Up. The rationale for the categorisation is "Infrastructure Risk Rating".



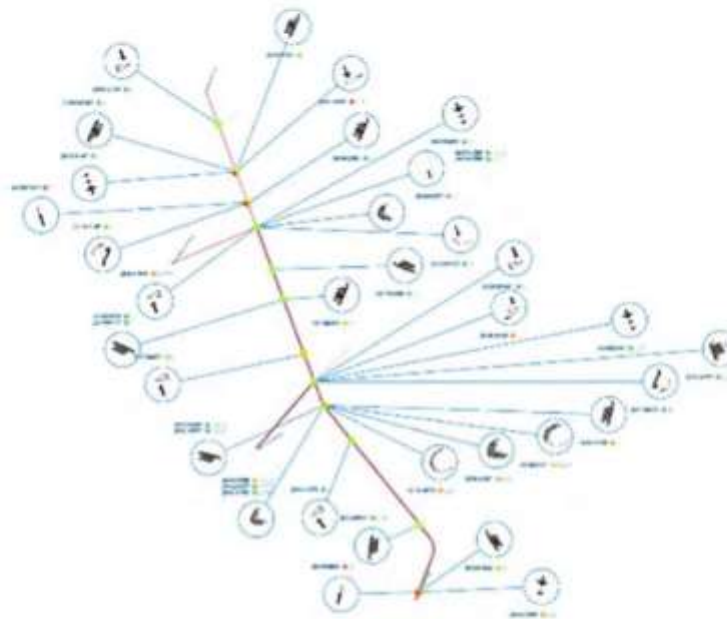
Excluding the three crashes at the State Highway 2 intersection there have been thirty-eight crashes reported on this section of the road in the last 10 years resulting in three fatal, four serious, nine minor and twenty-two non-injuries.

The number of crashes and their severity have been increasing as shown below.

Year	Fatal	Serious	Minor	Non-Injury	Total
2011			1	3	4
2012			2	2	4
2013			1	1	2
2014		1			1
2015	1		1	2	4
2016	1			1	2
2017				5	5
2018		3	1	3	7



Year	Fatal	Serious	Minor	Non-injury	Total
2019	1		3	3	7
2020				2	2



There are a range of crash types on this section with twenty-one loss of control, of which twelve were on a straight, five rear-end, five hitting an object, three head on, three intersection and one pedestrian. Speed was only identified as a factor in four crashes with poor observation and poor handling the most common contributing factors.

Two of the fatal crashes were head-on on a straight while there are no common factors between the four serious crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	92.56 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of Hauraki Road is 80/hr with the governing factor being the IRR is medium.

Overall, the Collective Risk for this section of the road is Medium, while the Personal Risk is Medium High.

Due to the high existing mean travel speed of 92.56km/hr and the straight alignment of the road any attempt to lower the speed limit is likely to result in poor compliance creating a larger differential in vehicle speeds and increased risk to users.

As indicated by the MegaMaps data the most appropriate treatment for this road is to engineer up the road. Due to the difficulty in widening the road due to geotechnical issues further investigation is required to determine what improvement works can be undertaken, especially at the intersections, to address the number of rear end and crashes involving turning vehicles by allowing following vehicles to safely undertake those waiting to turn.

To assist with risk management in the short term on this section of Hauraki Road additional delineation features such as ATP on the edgelines and centreline and additional edge marker posts should be considered along the route.

RIAWS treatments should also be considered at the intersections with Orchard East Road and Wharepoa Road West to reduce the risk to turning vehicles.

#### **Recommendations**

##### **Section 1 – RP 0 – 4160 State Highway 25 to Turua**

- Lower the speed limit to 80km/hr.
- Consider installing edgelines, with or without ATP, centreline ATP and additional edge marker posts

##### **Section 2 – RP 4160 – 5425 Turua Township**

- Apply a 30km/hr variable speed limit in the vicinity of Turua Primary School.
- Install variable school threshold style treatment at the change in speed limit points.
- Consider replacing the existing kea crossing with a patrolled zebra crossing on a raised platform.

##### **Section 3 – RP 5425 - 14135 Turua to State Highway 2**

- Lower the speed limit to 80km/hr.
- Consider installing edgeline and centreline ATP and additional edge marker posts
- Undertake further investigation on feasible treatment options for this section of Hauraki Road.
- Install intersection treatment such as RIAWS at the intersections with Orchard East Road and Wharepoa Road West.

#### **2.15.2 Huirau Road**

Huirau Road is a sealed no exit rural road off Hauraki Road in Turua that is approximately 3726m long with a single side road, Gumtown Road.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years. Further investigation of the crashes shows two crashes occurred at the intersection with Hauraki Road with only one crash midblock.

The only crash on Huirau Road was a serious crash that occurred in 2012 as the result of a drunk driver losing control of their vehicle. The crashes at the intersection were the result of the actions of drivers on Hauraki Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	57.17 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Huirau Road would be the result of changes to other adjacent roads in the area to provide consistency to road users

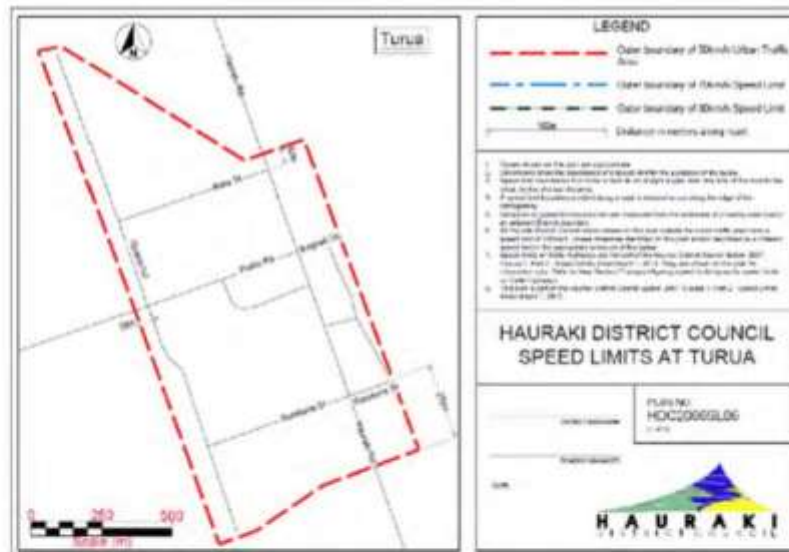
**2.16.3 Oparia Road**

Oparia Road is a mix of sealed and unsealed road that runs parallel to Hauraki Road in Turua. The road is 1329m long and has three side roads, Raratuna Street, Piako Road and Rata Street. The road is sealed to the south of Piako Road and unsealed to the north.

This road was identified for review as being of a peri-urban nature due to its location on the western edge of Turua and ability to subdivide the area.

There have been no reported crashes on this road in the last 10 years.

The posted speed limit on Oparia Road has been entered as 50km/hr into MegaMaps which is correct from the speed limit bylaw maps as shown below.



The speed limit signage in the area does not reflect the above and as a result the area has been operating with a 100km/hr speed limit.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.06 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

This error results in MegaMaps calculating an inappropriately low SAAS of 40km/hr in the largely undeveloped area.

**Recommendations**

- Change the speed limit to 80km/hr to reflect the rural nature of the area.

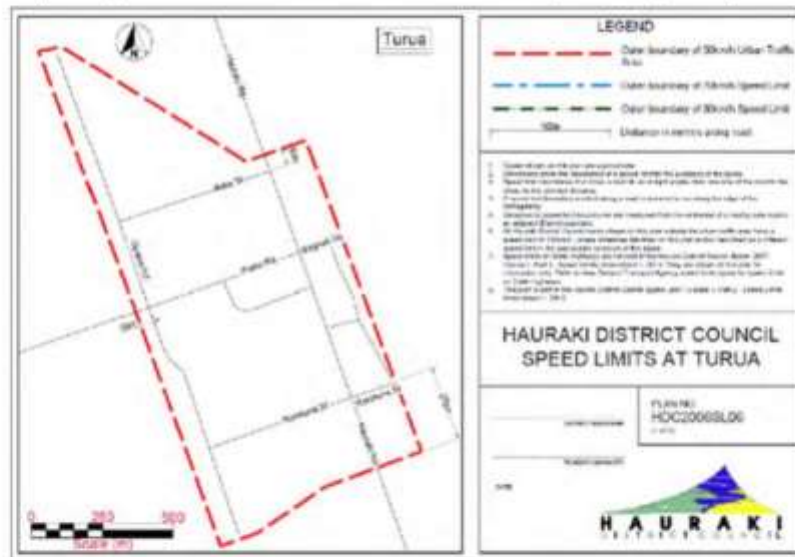
**2.15.4 Piako Road**

Piako Road is a sealed road that runs between Hauraki Road and Bush Road. The full length of the road is approximately 4701m long with the section under review between Hauraki Road and Oparia Road and 567m long. This section has two side roads, Raupoiti Street and Oparia Road.

This road was identified for review from a customer query regarding the appropriate placement of the speed limit signs.

There have been two reported crashes on this section of road in the last 10 years, both of the crashes occurred at the intersection with Hauraki Road.

The posted speed limit on this section is 50km/hr as shown in the speed limit bylaw map below.



The speed limit signage in the area does not reflect the actual development of the area and as a result compliance with the speed limit is low.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	49.62 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The recommended safe and appropriate speed from MegaMaps for this section of Piako Road is 50km/hr with the primary reason given as "Aligns with framework".

To enable better speed management of the area the speed limit on Piako Road should be changed to match the level of development and enable threshold treatments to be installed. A buffer zone could also be created to align with the speed limit on Oparia Road.

**Recommendations**

- Retain the 50km/hr speed limit to RP330.
- Change the speed limit to 80km/hr between RP 330 and RP 620.
- Install threshold treatments at both speed limit change locations.

**2.15.5 Raratuna Street**

Raratuna Street is a sealed road that runs between Oparia Road and Waihou Street with a mix of residential and rural properties in Turua. The road is 673m long, with the section of Oparia Road to RP250 rural on both sides of the road, RP250 to Hauraki Road has dwellings primarily on the southern side of the road, and the section from Hauraki Road to Waihou Street has the school on the southern side.

This road was identified for review as there is a childcare and school, Turua Primary, on this road and it has been the subject of a customer query regarding the excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

The posted speed limit for the full length of Raratuna Street has been entered as 50km/hr into MegaMaps which is correct from the speed limit bylaw maps.



The speed limit signage in the area does not reflect the above with the 100/50 signs located at RP 200.

This error results in MegaMaps calculating an inappropriately low SAAS of 40km/hr in the largely undeveloped area.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	30.2 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Turua Primary School on the southern side of the road a 30km/hr speed limit must be installed within the vicinity of the school. This will require the installation of

a threshold style treatments at the extent of the reduced speed limit. Due to the predominantly residential area, low traffic volumes it is recommended that a permanent 30km/hr speed limit be installed between Hauraki Road and Waihou Street. This lower speed limit will need to be consistent with that on Hauraki Road.

**Recommendations**

- Lower the speed limit to 30km/hr on Raratuna Street from Hauraki Road to Waihou Street.
- Change the speed limit to 80km/hr from Oparia Road to RP250 to reflect the rural nature of this section of the road.
- Install threshold style treatments at the change in speed limit locations.

Any changes to the speed limit on this road would require a similar change to Oparia Road to provide consistency to road users.

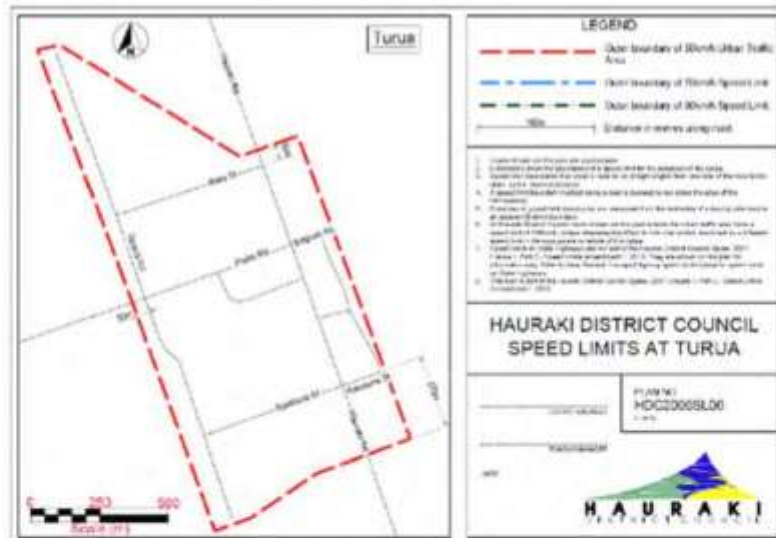
**2.15.6 Rata Street**

Rata Street is a mix of sealed and unsealed road that runs between Hauraki Road and Oparia Road in Turua. The road is 561m long and is sealed for the first 90m with the remainder unsealed.

This road was identified for review as being of a peri-urban nature.

There have been no reported crashes on this road in the last 10 years.

The posted speed limit on Rata Street has been entered as 50km/hr into MegaMaps which is correct from the speed limit bylaw maps as shown below.



This results in MegaMaps calculating an inappropriately low SAAS of 40km/hr in the largely undeveloped area:

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	25.84 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- Install an 80km/hr speed limit to reflect the rural nature of the area.
- Install speed signs.

**2.15.7 Raupoiti Street**

Raupoiti Street is a sealed residential street in Turua that runs between Piako Road and Matai Street and provides access to a number of residential properties and is approximately 119m long.

This road was identified for review as there is a childcare centre located at the Domain on the western side of the road.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	37.42 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.

**2.16 Waihi**

**2.16.1 Amaranth Street**

Amaranth Street is a sealed residential street in Waihi that runs between State Highway 2 and Silverton Road and provides access and connection into a wider residential neighbourhood. The full length of the road is 286m with a cross road intersection at Montrose Road.

This road was identified for review as there is a childcare centre located on the corner of Amaranth Street and Montrose Road.

There has been one non-injury crash reported which occurred in 2018 at the Amaranth Street / Montrose Road intersection when a driver on Amaranth Street failed to give way to a vehicle on Montrose Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	32.28 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

### Recommendations

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Amaranth Street would require a similar change to other roads in the area to provide consistency to road users.

### 2.16.2 Baber Street

Baber Street is a sealed residential street in Waihi that runs between State Highway 2 and Station Road and provides access and connection into a wider residential neighbourhood. The road is approximately 489m long with crossroad intersections at Kenny Street and Consols Street.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years. Further investigation of the crashes shows only one crash that was not at the State Highway 2 intersection. The treatment of the State Highway 2/Baber Street intersection is outside of the control of Hauraki District Council and will require discussions with Waka Kotahi.

The only crash on Barber Street was a serious crash that occurred at the intersection with Kenny Street in 2014 as the result of a motorcyclist approaching the intersection at speed and failing to give way to a through vehicle.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	29.62 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

### Recommendations

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Baber Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.

### 2.16.3 Bradford Street

Bradford Street is a sealed no exit residential street in Waihi that runs off Roberts Street and provides access and connection into a number of residential properties. The road is approximately 1156m long between Roberts Street and its end with a crossroad intersection at Victoria Street and side roads, Robin Street, Colesburg Lane and Grenadier Lane. The road has development primarily on only one side of the road.

This road was identified for review from a customer query regarding excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There has only been one crash report, which was in 2013 and the result of driver being distracted by their cellphone and losing control.

Safety and speed information from MegaMaps is on two section and shows the following.

#### Section 1 – Roberts Street to Victoria Street

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	34.45 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr



Section 2 – Victoria Street to end

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.17 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Bradford Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.

**2.16.4 Clarke Street**

Clarke Street is a sealed no exit residential street in Waihi that provides access and connection from State Highway 25 into a number of residential properties. The road is approximately 779m long with three side roads, Union Street, Baker Street and George Street. The road has development primarily on only one side of the road with Morgan Park on the northern side and access to the Ngatikoi Reserve.

This road was identified for review from a list of sites previously identified as potentially requiring speed management due to the high numbers of pedestrians and cyclists associated with the adjacent parks and cycle paths.

There have been two reported crashes in the last 10 years, both were non injury intersection crashes and occurred in 2011 and 2016.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	30.09 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Clarke Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.

**2.16.5 Consols Street**

Consols Street is a sealed residential street in Waihi that runs between State Highway 2 and Cornwall Street and provides access and connection into a wider residential neighbourhood. The total length of the road is approximately 1330m long while the section of road under review is between Baber Street and Victoria Street and is approximately 235m long.

This road was identified for review as there is a childcare centre located on the corner of Victoria Street and Consols Street.

There have been six crashes reported in the last 10 years all of which occurred at the Victoria Street / Consols Street intersection. All were intersection movements and resulted in one serious, one minor and four non-injury crashes. There have been no crashes since 2017.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	38.77 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Consols Street would require a similar change to other roads in the area to provide consistency to road users.

**2.16.6 Donnelly Street**

Donnelly Street is a sealed residential street in Waihi that runs between Gladstone Road and Smith Street that provides access to a small group of residential properties and a school. The road is approximately 234m long with one no exit side road, Kitchener Street.

This road was identified for review as there is a school, Waihi East, located on the southern side of the road.

There have been no crashes reported in the last 10 years on this road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.12 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Waihi East School on the southern side of the road a 30km/hr speed limit must be installed within the vicinity of the school. This will require the installation of a threshold style treatment at the extents of the speed limit. As the area is predominantly residential and likely high numbers of pedestrians and cyclists at the school even outside of school hours it is recommended that a permanent speed limit be installed rather than a variable speed limit. The presence of a childcare centre on the corner of Gladstone Road and Donnelly Street means that the extents of the speed reduction should include this intersection as well.

**Recommendations**

- Lower the speed limit to 30km/hr on Donnelly Street and on Gladstone Road for approximately 150m either side of the Donnelly Street intersection.
- Install school threshold style treatments at the change in speed limit locations

Any changes to the speed limit on this road will require a similar treatment to the side road of Kitchener Street.

Consideration should be given to implementing a 40km/hr speed limit in the area bounded by State Highway 25 and Mataura Road if supported by the local community. Physical works will be required to support the lower speed limit on Gladstone Road and Smith Street.

**2.16.7 Galbraith Street**

Galbraith Street is a sealed residential street in Waihi that runs between Kenny Street and Cornwall Street and provides access and connection into a wider residential neighbourhood. The total length of the road is approximately 721m long while the section of road under review is between Margaret Street and Wrigley Street and is approximately 150m long.

This road was identified for review as there is a childcare centre located on the southern side of the road in the section between Margaret Street and Wrigley Street.

There have been five crashes reported in the last 10 years, with one at the Margaret Street intersection and four at the Wrigley Street intersection. All were intersection crossing movements and resulted in three minor and two non-injury crashes. There have been no reported crashes since 2017.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.17 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- Install mini roundabouts at the intersection with Wrigley Street
- Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.

Any changes to the speed limit on this section of road would require a similar change to the remaining length of the road and other roads in the area to provide consistency to road users.

**2.16.8 Gilmour Street**

Gilmour Street is a sealed residential street in Waihi that runs between Seddon Street and State Highway 2 and provides access into a number of residential properties. The total length of the road is approximately 848m long while the section of road under review is between State Highway 25 and State Highway 2 and is approximately 669m long. This section of the road has four side roads, Johnston Street, Union Street, Wilson Street and George Street.

This road was identified for review as potentially requiring speed management due to the high numbers of pedestrians and cyclists associated with the adjacent park. The street currently has a heavy vehicle ban in place between the hours of 10pm and 6am.

There have been twenty-five reported crashes in the last 10 years, however further investigation of the crashes shows only five crashes were not at the intersections with State Highway. The treatment of the State Highway 25/Gilmour Street and State Highway 2/Gilmour Street intersections is outside of the control of Hauraki District Council and will require discussions with Waka Kotahi.

There were four crashes within the review section, with one involving a parked car and the other three were turning/intersection crashes, resulting in one minor and three non-injuries. Speed was not identified as a factor in any of the crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	42.97 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

The current mean travel speed is higher than the recognised Safe and Appropriate Speed (SAAS) of 40km/hr which will require significant investment in traffic calming measures to lower the mean travel speed. Any treatment on Gilmour Street will require similar works to be undertaken on Clarke Street, Mueller Street and Haszard Street to avoid the issue transferring to an adjacent road.

### Recommendations

- Install a mini roundabout at the intersection with Johnston Street
- Consider the installation of a raised safety platform in the vicinity of the access to the Gilmour Reserve to slow vehicles and provide a safe crossing point for pedestrians.
- Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.

Changes to the speed limit on Gilmour Street will require changes to other adjacent roads in the area to provide consistency to road users.

Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Gilmour Street to 40km/hr.

### 2.16.9 Gladstone Road

Gladstone Road is a sealed residential street in Waihi that runs between Barry Road and State Highway 25 and provides access to a number of residential properties that back onto State Highway 25. The total length of the road is approximately 1000m long while the section of road under review is between Mataura Road and Somerset Street and is approximately 455m long with a side road of Donnelly Street.

This road was identified for review as a childcare centre is located south of the intersection with Donnelly Street.

There have been four crashes reported in the last 10 years on this road with only two in the section under review. Both crashes involved vehicles failing to give way at the intersection of Mataura Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.12 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Waihi East School on Donnelly Street a 30km/hr speed limit must be installed within the vicinity of the school. The presence of a childcare centre on the corner of Gladstone Road and Donnelly Street means that the extents of the speed reduction should include this intersection as well.

### Recommendations

- Lower the speed limit to 30km/hr on Gladstone Road for approximately 150m either side of the Donnelly Street intersection.
- Install school threshold style treatments at the change in speed limit locations.

Consideration should be given to implementing a 40km/hr speed limit in the area bounded by State Highway 25 and Mataura Road if supported by the local community. Physical works will be required to support the lower speed limit on Gladstone Road and Smith Street.

### 2.16.10 Heard Road

Heard Road is a no exit sealed rural road off Trig Road North in Waihi. The road is approximately 2278m long and 6.0m wide with two no exit side roads, Poets Corner Road and Orokawa Heights.

This road was identified for review as being of a peri-urban nature due to the lot sizes and from a customer query regarding the excessive vehicle speeds. As the road is a no exit this indicates that compliance, not the speed limit is the issue for this road.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	55.32 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

**Recommendations**

- Lower the speed limit to 80km/hr in keeping with increased level of development and narrow carriageway.

Any changes to the speed limit on Heard Road would require a similar reduction in speed limit to the side roads of Poets Corner Road and Orokawa Heights and to others in the area to provide consistency to road users.

**2.16.11 Heath Road**

Heath Road is a sealed no exit rural road off State Highway 2 in Waihi. The road is approximately 5.8m wide and 450m long.

This road was identified for review as being of a peri-urban nature.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

Due to the length of this road and its higher density of dwellings, it can be considered in isolation to the adjacent road, State Highway 2.

**Recommendations**

- Lower the speed limit to 80km/hr in keeping with increased level of development and narrow carriageway.

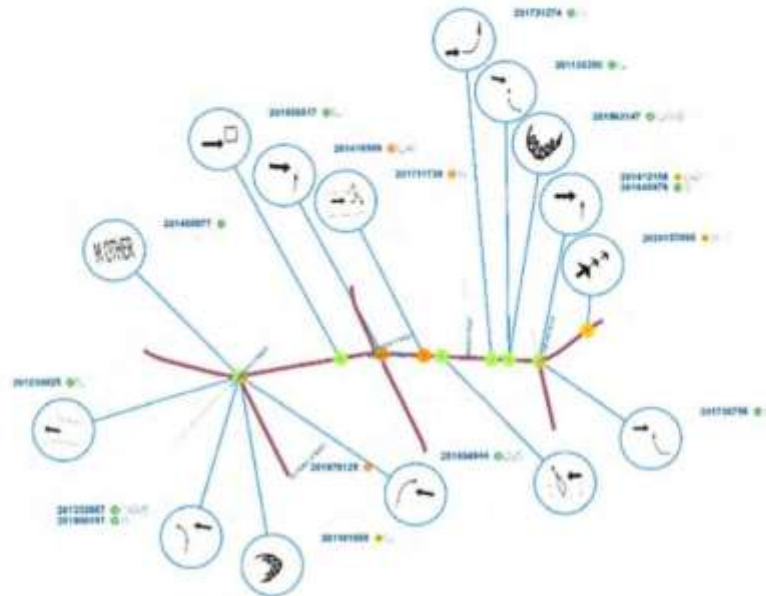
Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.

**2.16.12 Kenny Street**

Kenny Street is a sealed road in Waihi that runs between State Highway 2 providing an alternative route to the State Highway and access into a wider residential neighbourhood to the west and commercial/industrial premises to the east. The road is approximately 839m long with five side roads of Galbraith Street, Victoria Street, Barber Street, Devon Street and Silverton Road.

This street was identified for review from a customer query regarding the speed of existing vehicles as well as having two or more fatal and/or serious crashes in the last 10 years.

The customer query indicates that compliance, not the speed limit is the issue for this road. Two of the three serious crashes occurred at intersections, while the third occurred to the west of Devon Street.



The crash at Kenny Street involved a vehicle speeding on Kenny Street hitting a vehicle pulling out of Victoria Street while the Barber Street crash resulted from a motorcyclist approaching the intersection on Baber Street at speed and failing to give way to a through vehicle. The third crash involved a truck reversing off a site being hit by a through vehicle when a driver had sunstrike and failed to observe the truck.

Safety and speed information from MegaMaps is on two section and shows the following.

*Section 1 – State Highway 2 to Baber Street*

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	47.84 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

*Section 2 – Baber Street to State Highway 2*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	49.05 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The recommended safe and appropriate speed from MegaMaps for Kenny Street is 50km/hr with the primary reason given as "Aligns with framework".

There are a high number of vehicles that use this route to avoid the centre of Waihi when traveling to and from Tauranga. Due to the high number of residential accesses to the west and commercial activities to the east resulting in high turning movements the high volume of through traffic is considered an inappropriate / incompatible use of the road. Installation of features to

slow traffic speeds to reduce the risk to turning vehicles will also assist in discouraging through traffic.

**Recommendations**

- Install a raised safety platform to the south of State Highway 2 to support the cycle path and manage vehicle speeds.

Consider installing additional raised safety platforms in conjunction with pedestrian desire lines.

**2.16.13 Kensington Road**

Kensington Road is a sealed no exit residential street in Waihi that runs off State Highway 2 and provides access and connection to a large residential area and a school. The full length of the road is 1055m long while the section of road under review is between Rata Street and Hobson Street and is approximately 328m long.

This road was identified for review as there is a school, Waihi College, located on the western side of the road between Rata Street and the end of the road.

There have been one serious and two non-injury crashes reported in the last 10 years. The serious crash involved a drugged driver who was lost and drove off the road into a tree in 2016. There have been no crashes since 2017.

Safety and speed information from MegaMaps is in two section and shows the following.

*Section 1 – Rata Street to Morseby Avenue*

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.57 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

*Section 2 – Morseby Avenue to End*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Waihi College on the western side of the road a 30km/hr speed limit must be installed within the vicinity of the school. This will require the installation of a threshold style treatment at the extents of the speed limit. Due to the low traffic volumes, it is recommended that a lower permanent speed limit be applied in this area.

As Waihi College backs onto Rata Street the 40km/hr speed limit will need to be extended to cover this frontage.

**Recommendations**

- Lower the speed limit to 30km/hr within the vicinity of the school frontage and on Rata Street.
- Install school threshold style treatments at the change in speed limit locations.

Consideration should be given to implementing a 40km/hr speed limit across the wider residential area if supported by the local community. However due to the straight alignment of Kensington Road physical works will be required outside of the vicinity of the school to support the existing or lower speed limit.

#### 2.16.14 Lawrence Road

Lawrence Road is a no exit residential street in Waihi off Cornwall Street that provides access to a number of residential properties. The road is approximately 714m long and has development primarily on only one side of the road with the railway line on the northern side of the road.

This road was identified for review from a customer query regarding excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road. Concern was raised about the street requiring speed management due to the high numbers of cyclists associated with the Hauraki Rail Trail which uses Lawrence Road to access between the off-road section of the trail and the railway station.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.17 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Due to the high number of cyclists using this road is used as part of the Hauraki Rail Trail, consideration should be given to using features such as sharrows to highlight the presence of cyclists in the area.

#### Recommendations

- Considering installing sharrows and/or other cycle friendly features on the road.

Any changes to the speed limit on Lawrence Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.

#### 2.16.15 Mataura Road

Mataura Road is a sealed no exit residential street in Waihi that runs off State Highway 25 and provides access and connection into a wider residential neighbourhood. The full length of the road is 924m while the section of road under review is between Gladstone Road and Banks Road and is approximately 100m long.

This road was identified for review as there is a childcare centre located within the property at number 8 Mataura Road.

There have been three crashes reported in the last 10 years on this road with only two in the section under review. Both crashes involved vehicles failing to give way at the intersection of Mataura Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low - Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.12 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

#### Recommendations

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.



### 2.16.16 Moresby Avenue

Moresby Avenue is a sealed residential street in Waihi that runs from State Highway 2 to Kensington Road and provides access and connection to a large residential area and a school. The full length of the road is 969m while the section under review is between Seddon Street (State Highway 2) and Savage Road and is approximately 510m long.

This road was identified for review as there is a school, Waihi Central, located on the western side of the road and as having had two or more fatal and/or serious crashes in the last 10 years.

Further investigation of the crash data showed that the serious crashes were at the intersection with State Highway 2. The treatment of the State Highway 2/Moresby Avenue intersection is outside of the control of Hauraki District Council and will require discussions with Waka Kotahi. There were two minor and four non-injury crashes reported in this section of Moresby Avenue in the last 10 years. There are no commonalities between the crashes indicating that they are random crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	46.51 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Waihi Central School on the western side of the road a 30km/hr speed limit must be installed within the vicinity of the school. It is recommended that a lower permanent speed limit be applied in this area to provide certainty to drivers and avoid confusion. This will require the installation of a threshold style treatment at the extents of the speed limit and due to the already high mean travel speed in this area is likely to require the installation of supporting speed management features such as raised platforms.

The northern end of Moresby Avenue will also be incorporated within the school zone for Waihi College.

#### *Recommendations*

- Lower the speed limit to 30km/hr within the vicinity of the school frontage.
- Install threshold style treatments at the change in speed limit locations.
- Install speed management features in the vicinity of the school

### 2.16.17 Mueller Street

Mueller Street is a sealed residential street in Waihi that runs between Seddon Street and State Highway 2 and provides connection and access into a number of residential properties. The total length of the road is approximately 695m long while the section of road under review is between State Highway 25 and State Highway 2 and is approximately 527m long. This section of the road has three side roads, Johnston Street, Union Street, and Wilson Street all of which are cross road intersections.

This road was identified for review as there is a school, St Joseph's, located on the western side of the road between Johnston Street and Union Street. The street currently has a heavy vehicle ban in place to stop the road being used as a shortcut.

There has been one reported crash in the last 10 years, which occurred at the intersection with State Highway 2.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	32.88 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Any treatment on Mueller Street will require similar works to be undertaken on Gilmour Street, Clarke Street, and Haszard Street to avoid the issue transferring to an adjacent road.

As a result of the presence of St Joseph's School on the western side of the road a 30km/hr speed limit must be installed within the vicinity of the school. It is recommended that a lower permanent speed limit be applied in this area to provide certainty to drivers and avoid confusion. This will require the installation of a threshold style treatment at the extents of the speed limit.

To improve safety for pedestrians and assist with speed management in the area consideration should be given to replacing the existing crossing point with a patrolled zebra crossing on a raised platform.

**Recommendations**

- Lower the speed limit to 30km/hr within the vicinity of the school frontage.
- Install threshold style treatments at the change in speed limit locations.
- Consider installing mini roundabouts at the intersections with Johnston Street and Union Street
- Consider the installation of a raised safety platform in the vicinity of the existing crossing location outside the school to slow vehicles and provide a safe crossing point for pedestrians.

Any changes to the speed limit on Mueller Steet beyond the school frontage will require changes to other adjacent roads in the area to provide consistency to road users.

**2.16.18 Ngatitangata Road**

Ngatitangata Road is an unsealed rural road off Golden Valley Road in Waihi which is 2649m long.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years with three crashes occurring at the intersection with Golden Valley Road all of which were non-injury.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	37 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit or works proposed.

Any changes to the speed limit on this road would need to be considered as part of a wider strategy for rural roads.

**2.16.19 Orokawa Heights Road**

Orokawa Heights is a sealed no exit rural road off Heard Road in Waihi. The road is approximately 183m long.

This road was identified for review as being of a peri-urban nature.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	27.4 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The posted speed limit on Orokawa Heights Road has been entered as 50km/hr into MegaMaps which is incorrect from the speed limit bylaw maps.

**Recommendations**

- Lower the speed limit to 80km/hr in keeping with adjacent road (Heard Road).
- Install speed signs.

Any changes to the speed limit on Orokawa Heights Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.

**2.16.20 Poets Corner Road**

Poets Corner Road is a sealed no exit rural road off Heard Road in Waihi that is approximately 294m long.

This road was identified for review as being of a peri-urban nature.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The posted speed limit on Poets Corner Road has been entered as 50km/hr into MegaMaps which is incorrect from the speed limit bylaw maps.

**Recommendations**

- Lower the speed limit to 80km/hr in keeping with adjacent road (Heard Road).
- Install speed signs.

Any changes to the speed limit on Poets Corner Road would be the result of changes to Heard Road to provide consistency to road users.

**2.16.21 Reservoir Road**

Reservoir Road is a sealed no exit residential street in Waihi that runs off Walmsley Road and provides access to a residential and rural neighbourhood with the two side roads: Wharry Road and Kent Crescent. The full length of the road is 1036m with the section under review from Kent Crescent to the end 490m long.

This street was identified for review from a customer query regarding the excessive vehicle speeds. This indicates that compliance, not the speed limit is the issue for this road.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	31.46 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

The section of Reservoir Road from Walmsley Road to Kent Crescent has a higher level of development and a 50km/hr speed limit.

**Recommendations**

- Lower the speed limit to 60km/hr to reflect the rural residential nature of the area.
- Install speed signs.

The speed limit on Wharry Road should also be lowered to 50km/hr to be consistent with the adjacent section of Reservoir Road.

**2.16.22 Russell Street**

Russell Street is a sealed residential street in Waihi that runs between Kensington Road and Walker Street and provides access to a number of residential properties. The road is 418m long and has one side road, Pickett Place.

This road was identified for review as there is a childcare centre located at Number 4 Russell Street which is on the southern side of the road.

There have been three non-injury crashes reported on this road in the last 10 years. Two were loss of control and the third involved a vehicle reversing out of a driveway and hitting a parked car.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.57 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on this road would be as a result of changes to other roads in the area to provide consistency to road users.

**2.16.23 Seddon Street**

Seddon Street is a sealed street in Waihi that runs between State Highway 2 (Morseby Avenue) to Gilmour Street and provides access to primarily commercial properties. The road is divided into two sections,

- 1) Morseby Avenue to Mueller Street is 265m long and median divided,
- 2) Mueller Street to Gilmour Street is 300m long with no median.

Section 1 is the section of road under review.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Land use is Commercial Strip Shopping".



There have been nine reported crashes on this section of the road in the last 10 years, one serious, two minor and six non-injury. Four of crashes involved manoeuvring vehicles, three of the crashes were loss of control and two involved parked vehicles.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	21.83 km/hr	<i>Safe and Appropriate Speed</i>	30 km/hr

**Recommendations**

- Consider installing a 30km/hr speed limit for the full length of Seddon Street.
- Install threshold treatments.

Any changes to the speed limit on this road will require a similar treatment to the side roads of Haszard Street, Walker Street and Mueller Avenue.

**2.16.24 Somerset Street**

Somerset Street is a sealed residential street in Waihi that runs between State Highway 2 and Smith Street and provides access and connection into a wider residential neighbourhood. The full length of the road is 292m while the section of road under review is between State Highway 2 and Gladstone Road and is approximately 100m long.

This road was identified for review as there is a childcare centre located within the property on the corner of State Highway 2 and Somerset Street. Access to the site is from Somerset Street.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low - Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.12 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on this road would be the result of change to other roads in the area to provide consistency to road users.

**2.16.25 Thorn Road**

Thorn Road is an unsealed no exit rural road off Waitete Road in Waihi that is 1339m long.

Only the last portion of this road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years. Any changes to this road would need to be consistent with the treatment of Waitete Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	22.64 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

As both sections of the road are unsealed it would be inappropriate to lower the speed limit on one section only as this would result in drivers traveling from 50km/hr into 100km/hr before being required to slow to 60km/hr for the last 665m of the road.

#### **Recommendations**

- Lower speed limit to 60km/hr for the full length of Thorn Road in conjunction with Waitete Road Nth.
- Install speed signs

Following the Council hearing on the 13th July 2022 it was resolved to lower the speed limit on Thorn Road from 100km/hr to 50km/hr.

#### **2.16.26 Toomey Street**

Toomey Street is a sealed residential street in Waihi that runs between Kensington Road and Waitete Road and provides connection and access into a wider residential neighbourhood. The road is approximately 360m long with three midblock intersections providing access to other residential streets and the aged care facility, Waihi Lifecare.

This road was identified for review as there is an aged care facility located on the southern side of the road.

There has been one reported non-injury crash on this road in the last 10 years which occurred in 2018 and involved a driver losing control at the intersection with Kensington Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.57 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Due to the function of the road in the roading network as a connector type road, vehicles speeds are likely to be an issue. The lack of kerb and channel and large grassed berms creates a wide open corridor for drivers which is contrary to the desired slow speed environment.

Due to drainage constraints in the area further investigation is required to determine the feasible options for improving the urban environment of the street.

**Recommendations**

- Investigate options to improve the urban environment of the street.

Further physical works will need to consider the function of this road within the roading network and support the current or a lower speed limit of 40km/hr if desired at a later date.

Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.

**2.16.27 Victoria Street**

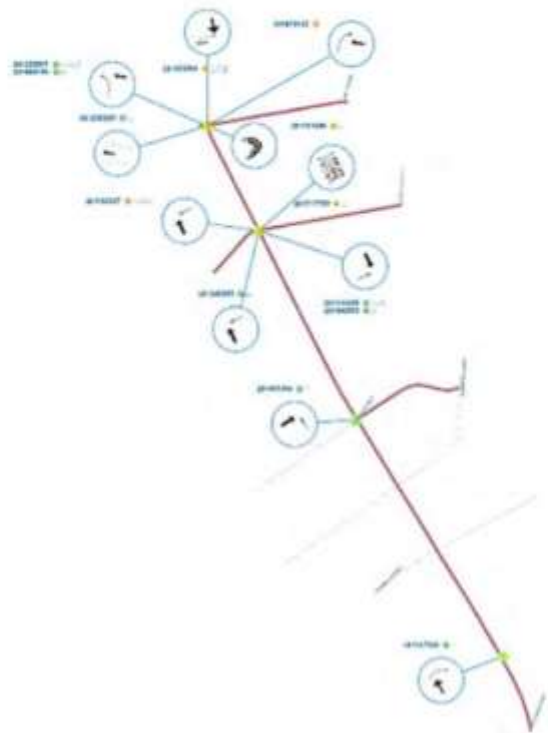
Victoria Street is a sealed residential street in Waihi that runs between Kenny Road to Frankton Road and provides connection to and access into a wider residential neighbourhood to the west and commercial/industrial premises to the east. The road is approximately 1120m long.

This street was identified for review from a customer query regarding the speed of existing vehicles as well as having two or more fatal and/or serious crashes in the last 10 years.

The customer query indicates that compliance, not the speed limit is the issue for this road.

The two serious crashes both occurred at intersections. The crash at Consols Street involved a driver failing to observe a motorcycle on the through road and pulling out in front of them. The crash at Kenny Street involved a vehicle speeding on Kenny Street hitting a vehicle pulling out of Victoria Street. Neither of these crashes involved speed on Victoria Street.





Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	53.57 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The lack of kerb and channel and large grassed berms creates a wide open corridor for drivers which is contrary to the desired urban speed environment. Due to drainage constraints in the area further investigation is required to determine the feasible options for improving the urban environment of the street.

The recommended safe and appropriate speed from MegaMaps for Victoria Street is 50km/hr with the primary reason given as "Aligns with framework".

#### **Recommendations**

- Investigate options to improve the urban environment of the street.
- Install repeater speed limit signs on Victoria Street to remind drivers of the speed limit.
- Install threshold treatment at the change of speed limit at Frankton Road.

### 2.16.28 Waitete Road

Waitete Road is a sealed residential street in Waihi that runs between Orchard Road and Thorn Road and provides connection to and access into a wider residential neighbourhood. The road is 855m long and has eight side roads: Orchard Road, Silverstream Place, Toomey Street, Colebrook Road, Albert Street, Kimberley Road, Regent Street and Rata Street.

This street was identified for review from a customer query regarding the speed of existing vehicles. This indicates that compliance, not the speed limit is the issue for this road.

There has been one reported crash on this road in the last 10 years. The crash was non-injury and occurred in 2016.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.57 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

#### Recommendations

- Install edge treatments for the full length to improve the urban environment of the street.
- Install slow street treatments required at multiple locations. Due to the straight alignment of the road consider the use of raised safety platforms or central islands to manage vehicle speeds and support use by pedestrians and cyclists.

Any physical works will need to consider the function of this road within the roading network and support the current or a lower speed limit of 40km/hr if desired at a later date.

### 2.16.29 Waitete Road North

Waitete Road North is an unsealed no exit rural road off Thorn Road in Waihi that is 631m long.

This road in conjunction with Thorn Road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years. Any changes to this road would need to be consistent with the treatment of Thorn Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	22.64 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

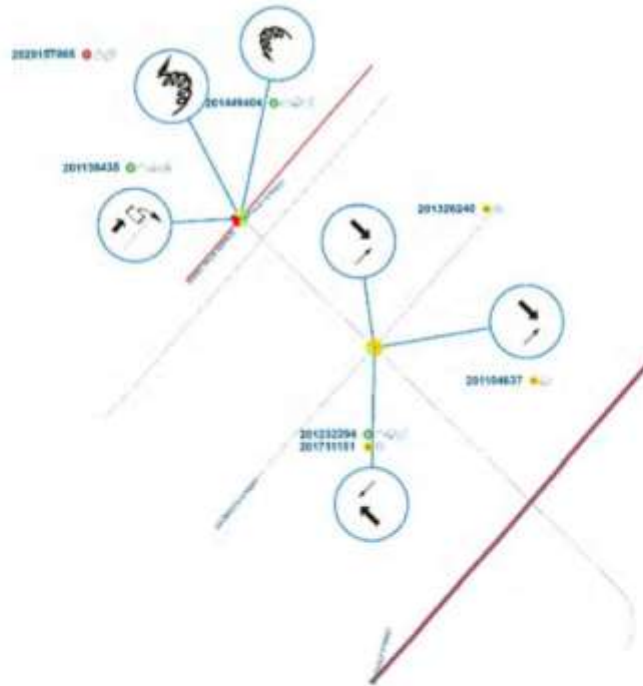
- Lower speed limit to 60km/hr for the full length of Waitete Road North in conjunction with Thorn Road.
- Instal speed limit signs.

Following the Council hearing on the 13th July 2022 it was resolved to lower the speed limit on Waitete Road North from 100km/hr to 50km/hr.

**2.16.30 Wrigley Street**

Wrigley Street is a sealed no exit residential street in Waihi that runs off State Highway 2 and provides connection and access into a wider residential neighbourhood and ends at the Waihi Railway Station. The full length of the road is approximately 490m and has three cross road intersections with Pary Palm Avenue Slip Road, Galbraith Street and Consols Street.

This street was identified for review as two or more fatal and/or serious crashes in the last 10 years and the high number of cyclists. The road provides access to the Waihi Railway Station and the Hauraki Rail Trail.



Further investigation of the crashes shows that the fatal crash was at the State Highway 2 intersection. The treatment of the State Highway 2/Wrigley Street intersection is outside of the control of Hauraki District Council and will require discussions with Waka Kotahi.

The crashes on Wrigley Street all occurred at the intersection with Galbraith Street and resulted in three minor and one non-injury crash. All crashes were the result of drivers failing to give way to a through vehicle.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	31.17 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Due to the cross road nature of all of the intersections and the higher numbers of cyclists likely to be using the road intersection treatments should be installed to manage traffic speed and improve network operations.

**Recommendations**

- Install mini roundabouts at the intersection with Galbraith Street and Consols Street.
- Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.

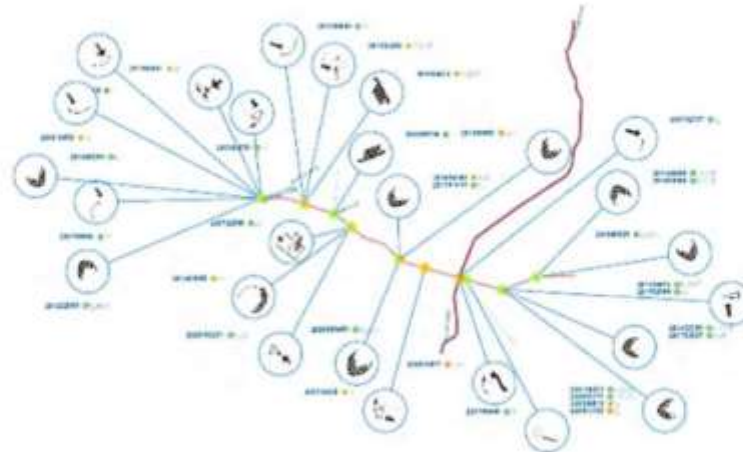
Any changes to the speed limit on this road would require a similar change to other roads in the area to provide consistency to road users.

**2.17 Waihi Beach**

**2.17.1 Waihi Beach Road**

Waihi Beach Road is a sealed rural road in Waihi that provides connection from State Highway 2 to the settlement of Waihi Beach and is within two local authority boundaries. The section of road within the Hauraki District boundary is approximately 4320m long.

This road was identified for review from MegaMaps as a Second 10% Interventions – engineer up as well as having two or more fatal and/or serious crashes in the last 10 years.



The majority of crashes are loss of control which indicates that edgeline treatments and the removal or protection of hazards such as large shelterbelt trees within close proximity of the road would be beneficial.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	78.21 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The recommended safe and appropriate speed from MegaMaps for Waihi Beach Road is 80/hr with the primary reason given for the categorisation of Engineer up as "Infrastructure Risk Rating".

The introduction of an 80km/hr speed limit on Waihi Beach Road would also require changes on Kingsley Road and Fisher Road which are no exit side roads off Waihi Beach Road. The speed limit on Trig Road North and South would also need to be reviewed to ensure consistency of treatment across the area.

#### **Recommendations**

- Lower speed limit to 80km/hr for the full length of Waihi Beach Road and Kingsley Road and Fisher Road.
- Install threshold treatment at change in speed limit locations and install repeater signs as required.
- Review the speed limit on Trig Road North and South for consistency and install signage as required.
- Install ATP on edgelines along the route.

Any physical works and/or changes to speed limit will need to be coordinated with Western Bay of Plenty District Council to ensure consistency along the route.

## 2.18 Waikino

### 2.18.1 Abbott Road

Abbott Road is a sealed residential street in Waikino that runs between Old Waitekauri Road and Princes Street and provides access to Waikino School and a small number of residential properties. The full length of the road is 410m and it is less than 5.0m wide with no road markings.

This road was identified for review as the Waikino school is located on the western side of the road.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	39.3 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

As a result of the presence of Waikino School on the western side of the road a 30km/hr speed limit should be installed within the vicinity of the school. Due to the predominantly residential area, narrow roads and low traffic volumes it is recommended that the school be included in a permanent 40km/hr speed limit area rather than install an isolated section of reduced speed limit. Threshold style treatments at the extent of the reduced speed limit will need to be installed.

#### *Recommendations*

- Lower the speed limit to 40km/hr on the surrounding network including Abbott Road, Queen Street, Poland Street, and sections of Princes Street and Old Waitekauri Road.
- Install threshold style treatments at the change in speed limit locations on Old Waitekauri Road.
- Install additional school signage on Abbots Road in the vicinity of Waikino School.

*Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Abbott Road to 30km/hr.*

### 2.18.2 Farrelly Road

Farrelly Road is a narrow unsealed no exit rural road off Old Waitekauri Road in Waikino that is approximately 1126m long.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

- No change to speed limit proposed.

Any changes to the speed limit on Farrelly Road would need to be considered as part of a wider strategy for unsealed rural roads.

**2.18.3 Larsen Road**

Larsen Road is a sealed no exit rural road that off Old Waitekauri Road, Waikino that is approximately 184m long.

This road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining.



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to other similar type roads.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

**Recommendations**

- Lower the speed limit to 40km/hr in keeping with the proposed changes to Old Waitekauri Road.

Any changes to the speed limit on Larsen Road need to be consistent with changes to Old Waitekauri Road.

**2.18.4 Old Waitekauri Road**

Old Waitekauri Road is a sealed road in Waikino that runs between State Highway 2 and Waitekauri Road and provides access and connection into a number of residential and rural properties. The full length of the road is approximately 1908m long with the section under review between State Highway 2 and Victoria Street and 940m long. This section has four side roads: Banks Road, Abbott Road, Poland Street and Victoria Street.

This road was identified for review from a list of sites previously identified as potentially requiring speed management due to the narrow road and poor alignment with limited forward sight distance.

There have been three reported crashes in the last 10 years in the section of road under review. Two were loss of control and one was an intersection crash at State Highway 2.

Safety and speed information from MegaMaps shows the following.



<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	39.30 km/hr	<i>Safe and Appropriate Speed</i>	40 km/hr

Due to the constrained topography of the section of road between State Highway 2 and Larsen Road consideration should be given to reducing the speed limit to 40km/hr for the township of Waikino. This will also support the lower speed limit in the vicinity of Waikino School.

**Recommendations**

- Lower the speed limit to 40km/hr between State Highway 2 and Larsen Road.
- Install threshold style treatments at the change in speed limit locations

Any changes to the speed limit on this road will result in the need for the speed limit to be reduced on Banks Road, Abbott Road, Poland Street, Victoria Street, Larsen Road, Queen Street, Princes Street, Wood, Melody Lane, Penny Lane, Seddon Street, Edward Street, Cadman Street, Bush Street and a section of Waitekauri Road.

## 2.19 Waitakaruru

### 2.19.1 Canal West Road

Canal West Road is a sealed rural road that runs between State Highway 25 and State Highway 2 in Waitakaruru. The full length of the road is 7209m and the section of road under review is from State Highway 25 for a distance of approximately 270m.

This road was identified for review as being of a peri-urban nature and as having a school, Waitakaruru, located at the intersection with State Highway 25.

There have been four reported crashes on this section of the road in the last 10 years. All crashes have occurred at or within 50m of the intersection with State Highway 25.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	70 km/hr
<i>Current mean travel speed</i>	57 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

The safe and appropriate speed for this road is 80km/hr which is higher than the existing speed limit. There is no desire to increase the speed limit on Canal West Road.

As a result of the presence of Waitakaruru School on the corner of State Highway 25 and Canal West Road a 60km/hr speed limit must be installed on both roads within the vicinity of the school. This will require the installation of a threshold style treatments at the ends of the reduced speed limit area and coordination with Waka Kotahi for the installation of the speed reduction on State Highway 25. Due to the low number of movements likely outside of school hours and coordination with the likely treatment on State Highway 25 it is recommended that a variable speed limit be installed rather than a permanent speed limit.

**Recommendations**

- Apply a variable speed limit of 60km/hr within the vicinity of Waitakaruru School.
- Install variable sign and threshold style treatment at the change in speed limit point.

Any further changes to the speed limit on this road needs to be considered in conjunction with the treatment of State Highway 25 and the rest of Waitakaruru for consistency.

### 2.19.2 Penrhys Close

Penrhys Close is a sealed no exit road off Back Miranda Road in Waitakaruru. The road is approximately 184m long.

This road was identified for review as being of a peri-urban nature.

There have been no reported crashes on this road in the last 10 years.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

Due to the very short length of road the speed limit should be the same as the adjacent section of road to provide consistency to drivers.

#### *Recommendations*

- No change to speed limit proposed. Changes will be driven by other roads.

Any changes to the speed limit on Penrhys Close would be the result of changes to Back Miranda Road to provide consistency to road users.

## 2.20 Waitawheta

### 2.20.1 Ford Road

Ford Road is a sealed rural road that runs between State Highway 2 and Old Tauranga Road in Waitawheta. The road is approximately 3123m long and 5.4m wide.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years and as being of a peri-urban nature.

There have been two serious crashes reported in the last 10 years. There were no commonalities between the two crashes with one involving a pedestrian wearing dark coloured clothing being hit at night and the second, a learner motorcyclist losing control of their vehicle and crashed into the drain with a pillion passenger in damp conditions.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	59.72 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

#### *Recommendations*

- No change to speed limit proposed. Changes will be driven by other roads.

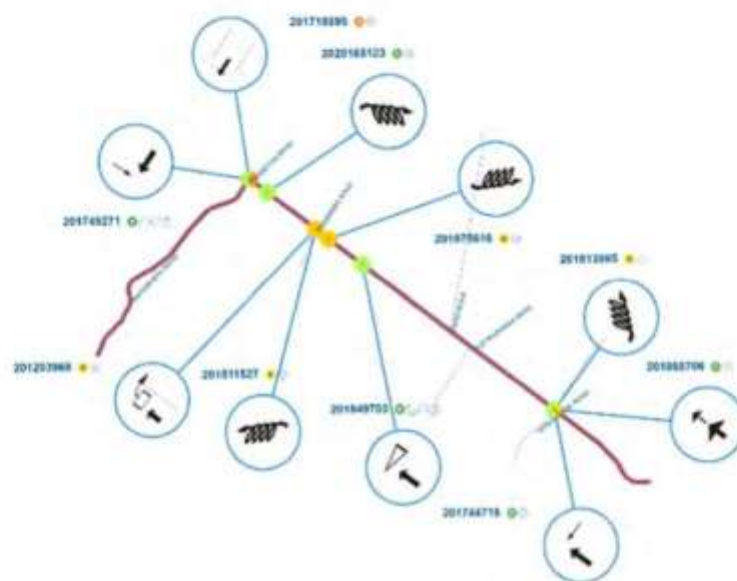
Any changes to the speed limit on Ford Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.

### 2.20.2 Old Tauranga Road

Old Tauranga Road is a sealed rural road that runs between Waitawheta Road and State Highway 2 and is part of an alternative route for vehicles traveling between Paeroa and Tauranga and avoids Waihi. The route is approximately 6275m long and has three side roads: Pukerewa Road, Ford Road and Woodlands Road.

This road was identified for review from community concerns.

There have been ten reported crashes on this road in the last 10 years with eight of the crashes occurring the last five years (2016-2020) resulting in one serious, four minor and five non-injuries.



Overall, the Collective Risk for the road is Low medium, while the Personal Risk is Medium.

There are a range of crash types and contributing factors with two of the loss of control crashes the result of drivers avoiding approaching vehicles in their lane. The majority of the crashes occurred in bright and dry conditions with only one crash occurring at night in wet conditions.

The predominance of crashes involving two vehicles or as the result of drivers avoiding other vehicles indicates that poor decision making is a common factor in these crashes.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	90.86 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

Due to the high existing mean travel speed of 90.86km/hr and the straight alignment of the road any attempt to lower the speed limit is likely to result in poor compliance creating a larger differential in vehicle speeds and increased risk to users.

Further investigation is required to determine what works can be feasibility undertaken to assist with speed management. In the short term the installation of edgelines and ATP would assist with managing traffic and vehicle speeds.

#### **Recommendations**

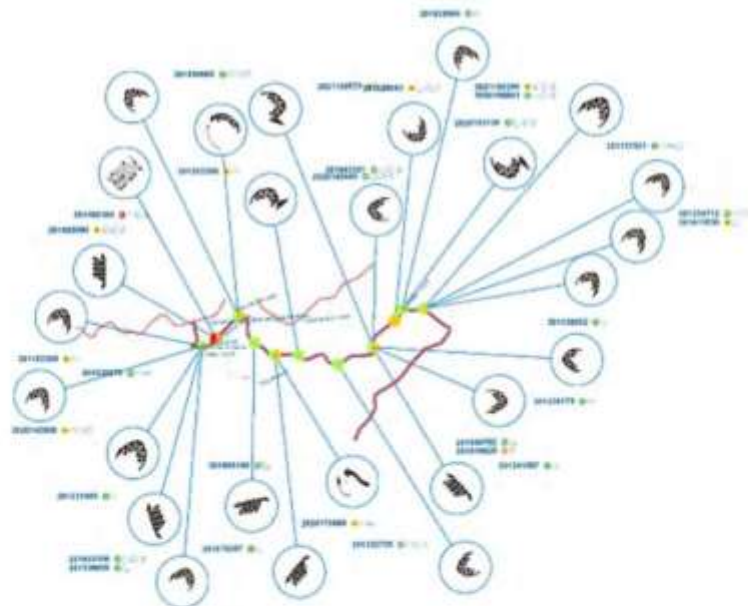
- Lower the speed limit to 80km/hr.
- Install edgelines with or without ATP and centreline ATP.
- Undertake further investigation for feasible improvement works including RIAWS at Woodlands Road intersection.

#### **2.20.3 Pukekauri Road**

Pukekauri Road is a sealed rural road that loops between Waitawheta Road is part of an alternative route for vehicles traveling between Paeroa and Tauranga and avoids Waihi. The route is approximately 6725m long.

This road was identified for review as having two or more fatal and/or serious crashes in the last 10 years.

There have been thirty reported crashes on this road in the last 10 years. One fatal, one serious, seven minor and twenty-one non-injury crashes. The majority of crashes have been loss of control (27), with one overtaking, one intersection and one crash involving a pedestrian also reported.



Overall, the Collective Risk for the road is Low medium, while the Personal Risk is High. The fatal and serious crashes occurred in 2014 and 2015 respectively.

The majority of the crashes occurred in overcast or dark conditions which would indicate that the night-time delineation is insufficient. Weather was not a significant contributor with 50% of crashes occurring in wet conditions. The crashes are spread along the route, however they predominantly occur on curves.

In response to concerns raised regarding safety in the section from Waitawheta Road to RP 1925 a study was commissioned by HDC which developed a number of recommendations for treatment of this area to provide better route consistency.

The predominance of loss of control crashes indicates that edgeline and curve warning treatments and the removal or protection of hazards within close proximity of the road would be beneficial.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Medium High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	70.22 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

The recommended safe and appropriate speed from MegaMaps for Pukekauri Road is 60/hr with the governing factor being the function of the road.

Due to the high existing mean travel speed of 70.22m/hr it is unlikely that this lower speed limit will be complied with creating greater differential between vehicle speeds and increasing the risk to users.

There is a small section of road from Waitawheta Road that has a more tortuous alignment and a number of accesses where the lower speed limit of 60km/hr would be appropriate. The remainder of the route should be consistent with Waitawheta Road to reduce the desire for drivers to use this route as a shortcut.

#### **Recommendations**

- Lower the speed limit to 60km/hr from Waitawheta Road to 400m east of Waitawheta Road
- Lower the speed limit to 80km/hr from 400m east of Waitawheta Road to the intersection with Franklin Road.
- Install speed threshold treatments at speed limit change locations.

Any changes to the speed limit on this road will result in the need for the speed limit to be reduced on Athol Road, Hollis Road and McKinney Road.

*Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Pukekauri Road from Waitawheta Road to east of Hollis Road to 60km/hr and from east of Hollis Road to Franklin Road to 80km/hr.*

#### **2.20.4 Pukewera Road**

Pukewera Road is a rural road that runs between Old Tauranga Road and Taieri Road in Waitawheta. The full length of the road is 4317m with the first 510m sealed and the remaining 3807m unsealed. There is a short section (370m) that is sealed in the vicinity of some houses.

This road was identified for review from the MegaMaps as a Second 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There has been one crash reported on this road in the last 10 years, which was a non-injury loss of control crash in 2020.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	36.78 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr. Any changes to this road would require a similar treatment to Taieri Road to provide consistency to road users.

**Recommendations**

- Lower speed limit to 60km/hr in conjunction with Taieri Road.
- Install speed threshold treatments and repeater signs

Any changes would need to be considered as part of a wider strategy for the rural roads adjacent to Waitawheta Road.

**2.20.5 Swetman Road**

Swetman Road is an unsealed no exit rural road off Waitawheta Road in Waitawheta that is 1065m long.

This road was identified for review from the MegaMaps as a First 10% Interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There has been one non-injury crash on this road in the last 10 years. This crash was in 2019 and occurred at the intersection with Waitaheta Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	20 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

**Recommendations**

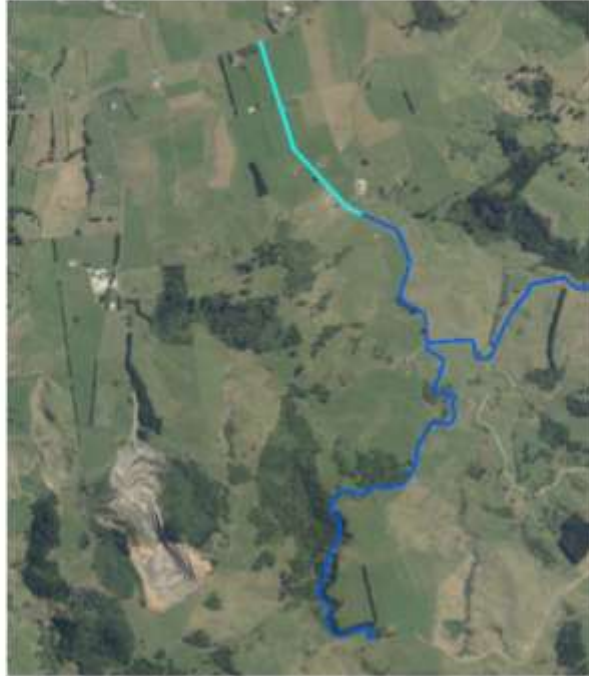
- Lower speed limit to 80km/hr in conjunction with Waitaheta Road.
- Install speed signs.

Any changes to the speed limit would need to be considered as part of a wider strategy for the rural roads adjacent to Waitaheta Road.

**2.20.6 Taireri Road**

Taireri Road is a rural road off Waitaheta Road in Waitaheta that also connects to Pukewera Road. The full length of the road is 3464m with the first 831m sealed and the remaining 2633m unsealed.

The unsealed portion of this road was identified for review from the MegaMaps as a First 10% interventions – self explaining. The rationale for the categorisation is "Road stereotype is Unsealed".



There have been no reported crashes on this road in the last 10 years. Any changes to this road would require a similar treatment to Pukewera Road and Waitawheta Road to provide consistency to road users.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	High	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	40.68 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

It should be noted that the safe and appropriate speed on all unsealed roads is set at 60km/hr.

#### **Recommendations**

- Lower speed limit to 80km/hr in conjunction with Waitawheta Road and Pukewera Road
- Instal speed signs.

Any changes would need to be considered as part of a wider strategy for the rural roads adjacent to Waitawheta Road.

#### **2.20.7 Waitawheta Road**

Waitawheta Road is a sealed rural road in Waitawheta that runs between State Highway 2 to Old Tauranga Road and is part of an alternative route for vehicles traveling between Paeroa and Tauranga and avoids Waihi. The full length of the road is 8644m. The section between State Highway 2 and Pukekauni Road has a higher level of development and also pedestrian and cyclist use. The Hauraki Rail trail crosses the road south of the one lane bridge on the



approach to State Highway 2. The speed limit on State Highway 2 in the vicinity of Waitawheta Road is 80km/hr which encourages drivers to take the alternative route with an open road speed limit.

This road was identified for review from a customer query regarding the speed of existing vehicles on the section of Waitawheta Road between State Highway 2 and Pukekauri Road and a request for a lower speed limit due to the high number of pedestrians and cyclists in the area.

There have been twenty reported crashes on this road in the last 10 years with the majority of them being non-injury crashes. The crashes between State Highway 2 and Pukekauri Road primarily are intersection crashes while those between Pukekauri Road and Old Tauranga Road are loss of control or head on crashes.

In response to concerns raised regarding safety in the section between State Highway 2 and Pukekauri Road a study was commissioned by HDC which developed a number of recommendations for treatment of this area.

The section of road between Pukekauri Road and Old Tauranga Road has a number of side roads that are no exit with the majority also being unsealed including, Swetman Road, Kennedy Road, Dickey Flats Road, Dean Road, Franklin Road, Spence Road, McLean Road, Bellamys Road and Taieri Road.

The majority of crashes in this section of the road are loss of control which indicates that edgeline treatments such as the installation of ATP on edgelines and/or centreline would be beneficial.

Safety and speed information from MegaMaps for the two section of Waitawheta Road shows the following.

*State Highway 2 - Pukekauri*

<i>Infrastructure Risk Rating</i>	Medium high	<i>Posted speed limit</i>	80 km/hr
<i>Current mean travel speed</i>	50.38 km/hr	<i>Safe and Appropriate Speed</i>	60 km/hr

*Pukekauri – Old Tauranga Road*

<i>Infrastructure Risk Rating</i>	Medium	<i>Posted speed limit</i>	100 km/hr
<i>Current mean travel speed</i>	71.75 km/hr	<i>Safe and Appropriate Speed</i>	80 km/hr

Any changes to this road would require a similar change on the side roads to provide consistency to road users. Changes are also required on Pukekauri Road, Old Tauranga Road and Frankton Road to discourage the use of this area as a shortcut and provide consistency of messaging.

**Recommendations**

- Lower the speed limit to 40km/hr between State Highway 2 and Pukekauri Road
- Lower speed limit to 80km/hr between Pukekauri Road and Old Tauranga Road.
- Lower the speed limit to 80km/hr on the adjacent side roads of Swetman Road, Kennedy Road, Dickey Flats Road, Dean Road, Franklin Road, Spence Road, Hume Road, McLean Road, Bellamys Road and Taieri Road to ensure consistency with speed limits.
- Review the speed limit on Pukekauri Road, Old Tauranga Road and Frankton Road and consider lowering to 80km/hr.
- Install threshold treatments at the extents of the speed limit changes and repeater signs as required.

## 2.21 Whiritoa

### 2.21.1 Whiritoa Beach Road

Whiritoa Beach Road is a sealed residential road in Whiritoa that runs between State Highway 25 to Kon Tiki Road and provides connection and access into a wider residential neighbourhood of Whiritoa. The road is approximately 627m long and has two side roads, Pohutukawa Road and Tavern Lane.

This street was identified for review from a customer query regarding the speed of existing vehicles. This indicates that compliance, not the speed limit is the issue for this road which is supported by the mean speed recorded on the road.

There have been two reported crashes on this road in the last 10 years both of which were intersection crashes. The 2016 crash occurred at Tavern Lane and resulted in minor injuries, while there were no injuries in the 2018 crash at Pohutukawa Road.

Safety and speed information from MegaMaps shows the following.

<i>Infrastructure Risk Rating</i>	Low Medium	<i>Posted speed limit</i>	50 km/hr
<i>Current mean travel speed</i>	44.41 km/hr	<i>Safe and Appropriate Speed</i>	50 km/hr

The primary reason given for the recommended safe and appropriate speed in MegaMaps is "Aligns with framework".

#### *Recommendations*

- Install repeater speed limit signs on Whiritoa Beach Road to remind drivers of the speed limit.
- Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.

Any changes to the speed limit on this road will require a similar treatment to the side roads of Pohutukawa Drive and Tavern Lane.

Consideration should be given to implementing a 40km/hr speed limit if supported by the local community.

### 3. Summary

A summary of the recommendations for each road or section of road identified in Section 2 is tabled below.

Report No.	Road Name	Recommendations
2.1.1	Aweti Road	Lower the speed limit to 80km/hr Install ATP on edgelines along the route. Any physical works and/or changes to speed limit will need to be coordinated with Matamata-Piako District Council to ensure consistency along the route.
2.2.1	Alley Memorial Road	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Alley Memorial Road should be consistent with that on the adjacent state highway
2.2.2	Maratoto Road	No change to speed limit or works proposed.
2.3.1	East Coast Road Section 1 – RP 0 – 8028	Lower the speed limit to 80km/hr Consider installing edgelines, with or without ATP, centreline ATP and additional edge marker posts
2.3.1	East Coast Road Section 2 – RP 8028 – 9553	Install threshold treatments at each end of Kaiaua Install edgelines throughout the area Consider installing kerb and channel to create a more urban environment

Report No.	Road Name	Recommendations
2.3.1	East Coast Road Section 3 – RP 9553 - 12313	Lower the speed limit to 50km/hr. Consider installing edgelines, with or without ATP, centreline ATP and additional edge marker posts Install threshold treatments with or without speed signage at each of the settlements Apply a 30km/hr variable speed limit in the vicinity of Kaiarau School. Install variable school threshold style treatment at the change in speed limit points.
2.3.1	East Coast Road Section 4 – RP 12313 - 16100	Lower the speed limit to 60km/hr.
2.3.1	East Coast Road Section 5 – RP 16100 - 18678	Lower the speed limit to 60km/hr. Install threshold treatments with speed signage Install additional repeater speed limit signs. Install additional pedestrian warning signage as appropriate.
2.3.1	East Coast Road Section 6 – RP 18678 - 19067	Lower the speed limit to 60km/hr Install threshold treatments with speed signage.
2.3.1	Ebner Place	Lower the speed limit to 80km/hr in keeping with increased level of development. Install speed threshold treatment at intersection with Kaiarau Road. <i>Following the Council hearing on the 13th July 2022 it was resolved to lower the speed limit on Ebner Place to 60km/hr.</i>

Report No.	Road Name	Recommendations
2.3.2	Kaiaua Road	<p>Lower the speed limit to 60km/hr.</p> <p>Install ATP on edgelines along the route.</p> <p>Further investigation is required to determine additional treatments required.</p> <p>Any physical works and/or changes to speed limit will need to be coordinated with Waikato District Council to ensure consistency along the route.</p>
2.3.3	Miranda Road	<p>Install ATP on edgelines along the route.</p> <p>Install additional edge marker posts and curve warning signage at out of context curves.</p> <p>Any physical works and/or changes to speed limit will need to be coordinated with Waikato District Council to ensure consistency along the route.</p>
2.3.4	Toft Road	No change to speed limit or works proposed.
2.4.1	Kaihehe Road	<p>Lower the speed limit to 30km/hr on Kaihehe Road from State Highway 2 to Hayward Street.</p> <p>Install school threshold style treatments at the change in speed limit locations.</p> <p>Install slow street treatments within the vicinity of the school. Consider the use of raised platforms to manage vehicle speeds.</p> <p>Consideration should be given to implementing a 40km/hr speed limit in the urban area of Ngatea if supported by the local community. However physical works will be required to support the existing or lower speed limit along the full length of the road.</p> <p>Lower the speed limit to 80km/hr between Brenner Drive and State Highway 27.</p> <p>Install edgelines along the rural section of the road especially at out of context curves.</p> <p>RP 3800 – 6600, RP10700 – 11000, RP14500 - 15500</p> <p>Install additional edge marker posts and curve warning signage at out of context curves.</p>

Report No.	Road Name	Recommendations
2.4.2	Ohinewai Road	No change to speed limit or works proposed. Any physical works and/or changes to speed limit will need to be considered as part of a wider strategy for rural roads and coordinated with Waikato District Council to ensure consistency along the route.
2.5.1	School Road (Karangahake)	Install a 30km/hr speed limit for the full length of the road. Install threshold treatment at the change in speed limit location.
2.6.1	Dagger Road	No change to speed limit proposed.
2.6.2	Karepehi Town Road	Lower the speed limit to 60km/hr from State Highway 2 to 40m east of Ponui Avenue Retain the 50km/hr speed limit from 40m east of Ponui Avenue to 100m west of Fernleigh Street Lower the speed limit to 80km/hr from 100m west of Fernleigh Street to Awaitei Canal Road Install threshold style treatments at the change in speed limit locations. Consider putting the existing zebra crossings onto raised platforms. Consideration should be given to implementing a 40km/hr speed limit through the township and across the wider residential area if supported by the local community. This will require the speed limit to be reduced on Ponui Avenue, Rakino Drive, Pakatopa Street, Kaikahu Road, Matai Street, Miro Street, Rmu Street, Rata Street, McGowan Avenue, Stanley Street, Thompson Road, Pah Road and Wharf Road.
2.6.3	McGowan Avenue	Lower the speed limit to 30km/hr within the vicinity of the school frontage. Install threshold style treatments at the change in speed limit locations.
2.6.4	Wharepoa Road West	Undertake further investigation on feasible treatment options.
2.7.1	Komata Reefs Road	No change to speed limit proposed.

Report No.	Road Name	Recommendations
2.7.2	Strange Road	No change to speed limit or works proposed.
2.8.1	Rahu Road	Lower speed limit to 70km/hr to be consistent with the remaining section of Rahu Road. Install repeater speed signs.
2.9.1	Church Road	Lower the speed limit to 60km/hr in keeping with increased level of development. This road is accessed off North Road which also has increased vehicle and pedestrian movements between State Highway 27 and Church Road and a lower speed limit should be installed on this section of North Road for consistency and to reduce the risk to all users in the area.
2.9.2	Coxhead Road	No change to speed limit proposed.
2.9.3	Mahuta Road North	No change to speed limit or works proposed.
2.9.4	North Road	Reduce the speed limit to 60km/hr on the section of North Road from State Highway 27 to RP120. Install threshold style treatments at the change in speed limit locations.
2.9.5	South Road	No change to speed limit or works proposed.
2.10.1	School Road (Netherton)	Apply a variable speed of 60km/hr on the first 230m of School Road. Install variable sign and threshold style treatment at the change in speed limit point. The installation of the variable speed limit will need to be coordinated with Waka Kotahi to ensure consistency of treatment within the vicinity of Netherton School.

Report No.	Road Name	Recommendations
2.11.1	Darlington Street	<p>Install slow street treatments between State Highway 2 and Hayward Road to match the environment of the rest of the road.</p> <p>Install a mini roundabout at the Hayward Road intersection.</p> <p>Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.</p> <p>Any changes to the speed limit on this road will require a similar reduction on the side roads of Braille Place, Walton Place, Hayward Road, Madgwick Place, Parfitt Place, Harris Place and Berner Drive.</p>
2.11.2	Hayward Road	<p>Lower the speed limit to 30km/hr on Hayward Street in conjunction with the school zone on Kaihere Road.</p> <p>Install school threshold style treatments at the change in speed limit locations</p> <p>Install a mini roundabout at the Darlington Street intersection</p> <p>Any changes to the speed limit on this road will require a similar reduction in speed limit on the side roads of McMillan Street and Miller Place and will need to be consistent with Kaihere Road and Darlington Street.</p> <p>Consideration should be given to implementing a 40km/hr speed limit in the area if supported by the local community. However physical works will be required to support the existing or lower speed limit along the full length of the road.</p>
2.11.3	McDuff Lane	<p>Considering installing additional roadmarking in the area in a long-life product.</p> <p>Any changes to the speed limit on McDuff Lane would be the result of changes to other adjacent roads in the area to provide consistency to road users.</p>
2.11.4	McMillan Street	<p>No change to speed limit proposed. Changes will be driven by other roads</p> <p>Any changes to the speed limit on McMillan Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.</p>



Report No.	Road Name	Recommendations
2.11.5	Puhunga Island Road North	No change to speed limit or works proposed.
2.11.6	River Road	No change to speed limit or works proposed.
2.12.1	Ainslie Road	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Ainslie Road would require a similar change to other roads in the area to provide consistency to road users.
2.12.2	Alpha Road	No change to speed limit proposed. Existing speed limit is appropriate.
2.12.3	Aorangi Road	Install slow street treatments at multiple locations. Due to the alignment of the road consider the use of side islands to narrow the road and one way sections to manage vehicle speeds. Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit. Any changes to the speed limit on Aorangi Road will require a similar treatment to Shaw Avenue and Ainslie Road.
2.12.4	Colin Drive	No change to speed limit proposed. Existing speed limit is appropriate.
2.12.5	Corbett Street	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Corbett Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.12.6	Coronation Street	Lower the speed limit to 30km/hr within the vicinity of the Paeroa Christian School frontage Install school threshold style treatments at the change in speed limit locations

Recommendations	
Report No.	Road Name
2.12.7	Junction Road
	<p>Install slow street treatments at multiple locations between Railway Street and Menzies Place. Due to the straight alignment of the road consider the use of side islands to narrow the road and one way sections to manage vehicle speeds.</p> <p>Install mini roundabout at the intersection with Opatito Road.</p> <p>Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit.</p> <p>Any changes to the speed limit on Junction Road will require a similar reduction in the speed limit to Menzies Place, and Opatito Road.</p>
2.12.8	Keepsa Avenue
	<p>No change to speed limit proposed. Changes will be driven by other roads.</p> <p>Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. Due to the short length of road physical works are unlikely to be required to support a lower speed limit.</p> <p>Any changes to the speed limit on this road will be as a result of changes to Shaw Avenue.</p>
2.12.9	Miller Avenue
	<p>Lower the speed limit to 30km/hr on Miller Avenue from Kennedy Street to the end.</p> <p>Install threshold style treatments at the change in speed limit location.</p>
2.12.10	Norwood Road
	<p>Lower the speed limit to 30km/hr within the vicinity of the school frontage.</p> <p>Install school threshold style treatments at the change in speed limit locations.</p> <p>Consider replacing the existing kea crossing with a patrolled zebra crossing on a raised platform.</p>
2.12.11	Nowra Crescent
	<p>No change to speed limit proposed. Changes will be driven by other roads.</p> <p>Any changes to the speed limit on Nowra Crescent would be the result of changes to other adjacent roads in the area (Shoalhaven Street) to provide consistency to road users.</p>

Report No.	Road Name	Recommendations
2.12.12	Papaturoa Road	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Papaturoa Road would be the result of changes to State Highway 26 to provide consistency to road users.
2.12.13	Railway Street	Install slow street treatments at multiple locations. Consider realigning the pedestrian access points to enable raised platforms to be installed. Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit. Any changes to the speed limit on Railway Street will require a similar reduction on the speed limit to Opalito Road, Dearie Street, George Street, Junction Road and Lee Avenue.
2.12.14	Rotokohu Road	Lower the speed limit to 80km/hr in keeping with increased level of development, narrow carriageway and presence of cyclists along the road. Install threshold treatment and repeater signs. Any changes to the speed limit on Rotokohu Road will require a similar reduction in speed limit to the side roads of Te Moananui Flats Road and Thorp Road
2.12.15	Shaw Avenue	Install slow street treatments at multiple locations. Due to the alignment of the road consider the use of side islands to narrow the road and one way sections to manage vehicle speeds. Consideration should be given to implementing a 40km/hr speed limit if supported by the local community. However physical works will be required to support the existing or lower speed limit. Any changes to the speed limit on this road will require a similar reduction in the speed limit to the side roads of

Report No.	Road Name	Recommendations
2.12.16	Te Moananui Flats Road	Lower speed limit to 80km/hr in keeping with increased level of development. Install speed signs Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.
2.12.17	Waimaree Avenue	No change to speed limit or works proposed.
2.12.18	Wood Street	Lower the speed limit to 30km/hr on the section of Wood Street and Thorp Street adjacent to the school. Install threshold style treatments at the change in speed limit points.
2.13.1	Mangawhero Road	No change to speed limit or works proposed.
2.14.1	Arawa Street	Lower the speed limit to 80km/hr in keeping with increased level of development and narrow carriageway. Install speed threshold at intersection with State Highway 25. Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.
2.14.2	Buchanan Road	Lower speed limit to 80km/hr in keeping with increased level of development, narrow carriageway and presence of cyclists along the road. Install threshold signage at intersection with State Highway 25 and repeater signage along the route Any changes to the speed limit on Buchanan Road will require a similar treatment to the side roads of Moehu Street and Scott Street for consistency.

Report No.	Road Name	Recommendations
2.14.3	Bush Road	<p>Apply a variable speed limit of 60km/hr within the vicinity of Kopuarahi School extending for 230m along Bush Road.</p> <p>Install variable sign and threshold style treatment at the change in speed limit point.</p> <p>Install ATP on edgelines along the route.</p> <p>Review curve warning signage and install new signs as required.</p> <p>The change to the speed limit will need to be coordinated with Waka Kotahi to ensure consistency of treatment within the vicinity of Kopuarahi School.</p>
2.14.4	Moehau Street	<p>Lower the speed limit to 80km/hr in keeping with changes proposed on Buchanan Road.</p> <p>Install repeater speed signage.</p> <p>Any changes to the speed limit on Moehau Street will be driven by changes on Buchanan Road and require a similar treatment to the side road of Scott Street.</p>
2.14.5	Pipiroa Road	<p>No change to speed limit proposed. Changes will be driven by other roads.</p> <p><i>Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Pipiroa Road from 70km/hr to 50km/hr on the section from RP5490 to Mahana Road.</i></p>
2.15.1	Hauraki Road Section 1 – RP 0 – 4160	<p>Lower the speed limit to 80km/hr.</p> <p>Consider installing edgelines, with or without ATP, centreline ATP and additional edge marker posts.</p>
2.15.1	Hauraki Road Section 2 – RP 4160 – 5425	<p>Apply a 30km/hr variable speed limit in the vicinity of Turua Primary School.</p> <p>Install variable school threshold style treatment at the change in speed limit points.</p> <p>Consider replacing the existing kea crossing with a patrolled zebra crossing on a raised platform.</p>

Report No.	Road Name	Recommendations
2.15.1	Hauraki Road Section 3 – RP 5425 - 14135	Lower the speed limit to 80km/hr. Consider installing edgeline and centreline ATP and additional edge marker posts. Undertake further investigation on feasible treatment options for this section of Hauraki Road. Install intersection treatment such as RIAWS at the intersections with Orchard East Road and Wharepoa Road West.
2.15.2	Huirau Road	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Huirau Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.15.3	Oparia Road	Change the speed limit to 80km/hr to reflect the rural nature of the area.
2.15.4	Piako Road	Retain the 50km/hr speed limit to RP330 Change the speed limit to 80km/hr between RP 330 and RP 620 Install threshold treatments at both speed limit change locations.
2.15.5	Raratuna Street	Lower the speed limit to 30km/hr on Raratuna Street from Hauraki Road to Waihou Street. Change the speed limit to 80km/hr from Oparia Road to RP250 to reflect the rural nature of this section of the road. Install threshold style treatments at the change in speed limit locations.
2.15.6	Rata Street	Install an 80km/hr speed limit to reflect the rural nature of the area. Install speed signs.
2.15.7	Raupoti Street	No change to speed limit proposed. Changes will be driven by other roads.

Report No.	Road Name	Recommendations
2.16.1	Amaranth Street	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Amaranth Street would require a similar change to other roads in the area to provide consistency to road users.
2.16.2	Baber Street	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Baber Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.16.3	Bradford Street	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Bradford Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.16.4	Clarke Street	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Clarke Street would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.16.5	Consols Street	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Consols Street would require a similar change to other roads in the area to provide consistency to road users.

Report No.	Road Name	Recommendations
2.16.6	Donnelly Street	<p>Lower the speed limit to 30km/hr on Donnelly Street and on Gladstone Road for approximately 150m either side of the Donnelly Street intersection.</p> <p>Install school threshold style treatments at the change in speed limit locations.</p> <p>Any changes to the speed limit on this road will require a similar treatment to the side road of Kitchener Street.</p> <p>Consideration should be given to implementing a 40km/hr speed limit in the area bounded by State Highway 25 and Malara Road if supported by the local community. Physical works will be required to support the lower speed limit on Gladstone Road and Smith Street.</p>
2.16.7	Galbraith Street	<p>Install mini roundabouts at the intersection with Wrigley Street</p> <p>Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.</p>
2.16.8	Gilmour Street	<p>Install a mini roundabout at the intersection with Johnston Street</p> <p>Consider the installation of a raised safety platform in the vicinity of the access to the Gilmour Reserve to slow vehicles and provide a safe crossing point for pedestrians.</p> <p>Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.</p> <p>Any changes to the speed limit on Gilmour Street would require changes to other adjacent roads in the area to provide consistency to road users.</p> <p><i>Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Gilmour Street to 40km/hr.</i></p>



Report No.	Road Name	Recommendations
2.16.9	Gladstone Road	<p>Lower the speed limit to 30km/hr on Gladstone Road for approximately 150m either side of the Donnelly Street intersection.</p> <p>Install school threshold style treatments at the change in speed limit locations.</p> <p>Consideration should be given to implementing a 40km/hr speed limit in the area bounded by State Highway 25 and Mataura Road if supported by the local community. Physical works will be required to support the lower speed limit on Gladstone Road and Smith Street.</p>
2.16.10	Heard Road	<p>Lower the speed limit to 80km/hr in keeping with increased level of development and narrow carriageway.</p> <p>Any changes to the speed limit on Heard Road would require a similar reduction in speed limit to the side roads of Poets Corner Road and Orokawa Heights and to others in the area to provide consistency to road users.</p>
2.16.11	Heath Road	<p>Lower the speed limit to 80km/hr in keeping with increased level of development and narrow carriageway.</p> <p>Consideration should be given to implementing a 60km/hr speed limit if supported by the local community.</p>
2.16.12	Kanny Street	<p>Install a raised safety platform to the south of State Highway 2 to support the cycle path and manage vehicle speeds.</p> <p>Consider installing additional raised safety platforms in conjunction with pedestrian desire lines.</p>
2.16.13	Kansington Road	<p>Lower the speed limit to 30km/hr within the vicinity of the school frontage and on Rata Street.</p> <p>Install school threshold style treatments at the change in speed limit locations.</p> <p>Consideration should be given to implementing a 40km/hr speed limit across the wider residential area if supported by the local community. However due to the straight alignment of Kensington Road physical works will be required outside of the vicinity of the school to support the existing or lower speed limit.</p>

Report No.	Road Name	Recommendations
2.16.14	Lawrence Road	Considering installing shearrows and/or other cycle friendly features on the road. Any changes to the speed limit on Lawrence Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.16.15	Mataura Road	No change to speed limit proposed. Changes will be driven by other roads.
2.16.16	Moresby Avenue	Lower the speed limit to 30km/hr within the vicinity of the school frontage. Install threshold style treatments at the change in speed limit locations. Install speed management features in the vicinity of the school
2.16.17	Mueller Street	Lower the speed limit to 30km/hr within the vicinity of the school frontage. Install threshold style treatments at the change in speed limit locations. Consider installing mini roundabouts at the intersections with Johnston Street and Union Street. Consider the installation of a raised safety platform in the vicinity of the existing crossing location outside the school to slow vehicles and provide a safe crossing point for pedestrians. Any changes to the speed limit on Mueller Street beyond the school frontage will require changes to other adjacent roads in the area to provide consistency to road users.
2.16.18	Ngaitangata Road	No change to speed limit or works proposed.
2.16.19	Orokawa Heights Road	Lower the speed limit to 80km/hr in keeping with adjacent road (Heard Road). Install speed signs. Any changes to the speed limit on Orokawa Heights Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.

Report No.	Road Name	Recommendations
2.16.20	Poets Corner Road	Lower the speed limit to 80km/hr in keeping with adjacent road (Heard Road) Install speed signs Any changes to the speed limit on Poets Corner Road would be the result of changes to Heard Road to provide consistency to road users.
2.16.21	Reservoir Road	Lower the speed limit to 60km/hr to reflect the rural residential nature of the area Install speed signs The speed limit on Wharry Road should also be lowered to 50km/hr to be consistent with the adjacent section of Reservoir Road.
2.16.22	Russell Street	No change to speed limit proposed. Changes will be driven by other roads
2.16.23	Seddon Street	Consider installing a 30km/hr speed limit for the full length of Seddon Street. Install threshold treatments. Any changes to the speed limit on this road will require a similar treatment to the side roads of Haszard Street, Walker Street and Mueller Avenue.
2.16.24	Somerses Street	No change to speed limit proposed. Changes will be driven by other roads
2.16.25	Thorn Road	Lower speed limit to 60km/hr for the full length of Thorn Road in conjunction with Waitete Road Nth. Install speed signs <i>Following the Council hearing on the 13th July 2022 it was resolved to lower the speed limit on Thorn Road from 100km/hr to 50km/hr</i>

Report No.	Road Name	Recommendations
2.16.26	Toomey Street	Investigate options to improve the urban environment of the street. Further physical works will need to consider the function of this road within the roading network and support the current or a lower speed limit of 40km/hr if desired at a later date.
2.16.27	Victoria Street	Investigate options to improve the urban environment of the street. Install repeater speed limit signs on Victoria Street to remind drivers of the speed limit. Install threshold treatment at the change of speed limit at Frankton Road
2.16.28	Waitele Road	Install edge treatments for the full length to improve the urban environment of the street. Install slow street treatments required at multiple locations. Due to the straight alignment of the road consider the use of raised safety platforms or central islands to manage vehicle speeds and support use by pedestrians and cyclists. Any physical works will need to consider the function of this road within the roading network and support the current or a lower speed limit of 40km/hr if desired at a later date.
2.16.29	Waitele Road North	Lower speed limit to 60km/hr for the full length of Waitele Road North in conjunction with Thorn Road. Install speed limit signs. <i>Following the Council hearing on the 13th July 2022 it was resolved to lower the speed limit on Waitele Road North from 100km/hr to 50km/hr.</i>
2.16.30	Wingley Street	Install mini roundabouts at the intersection with Galbraith Street and Consols Street. Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.

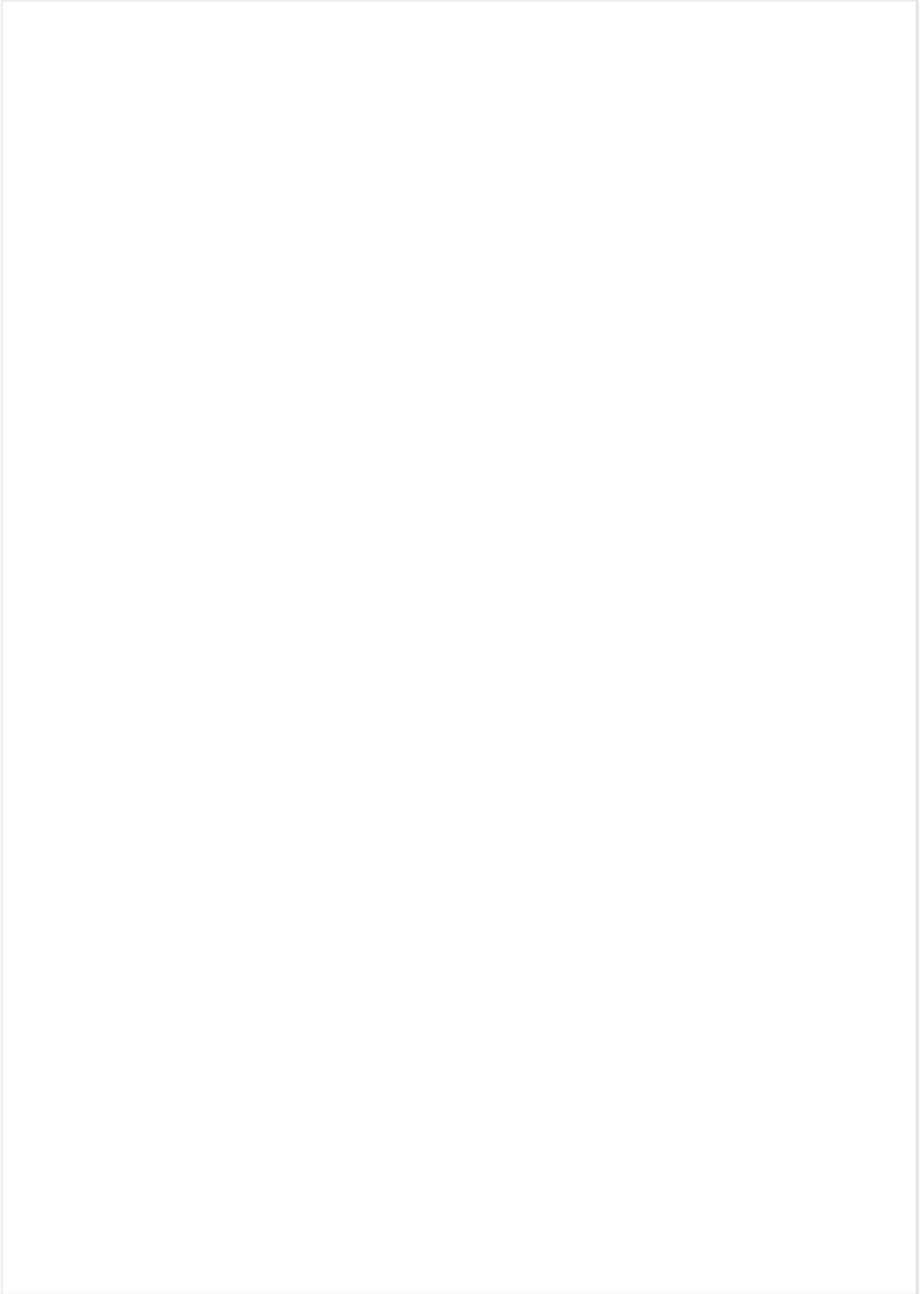
Report No.	Road Name	Recommendations
2.17.1	Waihi Beach Road	<p>Lower speed limit to 80km/hr for the full length of Waihi Beach Road and Kingsley Road and Fisher Road.</p> <p>Install threshold treatment at change in speed limit locations and install repeater signs as required.</p> <p>Review the speed limit on Trig Road North and South for consistency and install signage as required.</p> <p>Install ATP on edgelines along the route.</p> <p>Any physical works and/or changes to speed limit will need to be coordinated with Western Bay of Plenty District Council to ensure consistency along the route.</p>
2.18.1	Abbott Road	<p>Lower the speed limit to 40km/hr on the surrounding network including Abbott Road, Queen Street, Poland Street, and sections of Princes Street and Old Waitekauri Road.</p> <p>Install threshold style treatments at the change in speed limit locations on Old Waitekauri Road.</p> <p>Install additional school signage on Abbots Road in the vicinity of Walkino School.</p> <p><i>Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Abbott Road to 30km/hr.</i></p>
2.18.2	Fareilly Road	<p>No change to speed limit proposed.</p> <p>Any changes to the speed limit on Fareilly Road would need to be considered as part of a wider strategy for unsealed rural roads.</p>
2.18.3	Larsen Road	<p>Lower the speed limit to 40km/hr in keeping with the proposed changes to Old Waitekauri Road.</p> <p>Any changes to the speed limit on Larsen Road need to be consistent with changes to Old Waitekauri Road.</p>

Report No.	Road Name	Recommendations
2.18.4	Old Waitekaun Road	Lower the speed limit to 40km/hr between State Highway 2 and Larsen Road. Install threshold style treatments at the change in speed limit locations. Any changes to the speed limit on this road will result in the need for the speed limit to be reduced on Banks Road, Abbott Road, Poland Street, Victoria Street, Larsen Road, Queen Street, Princes Street, Wood, Melkoy Lane, Penny Lane, Seddon Street, Edward Street, Cadman Street, Bush Street and a section of Waitekaun Road.
2.19.1	Canal West Road	Apply a variable speed limit of 60km/hr within the vicinity of Watakaruru School. Install variable sign and threshold style treatment at the change in speed limit point. Any further changes to the speed limit on this road needs to be considered in conjunction with the treatment of State Highway 25 and the rest of Waitekaruru for consistency.
2.19.2	Penrhys Close	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Penrhys Close would be the result of changes to Back Miranda Road to provide consistency to road users.
2.20.1	Ford Road	No change to speed limit proposed. Changes will be driven by other roads. Any changes to the speed limit on Ford Road would be the result of changes to other adjacent roads in the area to provide consistency to road users.
2.20.2	Old Taurenga Road	Lower the speed limit to 80km/hr. Install edgelines with or without ATP and centreline ATP. Undertake further investigation for feasible improvement works including RIAWS at Woodlands Road intersection.

Report No.	Road Name	Recommendations
2.20.3	Pukekauni Road	<p>Lower the speed limit to 60km/hr from Waitawheta Road to 400m east of Waitawheta Road.</p> <p>Lower the speed limit to 80km/hr from 400m east of Waitawheta Road to the intersection with Franklin Road.</p> <p>Install speed threshold treatments at speed limit change locations.</p> <p>Any changes to the speed limit on this road will result in the need for the speed limit to be reduced on Athol Road, Hollis Road and McKinney Road.</p> <p><i>Following the Council hearing on the 13<sup>th</sup> July 2022 it was resolved to lower the speed limit on Pukekauni Road from Waitawheta Road to east of Hollis Road to 60km/hr and from east of Hollis Road to Franklin Road to 80km/hr.</i></p>
2.20.4	Pukewera Road	<p>Lower speed limit to 80km/hr in conjunction with Taiari Road</p> <p>Install speed threshold treatments and repeater signs</p>
2.20.5	Sweetman Road	<p>Lower speed limit to 80km/hr in conjunction with Waitawheta Road.</p> <p>Install speed signs</p>
2.20.6	Taiari Road	<p>Lower speed limit to 80km/hr in conjunction with Waitawheta Road and Pukewera Road</p> <p>Install speed signs</p>

Report No.	Road Name	Recommendations
2.20.7	Waiawheta Road	<p>Lower the speed limit to 40km/hr between State Highway 2 and Pukekauri Road</p> <p>Lower speed limit to 80km/hr between Pukekauri Road and Old Tauranga Road.</p> <p>Lower the speed limit to 80km/hr on the adjacent side roads of Swelmin Road, Kennedy Road, Dickey Flats Road, Dean Road, Franklin Road, Spence Road, McLean Road, Bellamys Road and Tairi Road to ensure consistency with speed limits.</p> <p>Review the speed limit on Pukekauri Road, Old Tauranga Road and Frankton Road and consider lowering to 80km/hr.</p> <p>Install threshold treatments at the extents of the speed limit changes and repeater signs as required</p>
2.21.1	Whirioa Beach Road	<p>Install repeater speed limit signs on Whirioa Beach Road to remind drivers of the speed limit.</p> <p>Consider the use of side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.</p> <p>Any changes to the speed limit on this road will require a similar treatment to the side roads of Pohutukawa Drive and Tavern Lane.</p> <p>Consideration should be given to implementing a 40km/hr speed limit if supported by the local community.</p>





## Appendices



Report for Hauraki District Council | HaurakiDC\_Interim Speed Management Plan\_Vol 2\_FINAL

## **Appendix A – 2021 Road Data**

Report Unit Section	Road Name	School	OSI	Peri-Urban	Chicane	Aged (CNC)	TPL	CSR	Mapa Mapa	Start	Start RP	End RP	End RP Band	Collective Risk	Personal Risk	Personal Risk Band	Posted Speed Limit	Free Flow Speed	Reason for Safe and Appropriate	Governing Factor	MIR Band	Safe and Appropriate Speed
413.1.1.1	Abbott Road	Y	Y	Y	Y	Y	Y	Y	Y	Old Waltham Road	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	36.3	Function / Feature	Medium	40
2.1.2.1	Alley Memorial Road	Y	Y	Y	Y	Y	Y	Y	Y	Alley Road	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
413.1.2.2	Alpha Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
793.2.36.1	Amersforth Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
465.1.3.3	Armagh Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
65.1.24.1	Arrest Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
2.1.2.1.3	Asahi Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
80.2.36.2	Baker St	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
82.2.26.2	Baker St	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
83.2.36.3	Bradford Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
66.2.24.2	Buchanan Road (Ramp)	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
67.2.24.3	Bush Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
120.2.29.1	Canal West Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
30.2.8.2	Church Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
85.2.36.4	Chive Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
47.2.22.4	Colin Drive	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
86.2.36.5	Conroy Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
48.2.32.5	Conroy Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
49.2.32.6	Conroy Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
31.2.8.2	Cooper Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
18.2.6.1	Cooper Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
86.2.31.1	Dorington Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
87.2.36.6	Dorington Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
4.2.3.3	East Coast Road - Sec 1	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
6.2.3.3	East Coast Road - Sec 2	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
7.2.3.3	East Coast Road - Sec 3	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
8.2.3.3	East Coast Road - Sec 4	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
9.2.3.3	East Coast Road - Sec 5	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
10.2.3.2	Elmer Place	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
117.2.28.2	Family Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
122.2.20.1	Ford Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
88.2.36.7	Gallagher Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
89.2.36.8	Gilmore Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
90.2.36.9	Gilmore Street	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
70.2.35.1	Hazaki Road - Sec 1	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
71.2.35.2	Hazaki Road - Sec 2	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
72.2.35.3	Hazaki Road - Sec 3	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
80.2.31.2	Hebbard Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
91.2.36.10	Hebbard Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
92.2.36.11	Hebbard Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
73.2.36.12	Hurua Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
80.2.22.7	Juniper Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
14.2.4.1	Kahera Road - Sec 1	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
15.2.4.1	Kahera Road - Sec 2	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
31.2.21.8	Keppa Ave	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
93.2.26.12	Kerry St	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
94.2.26.13	Kerry St	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
95.2.26.13	Kerrington Road	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
13.2.6.2	Kerrington Town Road - Sec 1	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
20.2.6.2	Kerrington Town Road - Sec 2	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	
21.2.6.2	Kerrington Town Road - Sec 3	Y	Y	Y	Y	Y	Y	Y	Y	SH20	Princes Street	Princes Street	436/low	Low	Low	50	36.3	36.3	Function / Feature	Medium	40	

Report Unit Section	Road Name	School	OSI	Peri-Urban	Classific	Agcd (IRC)	TPL	CSF	Start Mapa	Start RP	End RP	Collective Risk End RP	Personal Risk Band	Posted Speed Limit	Free Flow Speed	Reason for Safe and Appropriate Speed	Governing Factor Function / Feature	MIR Band Rating	Safe and Appropriate Speed
24.17.1	Kerrata North Road								SH26	11.90	End of Bradshaw Road	31.00 Low	Low	100	36.63 Road structure is Unassess	Function / Feature	High	50	
25.17.1	Kerrata South Road								SH26	11.90	End of Bradshaw Road	31.00 Low	Low	100	36.63 Road structure is Unassess	Function / Feature	High	50	
118.2.18.1	Larman Road								SH26	0	End of Old Waiheke Road	184 Low	Low	100	20.04 MC in Class 4	Function / Feature	Medium High	40	
97.2.16.14	Larman Road								SH26	0	End of Old Waiheke Road	184 Low	Low	100	20.04 MC in Class 4	Function / Feature	Medium High	40	
30.3.13.1	Makuta Road North								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
60.3.13.1	Miraflores Road								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
64.1.13.1	Miraflores Road								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
1.1.2.2	Miraflores Road								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
80.2.16.15	Miraflores Road								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
89.1.11.9	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
22.2.6.3	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
40.2.11.4	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
52.1.11.9	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
12.1.3.4	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
68.2.14.8	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
99.2.16.16	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
100.2.16.17	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
101.2.16.18	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
33.2.8.4	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
53.2.11.20	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
54.2.11.21	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
16.2.4.2	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
123.2.20.2	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
119.2.16.4	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
74.2.16.3	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
102.2.16.29	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
80.2.11.21	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
121.2.16.2	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
75.2.15.4	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
69.2.14.5	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
103.2.16.20	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
41.1.11.5	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
124.2.20.3	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
125.2.20.4	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
29.2.8.1	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
56.2.12.13	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
76.2.15.5	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
77.1.15.6	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
78.2.15.7	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
104.2.16.21	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
42.2.11.6	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
57.2.11.14	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
58.2.11.14	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
105.2.16.22	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
127.15.1	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
26.2.10.1	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
106.2.16.23	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
39.2.12.15	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
34.1.15.5	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
26.2.1.2	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
27.2.2	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
28.2.2	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
126.2.20.5	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
127.2.20.6	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
128.2.20.8	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
60.2.12.16	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
108.2.16.25	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	
109.2.16.25	Mitotu Lake								SH27	0	End of SH26	4820 Low	Medium High	50	31.17 MC in Class 4	Function / Feature	Medium High	60	

Report Port Section	Road Name	School	Peri-Urban	Chicane	Agcd (Arc)	TPL	CSR	Mega Maps	Start	Start BP	End	End BP	Collective Risk	Personal Risk	Posted Speed Limit	Free Flow Speed	Reason for Safe and Appropriate Speed	Governing Factor	MRI Band	Safe and Appropriate Speed
110.2.16.25	Toft Road								Kellogg Road	0 End	2143	303	Low	Low	100	21.07	Road geometry is Unassisted	Function / Feature	High	60
110.2.16.26	Towney Street								Kellogg Road	0 End	3119	303	Low	Low	50	31.57	Road geometry is Unassisted	Function / Feature	Low Medium	40
111.2.16.27	Victoria St								Kenny Street	0 Franklin Road	4113	3119	Low	Medium	50	51.57	Aligns with framework	Function / Feature	Low Medium	50
115.2.17.1	Wahli Beach Road								State Highway 2	0 Bly with WRCOP	4113	3119	Medium	Medium	100	78.21	Aligns with framework	Inappropriate Risk Rating	Medium	50
61.2.12.17	Whitmore Avenue								Norwood Road	0 End	395	395	Low	Medium	50	29.74	Road geometry is Unassisted	Function / Feature	Low Medium	40
129.2.20.7	Whitmore Road								512	0 Franklin Road	480	480	Low	Low	80	50.38	Aligns with framework	Inappropriate Risk Rating	Medium High	60
130.2.20.7	Whitmore Road								Pulchert Road	480 Old Tauranga Road	3935	3935	Low	Low-Medium	100	71.75	Road geometry is Unassisted	Function / Feature	Medium	60
112.2.16.26	Whitmore Road								Orchard Road	0 Kara Street	411	411	Low	Low	50	31.57	Road geometry is Unassisted	Function / Feature	Low Medium	40
29.2.6.4	Whitmore Road								Thorn Road	0 End	3388	411	Low	High	100	21.04	Road geometry is Unassisted	Function / Feature	High	60
130.2.21.1	Whitmore Road								State Highway 25	0 Haurangi Road	427	427	Low	Medium	50	44.42	Aligns with framework	Road Safety Alert	Medium	50
62.2.12.18	Wood Street								Victoria Street	183 Thompson Street	362	362	Low	Medium High	50	36.64	Road geometry is Unassisted	Function / Feature	Low Medium	40
114.2.16.30	Wyllie St								State Highway 2	0 End	451	451	Low	Medium High	50	31.17	Road geometry is Unassisted	Function / Feature	Low Medium	40

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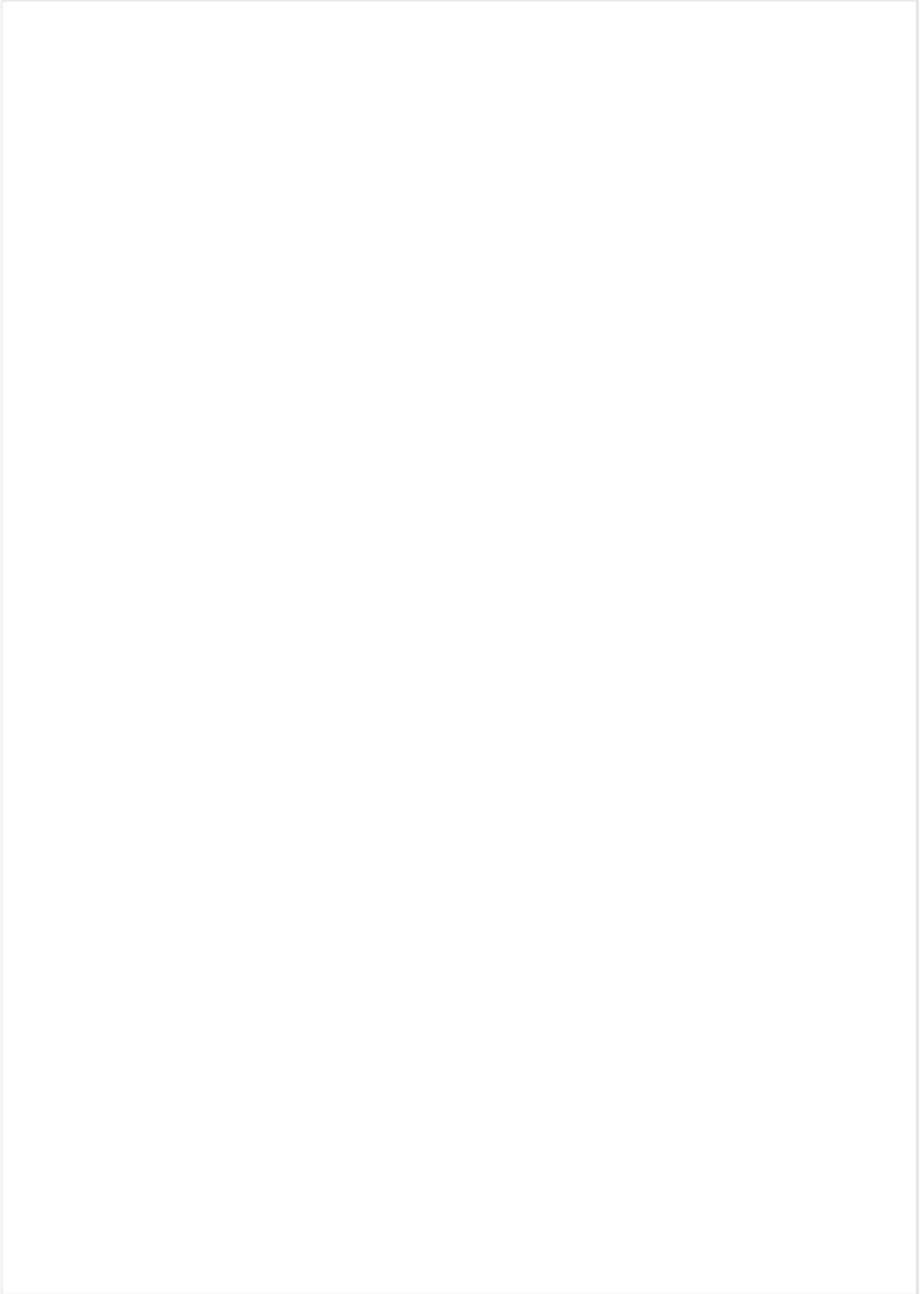
**Hauraki District Council**

Interim Speed Management Plan

Volume 3 – Implementation Plan

August 2022





## Table of contents

1.	Purpose of this document	1
2.	Speed Management Review	1
3.	Speed Limit changes	1
3.1	Speed limits around schools	1
3.2	Speed limit changes	4
4.	Safety Infrastructure	14
4.1	Further investigation	14
5.	Area treatments	18
5.1	Ngatea – Hauraki Plain College	18
5.2	Waihi – Gilmour Reserve	18
5.3	Waihi – Seddon St Town Centre	19

## Table index

Table 1	Speed Limits around schools	2
Table 2	Speed Limit changes	4
Table 3	Safety Infrastructure	14



## 1. Purpose of this document

Hauraki District Council are committed to reducing deaths and serious injury on the District roads and reducing its carbon footprint. To support this, a range of initiatives are required to be implemented to ensure that vehicle speeds are appropriate for the areas where we live, work and go to school.

This document sets out Council's 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.

## 2. Speed Management Review

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

- High risk roads – MegaMaps First and Second 10% Intervention locations
- DSI routes – Roads with 2 or more fatal or serious crashes in the previous 10 years including at least 1 fatal crash.
- Schools/daycares/kindy's/aged care locations
- Peri-urban locations
- Customer complaints/queries (CSR)
- Existing transport project list (TPL)

Changes to speed limits will be on going as development in the district continues and to achieve alignment with the NZ Governments Road to Zero Action Plan with respect to speed management. The 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 3 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.

## 3. Speed Limit changes

Following the 2021 speed management review a number of changes to speed limits were recommended and released for public consultation. The agreed speed limit changes are collated in the following sections.

### 3.1 Speed limits around schools

A summary of the proposed speed limits around schools in the Hauraki District are shown in Table 1. The indicative implementation date (NLTP) is based on the prioritisation undertaken for all speed limit changes on local roads in the district.

**Table 1 Speed Limits around schools**

School Name	Category	Proposed Speed Limit	Comments	NLTP
Goldfields School (Paeroa)	Cat 1	30		24-26
Hauraki Plains College	Cat 1	30		21-23
Kaiaua School	Cat 1	30		21-23
Kaihere School			State Highway frontage only	
Karangahake School	Cat 1	30		24-26
Kerepehi School	Cat 1	30		24-26
Kopuarahi School	Cat 2	60	60km/hr variable speed limit proposed. Will require coordination with Waka Kotahi due to State Highway frontage	21-23
Miller Avenue School	Cat 1	30		24-26
Netherton School	Cat 2	60	60km/hr variable speed limit proposed. Will require coordination with Waka Kotahi due to State Highway frontage	21-23
Ngalea School			Primarily State Highway frontage	
Paeroa Central School	Cat 1	30		24-26
Paeroa Christian School	Cat 1	30		24-26
Paeroa College			State Highway frontage only	
St Joseph's Catholic School (Paeroa)			Primarily State Highway frontage	
St Joseph's Catholic School (Waihi)	Cat 1	30		24-26
Tirohia School			State Highway frontage only	
Turua Primary School	Cat 1	30		21-24
Waihi Central School	Cat 1	30		24-26
Waihi College	Cat 1	30		24-26
Waihi East School	Cat 1	30		24-26

School Name	Category	Proposed Speed Limit	Comments	NLTP
Waikino School	Cat 2	40	40km/hr area wide speed limit proposed.	24-26
Waimata School			State Highway frontage only	
Waitakaruru School	Cat 2	60	60km/hr variable speed limit proposed. Will require coordination with Waka Kotahi due to State Highway frontage	21-23

### 3.2 Speed limit changes

A summary of each road where a speed limit change has been recommended in the 2021 review process are tabled below. Due to funding limitations the locations have been prioritised for implementation with schools and DSIR routes 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.

Table 2 Speed Limit changes

Report Section	Road Name	Start	Start RP	End RP	End RP	Proposed Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation timeframe (NLTP Period)	Safe and Appropriate Speed	Proposed - SAAS (Y/N)	Further Information	Dates / Times
2.1.1	Awatū Road	SH2	0	8024	100	80	80	Permanent	24-26	80	Y		
2.3.1	East Coast Road - Sec 1	RP 0	0	RP 8028	100	80	80	Permanent	21-23	80	Y		
2.3.1	East Coast Road - Sec 3	RP 9653	9653	RP 9923	70	50	50	Permanent	21-23	50	Y		
2.3.1	East Coast Road - Sec 3	RP 9923	9923	RP 10303	70	30	30	Variable	21-23	50	N	This section of road is outside Kaitiaki School so a 30km/hr speed limit is proposed.	8:25 – 9am 2:55 – 3:15pm School Days
2.3.1	East Coast Road - Sec 3	RP 10303	10303	RP 12313	70	50	50	Permanent	21-23	50	Y		
2.3.1	East Coast Road - Sec 4	RP 12313	12313	RP 16100	100	60	60	Permanent	21-23	60	Y		
2.3.1	East Coast Road - Sec 5	RP 16100	16100	RP 18678	70	60	60	Permanent	21-23	80	N	Lower speed limit to provide consistency with adjacent sections of road.	
2.3.1	East Coast Road - Sec 6	RP 18678	18678	AMI Bdy	70	60	60	Permanent	21-23	80	N	Lower speed limit to provide consistency with adjacent sections of road.	
2.3.2	Elver Place	Kaitiaki Road	0	End	100	60	60	Permanent	21-23	60	Y		
2.3.3	Kaitiaki Road	Existing 50/100	280	Bdy with Waikato	100	60	60	Permanent	24-26	60	Y		
2.4.1	Kaitiaki Road - Sec 1	SH2	0	Hayward Road	50	30	30	Permanent	21-23	40	N	This section of road is outside Kaitiaki Plains College so a 30km/hr speed limit is proposed.	
2.4.1	Kaitiaki Road - Sec 2	Brenner Drive	450	SH27	100	80	80	Permanent	24-26	80	Y		



Report Section	Road Name	Start	Start RP	End	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - 30AS (Y/N)	Further Information - Data / Time
2.5.1	School Road (Karangahake)	SH2	0	End	306	50	30	Permanent	24-26	40	N	This section of road is outside Karangahake School so a 30km/hr speed limit is proposed.
2.6.2	Kerepehi Town Road - Sec 1	SH2	0	40m east of Ponal Avenue	629	100	50	Permanent	24-26	50	N	Insufficient development to support 50km/hr speed limit
2.6.2	Kerepehi Town Road - Sec 3	100m west of Fernleigh Street	1611	Ferry Road	2006	100	80	Permanent	24-26	60	N	Insufficient development to support 60km/hr speed limit
2.6.3	McGowan Ave	Kerepehi Town Road	0	RP 270	270	50	30	Permanent	24-26	40	N	This section of road is outside Kerepehi School so a 30km/hr speed limit is proposed.
2.8.1	Rahu Road	End of seal	1445	End	3440	100	70	Permanent	21-23	60	N	To provide consistency with adjacent road section. Lower speed limit will be reviewed in next SMP.
2.9.1	Church Road	North Road	0	End	159	100	60	Permanent	21-23	60	Y	
2.9.4	North Road	SH27	0	RP 120	120	100	60	Permanent	21-23	60	Y	
2.10.1	School Road (Netherton)	SH2	0	RP 230	230	100	60	Variable	21-23	80	N	This section of road is outside Netherton School so a 60km/hr speed limit is proposed. Any changes to the speed limit will need to be coordinated with Waikā Kotahi to ensure consistency of treatment around the school.

Report Section	Road Name	Start RP	Start - End RP	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - SAA5 (Y/N)	Further Information - Data / Issue
2.12.2	Hayward Road	Kaheere Road	0 RP 630	630	50	30	Permanent	21-23	40	N	This section of road is outside Hiesaki Plains College so a 30km/hr speed limit is proposed.
2.12.6	Coronation Street	RP 300	RP 590	590	50	30	Permanent	24-26	40	N	This section of road is outside Paeroa Christian School so a 30km/hr speed limit is proposed.
2.12.9	Miller Avenue	Kennedy Street	177 End	310	50	30	Permanent	24-26	40	N	This section of road is outside Miller Avenue School so a 30km/hr speed limit is proposed.
2.12.10	Norwood Road	RP 440	RP 800	800	50	30	Permanent	24-26	40	N	This section of road is outside Goldfields School and Miller Avenue School so a 30km/hr speed limit is proposed.
2.12.14	Rotokohu Road	RP 200	RP 6420	6420	100	80	Permanent	21-23	80	Y	
2.12.14	Rotokohu Road	RP 6420	End	7720	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with remainder of the road.
2.12.14	Thorp Road	Rotokohu Road	0 End	1800	100	80	Permanent	21-23	80	Y	
2.12.16	Ta Moanani Flats Road	Rotokohu Road	0 End	989	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with remainder of the area.
2.12.18	Wood Street	Victoria Street	185 Thorp Street	363	50	30	Permanent	24-26	40	N	This section of road is outside Paeroa Central School so a 30km/hr speed limit is proposed.

Report Section	Road Name	Start	Start RP	End	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - S.M.A.S (Y/N)	Further Information - Details / Issues
2.12.18	Thorp Street	Nahum Street	0	Willaughby Street	180	50	30	Permanent	24-26	40	N	This section of road is outside Paeroa Central School so a 30km/hr speed limit is proposed.
2.14.1	Azarea Street	SH25	0	End	685	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with other side roads off SH25
2.14.2	Buchanan Road (Plains)	SH25	0	End	2018	100	80	Permanent	21-23	80	Y	
2.14.3	Bush Road	SH25	0	RP 230	230	100	60	Variable	21-23	80	N	This section of road is outside Kopuarahi School so a 30km/hr speed limit is proposed. Any changes to the speed limit will need to be coordinated with Waika Kōwhiri to ensure consistency of treatment around the school.
2.14.4	Moeheau Street	Buchanan Road	0	End	1030	100	80	Permanent	21-23	80	Y	
2.14.4	Scott Street	Moeheau Street	0	End	67	100	80	Permanent	21-23	80	Y	
2.14.5	Pipiroa Road	RP 5490	5490	Mahana Road	6290	70	50	Permanent	24-26	50	Y	
2.15.1	Hauraki Road - Sec 1	SH25	0	RP 4160	4150	100	80	Permanent	21-23	80	Y	
2.15.1	Hauraki Road - Sec 2	RP 5023	5023	RP 5367	5367	50	30	Variable	21-23	60	N	This section of road is outside Tunua School so a 30km/hr speed limit is proposed.
2.15.1	Hauraki Road - Sec 3	RP 5425	5425	SH2	14135	100	80	Permanent	21-23	80	Y	

Report Section	Road Name	Start	Start RP	End	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - SAA5 (Y/N)	Further Information - Data / Issue
2.15.3	Opatis Road	Southern End	0	Northern end	1329	50	80	Permanent	21-23	40	N	Incorrect inputs into Megamaps has given speed limit inconsistent with the rural environment.
2.15.4	Flako Road	RP 330	330	RP 620	620	50	80	Permanent	21-23	50	N	Incorrect inputs into Megamaps has given speed limit inconsistent with the rural environment.
2.15.5	Rarafuna Street	Opatis Road	0	RP 250	250	50	80	Permanent	21-23	40	N	Incorrect inputs into Megamaps has given speed limit inconsistent with the rural environment.
2.15.5	Rarafuna Street	Hauraki Road	521	Walhoo Street	673	50	30	Permanent	21-23	40	N	This section of road is outside Tunua School so a 30km/hr speed limit is proposed.
2.15.6	Ratu Street (Tunua)	Hauraki Road	0	Opatis Road	561	50	80	Permanent	21-23	40	N	Incorrect inputs into Megamaps has given speed limit inconsistent with the rural environment.
2.15.6	Donnelly Street	Gladstone Road	0	Smith Street	234	50	30	Permanent	24-26	40	N	This section of road is outside Wahi East School so a 30km/hr speed limit is proposed.
2.15.6	Kitchener Street	Donnelly Street	0	End	175	50	30	Permanent	24-26	40	N	This section of road is outside Wahi East School so a 30km/hr speed limit is proposed.
2.15.8	Gilmour Street	SH25	175	SH2	848	50	40	Permanent	24-26	40	Y	

Report Section	Road Name	Start	Start RP	End	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - S.M.A.S (Y/N)	Further Information - Data / Issue
2.16.9	Gladstone Road	RP 395	395	RP 695	695	50	30	Permanent	24-26	40	N	This section of road is outside Waihi East School so a 30km/hr speed limit is proposed.
2.16.10	Heard Road	Tig Road North	0	End	2278	100	80	Permanent	21-23	80	Y	
2.16.11	Heath Road	SH2	0	End	450	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 60km/hr to be consistent with other roads in the area.
2.16.13	Kensington Road	Rata Street	727	End	1055	50	30	Permanent	24-26	40	N	This section of road is outside Waihi College so a 30km/hr speed limit is proposed.
2.16.13	Rata Street (Waihi)	Kensington Road	0	Thorn Road	471	50	30	Permanent	24-26	40	N	This section of road is outside Waihi College so a 30km/hr speed limit is proposed.
2.16.16	Moresby Avenue	RP 30	30	RP 405	405	50	30	Permanent	24-26	40	N	This section of road is outside Waihi Central School so a 30km/hr speed limit is proposed.
2.16.17	Mueler Street	RP 261	261	RP 481	481	50	30	Permanent	24-26	40	N	This section of road is outside Waihi Central School so a 30km/hr speed limit is proposed.
2.16.17	Union Street	RP 40	40	RP 315	315	50	30	Permanent	24-26	40	N	This section of road is outside Waihi Central School so a 30km/hr speed limit is proposed.

Report Section	Road Name	Start RP	Start - End RP	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - SAA5 (Y/N)	Further Information - Data / Issue	
2.16.19	Orokawa Heights	Heard Road	0	End	183	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 60km/hr to be consistent with other roads in the area
2.16.20	Pools Corner	Heard Road	0	End	296	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with other roads in the area
2.16.21	Reservoir Rd	Kent Crescent	546	End	1036	100	60	Permanent	21-23	40	N	Incorrect inputs into Megamaps has given speed limit inconsistent with the rural environment
2.16.21	Wharfy Road	Reservoir Road	0	End	604	100	50	Permanent	21-23	60	N	Speed limit to be lowered to 50km/hr to be consistent with other roads in the area
2.16.23	Seddon St	Morseby Avenue	0	Muller Street	265	50	30	Permanent	30-32	30	Y	
2.16.25	Thorn Road	Rata Street	0	Waite Road Nth	674	100	50	Permanent	21-23	60	N	Speed limit to be lowered to 50km/hr to be consistent with other roads in the area
2.16.25	Thorn Road	Waite Road Nth	674	End	1339	100	50	Permanent	21-23	60	N	Speed limit to be lowered to 50km/hr to be consistent with other roads in the area
2.16.29	Waite Road Nth	Thorn Road	0	End	631	100	50	Permanent	21-23	60	N	Speed limit to be lowered to 50km/hr to be consistent with other roads in the area
2.17.1	Waahi Beach Road	State Highway 2	0	Bdy with WBOP	4313	100	80	Permanent	21-23	80	Y	
2.18.1	Abbot Road	Old Waitekauri Road	0	Princes Street	410	50	30	Permanent	24-26	40	N	School speed limit

Report Section	Road Name	Start RP	Start - End RP	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - SAA5 (Y/N)	Further Information - Data / Time
2.18.1	Queen Street	0	End	112	50	40	Permanent	24-26	40	Y	
2.18.1	Poland Street	0	Princes Street	542	50	40	Permanent	24-26	40	Y	
2.18.1	Princes Street	0	End	1264	50	40	Permanent	24-26	40	Y	
2.18.3	Lanson Road	0	End	184	70	40	Permanent	24-26	40	Y	
2.18.4	Old Waikauri Rd	SH2	Lanson Road	1081	50	40	Permanent	24-26	40	Y	
2.19.1	Canal West Road	SH25	RP 270	270	70	60	Variable	21-23	60	N	This section of road is outside Waikauri School so a 60km/hr speed limit is proposed.
2.20.2	Old Tauranga Road	SH2	Waikauri Road	6264	100	80	Permanent	24-26	80	Y	
2.20.3	Pukekauri Road	Waikauri Road	East of Hollis Road	560	100	60	Permanent	21-23	60	Y	
2.20.3	Pukekauri Road	East of Hollis Road	Franklin Road	6725	100	80	Permanent	21-23	50	N	Speed limit to be lowered to 80km/hr to be consistent with other roads in the area
2.20.3	Adair Road	Pukekauri Road	End	210	100	60	Permanent	21-23	60	Y	
2.20.3	Hollis Road	Pukekauri Road	End	1471	100	60	Permanent	21-23	60	Y	
2.20.3	McKinney Road	Pukekauri Road	End	606	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road.
2.20.4	Pukevera Road	Old Tauranga Road	Tairāwhiti Road	4317	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road.
2.20.5	Sheelam Road	Waikauri Road	End	1065	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road.

Report Section	Road Name	Start	Start RP	End	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation Conditions (MLP Period)	Safe and Appropriate Speed	Proposed - SAA5 (Y/N)	Further Information - Data / Issue
2.20.6	Takeri Road	Wallaheia Road	0	End	3464	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 60km/hr to be consistent with the adjacent road
2.20.7	Wallaheia Road	SH2	0	Pukakauni Road	490	100	40	Permanent	21-23	60	N	Speed limit to be lowered to 40km/hr to support high level of pedestrian activity in the area
2.20.7	Wallaheia Road	Pukakauni Road	480	Old Teauranga Road	9124	100	80	Permanent	21-23	80	Y	
2.20.7	Kennedy Road	Wallaheia Road	0	End	1022	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road
2.20.7	Dickey Flats Road	Kennedy Road	0	End	1899	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road
2.20.7	Franklin Road	Wallaheia Road	0	End	2484	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road
2.20.7	Dean Road	Franklin Road	0	End	1308	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road
2.20.7	Speece Road	Franklin Road	0	End	758	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road
2.20.7	Hume Road	Franklin Road	0	End	282	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road
2.20.7	McLean Road	Wallaheia Road	0	End	555	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 80km/hr to be consistent with the adjacent road



Report Section	Road Name	Start	Start RP	End	End RP	Posted Speed Limit	Proposed Speed Limit	Speed Limit Type	Implementation conditions (MLTP Period)	Safe and Appropriate Speed	Proposed - 30AS (Y/N)	Further Information - Delta / Time
2.20.7	Bellamy's Road	Wallarahita Road	0	End	225	100	80	Permanent	21-23	60	N	Speed limit to be lowered to 60km/hr to be consistent with the adjacent road

## 4. Safety Infrastructure

A summary of the initial safety infrastructure recommendations in the 2021 review process is tabled below. This summary includes locations where safety infrastructure over and above signage (threshold treatments) 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. Due to funding limitations the locations have been prioritised for implementation with schools and DSI routes assigned the highest priority. Existing budgets have been used to determine a likely implementation time frame and these priorities will be reviewed each NLP cycle as funding allocations are renegotiated.

### 4.1 Further investigation

A number of locations were identified during the review where treatments from the Standard Safety Intervention Toolkit have already been installed and crashes are continuing to occur. In addition there are roads, especially within the Hauraki Plains area, where due to geological reasons road widening to facilitate the installation of improvements such as barriers or wide centreline can not be achieved. These roads will require additional in depth investigation to determine what treatments can be installed and their associated costs.

Table 3 Safety Infrastructure

Report Section	Road Name	Start	Start RP	End	End RP	Proposed safety infrastructure (excl thresholds)	Implementation (NLP Period)	Comments
2.1.1	Awell Road	SH2	0		8024	ATP on edgelines along the route.	24-26	Any physical works and/or changes to speed limit will need to be coordinated with Manukau-Piako District Council to ensure consistency along the route.
2.3.1	East Coast Road - Sec 1	RP 0	0	RP 8028	8028	Edgelines, with or without ATP, centreline ATP and additional edge marker posts	21-23	
2.3.1	East Coast Road - Sec 2	RP 8028	8028	RP 9553	9553	Edgelines	21-23	
2.3.1	East Coast Road - Sec 3	RP 9553	9553	RP 9923	9923	Edgelines, with or without ATP, centreline ATP and additional edge marker posts	21-23	
2.3.1	East Coast Road - Sec 1	RP 9923	9923	RP 10303	10303	Edgelines, with or without ATP, centreline ATP and additional edge marker posts	21-23	
2.3.1	East Coast Road - Sec 3	RP 10303	10303	RP 12313	12313	edgelines, with or without ATP, centreline ATP and additional edge marker posts	21-23	
2.3.1	East Coast Road - Sec 5	RP 18678	18678	AKI Bdy	19067	Install additional pedestrian warning signage as appropriate	21-23	
2.3.3	Kalua Road	Existing 50100	280	Bdy with Waikato	5876	ATP on edgelines along the route. Investigate options for further route improvements		Any physical works and/or changes to speed limit will need to be coordinated with Waikato District Council to ensure consistency along the route.
2.3.4	Miranda Road	Findlay Road	0	Waikato DC Bdy	4602	ATP on edgelines along the route. Additional edge marker posts and curve warning signage at out of context curves	24-26	
2.4.1	Kalhera Road - Sec 1	SH2	0	Hayward Road	324	Slow street treatments within the vicinity of the school. Raised platforms to manage vehicle speeds.	24-26	

2.4.1	Kalhero Road - Sec 2	Breener Drive	450	SH27	1570	Edgelines along the rural section of the road. Edge marker posts and curve warning signage at the out of context curves. RP 3800 – 6600, RP 10700 – 11000 and RP 14500 - 15500.	24-26
2.6.2	Kerepahi Town Road - Sec 2	40m east of Pomu Avenue	629	100m west of Fernleigh Street	1611	Existing zebra crossings onto raised platforms.	24-26
2.6.4	Wharepou Road West	State Highway 2	0	Hauraki Road	3398	Investigate options for route improvements	21-23
2.11.1	Darlington Street	SH2	0	End	910	Slow street treatments at multiple locations between State Highway 2 and Hayward Road to match the environment of the rest of the road. Install a mini roundabout at the Hayward Road intersection.	27-29
2.11.2	Hayward Road	RP 630	630	Darlington Street	707	Install a mini roundabout at the Darlington Street intersection	24-26
2.11.3	McDuff Lane	SH2	0	End	60	Additional roadmarking in the area in a long-life product.	27-29
2.12.3	Aorangi Road	SH26	0	End	1149	Slow street treatments at multiple locations. Side islands to narrow the road and one way sections to manage vehicle speeds	27-29
2.12.7	Junction Road	Railway Road	0	Mendes Place	405	Slow street treatments at multiple locations between Railway Street and Mendis Place. Side islands to narrow the road and one way sections to manage vehicle speeds. Install mini roundabout at the intersection with Opatito Road	30-32
2.12.10	Norwood Road	RP 440	440	RP 800	800	Replace the existing bus crossing with a painted zebra crossing on a raised platform	24-26
2.12.13	Railway Street	SH2	0	End	458	Slow street treatments at multiple locations. Realign the pedestrian access points to enable raised platforms to be installed	30-32
2.12.15	Shaw Avenue	Aorangi Road	0	End	700	Slow street treatments at multiple locations. Side islands to narrow the road and one way sections to manage vehicle speeds.	30-32
2.14.3	Bush Road	SH25	0	RP 230	230	Review curve warning signage and install new signs as required.	21-23
2.14.3	Bush Road	RP 230	230	End	6259	ATP on edgelines along the route.	24-26
2.15.1	Hauraki Road - Sec 1	SH25	0	RP 4160	4160	Edgelines, with or without ATP, centreline ATP and additional edge marker posts (RP 0 – 4160)	24-26
						Investigation to be undertaken in conjunction with Hauraki Road	
						Any changes to the speed limit will need to be coordinated with Waka Kotahi to ensure consistency of treatment around the school.	
						Works to be coordinated with Hauraki Road	

2.15.1	Hauraki Road - Sec 2	RP 4160	4160	RP 5023	5023	24-26	Replace the existing sea crossing with a protected zebra crossing on a raised platform.
2.15.1	Hauraki Road - Sec 3	RP 5425	5425	SH2	14135	21-23	Investigate options for further route improvements. Edge-line and centreline ATP and additional edge marker posts (RP5425 - 14135). Install intersection treatment such as RWYS at the intersections with Orchard East Road and Wharepoa Road West.
2.16.7	Galbraith Street	Margaret Street	153	Wigley Street	303	30-32	Install mini roundabouts at the intersection with Wigley Street. Side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.
2.16.8	Gilmore Street	SH25	179	SH2	848	27-29	Install a mini roundabout at the intersection with Johnson Street. Raised safety platform in the vicinity of the access to the Gilmore Reserve to slow vehicles and provide a safe crossing point for pedestrians. Side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.
2.16.12	Kenny St	SH2	0	SH2	839	27-29	Raised safety platform to the south of State Highway 2 to support the cycle path and manage vehicle speeds. Additional raised safety platforms in conjunction with pedestrian desire lines.
2.16.14	Lawrence Road	Comwall Street	0	End	716	30-32	Install sharrows and/or other cycle friendly features on the road.
2.16.16	Moresby Avenue	RP 36	30	RP 405	405	27-29	Speed management features in the vicinity of the school.
2.16.17	Mueller Street	SH25	168	RP 261	261	27-29	Install mini roundabout at the intersections with Johnson Street.
2.16.17	Mueller Street	RP 261	261	RP 481	481	27-29	Raised safety platform in the vicinity of the existing crossing location outside the school to slow vehicles and provide a safe crossing point for pedestrians.
2.16.17	Mueller Street	RP 481	481	SH2	695	27-29	Install mini roundabout at the intersections with Union Street.
2.16.26	Toomy Street	Kensington Road	0	Waite Road	363	30-32	Investigate options for route improvements. Further physical works will need to consider the function of this road within the road network and support the current or a lower speed limit of 40km/h if desired at a later date.

2.16.27	Victoria St	Kenny Street	0	Frankton Road	1119	Investigate options for road improvements. Further physical works will need to consider the function of this road within the existing network and support the current speed limit. Install repeater speed limit signs on Victoria Street to remind drivers of the speed limit. Install threshold treatment at the change of speed limit at Frankton Road	24-26
2.16.28	Waiote Road	Orchard Road	0	Rata Street	885	Investigate edge treatments for the full length to improve the urban environment of the street. Slow street treatments required at multiple locations. Raised safety platforms or central islands to manage vehicle speeds and support use by pedestrians and cyclists.	30-32
2.16.30	Wigley St	State Highway 2	0	End	491	Install mini roundabouts at the intersections with Galbraith Street and Consoak Street. Side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area.	27-29
2.17.1	Wahi Beach Road	State Highway 2	0	Boyl with WBOP	4313	Install ATP on edges along the route. RIWAYS at Tlig Road North and South intersection	21-23
2.18.1	Abbott Road	Old Waitekauri Road	0	Princes Street	410	Install additional school signage on Abbots Road in the vicinity of Waikino School.	24-26
2.20.2	Old Tauranga Road	SH2	0	Waitekauri Road	6264	Install edges with or without ATP. Install central ATP. Investigate options for further road improvements including RIWAYS at Woodlands Road intersection	24-26
2.21.1	Whitika Beach Road	State Highway 25	0	Kun Tiki Road	627	Side islands and central refuges to create a slower speed environment while supporting pedestrian usage in the area	30-32

## 5. Area treatments

During the review process there were a number of locations where intersecting roads had been identified or where changes to one road would have an effect on multiple adjacent roads.

These areas should be considered as a single treatment area to avoid confusion to drivers and ensure that vehicle speeds are managed consistently, and key factors or risks do not simply transfer from one road to an adjacent one.

The areas that were identified fitting these criteria in no particular order are discussed below.

### 5.1 Ngatea – Hauraki Plain College

This section of roading network is bordered by State Highway 2 and Kaihere Road and is a primarily residential area with access to a school and two childcare facilities.



The following roads have already been identified in this area, Darlington Street, Haywood Street, McMillan Street and Kaihere Road. Darlington Street and Haywood Road have already been the subject of customer complaints regarding vehicle speeds, while the mean speed on Kaihere Road is higher than desirable. The speed limit and speed environment will require lowering on Haywood Road and Kaihere Road due the presence of Hauraki Plains College. In conjunction with Darlington Street these three roads form the core of this area and as such the speed limit through the whole area should be consistent to provide consistency of message to drivers:

### 5.2 Waihi – Gilmour Reserve

This section of roading network is bordered by both State Highway 25 and State Highway 2 and is a primarily residential area with access to a school and a number of recreational parks.



The following roads have already been identified in this area, Clarke Street, Gilmour Street, and Mueller Street. Due to the grid layout of the network in this area the parallel residential streets should all be treated in a similar nature to ensure that through vehicles remain on the state highway network rather than using this area as a short-cut.

The area to the east of State Highway 2 should also be considered for an area treatment due to the grid layout of the network.

### 5.3 Waihi – Seddon St Town Centre

This section of roading network is bordered by both State Highway 25 and State Highway 2.



The section of Seddon Street shown above has been identified for a change in speed limit due to its high pedestrian numbers and low speed reinforced by the existing raised platforms. Due to the similar nature of activity, consideration should be given to creating a 'town centre' with similar treatments on all approach roads off State Highway 25. The small section to the north comprising Martha Street and Haszard Street should be included for consistency.



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