NORTHLAND TRANSPORTATION ALLIANCE

"Moving Northland Forward"

Regional Speed Limit Review
Mangawhai and Kaiwaka (including Oneriri and Oruawharo Road)

Recommendations Report

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1 Overview

Kaipara District Council (Council) is a Road Controlling Authority (RCA) within the Kaipara District and has a statutory role in managing the District's local roads (except State Highways), including the setting of speed limits. This statutory role as an RCA is set out under the Land Transport Act 1998, which also enables Council to make a bylaw that fixes the maximum speed of vehicles on any road for the safety of the public, or for the better preservation of any road (*Section 22AB(1)(d)*).

The Kaipara District Speed Limits Bylaw 2018 sets the speed limits on all local roads within the district, with the Schedules and maps in that Bylaw identifying the enforceable speed limits and where they apply.

Council undertook community consultation on proposed new speed limits within the Mangawhai and Kaiwaka (Oneriri and Oruawharo) area that is identified in Figure 1 and bounded by:

- The Mangawhai Coast to the east
- State Highway 1 to the west
- The Brynderwyn Range to the north
- Auckland Council Boundary to the south

In addition, a small area to the west of Kaiwaka (Oneriri and Oruawharo) located between the Kaipara Harbour and the Auckland Council boundary is included in the review area and is identified in Figure 2.

The proposed changes to speed limits were publicly notified in accordance with Section 156 of the Local Government Act 2002; with feedback being sought from 29th October to 5pm, Friday 18th December 2020. Hearings were held in Mangawhai at Council offices at "The Hub" on Molesworth Drive.

This Report brings together all the information that must be considered under Section 4.2(2) of the Setting of Speed Limits Rule 2017, including:

- Community feedback and recommendations (main body of Report)
- Recommended Speed Limit Maps (Appendix 1)
- Technical Information to be considered (Appendix 2 as a separate attachment)
- Statement of Proposal as notified (Appendix 3)
- Traffic Notes 37 and 56 (Appendix 4)

In addition to this Recommendations Report, it should be noted that all submissions were formally read and received by a Council Committee on behalf of Council at the Hearings held on 25th March and were attached to the Agenda item for that meeting.

1.1 Hearing Committee

Council delegated authority to a Hearings Committee to hear any submitters that wished to present their submissions in person at their 30th September 2020 meeting. The Hearings Committee consisted of:

Deputy Mayor Anna Curnow

Councillor Peter Wethey

Councillor David Wills

In addition to the Committee, the following Northland Transportation Alliance staff members were present to provide expert advice where required:

- Shawn Baker: Project Manager – Speed Limits
- Nick Marshall: Team Leader Road Safety and Traffic Engineering
- Victor Devyatov: Intermediate Road Safety and Traffic Engineer

In addition, Gavin Dawson (Governance Advisor) was also in attendance to provide governance advice to the Committee and manage the Hearing.

1.2 Purpose and Scope

The purpose of this Report is to make recommendations to Council on new speed limits within the review area. The recommendations arise from an assessment of all the information that the RCA is required to consider when setting speed limits under Section 4.2(2) of the Setting of Speed Limits Rule 2017, including community feedback in submissions and at a Hearing.

The detailed technical information that was collated and considered when proposing new speed limits for public notification and community feedback forms part of the decision-making process and is appended to this Report (Appendix 2 as a separate attachment).

This report meets the requirements of the Local Government Act (2002): Principles of Consultation (Section 82 and 82A). The report provides:

- A summary of the feedback received.
- A discussion of the issues raised by submitters, either individually; or collectively where there are similar themes.
- The recommendations arising from the feedback, including the reasons for the recommendations.

Feedback is acknowledged in this report; but individual submissions may not be specifically referenced within the body of this report due to the similarity of the decisions requested, reasons given, and the volume of submissions received.

1.3 Implementation of recommended speed limits

There are a number of factors that are required to ensure that a speed limit is legally enforceable:

- The Speed Limit must be set in accordance with the Setting of Speed Limits Rule 2017. This has been achieved through the speed limit review process (including associated consultation); and
- New speed limits signage must be installed in accordance with Setting of Speed Limits Rule 2017 and relevant standards; and
- Speed limit signage must match the operative speed limits set out in the Speed Limits Bylaw

Given the physical works required to ensure the enforceability of proposed new speed limits, the Committee will be requested to debate the recommendations in this Report and make final recommendations to Council. Council will then make a separate decision to make the proposed speed limits operative once signage has been installed. Implementation requirements are included in Appendix 4.

1.4 National Speed Limit Register

The Kaipara District Speed Limits Bylaw currently sets the speed limits on all local roads within the District, with the Schedules and maps in that Bylaw identifying the enforceable speed limits and where they apply.

In 2021, all Speed Limit Bylaws are expected to be migrated to a National Speed Limit Register (NSLR). The NSLR will become the legal instrument by which all speed limits are enforced. In effect, once the NSLR goes "live" for the Kaipara District, The Kaipara District Speed Limits Bylaw will be superseded.

The timing of the change-over has not yet been determined as the required legislation is yet to pass through Parliament. However, the current proposed timing will coincide with the implementation of this speed limit review. The proposed change will not impact on the implementation of the adopted recommendations, but implementation of the legal instrument (Bylaw) to enforce the new speed limits may change.

The change in legal instrument from Bylaw to NSLR does not change the Kaipara District Council's role as a Road Controlling Authority. Speed limits are still set, in accordance with the Setting of Speed Limits Rule 2017 (and its amendments). The matters that must be considered when setting a Speed Limit are not expected to change under the new system.

2 Delegations

Speed Limits within the District are set by Council in accordance with its role as an RCA. The RCA is responsible for decisions relating to feedback on proposed speed limits. The Speed Limits Bylaw is made under Section 22AB(1)(d) of the Land Transport Act.

Council delegated authority to a Hearings Committee to receive submissions and hear any submitters that wished to present their submissions in person at their 30th September 2020 meeting.

3 Community Consultation Process

The Kaipara District Speed Limits Bylaw is made pursuant to the Land Transport Act 1998. Section 22AD (1) of the Land Transport Act 1998 states that Section 156 of the Local Government Act 2002 applies. Section 156 (LGA) sets out the consultation requirements when making or amending a Bylaw.

- The Local Government Act 2002 provides the process for consultation.
- The Land Transport Act 1998 and the Setting of Speed Limits Rule 2017 identifies who must be consulted.

The proposed changes to the Speed Limits Bylaw were assessed against the requirements of Section 156 of the LGA 2002. This assessment determined that the proposed changes would; or would likely to have; a significant impact on the public. The significance relates to the wide-ranging proposals to change speed limits within the affected catchment area. The proposed changes would have the potential to impact on all road users to some degree.

Given the significance of the proposed changes, it was determined that consultation should be undertaken in accordance with Section 83 of the LGA 2002 – Special Consultative Procedures.

3.1 Notification

A Statement of Proposal (Appendix 3) was prepared in accordance with the requirements of the LGA 2002 and notified in local media and on Council's website. The Public Notice included information about where the Statement of Proposal could be obtained or viewed and the dates, times and locations of information drop-in sessions. In addition:

- The full Statement of Proposal and supporting technical information was made available on Council's website.
- Press releases relating to the review and proposed speed limit changes were featured in local media.
- Statutory Consultees were notified directly.
- Information, including the Statement of Proposal and Technical Information was made available at Council offices and service centres.

- Information and community "drop in" sessions, attended by key staff were held at the following locations:
    - 12th November at the Hakaru Hall on Settlement Road between 12noon and 2pm
    - 17th November at the Mangawhai Senior Citizens Hall – Fagan Place – between 4pm and 6pm
    - 18th November at Kaiwaka Memorial Hall between 4pm and 6pm
    - 19th November at Mangawhai Library Hall between 4pm and 6pm

3.2 Hearings

Section 83(1)(d) and (e) of the LGA 2002 requires the Local Authority to provide an opportunity for persons to present their views to the local authority in a manner that enables spoken (or New Zealand sign language) interaction between the person and the Local Authority, or any representatives to whom an appropriate delegation has been made.

The community was provided with an opportunity to provide written submissions between 29th October and 18th December 2020. All submitters were asked to indicate if they wished to be heard in person to support their submission.

All submitters that indicated that they wished to be heard in support of their submission were contacted by both email and telephone to confirm whether they still wished to be heard.

A total 13 submitters presented their submissions at a formal hearing on 25th March 2021, held at the Kaipara District Council offices at "The Hub", Molesworth Drive, Mangawhai.

The Hearing Committee and expert staff attendees are set out in Section 1.1 above.

3.3 Hearing Summary

A range of issues were expanded upon by submitters at the hearing. Most of those issues have been addressed throughout this Report in some detail. A full copy of each submission is available in the Speed Limits Review Committee Hearing Agenda for 25th March 2021.

Any recommendations that are set out in this Section of this Report are carried through to the tables in Section 7.

Greg Campbell (Submitter 10) was primarily concerned about proposed speed limits in Cames Road and Lawrence Road. On Cames Road, Mr Campbell noted that the road should be 40kph for the entire length of the road (proposed 60kph section should be 40kph). Mr Campbell also indicated in his submission that the current temporary 30kph Section of Cames Road should be retained.

A consistent speed limit of 40kph along Cames Road would provide a good signal that the area is a slow zone. Mr Campbell noted that the area has a large amount of existing and new dwellings and the road is windy and has very steep sections and blind corners.

Mr Campbell stated in his submission that there are many people who want to use Cames Road for recreational purposes (walking, running, riding etc), however due to the fear of traffic, are unable to do so. 40kph would give the entirety of Cames a sense of cohesion and calmness, rather than seeming like a shortcut or way to bypass Mangawhai Village

With respect to Lawrence Road, Mr Campbell raised concerns with part of the road being proposed as 80kph. This section of road is sealed but would be better suited to 60kph. A 60kph speed limit along the length of Lawrence Road would help reduce the sense that Cames Rd / Laurence Rd is a quick short cut to bypass Mangawhai Village.

Response to submission: The jurisdictional boundary between Kaipara District Council and Auckland Council is along Cames Road between approximately 128 and 160 Cames Road. This boundary is in the part of Cames Road where a temporary 50kph speed limit is

in force and a 60kph speed limit has been proposed. The Kaipara District Speed Limit Bylaw can only be legally enforced within its own boundaries.

It is noted that Auckland Transport (the Road Controlling Authority that acts on behalf of Auckland Council) is generally supportive of the proposals made in the Statement of Proposal. It is therefore considered likely that Auckland Transport would support a 40kph speed limit on that part of Cames Road that it has responsibility for. If Auckland Transport is supportive of a 40kph speed limit, then a 40kph speed limit along the full length of Cames Road is practical.

The current temporary 30kph on Cames Road reflects the very narrow and poorly formed carriageway on this section of the road. Within the context of the wider speed limit review across Northland, 30kph speed limits are generally reserved for specific pedestrianised areas within the urban setting, and for variable speed limits outside schools.

Consistency of speed limits is an issue raised be several submitters, principally within the urban setting of Mangawhai. However, consistency of speed limits (limiting changes along a single road or journey) is a valid concern for rural roads and is addressed in the Setting of Speed Limits Rule, which sets minimum distances for some speed limits. The One Network Road Classification (ONRC) and the Road to Zero National Road Safety Strategy both favour consistent speed limits reflective of the wider road environment.

A short 30kph speed limit in the centre of Cames Road would create multiple speed limits along the single road (40kph – 30kph – 40kph – to potentially 60kph). Although it is recognised that the current road environment within the temporary 30kph speed limit area provides an argument for the lower speed limit, it is considered that multiple speed limits is nevertheless undesirable. Multiple speed limits would be further exacerbated if Auckland Transport were to set a 60kph or 50kph speed limit on their section of the road.

A single speed limit of 40kph for the length of Cames Road is considered the most appropriate response to the issues raised by submitters, whilst giving effect to other technical matters that must also be considered.

With respect to Lawrence Road an 80kph speed limit was proposed along the sealed section of Lawrence Road. Several submitters, including Mr Campbell sought a consistent speed limit along the length of Lawrence Road. Mr Campbell noted in his submission that a slower speed limit along the length of Lawrence Road would reduce the sense that Cames Rd / Laurence Rd is a quick short cut to bypass Mangawhai Village.

The proposed 80kph area on Lawrence Road meets the minimum threshold for the length of an 80kph speed limit set by the Setting of Speed Limits Rule. However, it is recognised that a consistent speed limit along the full length of Lawrence Road would be desirable and would create a consistent speed zone in the area.

Recommendations:

It is recommended that the speed limit on Cames Road be set at 40kph for the full length of the road within Kaipara District Council jurisdiction. In support of this recommendation, the following further action will be required:

- *Additional warning signage be installed where there is a change in the road environment from a well-formed unsealed road to a narrower carriageway.*
- *Liaison with Auckland Transport will be required to make changes to the section of Cames road that is under Auckland Transports jurisdiction (to make that section of road 40kph).*

It is recommended that the proposed sealed section at the Kaiwaka-Mangawhai Road end of Lawrence Road (proposed as 80kph) be reduced to a 60kph speed limit.

Catharina Cornelia Maria (Tineke) Hosking Back Bay Property Committee (Submitter 21 and 32) represented both herself and Back Bay Property Committee. Ms Hosking and the Committee were most concerned with Molesworth Drive. They supported the proposed

60kph speed limit on Molesworth Drive, but would like to see this speed limit dropped further to 50kph or preferably 40kph.

Ms Hosking submitted that Molesworth Drive is in affect a 50kph with the Mangawhai Central development and that Molesworth Drive connects a town – not two towns. In addition, Mangawhai as a community is seeking to encourage people to be active and use facilities including a 3m shared path along Molesworth Drive, a 50kph speed limit would therefore be much better for people.

The proposed 60kph speed limit is approximately 1.8km long and creates an additional speed limit along Molesworth Drive that is confusing with so many changes. The Mangawhai Central development effectively makes Molesworth Drive a 50kph, and this has been signalled already. Ms Hosking questions why not set a 50kph zone now.

Ms Hosking stated that she supported the proposed 30kph speed limits in Mangawhai and other lower speed limits as Mangawhai was a "slow town".

Response to submission: Consistency of speed limits is an issue raised be several submitters, principally within the urban setting of Mangawhai and on Molesworth Drive. Other submitters have requested that the speed limit along Molesworth Drive be 50kph, for a variety of reasons. There is currently a temporary speed limit in place along the part of Molesworth Drive where construction is occurring for the Mangawhai Central Development.

Once Mangawhai Central is completed, the anticipated speed environment along that section of Molesworth Drive will be 50kph. This allows for the new pedestrian facilities and the round-a-bouts that are being installed as part of the Mangawhai Central development (it is noted that Mr Tollemarche, representing MCL Ltd (Marsden Central Limited) provided additional evidence that supports Ms Hosking's submission.

Lowering the proposed speed limit from 60kph to 50kph on Molesworth Drive as part of this review is both effective and efficient. Making Molesworth Drive 50kph at this time will avoid the need for an additional change of speed limit within the next year. A 50kph speed limit is also consistent with long-term planning for Mangawhai which promotes walking and cycling opportunities between the main Mangawhai hubs.

Amending the proposed 60kph on Molesworth Drive to 50kph will result in a single 50kph speed limit for the length of Molesworth Drive, with the exception of the part of Molesworth Drive that is located in the Mangawhai Village commercial area.

It is noted that Ms Hosking supports the proposed 30kph speed limits in Mangawhai Heads and Mangawhai Village.

Recommendations:

It is recommended that the speed limit on Molesworth Drive be set at 50kph for the section of road from Estuary Drive to 160m north of Old Waipu Road (current proposed 50kph zone).

Paul Wightman (Submitter 63) noted that he has campaigned on issues about Lawrence Road for some years. Mr Wightman believes that, irrespective of the speed limit, about 10% of drivers will continue to drive fast.

Mr Wightman stated that in 2019, Lawrence Road had approximately 158 cars per day and questioned why there appeared to be no traffic counts being taken as traffic volume is an issue. Mr Wightman stated that a survey team has done a radar check on speed, but no statistics are available.

Mr Wightman submitted that the road needed to be sealed as the best answer to speed issues. He submitted that over the past 20 years there has been an increase in houses along Lawrence Road from about 20 to approximately 500 houses. This has contributed to the traffic volume and issues on the road, but reserve contributions do not seem to be spent on the road.

Mr Wightman also noted that the one lane bridge on Devich Road is a real issue as trucks cannot use it. This causes the trucks to use Lawrence Road instead. Lawrence road is also used as a bypass.

Response to submitter: Traffic volumes on Lawrence Road vary between sections, with approximately 475 vehicles per day utilising the sealed section between Kaiwaka-Mangawhai Road and Devich Road. This number reduces significantly along the unsealed part of the road with approximately 175 vehicles per day between Cames Road and Valley Road, with a slight increase in traffic volume between Valley Road and Settlement Road. The Average Annual Daily Traffic (AADT) Count is derived by data held by Waka Kotahi (NZTA) and Northland Transportation Alliance and updated by Corelogic.

The current speed limit review is based on the current road environment and any changes to that environment that is expected in the foreseeable future. The speed review is therefore not based on Lawrence Road being sealed. If Lawrence Road is sealed at some point in the future, the speed limit would be further reviewed at that time. The sealing, of roads is outside of the scope of this review (refer Section 4.1 below).

It is noted that other submitters have expressed similar concerns as Mr Wightman with respect to Lawrence Road.

Recommendations:

It is recommended that the speed limit on Lawrence Road be set at 60kph for the full length of the Road, including the relatively short, sealed sections.

David Medland-Slater (Submitter 28) was generally supportive of all proposals but was most concerned about speed limits on Black Swamp Road. Mr Medland-Slater stated that Black Swamp Road has a lot of additional construction and trade traffic and that the road gets very busy with trade vehicles during commute times. The road is also important for pedestrians and as a cycle route. Some walkers wear masks for the dust that is created by vehicles.

Mr Medland-Slater said that Black Swamp Road near the campsite (sealed section), is windy and cattle cross the road along this section of road. A slower speed limit is therefore appropriate.

Mr Medland-Slater submitted that the sealed section that is proposed as 80kph is too high and should be further lowered to 60kph. He also submitted that the speed limit along the unsealed length of the road should be 40kph.

Response to submitter:

The jurisdictional boundary between Kaipara District Council and Auckland Council is along Blackswamp Road between approximately 176 and 245 Blackswamp Road. Although the entirety of Blackswamp Road was included in the Statement of Proposal; the Kaipara District Speed Limit Bylaw can only be legally enforced within its own boundaries.

It is noted that Auckland Transport (the Road Controlling Authority that acts on behalf of Auckland Council) is generally supportive of the proposals made in the Statement of Proposal. It is therefore considered likely that Auckland Transport would support a lower speed limit on the section of Black Swamp Road under its jurisdiction.

The sealed section of Blackswamp Road from Tomarata Road to Raymond Bull Road is 1.1km. The campground is expected to generate additional low speed traffic accessing Tomarata Road, as well as a higher-than-normal number of pedestrians walking aong this section of the road. It is noted that Mr Medland-Slater highlighted the importance of this road for walkers and cyclists.

Consistency of speed limits is an important factor that has been raised in several submissions, including in relation to Lawrence Road, Cames Road and Molesworth Drive. As a result of these submissions, it has been recommended that relatively short, sealed

sections of road (that were proposed as 80kph) should be lowered to 60kph to maintain consistency with the majority of the road.

From a road environment perspective, the unsealed section of Blackswamp Road is consistent with a 60kph unsealed road. Reducing this section of road to 40kph is unlikely to reach significant compliance levels. Equally, a 50kph speed limit is generally reserved for urban roads and is not available as a speed limit within a rural environment (except in exceptional circumstances).

Reducing the sealed section of Blackswamp Road to 60kph will not have a significant impact on overall travel time from the originally proposed 80kph speed limit. Travelling at 60kph instead of 80kph over the sealed section of Blackswamp Road would result in a 16 second change in journey time. This time difference is expected to be negligible for the average driver as the operating speed (average speed) on this section of road is less that 60kph.

Recommendations:

It is recommended that the speed limit on Blackswamp Road be set at 60kph for the full length of the Road within Kaipara District Council jurisdiction, including the sealed section.

To liaise with Auckland Transport to lower the part of Blackswamp Road that is under their jurisdiction to 60kph.

Chris Carey (Submitter 37) was supportive of the proposed speed limits on Oneriri Road, and in particular the proposal to reduce the speed limit on the unsealed section to 60kph.

Mr Carey was concerned that the unsealed section of Oneriri Road has become "rally central". To his knowledge, four cars have rolled on this section of the road.

Mr Carey also noted that the demographics of the road has changed over time with new developments. These new developments have increased the number of cars on the road. Developments currently underway are expected to add an additional 27 vehicles per day to the road.

Mr Carey raised issues relating to dust and enforcement. He noted that a lower speed limit should reduce dust, but also raised concerns as to who would monitor and enforce the new speed limit. Mr Carey also suggested that Council put up "Dust nuisance' and "children and Horses" signage on the road at strategic points.

Response to submitter:

The submitters general support of the proposed speed limits is noted. Surrounding land-uses and potential changes to the wider environment, including planned developments are all factors that are considered when setting a speed limit.

Dust is a significant issue on all unsealed roads and is addressed in more detail in Section 4 of this Recommendations Report. Monitoring and enforcement of speed limits are also addressed in Section 4.

Recommendations:

It is recommended that no change is made to the proposed speed limit on Oneriri Road.

MCL Ltd - Mark Tollemache (Submitter 73) represents the development company that is currently developing Mangawhai Central. Mr Tollemache was principally concerned with the proposed speed limit along Molesworth Drive in the vicinity of the Mangawhai Central development. Mr Tollemache sought a continuous 50kph speed limit along the length of Molesworth Drive where a 60kph speed limit is proposed.

Mr Tollemache stated that the current round-a-bout design at the entry to Mangawhai Central will support a 50kph speed limit along Molesworth Drive, without the need to retrofit (engineer down) the entrance to Mangawhai Central. Mr Tollemache was concerned that the round-a-bouts, which are currently nearing completion would in effect create three separate sections of 60kph speed limits and therefore the proposed 1.8km, 60kph speed

limit zone would not be a single area. Mr Tollemache noted that, in his opinion, 60kph would be appropriate if there was no Mangawhai central, however, there is no traffic reason to go faster.

Mr Tollemarche noted that the statutory goal is zero crashes (road to Zero Road Safety Strategy). The issue is therefore not about the number of houses, but pedestrian and cyclist safety. He noted that Mangawhai is spread out over Mangawhai Heads and Mangawhai Village. For 250 days a year, children travel from one end to another to access schools that are located in Mangawhai Village. Currently many children are dropped off at school. A slower 50kph speed limit along Molesworth Drive, coupled with the development of new facilities will encourage other options for getting to school, including walking and cycling.

Mr Tollemache noted that 60kph is not a slow speed for an urban environment. There is a strong desire to encourage people to walk and cycle between the various community nodes. To achieve this, a slower (than 60kph) speed limit is needed to make people feel safe. He noted that the Causeway is unlikely to have a footpath on both sides of the causeway, which will force pedestrians to cross the road. A 50kph speed limit would support this.

Other Submissions on Molesworth Drive

In addition to Mr Tollemarche of MCL, there were several submitters (not attending the hearing) that raised issues associated with Molesworth Drive.

Submissions received consistently requested that the speed limit along the "causeway" section of Molesworth Drive be reduced to 50km/h. One submitter noted that it is dangerous exiting their driveway on Molesworth Drive with vehicles traveling in both directions, often at speeds over the 80kph speed limit. Another submitter noted that, in Mangawhai, travel distances are relatively short, so time should not be an issue.

One submitter highlighted their concerns for the children and older / disabled people trying to cross Molesworth Drive as there is no crossing anywhere along that road and a huge children's play park on one side so a magnet for the children of Mangawhai.

One submitter sought a 60-70km/h speed limit, rather than 50km/h past Mangawhai Central.

Concerns were also raised about the proposed 30km/h speed limit through Mangawhai Village, and whether this should extend as far down Molesworth Drive, toward the Causeway.

Response to submitter:

It is recognised that, with the development of Mangawhai Central, that the speed limit on Molesworth Drive will need to be further reviewed. Mr Tollemache's submission is supported by several other submitters that have also sought a 50kph speed limit along Molesworth Drive, or raised the issue of consistency in speed limits.

The Network Operating Framework for Mangawhai (Appendix 5) promotes a primary walking and cycling route along Molesworth between Mangawhai Heads and Mangawhai Village. This primary walking and cycling route is supported by Mangawhai Structure plans and the Kaipara Walking and Cycling Strategy. It is also noted that the route along Molesworth Drive connects to the Te Araroa Trail through Blackswamp Road.

One issue raised by a number of submitters is the inconsistency in speed limits (changing from one speed limit to another). With the proposed introduction of a 30km/h speed limit in Mangawhai Village, a short 40km/h zone would be created between an Early Childhood Centre and the higher speed limit along the causeway. Reducing the extent of the 30km/h zone to better encompass the commercial part of Mangawhai Village and extending the 50km/h zone to the shortened 30km/h zone will resolve this issue. Making Molesworth Drive a consistent 50km/h (outside the Mangawhai Village commercial area) enables this change to be made.

Recommendations:

It is recommended that:

- *The proposed 60kph section of Molesworth Drive be reduced to 50kph, creating a consistent speed limit from the northern entry to Mangawhai Heads to the entry into the Mangawhai Village commercial area (intersection with Longview Street).*
- *The proposed 30km/h speed zone be reduced to a point near the intersection with Longview Street.*

Maryjane Francis (Submitter 85) main concern related to Lawrence Road, from Kaiwaka-Mangawhai Road to Devich Road and sought a reduction in the speed limit along Lawrence Road to 40kph. Ms Francis noted that the road is in poor condition and essentially unsealed. There are approximately 35 houses on this section of the road and the road is used for walking and cycling.

Ms Francis preferred that that the speed limit be further reduced to 40kph to reduce the dust nuisance. Ms Francis noted that she did not have any other recourse to address the dust issue. She noted that dust is unhealthy, but there is little money to upgrade and seal the road.

Ms Francis stated that reducing the speed limit from the proposed 60kph to 40kh is not going to impact on local residents. However, it will impact on heavy goods and commercial vehicles that currently set their speed at around 80kph. The number of Heavy goods Vehicles travelling along the road is increasing.

Response to submitter:

Consistency of speed limits is an important factor that has been raised in several submissions, including in relation to Lawrence Road, Cames Road and Molesworth Drive.

As a result of these submissions, it has been recommended that relatively short, sealed sections of road (that were proposed as 80kph) should be lowered to 60kph to maintain consistency with the majority of the road.

It is recognised that there is a short section of Lawrence Road that is very narrow, and a much slower speed limit would be appropriate. This section of the road has a cutting on both sides of the road and opposing traffic would be required to give way. This section of road is approximately 100m long. The remainder of unsealed sections of Lawrence Road is consistent with a 60kph speed limit that has been set on other similar rural unsealed roads.

Dust is a significant issue on all unsealed roads and is addressed in more detail in Section 4 of this Recommendations Report. Maintenance and general road condition are also addressed in Section 4.

Recommendations:

It is recommended that the speed limit on Lawrence Road be set at 60kph for the full length of the Road, including the relatively short, sealed sections.

Alison Mason (Submitter 86) sought a reduction in the speed limit along Lawrence Road to 40kph. Ms Mason stated that there were blind corners on the road and there are often speed related minor crashes. Ms Mason stated that there are a lot of crashes on Lawrence Road that are not reported. Some of these crashes are speed related, but others are caused by the condition of the road. In some parts of the road – if opposing cars come across each other one needs to stop to let the other through.

Ms Mason said that some sections of Lawrence Road are very narrow and opposing traffic needs to give way to pass each other. Ms Mason also noted that the road is a school bus route. Trucks travel so fast that they would not be able to stop if something happened. Ms

Mason said that she had been subjected to road rage when trying to challenge some drivers about their speed on the road.

Currently there are an additional 10 house site, each adding two or three cars to the road. Ms Mason strongly recommended a 40kph speed limit.

Ms Mason also raised the issue of dust, stating that the dust and grit is definitely a health issue.

Response to submitter:

Consistency of speed limits is an important factor that has been raised in several submissions, including in relation to Lawrence Road, Cames Road and Molesworth Drive.

As a result of these submissions, it has been recommended that relatively short, sealed sections of road (that were proposed as 80kph) should be lowered to 60kph to maintain consistency with the majority of the road, including along Lawrence Road.

It is recognised that there is a short section of Lawrence Road that is very narrow, and a much slower speed limit would be appropriate. This section of the road has a cutting on both sides of the road and opposing traffic would be required to give way. This section of road is approximately 100m long. The remainder of unsealed sections of Lawrence Road is consistent with a 60kph speed limit that has been set on other similar rural unsealed roads.

Dust is a significant issue on all unsealed roads and is addressed in more detail in Section 4 of this Recommendations Report. Maintenance and general road condition are also addressed in Section 4.

Recommendations:

It is recommended that the speed limit on Lawrence Road be set at 60kph for the full length of the Road, including the relatively short, sealed sections.

Alan William Preston (Submitter 69) sought a blanket speed reduction to 60kph on all rural roads. Mr Preston recognised that driver culture may never accept this and that in the absence of enforcement, aggressive drivers will only ever be governed by the physical limits that their vehicles are subject to as they negotiate the many tight corners on our rural roads. Mr Preston indicated that he could accept a compromise of 70kph but considered that a speed limit of 100kph on these roads was “just plain crazy”. He noted that a speed limit of 90kph, or even 80kph are not going to reduce the risk of injuries or fatalities should a crash occur.

Mr Preston suggested that rather than a set speed limit, that it would be more effective to have signage that recommends speeds on sections of the road. He suggested that these recommended speeds be painted directly onto the road to create more visual sign. Mr Preston suggested a range of alternative options for slowing traffic, including the use of temporary or permanent traffic calming devices.

Mr Preston noted that the 50kph speed limit for vehicles passing through busy areas with pedestrians, cyclists, parking vehicles and frequently visited urban centres such as Mangawhai Village, Wood Street Centre, Mangawhai Heads surf beach is inappropriate and needs to be dropped to at most 30kph.

Response to submitter:

The purpose of this speed review; the focus of national speed management guidance; and the Road to Zero National Road Safety Strategy is to reduce serious injury and fatal crashes on our roads. One of the cornerstones of the guidance and strategy is to set safe and appropriate speeds that match the road environment. A blanket, single low speed does not meet the requirements of national guidance, nor the Road to Zero Road Safety Strategy.

It is however recognised that many of the speed limits are currently too high and are not appropriate for the road environment, or the purposes to which the road is utilised. This speed limit review addresses many of those issues.

Extensive research suggests that a relatively small reduction in speed reduces the likelihood of a crash occurring, and if one does occur, the risk of serious injury or death is significantly reduced. 80kph and 60kph speed limits on rural roads reflect the road environment.

Speed limit signage, including its design and location is set through the setting of Speed Limits Rule. National standards and approach to speed limits and signage is required to ensure consistency across the entire network.

Mr Preston notes that the current 50kph speed limit in some high use urban areas is inappropriate. A lower speed limit of 40kph in most urban areas (except key arterial routes) is recommended. Town centres such as Wood Street.

Recommendations:

It is recommended that, with the exception of changes recommended as a result of other submissions; no change is made to the proposed speed limits in direct response to this submission.

Melanie Scott (Submitter 70) was concerned that Cames road is used as a "rat run" or a bypass route, particularly for commercial vehicles. Ms Scott highlighted that concrete driveways are enforced for new subdivisions for safety purposes. However, the roads that they connect to are very dangerous. Ms Scott questioned how development money is used by Council, and that this money should be spent on upgrading roads.

Ms Scott also highlighted that drivers are using some of the rural roads, particularly Cames Road as through roads, and were driving dangerously, including talking on their cell phones. She accepted that Council cannot change laws on penalties for bad driving but can lower the speed limit.

Response to submitter:

Ms Scott's concerns relating to Cames road being used as a through road cannot be directly addressed through the Speed Limits Bylaw. However, it is recommended that the speed limit on Cames Road be reduced to 40kph over its entire length.

The jurisdictional boundary between Kaipara District Council and Auckland Council is along Cames Road between approximately 128 and 160 Cames Road. This boundary is in the part of Cames Road where a temporary 50kph speed limit is in force and a 60kph speed limit has been proposed. The Kaipara District Speed Limit Bylaw can only be legally enforced within its own boundaries.

It is noted that Auckland Transport are the Road Controlling Authority for the Auckland Region and are generally supportive of the proposals made in the Statement of Proposal. It is therefore considered likely that Auckland Transport would support a 40kph speed limit on that part of Cames Road that it has responsibility for. If Auckland Transport is supportive of a 40kph speed limit, then a 40kph speed limit along the full length of Cames Road is practical.

Issues relating to road maintenance and driver behaviour are beyond the scope of the Speed Limits Bylaw and are addressed in more detail in Section 4 of this recommendations Report.

Recommendations:

It is recommended that the speed limit on Cames Road be set at 40kph for the full length of the road that is under Kaipara District Council jurisdiction. In support of this recommendation, the following further action will be required:

- *Additional warning signage be installed where there is a change in the road environment from a well-formed unsealed road to a narrower carriageway.*
- *Liaison with Auckland Transport will be required to make changes to the section of Cames road that is under Auckland Transports jurisdiction (to make that section of road 40kph).*

John Dickie (Submitter 74) was primarily concerned with urban speed limits, particularly along Molesworth Drive. Mr Dickie supported a 40kph speed limit for most side roads as this speed limit is more than adequate. However, he considered that the extension of Mangawhai Heads Road down to the campground needed to be lowered further as this road is dangerous.

Mr Dickie raised concerns about the number of variations to speed limits, particularly along Molesworth Drive. He considered that the variations in speed limits was confusing and should be simplified. Mr Dickie suggested a 50kph speed limit along the entire length of Molesworth Drive (except outside schools).

Mr Dickie also noted that Council needed to work with enforcement agencies to get a reasonable outcome for the community.

Response to submitter:

Mr Dickies submission is supported by several other submitters that have also sought a 50kph speed limit along Molesworth Drive, or raised the issue of consistency in speed limits. It is also recognised that, with the development of Mangawhai Central (no matter what form that takes), that the speed limit on Molesworth Drive will need to be further reviewed.

The Network Operating Framework for Mangawhai (Appendix 5) promotes a primary walking and cycling route along Molesworth between Mangawhai Heads and Mangawhai Village. This primary walking and cycling route is supported by Mangawhai Structure plans and the Kaipara Walking and Cycling Strategy. It is also noted that the route along Molesworth Drive connects to the Te Araroa Trail through Blackswamp Road.

The extension of Mangawhai Heads Road from the intersection of Wintle Street to the campground generates significant informal pedestrian activity, along with holiday traffic in the summer months. This section of Mangawhai Heads Road is similar in character and use to Alamar Street where a 30kph speed limit has been recommended.

Recommendations:

It is recommended that:

- *The proposed 60kph section of Molesworth Drive be reduced to 50kph, creating a consistent speed limit from the northern entry to Mangawhai Heads to the entry into the Mangawhai Village commercial area (intersection with Longview Street).*
- *The proposed 30km/h speed zone be reduced to a point near the intersection with Longview Street.*
- *The speed limit on Mangawhai Heads Road from the intersection with Wintle Street to the campground to remain at the proposed 40km/h.*

Rashel Rey Hall (Submitter 68) was concerned that, even at the existing speed limit people are going extremely fast and trying to get to 100kph as a target speed. The Mangawhai – Kaiwaka road should be 60kph is this is closer to the actual safe driving speed is.

There is limited policing and enforcement on the roads. The speed limit becomes the speed that you can get around corners rather than a safe driving speed. Speed limits need to be painted on the road surface.

Ms Rey Hall also raised an issue of slumps on the road, and the fact that they are poorly sign posted and often not repaired within a reasonable timeframe. This issue also related to a lack of road funding and dust generation.

With respect to dust, Ms Rey Hall highlighted the lack of funding to properly seal roads, as well as the negative effects of dust, particularly in relation to health. Ms Rey Hall felt that there is probably under-reporting to the DHB on the negative effects on health arising from road dust.

Response to submitter:

The issue of drivers travelling extremely fast and treating the current 100kph speed limit is an issue throughout Kaipara District and Northland. The purpose of this speed review is to set speed limits that are safe and appropriate and better reflect the road environment. In doing this, research suggests that the higher speeds on the road will reduce closer to the average speed on the road.

The geology of many Kaipara Roads, coupled with weather conditions will continue to result in damage to roads such as slumping. Whilst this matter is recognised, it is beyond the scope of the Speed Limit Bylaw and is addressed in more detail in Section 4 of this Recommendations Report.

Dust is a significant issue on all unsealed roads and is addressed in more detail in Section 4 of this Recommendations Report. Maintenance and general road condition are also addressed in Section 4.

Recommendations:

It is recommended that, with the exception of changes recommended as a result of other submissions; no change is made to the proposed speed limits in direct response to this submission.

Automobile Association - Steve Westgate (Submitter 83) provided an extensive submission covering a wide range of issues. As the automobile Association is a Statutory Consultee this submission is addressed in Section 4.3 of this Report.

4 Submissions Overview

4.1 Submissions Out of Scope

Out of scope submissions seek changes to speed limits that are outside of the current review area; are seeking non-speed related decisions, for example, road maintenance; or seek solutions that are beyond Council's legal mandate, for example, enforcement issues.

The main out of scope issues are set out below. Specific submission numbers are not quoted to avoid confusion as often submissions also included comments and feedback that were both in and out of the scope of the review.

4.1.1 Speed limits in other areas

Submissions seeking a change in speed limit in areas outside of the review area are out of the scope of the current review and associated consultation. In order to make a legal change to a speed limit outside of the current review area; additional technical assessments would be required, as well as a separate consultation process. Submissions relating to areas outside the current review area, where Kaipara District RCA has jurisdiction have been retained on file for later consideration.

Submissions relating to the State Highway network have been passed onto the Waka Kotahi (NZTA) Speed Limits Project Team.

4.1.2 State Highways

Council is an RCA for local roads only. This excludes State Highways, which are administered by the Waka Kotahi (NZTA). Waka Kotahi have embarked on a review of speed limits on portions of the State Highway Network and are following a similar community consultation process to Kaipara District.

Submissions relating to the State Highway network have been passed onto the Waka Kotahi (NZTA) Speed Limits Project Team.

4.1.3 Enforcement

Some submitters have raised the issue of enforcement. The feedback received can be categorised into the following broad topics:

- Without proper enforcement, lower speed limits won't work; including concerns about who will monitor or enforce speed limits.
- Lower speed limits are intended for revenue collection.

Although speed limits are set by the road Controlling Authority (Kaipara District Council), the responsibility for enforcing those speed limits is with the NZ Police. Any fines, including speed camera fines, do not go to Council. Nor do they go directly to the NZ Police.

It is agreed that enforcement is a key component of ensuring compliance with speed limits and improving safety on our roads. However, if the speed limit is neither safe, nor appropriate for the road environment, then, even with a good level of enforcement, safety outcomes will not be achieved.

NZ Police base their enforcement activities on risk, with the sole purpose of reducing serious and fatal crashes on our roads. The NZ Police target drivers that are driving in an unsafe manner for the road environment or exceeding a safe and appropriate speed (proposed speed limits).

It should be noted that all Road Controlling Authorities (including Kaipara District) have regular meetings with NZ Police Northern to discuss and highlight road safety and enforcement issues.

4.1.4 General Submissions

A number of submitters provided more general submissions. These submissions opposed the proposed speed limits, often without providing detailed evidence or alternatives. Where the submitter provided alternatives on specific roads, those are addressed in the Tables in Section 7 (below).

One submitter stated that the proposed reductions in speed limits are unnecessarily restrictive. The submitter agreed that unsealed roads should have a reduced speed limit but disagreed with the almost blanket reduction of 100kmh down to 60kmh on these roads. This submitter also considered that there should be no reduction in speed limits on sealed roads.

Another submitter stated that roads in Mangawhai or Mangawhai Heads need a reduction in speed. Mangawhai does not have an issue with speeding any more than any other town or city in NZ.

One submitter strongly opposed any speed limit changes of more than 20kmph. Changes of more than 20km/h seem unnecessary. This would also set drivers up for failure as sticking to such low-speed limits would be onerously impractical.

Other submitters indicated that they felt that a reduction in speed limits is a waste of resources and treating the residents of the Kaipara District as though they are sensible adults that can drive a motor vehicle sensibly without the speed regulations the KDC now wish to impose.

Improving the quality of roads and signage was also raised.

The above submissions did not seek a specific outcome for the speed limit review, other than to maintain the status quo.

4.2 Other issues raised

Some submitters raised specific speed related issues that need to be specifically addressed. These issues raised by submitters were utilised to either oppose the lowering of speed limits generally; or justify a different speed limit.

4.2.1 Dust

Dust was identified as an issue on a number of unsealed roads, including Settlement Road and Oneriri Road. Submitters noted that slower speed limits would be beneficial to reducing dust.

Dust was a significant issue raised by the local community on Settlement Road, that attended a Drop-in Session at the Hakaru Hall.

Dust generated on unsealed roads is influenced by both speed and the number / weight of wheels on the road. For example, a large logging truck traveling at 80kph will generate significantly more dust then a car travelling at the same speed. Likewise, a logging truck travelling at 60kph will generate less dust than if it were travelling at 80kph. There are other factors that have a significant influence on dust, including weather, road geometry and road surface materials.

Kaipara District Council are continually researching and trialling new road surfacing materials and processes that increase the longevity of unsealed roads and reduce dust emissions.

Dust reduction is a potential outcome of a reduced speed limit. However, under the Land Transport Act 1998 (which restricts the purpose for a speed limit Bylaw), dust is not a principal reason for setting a speed limit.

The focus of the speed limit review is to identify and set a safe and appropriate speed that reflects the road environment, which includes, among other factors, dust generation. However, a reduced speed limit has been recommended for roads where submitters identified dust as an issue.

4.2.2 Maintenance and Upgrade

Some submitters stated that Council should expend more effort on road maintenance. Several submitters questioned how development contributions were being utilised by Council and felt that this money should be used to upgrade roads.

4.2.2.1 Maintenance

Roading currently consumes one third of Council's overall Operating Expenditure (this excludes capital expenditure). In addition, Council receives additional subsidised funding from the government, which effectively triples Council budget for most road maintenance.

Council has an extensive road maintenance programme. However, the local road network in the Kaipara is extensive and includes a very high portion of unsealed roads.

4.2.2.2 Upgrading and widening roads

Upgrading roads comes at a significant financial cost. Council has a limited budget available for maintaining and upgrading our road network, even with government subsidies. Given the costs involved, it is necessary to prioritise which roads should be upgraded over time. Consideration needs to be given to a range of maters, including:

- The strategic nature of the road, for example, roads providing an efficient east-west linkage.
- The economic benefits of upgrading the road, for example reduced travel times.
- Other road priorities, including sealing unsealed roads.

Once a road is identified for an upgrade, the time required to secure finances (including government subsidies), complete planning and design work and undertake the upgrades is

typically in the 2-5-year timeframe, depending on the size and nature of the work to be undertaken. In most cases, it is cost prohibitive to upgrade the full length of a road to a consistent 100kph standard. Therefore, any upgrade work is normally undertaken in a staged manner over several years.

Whilst upgrade and widening work may be desirable or planned; it is necessary to ensure that our speed limits reflect the current road environment. As roads are upgraded, speed limits can be revisited.

4.2.3 70kph Speed Limit

Some submitters, including the Automobile Association have suggested that some roads have a speed limit of 70kph set on them. The Automobile Association submission requests that a 70kph speed limit apply to most unsealed roads as that is a speed that is attainable on those roads (refer 4.2.4 below on attainable speeds).

The RCA must work within a hierarchy of legislation, national rules and guidance documents when setting speed limits. The RCA may set a 70kph speed limit. The National Speed Management Guidance 2016 and the Setting of Speed Limits Rule 2017 discourage 70kph zones, except in exceptional circumstances.

The Setting of Speed Limits Rule 2017 requires additional sign-off at a national level when setting a 70kph speed limit.

Consistent with the above documents, 70kph zones will only be used where there is clear evidence that both 60kph and 80kph are inappropriate. Where there is an existing 70kph zone, consideration will be given to the benefits of changing that speed limit to 60kph or 80kph.

4.2.4 Restricting Heavy Vehicles on certain roads

One submitter raised the issue of restricting Heavy Goods Vehicles on Baldrock Road and stated that the most significant damage done to Baldrock Road on an annual basis is done by heavy vehicles looking to "cut the corner" between State Highway 1 and the Kaiwaka Mangawhai Road. The submitter suggested that Council encourage as much heavy traffic to utilise SH1 rather than Baldrock Road. The submitter suggested that Council had several means to do this, including reviewing the soundness and longevity of the bridges which are located at the SH1 end of Baldrock road with a view to limiting the weight of vehicles using them. This would, in effect, make Baldrock Road off limits to all heavy traffic.

Reviewing weight limits on bridges is beyond the scope of this speed limit review. In addition, bridge weight limits are set using a detailed engineering assessment. Undertaking a review with the purpose of preventing Heavy Goods Vehicles to utilise a legal road is inappropriate.

4.3 Statutory Consultee Submissions

Section 2.5 of the Land Transport Rule: Setting of Speed Limits 2017 sets out the persons or groups that must be consulted before setting a speed limit. In addition to the local communities that may be affected, the Rule requires the RCA to consult:

- The Territorial Authorities that are affected by the proposed speed limits
- The Commissioner of Police
- The Chief Executive of the Automobile Association
- The Chief Executive of the Road Transport Forum New Zealand
- Waka Kotahi New Zealand Transport Agency
- Any other organisation or road user group that the RCA considers affected.

All of the above Statutory Consultees were directly notified of the proposed new speed limits; were provided a full Statement of Proposal; and advised of where additional information could be found. The current review area is entirely contained within the Council's Boundaries.

The following Statutory Consultees provided no formal response:

- The Commissioner of Police, including the Northland Area Commander
- The Chief Executive of the Road Transport Forum New Zealand

It should be noted that, in addition to the Chief Executive of the Road Safety Forum, all local Road Safety Forum groups and their members were notified of the proposed changes and provided an opportunity to make a submission. Any submissions from these groups or individuals are summarised in the tables below.

Northland Transportation Alliance is an alliance of the three Northland District Councils and the Northland Regional Council. A separate review of speed limits was undertaken concurrently by Northland Transportation Alliance on behalf of Whangarei District Council. This concurrent review included Cove Road which crosses the boundary of the two jurisdictions.

The review area also bounds with Auckland Council, with some roads crossing the jurisdictional boundary.

4.3.1 Auckland Council

Auckland Council through the Council Owned Organisation, Auckland Transport provided a submission that was generally supportive of the proposals (refer Appendix 1 for full submission). Auckland Transport did not attend the Hearing.

Auckland Transport noted that the proposed changes to speed limits aligned well with future changes to speed limits in the Auckland Transport area immediately to the south of the Kaipara District boundary.

Response to submitter:

It is noted that Auckland Council is not seeking any amendments to the proposed speed limits. It is also noted that there are cross boundary issues associated with several roads, most notably Cames Road and Blackswamp Road.

Although the entirety of Blackswamp Road and Cames Road was included in the Statement of Proposal; the Kaipara District Speed Limit Bylaw can only be legally enforced within its own boundaries. It is also anticipated that the consultation undertaken as part of this review will partially or fully satisfy the consultation requirements to make amendments to the Auckland Council Speed Limits Bylaw.

Recommendations:

It is recommended that Northland Transportation Alliance liaise with Auckland Transport to make changes to the section of Cames Road and Blackswamp Road that is under Auckland Transports jurisdiction.

4.3.2 Automobile Association (AA)

In keeping with other Statutory Consultees, the full submission of the Automobile Association is set out in this Recommendations Report. Given the detailed nature and size of the submission, it has been included in Appendix 1, rather than in the main body of the Report.

The AA was generally supportive of lower speed limits on many local roads and acknowledged that 100 km/h is not a safe and appropriate speed for the majority of rural roads that are not state highways. This was caveated with the following general comments:

- Support focusing on the highest risk roads – the top 10% - but also engineering up where appropriate in order to maintain their function (e.g. arterial roads).
- Support the use of 90km/h if that is self-explaining.
- Do not support a blanket reduction on unsealed roads from 100 km/h to either 60km/h or 40km/h.

- Support a 70km/h speed limit which is more appropriate and more likely to be complied with. Under the imminent Setting of Speed Limits Rule change, we expect 70 km/h to be a more readily available option for some roads.

Response to key issues raised:

Responses are provided to the more general issues raised by the AA as well as specific comments on specific roads. Where the AA has supported a proposal, no specific response is provided. Recommendations are set out in the Tables in Section 7 of this Report or under specific headings (Significant Roads or Schools).

40km/h in Urban Streets

The AA does not consider a default speed limit of 40km/h is justified on urban streets, although it may be appropriate in High Pedestrian Activity Areas. The proposals within the Mangawhai urban area is consistent with other proposals across Northland's small rural and coastal communities. Mangawhai in particular has a high part time and holiday population, increasing informal pedestrian uses of the road environment.

A common approach to new subdivision development is achieving a design speed of between 40km/h and 30km/h. This design speed is intended to ensure the road environment in residential areas is more suitable for a wide range of residential uses. Residential uses increase the risk pedestrians, particularly small children using the road, or unexpectedly moving onto the carriageway.

The overwhelming feedback received from residents, through formal submissions, request for surface and other forums is a need to reduce speed in urban areas.

Speeds set at what drivers feel to be 'safe and appropriate' are likely to result in frustration and dangerous overtaking.

The average operating speed of the roads within the Mangawhai and Kaiwaka review area is currently well below the current posted speed limit. Frustration already occurs because some drivers feel that others are driving "below the speed limit" yet are actually driving near the average operating speed of the road. Setting speed limits closer to the operating speed of a road will provide a better indication of the operating speed of the road.

Reducing speed limits is not on its own a panacea to the road toll.

The AA's comment is accepted. The Road to Zero National Road Safety Strategy focusses on a safe system approach, of which speed limits are one component. Implementing lower speed limits also entails signage and other physical works such as gateways, footpaths to ensure that the road environment matches the speed limit and vice versa.

Engineering works, for example in Wood Street and Mangawhai Village are being undertaken to support new speed limits. However, it must be recognised that engineering solutions are a significant cost and takes time to implement.

Where engineering works are undertaken along a road length, further reviews of the speed limit can be undertaken to ensure that the road environment and the speed limit are matched.

What consideration has been given to constructing a roundabout at the inherently unsafe junction of Molesworth Drive, Moir Street and the entrance to the adjacent shopping centre car park?

The intersection of Molesworth Drive and Moir Street has been re-designed with engineering due to commence.

It is inherently unsafe to have cars reversing from in front of the Four-Square supermarket in Mangawhai village onto the highway next to a T-junction, or exiting onto the T-junction.

Trials of engineering work have been undertaken in Wood Street that are intended to address these issues. This is a slow street project and will support the 30km/h speed limit.

Has consideration been given to installing a "Slow Down. 50 kph at 400 metres" sign on Molesworth Drive approaching Mangawhai village?

"Slow down" signage and other appropriate signage will be installed as part of the detailed design process, irrespective of the final speed limits.

Setting of Speed Limit Rule

The Northland Transportation Alliance is confident that the interpretation and procedures associated with setting of new speed limits is correct and appropriate to achieve the outcomes of the Road to Zero road Safety Strategy.

NZTA Mega Maps

NZTA Mega Maps is one tool that is utilised to assess and propose new speed limits. It provides a convenient starting point, and additional testing is undertaken to determine final appropriate speed limits. The Setting of Speed Limits Rule requires a range of matters to be taken into account.

Speed Limits around Schools

The requirements for lower speed limits around schools is clearly articulated in the various guidance documents and the speed reviews are consistent with that guidance. Where there is a permanent lower speed limit outside of a school, then the presence of the school is just one factor being considered.

It is unclear as to the areas where the AA refers to a 30km/h speed limit due to a school. It was proposed that Molesworth Drive have a 30km/h speed limit at the Mangawhai Village. The proposal extended this 30km/h zone to beyond an early childhood centre. Following feedback from the community, including the AA, changes have been recommended to the proposed speed limits on Molesworth Drive. The 30km/h village speed limit has been reduced as a result (Refer 3.3 above).

Unsealed Roads

The AA is seeing a 70km/h speed limit on unsealed roads and states that a safe speed as totally dependent on the current state of the road. On a recently graded road with copious loose gravel, a maximum speed of 50 k/h may be appropriate, but on a well-swept road with minimal loose gravel, we would regard speeds of 70 k/h as safe.

It is noted that the speed review is recommending a 60kph speed limit on many unsealed roads. This speed limit would seem appropriate, based on the AA example of different speeds on un-sealed roads. It is also noted that 60kph is near the actual speed that most road users travel at on unsealed roads in the Whangarei District.

On some sections of road (whether sealed or unsealed) a higher speed than the posted speed limit may be attainable. Conversely, there will be other sections of the road where a much slower speed is required.

The purpose of the reviewed speed limits is to set a safe and appropriate speed for the road as whole, having consideration to the road geometry and the wider road environment and its principle uses. The safe and appropriate speed is intended to promote a safer driving environment for all road users, including other traffic, pedestrians and cyclists where appropriate.

It is also important to note that a posted speed limit is as much for local drivers as it is for those that are unfamiliar with the road. In this respect it is worth noting that a significant number of speed related crashes are vehicles travelling on their "local roads" where the driver "knows the road".

Automobile Association Comments on Specific Roads

Mangawhai Urban Traffic Area:

The AA does not support a 40km/h speed limit for most of the Mangawhai and Kaiwaka Urban Traffic Areas, quoting a lack of Death and Serious Injury (DSI) crashes. Most new subdivisions have a design speed of 40km/h or less. In addition, it is considered appropriate that smaller towns, villages and coastal holiday communities have speed limits that provide a safe environment for walking, cycling and other informal uses of the road environment. Urban residential uses also give rise to greater risk of children entering the road carriageway unexpectedly.

Urban areas are characterised by short journeys on access roads. The speed limits proposed and recommended in Mangawhai maintain a higher 50km/h speed limit along the main urban connector routes of Molesworth Drive, Estuary Drive and Moir Point Road.

Molesworth Drive

Refer to Section 3.2.2 for detailed responses to submissions relating to Molesworth Drive.

Estuary Drive

The proposed (and recommended) 40km/h section of Estuary Drive exhibits a distinct change in the road environment from the arterial route that connects to Moir Point Road to a narrow access road that provides access to a relatively new subdivision and campground.

Old Waipu Road

The recommended 40km/h section of Old Waipu Road exhibits a very distinctive change in road environment from a well-formed sealed road with residential dwellings to a very narrow unsealed road. Although the AA's comment relating to a consistent speed limit is recognised, in this instance the change in road environment is substantive and higher speed limit would be inappropriate.

Jack Boyd Drive

Refer response to the wider Urban Traffic Area.

Alamar Crescent

Alamar Crescent is adjacent to a reserve area and provides access to a boat ramp. Whilst the area has not been formally identified as a shared space, the road environment lends itself to informal use of the road carriageway. 30km/h is therefore considered appropriate.

Wood Street

Wood Street has had a recent successful trial of physical works that create a greater sense of a shared space on Wood Street. Fagan Place, which forms part of this area currently has a 30km/h speed limit and Ellen Street is utilised as informal overflow parking for Wood Street. The physical works that were trialled have now been made more permanent following public consultation. A 30km/h speed limit in this area is appropriate.

Mangawhai Township

The Mangawhai Village area is a busy road environment that includes shops, a bakery, fuel station, tourist attractions (Chocolate Factory), Library and Community Hall. The area also contains a number of intersections and is heavily utilised by pedestrians. Engineering work that will support a 30km/h speed limit is being undertaken in this area. A 30km/h speed limit is considered appropriate. In response to the AA and other feedback, it is now recommended that the proposed 30km/h speed limit be scaled back to incorporate the key commercial area and will now end at the intersection with Longview Street.

Refer to 3.3 for additional responses and recommendations with respect to the extent of the recommended 30km/h zone.

4.3.3 New Zealand Transport Agency (NZTA)

Waka Kotahi congratulates Council on the network wide approach the proposals take, and agrees that the proposals for the urban traffic areas for Mangawhai Heads, Mangawhai Village and Kaiwaka align with the requirements of the Setting of Speed Limits Rule and the intent of the Speed Management Guide.

*However, Waka Kotahi **disagrees** that the following 80km/h proposals reflect the safe and appropriate speeds for the network, as their IRR values are well higher than the 1.6 that allows 80km/h to be a safe speed limit. This is also reflected in the low mean operating speeds on these roads which do not justify 80km/h speed limits:*

- *Baldrock Road (IRR 1.82; mean operating speed 37km/h)*
- *Black Swamp Road (rural residential; mean operating speed 44km/h)*
- *Coal Hill Road (IRR 2.02; mean operating speed 39km/h)*
- *Cove Road (IRR 2.03; mean operating speed 63km/h)*
- *Devich Road (IRR 2.06; mean operating speed 47km/h)*
- *Garbolino Road (IRR 1.82; mean operating speed 62km/h)*
- *Kaiwaka-Mangawhai Road (IRR 1.97; mean operating speed 68km/h (under the current 100km/h speed limit))*
- *King Road - (IRR 1.92; mean operating speed 48km/h)*
- *Lawrence Road (IRR 2.37; mean operating speed 38km/h)*
- *Mangawhai Road - no record found*
- *Tomarata Road (IRR 2.07; mean operating speed 71km/h (under the current 100km/h speed limit))*
- *Oneriri Road from Rangiora to Parekura (IRR 1.88; mean operating speed 61km/h)*

Waka Kotahi recommends these roads all be set at 60km/h to meet the requirements of the Rule and intent of the Guide.

A further observation is that speed limit entrance/exit signage in the area does not meet the requirements of clause 9.5 of the Rule: The design, format, shape, colour, and size of a speed limit sign must comply with requirements for signs in Land Transport Rule: Traffic Control Devices 2004, which invalidates the legality of these speed limits. Here is an example - the (legally correct) speed limit should be at the top and only the destination name should be at the bottom (alternatively with the words WELCOME TO).

Responses to NZTA Submission

Waka Kotahi's comments on signage is noted. Signage is being reviewed as part of the speed review detailed design process and will be updated in accordance with current design standards.

Waka Kotahi submissions on individual roads have been considered and taken into account within the comments in the Tables in Section 7 and are sumarised in the table below.

Recommendations:

Recommendations for each individual road is set out in the Tables in Section 7 below and are summarised as:

Road Name	Recommended Speed Limit	Comment
Baldrock Road	80	Baldrock Road is a key road that Council does not wish to downgrade. Seal extensions on this road are designed as an 80km/h speed environment
Black Swamp Road	60	Recommended to make the entire road within the jurisdiction of Kaipara District Council 60km/h.
Coal Hill Road	60	Recommended to make the entire road within the jurisdiction of Kaipara District Council 60km/h.
Cove Road	80/60	Cove Road from 20m north of Woodliegh Lane to the Kaipara District Boundary is recommended as 60km/h.
Devich Road	80/60	Recommended to move the proposed 80/60km/h boundary to a location near Arcadian Rise. This reflects a change in the sealed road environment.
Garbolino Road	80	Garbolino Road is a key road that Council does not wish to downgrade. A further review will take place if further development occurs.
Kaiwaka-Mangawhai Road	80	Kaiwaka-Mangawhai Road is a key road that Council does not wish to downgrade. A programme of engineering works will be developed.
King Road	80/40	It is recognised that there is new development on King Road. The proposed 40km/h speed limit replaces the existing 50km/h speed limit. Further development may result in a future reduction to 60km/h.
Lawrence Road	60	Recommended that Lawrence Road be 60km/h for its entire length.
Mangawhai Road	80	80km/h is considered appropriate.

Road Name	Recommended Speed Limit	Comment
Tomarata Road	60/80	A 60km/h speed limit has been recommended to a point 80m SE of Blackswamp Road. This is consistent with recommendations for Blackswamp Road with the remainder of Tomarata Road within Kaipara District Councils jurisdiction being 80km/h. Kaipara District Council will participate in any review of the remainder of Tomarata Road if undertaken by Auckland Council.
Oneriri Road from Rangiora to Parekura	80/60	The recommended 80/60 boundary is at the end of the seal. There is little difference in perceived road environment and expanding the recommended 60km/h is not supported.

5 Schools

In late 2019, central government released its Road to Zero National Road Safety Strategy. The Strategy includes provision that all urban schools should have a maximum speed limit of 40kmph when children are present, and all rural schools should have a maximum speed limit of 60kmph when children are present. This change is expected to be supported with amendments to the Setting of Speed Limits Rule by late 2021.

The schools and education facilities identified within the review area were:

- Mangawhai Beach School – Insley Street, Mangawhai
- Mangawhai Kindergarten – Insley Street, Mangawhai
- Before 6 Early childhood Centre – Molesworth Drive, Mangawhai
- Kaiwaka School – Kaiwaka-Mangawhai Road, Kaiwaka
- Small Pukeko's Early Learning Centre - Kaiwaka-Mangawhai Road, Kaiwaka
- Te Kura Kaupapa Maori O Ngaringaomatariki – Oruawharo School Road, Kaiwaka West

5.1 Mangawhai Beach School – Insley Street, Mangawhai

Mangawhai Beach School and Mangawhai Kindergarten operate off the same site, located at 34 Insley Street.

There is existing signage for a Variable School Speed Zone of 40kph on the approaches to and outside the school. However, the proposed urban speed limit, that would apply to Insley Street is 40kph. In this instance, a Variable Speed Limit of 40kph outside the school would not have an effect as the variable speed limit and the permanent base speed limit would be the same.

The Automobile Association comments that a permanent 40kph speed limit in not consistent with the Road to Zero Strategy unless the school falls within a lower speed zone because of other factors. It is noted that the school is located in a newer, busy urban area. The school site also includes a community recreation centre. Consistency with other coastal community speed limits that are being proposed, would indicate that a permanent speed limit of 40kph is appropriate.

The School Speed Management Prioritisation Rating for Mangawhai School is high, and it fits within the top 40% of schools where speed management intervention is required. It is noted that the Road to Zero National Road Safety Strategy promotes a 30kph variable speed zone outside urban schools. As a top 40% priority school, the proposed changes to the Setting of Speed Limits Rule 2017 are expected to require a lower 30kph variable speed limit

to be set outside this school. It is therefore expected that the speed limit outside this school will be revisited within the next 2-3 years.

Recommendation

- ***That the proposed permanent speed limit of 40kph be retained; and***
- ***When amendments to the Setting of Speed Limits Rule are made – consider a variable 30kph speed limit outside the school (retaining the 40kph speed limit); and***
- ***Consider the need for additional engineering and physical works to promote a slower speed environment along this section of Insley Street,***

5.2 Mangawhai Kindergarten – Insley Street, Mangawhai

Mangawhai Beach School and Mangawhai Kindergarten operate off the same site, located at 34 Insley Street. The same considerations and recommendations as set out in 5.1 (above) apply.

Recommendation

- ***That the proposed permanent speed limit of 40kph be retained; and***
- ***When amendments to the Setting of Speed Limits Rule are made – consider a variable 30kph speed limit outside the school (retaining the 40kph speed limit); and***
- ***Consider the need for additional engineering and physical works to promote a slower speed environment along this section of Insley Street,***

5.3 Before 6 Early childhood Centre – Molesworth Drive, Mangawhai

The AA submitted that It is not acceptable for private early childhood centres to be established on arterial routes without adequate provision for pick-up and drop-off, in an expectation that RCAs will subsequently lower speed limits 24/7. The AA suggested that extending the 30km/h zone beyond the Early Childhood Centre was not appropriate.

With other recommendations (refer 3.2 above), the proposed 30km/h zone is recommended to be shortened to the intersection with Longview Street. This will bring the newly recommended 50km/h zone into that location (from the Causeway).

5.4 Kaiwaka School – Kaiwaka-Mangawhai Road, Kaiwaka

There were no specific submissions relating to Kaiwaka School, although some more general comments relating to Variable School Speed Zones verse permanent speed limits are applicable to this school.

The School Speed Management Prioritisation Rating for Mangawhai School is high, and it fits within the top 40% of schools where speed management intervention is required. It is noted that the Road to Zero National Road Safety Strategy promotes a 30kph variable speed zone outside urban schools. As a top 40% priority school, the proposed changes to the Setting of Speed Limits Rule 2017 are expected to require a lower 30kph variable speed limit to be set outside this school. It is therefore expected that the speed limit outside this school will be revisited within the next 2-3 years.

Kaiwaka School does not meet the criteria of NZTA Traffic Note 37 relating to Variable School Speed Zones, particularly as students are unlikely to be crossing the road near the school. Under the current Setting of Speed Limits Rule and blanket 40kph Variable School Speed Zone approval for a variable speed zone is unlikely. It should be noted that this is expected to change over the next few months.

It is proposed that the Kaiwaka urban area have a 40kph speed limit, except for State Highway 1. The proposed 40kph speed limit will extend to a point immediately to the east of

the school. The proposed speed limit will meet the requirements of the governments *Road to Zero* Road Safety Strategy as it applies to schools and educational facilities.

With respect to the Kaiwaka urban area, it is noted that the Automobile Association stats that MegaMaps show the safe and appropriate speed in Kaiwaka's urban streets to be 50 kph. Given the absence of any DSI's since 2000, we do not support a lower limit of 40 kph within the urban traffic area.

Whilst it is agreed that DSI's in Kaiwaka have principally occurred on the State Highway through Kaiwaka, it is incorrect to assume a safe and appropriate speed of 50kph on urban roads within Kaiwaka. A number of roads within the Kaiwaka urban area have an identified safe and appropriate speed of 40kph (not the 50kph suggested by the AA submission). The free flow speed on Kaiwaka urban streets ranges from 36kph to 51kph (outside the school).

A permanent speed limit of 40kph is considered appropriate as it is consistent with proposals for small rural settlements, and this section of Kaiwaka-Mangawhai Road includes a school, a commercial shopping area and town hall.

Recommendation:

That the proposed permanent speed limit of 40kph be retained.

5.5 Small Pukeko's Early Learning Centre - Kaiwaka-Mangawhai Road, Kaiwaka

Small Pukeko's Early Learning Centre is located in the Town Centre. There is angle parking on the Kaiwaka-Mangawhai Road outside the Early Learning Centre, with parallel parking located on the opposite side of the road.

There were no specific submissions relating to the speed limit outside Small Pukeko's Early Learning Centre, except for the wider submission relating to urban speed limits in Kaiwaka (discussed in 5.4 above).

Given the location of Small Pukeko's, it is considered that the permanent proposed speed limit of 40kph is appropriate.

Recommendation:

That the proposed permanent speed limit of 40kph be retained.

5.6 Te Kura Kaupapa Maori O Ngaringaomatariki – Oruawharo School Road, Kaiwaka West

Te Kura Kaupapa Maori O Ngaringaomatariki is located on a very narrow unsealed access road. There were no submissions on this proposal.

The permanent speed limit on this part of Oruawharo School Road is 40km/h.

Recommendation:

That the proposed permanent speed limit of 40kph be retained.

6 Significant Roads

Following the consideration of submissions received, NTA Staff undertook additional site visits to further assess submitters views and the road environment. All recommended speed limits are set out in the Tables in Section 7 of this Report. Additional detail as to the reasons for recommendations have been provided for the following roads as they were subject of extensive submissions, or the submissions raised specific issues that required additional consideration:

- Settlement Road
- Cames Road
- Lawrence Road
- Kaiwaka-Mangawhai Road

6.1 Settlement Road

Settlement Road provides a connection between Kaiwaka-Mangawhai Road and State Highway 1 at Kaiwaka. The road is located to the south of the main Kaiwaka-Mangawhai Road.

Settlement road is largely unsealed, with a relatively short sealed section in the vicinity of Valley Road. The sealed section includes the approaches to a one lane bridge. Given that the majority of Settlement Road is unsealed, it was proposed that the entire road have a 60kph speed limit, including the sealed section.

The Hakaru Hall, RSA, Pony Club and some rural businesses are located on the section of Settlement Road from Kaiwaka-Mangawhai road to Valley Road.

6.1.1 Community Feedback – Settlement Road

A community drop-in session and information session was held at Hakaru Hall as part of the community engagement process. This session was attended by approximately 40 local residents and representatives of the Hall Committee. The Hall Committee (submitter 84) made a submission that summarised the discussions held at the drop-in session.

Significant issues raised by the community included the condition of Settlement Road, dust and the proposed speed limit.

Issues relating to the condition of the road and dust are outside of the decision-making scope of the speed review and are addressed in Section 4.3.2 above. With respect to the issues relating to the condition of the road, it is noted that resurfacing of settlement Road, outside the Hakaru Community Hall was being undertaken at the time of the drop-in session.

The Hall Committee requested that the speed limit be significantly reduced through the Hall parking area and past the pony club entrance, RSA entrance and beyond. This would provide safer access for the many properties that are now being occupied in the immediate vicinity of the Hakaru Hall and Domain.

The use of the Hall has increased significantly over the past few years as a result of upgrades and improved facilities at the Hall. The Hall is now in almost constant use 7 days per week. The Hall Committee submission outlined the range of hall users, including pre-school play groups, exercise and line dancing groups.

The Hall Committee submission was supported by other submitters.

6.1.2 Settlement Road Analysis

All submissions, including feedback from community drop-in sessions were assessed, alongside evidence-based matters and relevant speed management guidance, legislation and engineering standards.

The base speed limit of 60kph along the full length of Settlement Road (except where it enters Kaiwaka) is considered appropriate for a well-formed unsealed road that is generally not torturous in nature.

With the exception of the section of Settlement Road from Kaiwaka-Mangawhai Road to approximately 500m north of the Valley Road intersection (and one lane bridge) the land uses along the road are typically rural in nature.

From 500m north of the Valley Road intersection to the Kaiwaka-Mangawhai Road, there is a distinctive change in land-use. Although there is no defined community, this area acts as a central hub for wider Hakaru community activities, including the RSA, Community Hall and associated activities and the Pony Club. Evidence provided by the Hall Committee, along with additional feedback received from the Pony Club and other members of the community who attended the drop-in session indicates that the Hall, RSA and Pony Club are heavily used throughout the day and the week.

The submissions received suggested that a 50kph speed limit would be appropriate along this section of Settlement Road. A 50kph speed limit would be consistent with an urban environment. A 50kph speed limit is generally restricted to urban environments, rather than rural environments. As such, the available speed limits, under the Setting of Speed Limits Rule is either 40kph or 60kph.

A 60kph speed limit is safe and appropriate for an unsealed road, where there are general rural land-uses and no activities that would generate significant pedestrian numbers. Given the relatively short section of road and the range of activities that occur at the Hall, RSA and Pony Club, it is considered that a 60kph speed limit would be too high.

A 40kph speed limit would recognise the community hub nature of the section of road. A 40kph speed limit also allows for higher numbers of pedestrians utilising the hall and adjacent facilities. It would also recognise the number of Heavy Goods Vehicles that utilise this section of road and ensure that a safe speed is maintained in the vicinity of this cluster of community facilities.

The 40kph speed limit would extend for a distance of approximately 300m incorporating the Hall, Pony Club and RSA. Gateway signage will further enhance safety.

Although it has been suggested that a 40kph speed limit should extend between Kaiwaka-Mangawhai Road and the one lane bridge near the Valley Road intersection, it is noted that a significant change in road environment does not occur for several hundred meters. It has therefore been recommended that the recommended 80km/h speed limit on Kaiwaka-Mangawhai Road through to the beginning of the recommended 40km/h zone. This will reduce the number of speed limit changes over a short distance.

Gateway signage for 40kph speed limit is expected to create better compliance with a 40kph speed limit through the Hakaru Community Hub area.

6.1.3 Recommendation

It is recommended that the following changes be made to the speed limits on Settlement Road:

1. ***Settlement Road from Kaiwaka-Mangawhai Road to 300m along Settlement Road is 80km/h***
2. ***Settlement Road from 300m along Settlement Road for a distance of 300m is 40km/h.***
3. ***Settlement Road from 600m south of intersection with Kaiwaka-Mangawhai Road to 50m east of Wattle Lane is 60km/h.***
4. ***Settlement Road from SH1 to 50m east of Wattle Lane is 50km/h.***
5. ***Gateway signage is utilised at both ends of the 40kph speed limit zone to encourage compliance.***

6.2 Cames Road

Cames Road connects Lawrence Road with Tomorata Road (main road between Auckland and Mangawhai). The road is subject to a 50km/h temporary speed limit on the well-formed unsealed part of the road the exists off Tomarata road. The remainder of the road (Lawrence Road end) is in poor condition with a variety of road surfaces and very narrow carriageway. Cames Road also crosses the Kaipara / Auckland jurisdictional boundary.

6.2.1 Community Feedback – Cames Road

The feedback received highlighted the poor condition of Cames Road with comments like "the sealed parts are incredibly narrow, and the unsealed parts are so damaged with potholes that it is has become a very dangerous adventure to drive over it, I'm really frightened to use the road (but I have to, I live there). I don't mind the road being unsealed; I quite like it. But it needs to be maintained" being typical. It should be noted that maintenance issues are beyond the scope of this speed limits review.

Submitters also noted that the population of the area is increasing and there is no footpath, and dust is an issue.

Overall residents sought a 40km/h speed limit along the entire road, including the well-formed unsealed section. One submitter stated that they do not support the proposed 60km limit, preferring a 40km limit. The submitter noted that splitting the limits just adds confusion and the road is always in a state of extreme disrepair that 40km is the appropriate speed.

One submitter stated that 40km is too slow for a day commute, it means that now all the good of being close to work will be lost as it will take more than half hour of travel time each way. Only new property owners are complaining about dust and speed and also drive too fast as they aren't used to the calm of the countryside, never-the-less the insistence of walking along the roadside instead of exploring all the walking tracks and beaches that Mangawhai has to offer!

Refer Section 3.2 for detailed responses to Cames Road.

6.2.2 Recommendation – Cames Road

It is recommended that the speed limit on Cames Road be set at 40kph for the full length of the road that is within Kaipara District Council jurisdiction. In support of this recommendation, the following further action will be required:

1. ***Additional warning signage be installed where there is a change in the road environment from a well-formed unsealed road to a narrower carriageway.***
2. ***Liaison with Auckland Transport will be required to make changes to the section of Cames road that is under Auckland Transports jurisdiction (to make that section of road 40kph).***

6.3 Blackswamp Road

Blackswamp Road is mostly unsealed and is located in the Tern Pont Area. The road is partially within the Auckland Council jurisdiction.

6.3.1 Community Feedback – Blackswamp Road

There was a significant number of submissions received on Blackswamp Road. The submissions received were overwhelmingly in support of a lower speed limit on the Road. Submitters requested that the full length of the road (including the sealed section) be 60km/h.

Submitters highlighted the development occurring on Blackswamp Road, as well as other roads in the wider Tern Point area.

One submitter noted that Blackswamp Road is part of the Te Araroa Trail and and trail users have to walk on the road, which is dangerous with the current speed limit. People from the camping ground walk to the village over the causeway.

Another submitter noted that Blackswamp Road is of national significance as part of the Te Araroa Trail. The lack of footpath and high speeds mean a fatality is when not if. To not reduce the speed limit would be negligent.

A submitter noted that the first 500m of Blackswamp Road does not meet the 80km/h criteria. There is no shoulder area and there are significant blind corners. In addition there is an increasing amount of road users both in cars and out of cars using this stretch of road to access Mangawhai Village. This includes school children walking and biking and the significant number of visitors who stay at Riverside Campground and walk this windy narrow roadway day and night.

One submitter strongly opposed any changes to Blackswamp Road.

6.3.2 Analysis – Blackswamp Road

Analysis of submissions on Blackswamp Road is set out in Section 3.2 above.

6.3.3 Recommendation – Blackswamp Road

It is recommended that the speed limit on Blackswamp Road be set at 60kph for the full length of the Road, including the relatively short, sealed section.

To liaise with Auckland Transport to lower the part of Blackswamp Road that is under their jurisdiction to 60kph.

6.4 Kaiwaka-Mangawhai Road

Kaiwaka-Mangawhai is a key route linking Mangawhai with Kaiwaka and State Highway 1. The Road is strategically important. The road is also within the top 10% high risk roads where speed management is expected to significantly reduce serious injury and fatal crashes.

6.4.1 Community Feedback – Kaiwaka-Mangawhai Road

Waka Kotahi (NZTA) submitted that the speed limit on the Kaiwaka-Mangawhai Road should be 60km/h as the Kaiwaka-Mangawhai Road has an IRR of 1.97 and a mean operating speed 68km/h under the current 100km/h speed limit. This would suggest that a 60km/h speed limit is appropriate.

One submitter suggested that dropping the speed limit will not have the desired effect (reducing serious injury and fatal crashes) as drivers will continue to drive the same speed limit as it is now, and slow drivers will drop their speed yet again. Causing people to dangerously overtake and risk other people's lives at the same time.

Some submitters generally opposed a lowering of speed limit on the Kaiwaka-Mangawhai Road.

One submitter, who fully supports the proposed change stated that the road is very windy and there are not many places where it is safe to pass another vehicle, which increases the risk of accidents. Another submitter who sought an 80km/h speed limit noted that there are many corners and blind spots.

6.4.2 Analysis – Kaiwaka-Mangawhai Road

The Kaiwaka- Mangawhai road is in the top 10% of high-risk roads where speed management will have a significant impact on reducing serious injury and fatal crashes. All research on speed limits suggests that lowering a speed limit will reduce crash rates in two key areas:

- Reduces the chances of a crash occurring (this is supported by monitoring of other speed reduction areas); and

- If a crash does occur, the lower speed will increase the chances of being able to walk away or surviving the crash.

Where the speed limit is set close to the mean operating speed of the road (Kaiwaka-Mangawhai Road it is 68km/h) there is no evidence that slower drivers will slow further. However, there is evidence that the top end speed will drop to a safer speed.

The evidence suggests a safe and appropriate speed of between 60km/h and 80km/h. Given the strategic nature of this road, and to ensure consistency across the local road network, it is considered that an 80km/h speed limit be set and monitored for a period. Consideration should also be given to engineering solutions in the medium to long term.

6.4.3 Recommendation – Kaiwaka-Mangawhai Road

That the proposed 80km/h speed limit be retained and a programme to engineer the road up to an 80km/h speed environment be undertaken.

6.5 Raymond Bull Road

Raymond Bull Road is a straight, unsealed road that connects Blackswamp Road with Tern Point. A 60km/h speed limit was proposed on Raymond Bull Road.

6.5.1 Community Feedback – Raymond Bull Road

There was a significant number of submissions received on Blackswamp Road. The submissions received were overwhelmingly in support of a lower speed limit on the Road. Submitters requested that the full length of the road (including the sealed section) be 60km/h or 50km/h.

One submitter noted that Raymond Bull Road is dangerous for children or anyone walking on the road. There is no footpath and there is significant residential development at the end of the road. Raymond Bull is also the arterial road for Tern Point developments.

Another submitter stated that currently cars speed down this road and it is dangerous for pedestrians to use it. The submitters wife rides a horse down this road, and she feels unsafe. The dust nuisance is also an issue. This submitter sought a 50km/h speed limit.

Most submitters raised concerns about dust generation (refer Section 4.2.2 for Dust).

6.5.2 Analysis – Raymond Bull Road

Raymond Bull Road is a straight unsealed road. Traffic movements on the road is higher than expected for a rural unsealed road. This is a function of the proximity to Mangawhai and its use as a primary access to Tern Point, which is the subject on significant ongoing development.

The Setting of Speed Limits Guidance only allows for a 50kph speed limit with an urban environment. National guidance indicates that the speed limit for this road should be 60km/h.

A 60km/h speed limit, as proposed is consistent with other similar roads in the area, including Blackswamp Road.

6.5.3 Recommendation – Raymond Bull Road

That the proposed 60km/h speed limit be retained.

7 Summary of submissions received and recommendations (road by road)

All submissions have been read and considered before recommending new speed limits. Submissions were broken down to comments on individual roads wherever possible. Summary information is provided in the following tables, including:

- Road name
- Current posted speed limit
- Proposed speed limit (as set out in the Statement of Proposal)
- A summary of the feedback received
- Northland Transportation Alliance Road Safety Engineer (Team Lead) comments and recommendations
- Recommended new speed limit

The summarised Northland Transportation Alliance Road Safety Engineer comments, and the resulting recommended speed limit, are made having considered:

- The initial assessment of the road
- Evidence based matters that are required to be considered under Section 4.2(2) of the setting of Speed Limits Rule 2017 and set out in the following Reports as referenced in the Statement of Proposal and published on Council's Website:
    - Regional Speed Limit Reviews Kaiwaka-Mangawhai
- Community feedback received during the consultation process
- Additional site visits and assessments undertaken as a result of the community feedback received

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Atkin Road	100	60	No feedback received	Proposed speed limit appropriate.	60
Alamar Crescent	50	30	No feedback received	Proposed speed limit appropriate.	30
Avocado Lane			No feedback received	Proposed speed limit appropriate.	60
Bagnal Road	100	60	Request that the speed limit be reduced to either 60km/h or 50km/h. The road is relatively short and there is significant industrial and commercial activity on the road, as well as a significant residential development. It has significant industrial or commercial activity (for a road only 600m in length), it has significant residential development (approx. 20 dwellings in 600m) and it is unsealed. There are no footpaths nor street lighting.	The Setting of Speed Limits Guidance only allows for a 50km/h speed limit within an urban environment. National guidance indicates that the speed limit for this road should be 60km/h. Proposed speed limit appropriate.	60
Baldrock Road	100	80	Support for a speed reduction to 80km/h. However, some parts need a lower limit. Heavy vehicles use the road as a short cut between SH1 and Kaiwaka Mangawhai Road, increasing volume on the road. There have been many near misses with children crossing the road to the bus stop. Suggest reducing speed limit to 50kph from Gibbons Rd to approx. 457 Baldrock Road. Waka Kotahi NZTA sought a speed limit of 60km/h as Baldrock Road has an IRR of 1.82 and mean operating speed 37km/h.	Baldrock Road is a key road that Council does not wish to downgrade. Seal extensions on this road are designed as an 80km/h speed environment. Proposed speed limit appropriate.	80

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Barrier View Drive	100	60	No feedback received	Proposed speed limit appropriate.	60
Black Swamp Road (Insley street to Raymond Bull Road)	100	80	Refer Section 6.4 for feedback on Blackswamp Road.	Refer Section 6.4 for analysis of feedback on Blackswamp Road.	60
Black Swamp Road (Raymond Bull Road to Coal Hill Road)	100	60	Refer Section 6.4 for feedback on Blackswamp Road.	Refer Section 6.4 for analysis of feedback on Blackswamp Road	60
Brown Road (North end branch to Tara Road)	100	40	Concerns about increased traffic and dust issues (refer Section 4.2.2 above). What used to be a quiet rural road has become a shortcut for heavy trucks and with development traffic has increased a lot. One submitter sought a 60km/h speed limit instead of 40km/h.	This section of Browns Road is a separate road in its own right. The carriageway is narrow and unsealed. The road is also approximately 350m long. As a narrow access road, a 40km/h speed limit is considered appropriate in this instance.	40
Brown Road (Tara Road to Kaiwaka-Mangawhai Road)	100	60	Concerns about increased traffic and dust issues (refer Section 4.2.2 above). What used to be a quiet rural road has become a shortcut for heavy trucks and with development traffic has increased a lot.	Proposed speed limit appropriate.	60
Cames Road (from Lawrence Rd to Carters Rd)	100 (temp 50)	40	Refer Section 6.2 for feedback on Cames Road.	Refer Section 6.2 for analysis of feedback on Cames Road. It is noted that 40 km/h is consistent with the current road environment, but inconsistent with the current road function.	40
Cames Road (from Carters Rd to Mangawhai Rd): ***Note part of this road is within Auckland District***	100 (temp 50)	60	Refer Section 6.4 for feedback on Cames Road.	Refer Section 6.2 for analysis of feedback on Cames Road. It is noted that 40 km/h is consistent with the current road environment, but inconsistent with the current road function.	40

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Carter Road	100	40	One submitter sought a 60km/h speed limit instead of 40km/h.	Proposed speed limit appropriate.	40
Carters West Road	100	40	One submitter sought a 60km/h speed limit instead of 40km/h.	Proposed speed limit appropriate.	40
Cemetery Access Road (Mangawhai)	-	30	No feedback received	Proposed speed limit appropriate.	30
Clarke Road	100	40	One submitter sought a 60km/h speed limit instead of 40km/h.	Road is a very narrow unsealed access road that serves few residential dwellings. A 40km/h speed limit is consistent with other similar roads.	40
Coal Hill Road (Tomarata Road to end of seal)	100	80	One submitter sought a 50km/h maximum speed limit as Coal Hill Road is a main route and the population is growing, no footpaths, lots of dust. One submitter strongly opposed changes to Coal Hill Road.	Coal Hill Road has an Infrastructure Risk Rating of 2.02 and safe and appropriate speed of 60kph with a mean operating speed of 39km/h. The Setting of Speed Limits Guidance only allows for a 50kph speed limit with an urban environment. National guidance indicates that the speed limit for this road should be 60km/h. Whilst a 60kph speed limit is recommended, Coal Hill Road forms the boundary between Auckland and Kaipara Districts. Additional consultation will be required with Auckland Transport.	60

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Coal Hill Road (End of seal to Te Arai Point Road)	100	60	One submitter sought a 50km/h maximum speed limit as Coal Hill Road is a main route and the population is growing, no footpaths, lots of dust. One submitter strongly opposed changes to Coal Hill Road.	The Setting of Speed Limits Guidance only allows for a 50kph speed limit within an urban environment. National guidance indicates that the speed limit for this road should be 60km/h. Whilst a 60kph speed limit is recommended Coal Hill Road forms the boundary between Auckland and Kaipara Districts. Additional consultation will be required with Auckland Transport.	60
Cove Road from District Boundary to 20m north of Woodliegh Lane	100	80	Waka Kotahi (NZTA) sought a 60km/h speed limit.	Cove Road becomes tortuous at this point. A 60km/h speed limit is consistent with WDC proposed speed limit.	60
Cove Road south of Woodliegh Lane	100	80	There was general support for a lower speed limit of 80km/h on Cove Road, with several submitters seeking a 70km/h speed limit. Main issues raised was increased traffic density with more property access and driveways being created along Cove Road. There are some areas (near Bagnal Road) where visibility of driveways is limited, and fast vehicles are unaware there could be vehicles exiting their driveways. There is also a one lane bridge very close to a blind corner, that is not within stopping distance at a speed of 80 if entering from the blind corner of Cove Road. There are increasing numbers of bicycle riders, slow scooters and heavy vehicles and no footpaths.	Cove Road crosses the jurisdictional boundary between Kaipara District Council and Whangarei District Council. An 80km/h speed limit on the Kaipara District end of the road is considered appropriate. It should be noted that sections od this road, which are tortuous have been assessed at having a 60km/h speed limit. These sections are within the Whangarei District.	80

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Devich Road from Kaiwaka-Mangawhai Road to end of seal	100	80	There was support for the proposed changes to the speed limit on Devich Road. A submitter noted that it is dangerous exiting the driveway when cars are doing100km/h. The submitter regularly walks the roads and there are no footpaths.	This section of Devich Road is a two lane, undivided, sealed road. Consistency with other similar roads indicate a speed limit of 80km/h. From Arcadian Rise, there is a section of increased residential land uses and the road becomes tortuous and has a one lane bridge prior to the end of the seal. Shifting the 80/60 boundary to 40m south of Arcadian Rise will slow vehicles before the more tortuous section of Devich Road. The shorter 80km/h section of road is consistent with the speed limit on Kaiwaka-Mangawhai Road (80km/h).	80 with 80/60 boundary 40m south of Arcadian Rise.
Devich Road from 40m south of Arcadian Rise.	100	60	There was support for the proposed changes to the speed limit on Devich Road. A submitter noted that it is dangerous exiting the driveway when cars are doing100km/h. The submitter regularly walks the roads and there are no footpaths. The dust is significantly worse with speed and a health hazard (refer Section 4.2.2 above).	Slower speed limit is generally supported. Extending the 60km/h zone will incorporate the tortuous sealed section of Devich Road.	60 with 80/60 boundary 40m south of Arcadian Rise.
Echo Valley Road	100	60	No feedback received	Proposed speed limit appropriate.	60
Ellen Street	50	30	No feedback received	Ellen Street is utilised for informal parking and pedestrian access to the Wood Street shopping area. Proposed speed limit appropriate.	30

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Estuary Drive from Molesworth Drive to the intersection with Moir Point Road.	70	50	No feedback received	Proposed speed limit appropriate.	50
Estuary Drive from Molesworth Drive east of Moir Point Road	70	40	No feedback received	Proposed speed limit appropriate.	40
Fagan Place	30	30	No feedback received	Fagan Place provides access for car parking and a retirement village. It also forms part of the Wood Street Slow Streets development.	30
Garbolino Road	100	80	A submitter supported speed limits of 80km/h and 60km/h and noted that, when exiting the driveway, trucks are often going too fast. It is hard to judge if a truck or car is approaching. During school drop offs the Bus often has traffic traveling too fast.	Proposed speed limit appropriate	80
Gibbons Road (State Highway 1 to 50m north of the entrance to Kaiwaka Domain)	100	40	One submitter sought a 60km/h speed limit instead of 40km/h.	The 40km/h section of Gibbons Road is located within the Kaiwaka urban area and provides access to the domain. A 40km/h is considered appropriate for this road environment. It is noted that the submitter opposed all 40km/h speed limits.	40
Gibbons Road (From 50m north of the entrance to Kaiwaka Domain to one lane bridge at 247 Gibbons Road)	100	60	A submitter supported speed limits of 80km/h and 60km/h and noted that, when exiting the driveway, trucks are often going too fast. It is hard to judge if a truck or car is approaching. During school drop offs the Bus often has traffic traveling too fast.	Gibbons Road is an unsealed road and the road environment indicates that a 60km/h speed limit is appropriate. Submitter generally supported the proposed speed limit.	60

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Gibbons Road (From one lane bridge at 247 Gibbons Road to 30m North of 285 Gibbons Road – current 100kph sign)	100	40	A submitter supported speed limits of 80km/h and 60km/h and noted that, when exiting the driveway, trucks are often going too fast. It is hard to judge if a truck or car is approaching. During school drop offs the Bus often has traffic traveling too fast.	Further review of the proposed 40km/h speed limit has determined that a slower speed limit to address the operation of a vehicle loading area is inappropriate. A formal Traffic Management Plan would be the most appropriate method to address this issue. This could include temporary speed limits as required.	60
Gibbons Road (From30m North of 285 Gibbons Road – current 100kph sign to Baldrock Road)	100	60	A submitter supported speed limits of 80km/h and 60km/h and noted that, when exiting the driveway, trucks are often going too fast. It is hard to judge if a truck or car is approaching. During school drop offs the Bus often has traffic traveling too fast.	Gibbons Road is an unsealed road and the road environment indicates that a 60km/h speed limit is appropriate. Submitter generally supported the proposed speed limit.	60
Hilltop Road	100	60	A submitter supported 60km/h as the road is only 1km long, a dead-end and there are plenty of houses close to road and therefore a major dust nuisance…	Submissions supported proposed speed limit.	60
Insley Street from Intersection with Moir Street for a distance of 150m	50	30	Submitters questioned the need for a 30km/h speed limit within the Mangawhai town centre.	This short section of Insley Street is located within the town centre of Mangawhai Village. A slower speed limit is appropriate.	30
Insley Street from 150m SE of Moir Street to 300m SE of Kedge Drive.	50	40	Refer Section 5.1 on Mangawhai Beach School.	Refer Section 5.1 on Mangawhai Beach School.	40

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Insley Street from 300m SE of Kedge Drive to Tomarata Road	100	80	There was no specific feedback on this section of road. However, Waka Kotahi (NZTA) sought a 60km/h speed limit on the contiguous Tomarata Road.	Insley Street joins Tomarata Road, which in turn crosses into the Auckland District after a short distance. A slower 60km/h speed limit on the outskirts of Mangawhai is appropriate. This 60km/h section allows for the minimum distance for a 60km/h speed limit under the Setting of Speed Limits Rule 2017. The speed limit also provides consistency with Blackswamp Road.	60
Jack Boyd Drive	70	40	70km/h is too fast and presents a risk to pedestrians. There are too many houses on this road now for 70km/h to be safe. The footpath also needs to be extended to make the road safer.	Jack Boyd Drive has now become an urban residential area. A 40km/h speed limit is considered appropriate.	40
Jude Road	100	60	Jude Road is a dead end, unsealed road. 80kph on Jude for a dead end, unsealed, uphill road, un-helpful to road condition which is why we were put on this speed review list. Wants either 40km/h or 50km/h	Road safety traffic engineers have re-assessed this road and determined that, when taking account of national speed management guidance; 60km/h is appropriate.	60
Kiawaka-Mangawhai Road (from current 50km/h boundary to Garbolino Road)	100	80	Refer Section 6.5 for feedback on Kaiwaka-Mangawhai Road.	Refer Section 6.5 for analysis of feedback on Kaiwaka-Mangawhai Road	80
Kiawaka-Mangawhai Road (Garbolino Road to Kaiwaka)	100	80	Refer Section 6.5 for feedback on Kaiwaka-Mangawhai Road.	Refer Section 6.5 for analysis of feedback on Kaiwaka-Mangawhai Road	80

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Kapawiti Road	100	60	No feedback received	Proposed speed limit considered appropriate.	60
King Road (From Cove Road to Spioenkop Road)	100	80	Waka Kotahi (NZTA) sought a 60km/h speed limit.	King Road is a well formed two lane undivided sealed road. Although there is development, direct access onto the carriageway is limited. An additional assessment may be appropriate if development continues.	80
King Road (From Spioenkop Road to Bush Lane)	50	60	This is the only section of road in the review area where it is proposed to increase the speed. The submitter strongly opposes this speed increase because it does not reduce risk; it increases it.	The increase in speed limit from 50km/h to 60km/h is intended to make this road consistent with other speed limits.	40
Lawrence Road (From Kaiwaka-Mangawhai Road to Cames Road)	100	80	Feedback sought a speed limit of 60km/h and raised issues of dust and speeding vehicles.	The sealed section is relatively short, and a lower speed limit of 60km/h would be consistent with the remainder of the road. That Lawrence Road should be 60km/h for its full length.	60
Lawrence Road from Cames Rd to Valley Road	100	60	Feedback sought a speed limit of 60km/h and raised issues of dust and speeding vehicles.	That Lawrence Road should be 60km/h for its full length.	60
Mangawhai Road	100	80	No feedback received	Proposed speed limit considered appropriate.	80
Mangawhai Heads Road from Cove Road intersection for a distance of 550m	70	60	No feedback received	A 60km/h speed limit is considered appropriate from Cove Road for a distance of 550m.	60

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Mangawhai Heads Road from 550m from Cove Road to round-a-bout	70/50	50	No feedback received	A 50km/h speed limit is considered appropriate 550m from Cove Road to the round-a-bout. This section of road has a more urban feel and increased direct accesses onto the carriageway.	50
Moir Street from the Mangawhai Chocolate Factory to Tara Road end.	50	50	No feedback received	Proposed speed limit considered appropriate	50
Moir Point Road	70	50	No feedback received	Proposed speed limit considered appropriate	50
Molesworth Drive			Refer Section 3.3 Hearings Summary of Mr Mark Tollemache (MCL).	Consistency of speed limits along Molesworth Drive is agreed. MCL provided additional evidence with respect to the impact of Mangawhai Central Development (in whichever form it takes). Molesworth Drive should be made 50kph for its full length. A new 50kph / 30kph boundary to be moved to intersection with Longview Street.	50 for the length of Road, except from Longview Street to Moir Street.
Molesworth Drive (Mangawhai Village)	50	30	30km/h is far too slow, and people just won't do it and you get to distracted from the road at that speed. It will also congest an already very congested area. Refer Section 3.3 Hearings Summary of Mr Mark Tollemache (MCL)	30km/h in Mangawhai Village is appropriate. Additional innovating streets physical works in the village will support a 30lm/h zone. The extent of the 30km/h on Molesworth Drive should be shortened to Longview Street. Refer 3.3 Hearing Summary.	30/50km/h boundary to be located at Longview Street.

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Old Waipu Road from Molesworth Drive to end of seal at 89 Old Waipu Road	50	50	No feedback received	Proposed speed limit considered appropriate.	50
Old Waipu Road unsealed section	50	40	No feedback received	Proposed speed limit considered appropriate	40
Old Waipu Road North	100	50	One submitter sought a 60km/h speed limit instead of 50km/h.	Old Waipu road is currently not maintained by Council as a Road controlling Authority but proposed private development will lead to it being maintained. The road is within the new Urban Traffic Area.	50
Otioro Road	100	60	Reduce speed limit on Otirio Rd to 80km/h (not proposed 60km/h). Or reduce first 500m to 60km/h with the remainder at 80km/h. ONRC 60km/h to 80km/h and is moderately windy in two sections and has a low volume of traffic and a low accident record.	Otioro Road is an unsealed access road. The road is well formed and is consistent with similar roads where a 60km/h speed limit has been recommended.	60
Pakeho Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Paul Road	100	60	No feedback received	Paul Road is a very narrow unsealed access road that serves few residential dwellings. A 40km/h speed limit is consistent with other similar roads.	40

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Pebblebrook Road	100	60	Pebblebrook Road is a dead end, unsealed road. 80kph on Jude for a dead end, unsealed, uphill road, un-helpful to road condition which is why we were put on this speed review list. Wants either 40km/h or 50km/h	Pebblebrook road is an unsealed, well-formed road. The road does have one lane bridges; however, the lane width is similar to many unsealed roads with a speed limit of 60km/h.	60
Pritchard Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Raymond Bull Road	100	60	Refer Section 6.6 for feedback on Raymond Bull Road	Refer Section 6.6 for analysis of feedback on Raymond Bull Road.	60
Rua Road	50	40	One submitter sought a 60km/h speed limit instead of 40km/h.	Rua Road is a very short access road for a residential development. A 40km/h speed limit is appropriate.	40
Settlement Road from Kaiwaka-Mangawhai Road to 300m along Settlement Road.	100	60	Refer Section 6.1 for analysis of feedback on Settlement Road.	Refer Section 6.1 for analysis of feedback on Settlement Road.	80
Settlement Road from 300m along Settlement Road for a distance of approximately 300m.	100	40	Refer Section 6.1 for analysis of feedback on Settlement Road.	Refer Section 6.1 for analysis of feedback on Settlement Road.	40
Settlement Road from 600m south of intersection with Kaiwaka-Mangawhai Road to 50m east of Wattle Lane	100	60	Refer Section 6.1 for analysis of feedback on Settlement Road.	Refer Section 6.1 for analysis of feedback on Settlement Road.	60

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Settlement Road from SH1 to 50m east of Wattle Lane	50	50	No feedback received.	Extend 50km/h to 50m east of Wattle Lane.	50
Spioenkop Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Stewart Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Tara Road (from Kaiwaka-Mangawhai Road to 100m west of Dharma Lane)	50	50	One submitter sought a 60km/h speed limit instead of 50km/h.	This section of Tara Road was recently reviewed, and the speed limit changed to 50km/h to address developing residential land uses and the installation of footpaths.	50
Tara Road (100m west of Dharma Lane to 679 Tara Road)	100	80	There are multiple commercial orchards on this road of which we are one. We have large trucks turning in and out of the orchard as well as machinery moving up the road. 100km/h is a dangerous speed limit in this road. It is a matter of time before a speeding car comes up the road and collided with a turning truck. The limit should be 70km/h One submitter opposed the proposed speed limit on Tara Road because it's not a residential area and shouldn't have speed restrictions.	70kph is a speed limit that is discouraged under national guidance unless there is compelling evidence for a 70km/h speed limit. This section of Tara Road is consistent with other rural sealed roads and 80km/h is considered an appropriate speed limit.	80
Tara Road (from 679 Tara Road to Brown Road)	100	60	One submitter opposed the proposed speed limit on Tara Road because it's not a residential area and shouldn't have speed restrictions.	This section of Tara Road is unsealed. A speed limit of 60km/h is consistent with recommendations on other similar unsealed roads in the area.	60

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Tawa Avenue	100	40	One submitter sought a 60km/h speed limit instead of 40km/h.	Tawa Avenue is a very short access only road with a free flow speed of 22.93km/h (TomTom data). It is noted that the submitter opposed all 40kph speed limits.	40
Tern Point Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Tomarata Road from Insley Street to 80m south of Black Swamp Road	100	80	Proposes 60km/h as Tomarata Road has an IRR of 2.07 and mean operating speed 71km/h (under the current 100km/h speed limit).	Extending a 60km/h speed limit to beyond Blackswamp Road creates consistency with Blackswamp Road. This also allows for the minimum distance required for a 69km/h speed zone entering Mangawhai and the Mangawhai Beach School area.	60
Tomarata Road from 80m south of Black Swamp Road to District Boundary	100	80	Proposes 60km/h as Tomarata Road has an IRR of 2.07 and mean operating speed 71km/h (under the current 100km/h speed limit).	Tomarata Road crosses the Kaipara / Auckland Boundary within a short distance. There is no significant change in the road environment on either side of the boundary (Auckland remains 100km/h). A further reduction in speed limit may be considered in conjunction with an Auckland Council review of Tomarata Road.	80

Mangawhai / Hakaru Catchment Area					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Valley Road (Settlement Road to Lawrence Road)	100	80	Valley Road (Settlement to Lawrence). I would like to see the proposed change drop to 60kph. The church and cemetery are on this road. We see visitors to the cemetery every day. Milk Tankers are on the road daily. Valley Road should be 60 because there are two, one lane bridges, the road is narrow, road often floods, lots of stock trucks and farming vehicles.	The sealed section of Valley Road from Settlement Road to Lawrence Road, where after a one lane bridge, the road becomes unsealed. The minimum distance for an 80km/h speed limit zone is 800m. A 60km/h zone would be consistent with recommended speed limits for both Settlement Road and Lawrence Road.	60
Valley Road (Lawrence Road to end)	100	60	Valley Road should be 60 because there are two, one lane bridges, the road is narrow, road often floods, lots of stock trucks and farming vehicles.	Proposed speed limit considered appropriate	60
Weka Street	50	40	No feedback received	Urban traffic Area 40kph	40
Wharfedale Crescent			No feedback received	Urban traffic Area 40kph	40
Wintle Street	50	40	No feedback received	Wintle Street is within the Urban Traffic Area and the proposed speed limit considered appropriate	40
Wonderview Lane	100	60	No feedback received	Proposed speed limit considered appropriate	60
Wood Street from Molesworth Drive to 40m east the intersection with Margaret Street.	50	30	Mangawhai Village down to 30km. It could maybe be 40km but 30 is far too slow and people just won't do it and you get to distracted from the road at that speed. It will also congest an already very congested area.	Innovating Streets physical works are underway on Wood Street will support a 30km/h speed limit. Fagan Place and Ellen Street are included within the proposed 30km/h zone.	30

Kaiwaka West / Oruawharo Road					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Dowson Place (Urban Traffic Area)	50	40	No feedback received	Proposed speed limit considered appropriate	40
Farr Road	100	40	No feedback received	Although no feedback was received, a further assessment of this road indicates that a 60km/h speed limit is appropriate to maintain consistence with Oneriri Road.	60
Hastie Lane (Urban Traffic Area)	50	40	No feedback received	Proposed speed limit considered appropriate	40
Kaira Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Nathan Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Nukuroa Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Oneriri Road from SH1 to current 50kph/100kph boundary sign	50	40	40km/h at the beginning of Oneriri Road would not make a huge difference. Would be more than happy for it to stay at 50km/h.	A further review of this section of Oneriri Road indicates that there are few residential accesses onto the road and that a 50km/h speed limit is appropriate.	50

Kaiwaka West / Oruawharo Road					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Oneriri Road (From current 50kph/100kph boundary sign to Parekura Road – end of seal)	100	80	Most submitters supported an 80km/h speed limit on the sealed section of Oneriri Road with one submitter stating that the sealed section does not have the capacity to support the current speed and it only encourages speeding in dangerous spots. Excessive speed is an issue with submitters noting that they often see vehicles well in excess of 100km/h. Monitoring and enforcement is also required. Waka Kotahi states that Oneriri Road from Rangiora to Parekura has an IRR of 1.88 and a mean operating speed 61km/h. This section should be 60km/h.	It is recognised that Oneriri Road from Rangiora to Parekura has a higher IRR and a lower mean operating speed. However, there is little or no visible change to the wider road environment that signifies a change in speed limit.	80
Oneriri Road (From Parekura Road to end.)	100	60	Support the speed limit to 60kph. The unsealed part of Oneriri Road has become rally central. The submitter states that four cars have recently rolled on this road. Dust is an issue (refer 4.2,2). The unsealed section of Oneriri Road is now changed from a back country road servicing the farms at the end to being now a busy access road to the new and ever-increasing lifestyle blocks being developed and new houses being built. Submitters also requested additional signage for horses and children at strategic locations on the road. Monitoring and enforcement have also been identified as an issue.	Submitters support a 60km/h speed limit on the unsealed section of the road. Issues relating to enforcement and monitoring have been noted. Proposed speed limit considered appropriate	60

Kaiwaka West / Oruawharo Road					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Oruawharo Road (From SH 1 to Payne Road)	100	80	One submitter supported the proposed speed limit and noted that Oruawharo Road is always in poor condition.	Submitter supports proposed reduction in speed limit. Proposed speed limit considered appropriate	80
Oruawharo Road (From Payne Road to end)	100	60	No feedback received	Proposed speed limit considered appropriate	60
Oruawharo School Road	100	40	No feedback received	Proposed speed limit considered appropriate	40
Otara Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Parekura Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Parekura School Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Payne Road	100	40	No feedback received	Proposed speed limit considered appropriate	40
Phillips Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Pukenui Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Ranganui Road	100	60	No feedback received	Proposed speed limit considered appropriate	60

Kaiwaka West / Oruawharo Road					
Road Name	**Current Speed Limit**	**Proposed Speed Limit**	**Community Feedback**	**NTA Road Safety Engineer (Team Lead) comments and recommendations**	**New Speed Limit**
Rangiora Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Syd Smith Road	100	60	No feedback received	Proposed speed limit considered appropriate	60
Wiki Brown Road	100	40	No feedback received	Proposed speed limit considered appropriate	40

Appendix 1: Statutory Consultee Submissions

In keeping with other Statutory Consultees, the full submission of Auckland Transport and the Automobile Association is set out in this Appendix. Given the detailed nature and size of the submission, it has been included in this Appendix, rather than in the main body of the Report.

Auckland Transport
An Auckland Council Organisation

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16 December 2020

Kaipara Speed Limit Bylaw
Kaipara District Council
Private Bag 1001
Dargaville 0340

Dear Sir/Madam

Submission on proposed changes to speed limits in Kaipara District

Auckland Transport (AT) is a Council Controlled Organisation under Auckland Council. AT carries out the functions of a Road Controlling Authority for public roads (excluding State Highways) within the boundaries of Auckland Council. This includes the setting of speed limits under the Auckland Transport Speed Limits Bylaw 2019. In 2019 AT led the development of the Vision Zero for Tāmaki Makaurau Transport Safety Strategy, setting Vision Zero as the guiding strategic context for safety on our transport network.

AT welcomes this opportunity to provide feedback on the proposed speed limit changes in the part of Kaipara District immediately north of the Auckland Council boundary.

We note the proposed changes appear well aligned with national speed management guidance and commend your effort in preparing these changes. The approach taken is consistent with AT's recent changes in the area east of Warkworth. It is also likely to align well with future changes in the part of the AT network immediately south of the Kaipara District boundary.

We note that the proposal includes changes to speed limits on a number of sections of shared boundary road and on a few sections of road that extend beyond the boundary with Auckland Council. The Auckland Transport Speed Limit Bylaw 2019 will need to be amended to give effect to these parts of the proposal. We ask that Kaipara District Council staff contact us to discuss how we can coordinate our work and incorporate appropriate changes into our next bylaw review. In the first instance please contact Dayal Pituwala Withana, Road Safety Engineering Team Leader at Dayal.PituwalaWithana@at.govt.nz.

Thank you for the opportunity to give feedback on this proposal.

Yours faithfully

Bryan Sherritt
Executive General Manager, Safety

Automobile Association Full Submission

Please find attached submission from the Northland District Council of the NZ Automobile Association on the Kaipara District Council's STATEMENT OF PROPOSAL: Speed Limits Review – Mangawhai and Kaiwaka West Area.

Submission on Kaipara District Council's STATEMENT OF PROPOSAL: Speed Limits Review – Mangawhai and Kaiwaka West Area

From: Northland District Council of the NZ Automobile Association

Please note that we would like an opportunity to present our submission in person:

INTRODUCTION

The Northland District Council of the NZ Automobile Association represents over 48,000 AA Members who live in Northland. The AA Northland District Council welcomes the opportunity to submit on the Statement of Proposal ('SOP') for proposed speed limit changes in the Mangawhai and Kaiwaka West areas.

In this submission, we shall first offer some general comments on speed limits and speed limit changes, and comments on specific aspects of the proposed changes, including references to various government announcements and stated policies, the process adopted by NTA, and procedures adopted by other RCAs (e.g. Auckland and Queenstown Lakes). Particular references are made to:

- the Setting of Speed Limits Rule 2017,
- a proposed New Setting of Speed Limits Rule,
- the Tackling Unsafe Speeds Programme,
- statements by MoT and NZTA and announcements by Ministers.

We shall then comment on various statements made in the pre-amble to the Statement of Proposal.

Finally, we shall offer general comments on the proposed speed limit changes and offer comments on some (but not all) of the specific proposed changes.

1. GENERAL COMMENTS ON PROPOSED SPEED LIMIT CHANGES

1.1 We readily acknowledge that lower speeds result in fewer crashes of less severity. We support measures to lower the road toll by the adoption of safe and appropriate speeds, but these should be combined with engineering improvements.

1.2 We acknowledge that 100 kph is not a safe and appropriate speed for the majority of rural roads that are not state highways. AA policy is that we support focusing on the highest risk roads – the top 10% - but also engineering up where appropriate in order to maintain their function (e.g. arterial roads). We also support the use of 90km/h if that is self-explaining.

1.3 We acknowledge that 100 kph is neither a safe nor appropriate speed on unsealed roads but we do not support a blanket reduction on unsealed roads from 100 to either 60 kph or 40. We support a 70 kph speed limit which is more appropriate and more likely to be complied with. Under the imminent Setting of Speed Limits Rule change, we expect 70 kph to be a more readily available option for some roads. Drivers are at all times required to "drive to the conditions." The posted speed limit is never a target.

1.4 There are far too many proposed speed limit changes and there is limited consistency. Urban streets are variously 30, 40 and 50 kph. Urban arterial routes are variously 30, 40, 50 and 60 kph. Collector roads are 40 and 50. Motorists will not be able to keep up with the rapid number of changes and the inconsistency.

1.5 The Statement of Proposal describes the 50 kph speed environment as "Urban roads that have a high residential density, but no facilities that would generate significant additional pedestrian activity such as schools, shopping centres, sports facilities, or other developed recreational areas." This statement appears to conflict with the proposal to adopt a general default speed limit of 40 kph in residential areas.

1.6 Mega Maps show no history of DSIs since 2000 in Kaiwaka's urban streets where 40 kph limits are now proposed. Consequently, we do not consider that a default speed of 40 kph is justified. We acknowledge that 40 kph is an appropriate speed limit in High Pedestrian Activity Areas (HPAAs).

1.7 For roads that have a mean operating speed no more than 10% above the proposed speed limit, the AA Northland Council supports the proposed changes.

2. GENERAL PRINCIPLES RELATING TO SPEED LIMIT CHANGES

2.1. Summarising the above:

- we support measures to lower the road toll by the adoption of safe and appropriate speeds, but these should be combined with engineering improvements for roads.
- we acknowledge that 100 kph is not a safe and appropriate speed on Northland's unsealed roads.
- we acknowledge that 100 kph is not a safe and appropriate speed on the majority of Northland's sealed roads that are not state highways.

2.2. The vast majority of drivers drive to the conditions, and don't crash. High-risk drivers ignore existing speed limits and will continue to do so. Distracted drivers will continue to crash. Speeds that are not 'self-explaining' or are set below what drivers feel to be 'safe and appropriate' are likely to result in frustration and dangerous overtaking.

2.3. Speed management is much broader than speed limit changes, and includes engineering roads to be safe at current travel speeds. It also includes other engineering changes to roads, which can naturally calm traffic and reduce travel speeds. This is done by making a road feel like a slower, more self-explaining speed environment.[1]

2.4. Reducing speed limits is not on its own a panacea to the road toll. Overseas experiences on congested city roads such as in New York, Bristol and London (which can hardly be compared with

[1] https://www.transport.govt.nz//assets/Uploads/Report/Speed-outcomes-report.pdf

Mangawhai and Kaiwaka) confirms that engineering features such as speed limit signs at entry/exit points, engineering methods to improve junctions such as pavement markings, traffic calming, pedestrian refuge and kerb extension, median barriers, roundabouts, speed tables and extra lighting, along with awareness campaigns and speed limit enforcement, all have an important role to play in bringing about crash reductions.

2.5 New South Wales (Australia) – 40km/h permanent speed limits have been implemented in high pedestrian activity areas (HPAA) since 2003. "A 2017 evaluation concluded that a 38 per cent reduction in casualty crashes had been observed since the HPAA program was introduced. This was mostly related to speed limit reduction but there were other features such as pavement markings, traffic calming, pedestrian refuge and kerb extension that supported this outcome. (See https://at.govt.nz/media/1981261/summary-of-local-board-and-stakeholder-feedback-speed-limits-bylaw-2019.pdf)

2.6. While we acknowledge the general principles involved with the description of the Speed Environments, the descriptions are likely to change in 2021 with the new Setting of Speed Limits Rule and we question the proposed application of the current speed environment descriptions in the SOP.

2.7. We acknowledge that speed limits need to be reviewed to address ongoing urban development and urban sprawl that has occurred and is planned.

2.8. The *Road to Zero* strategy aims to reduce deaths and serious injuries by 40% by 2030. The focus in this SOP appears to be on minor injuries.

Comments: We see no evidence of consideration given to safe engineering upgrades, other than the installation of new speed limit signs. For example:

- What consideration has been given to constructing a roundabout at the inherently unsafe junction of Molesworth Drive, Moir Street and the entrance to the adjacent shopping centre car park?
- It is inherently unsafe to have cars reversing from in front of the Four Square supermarket in Mangawhai village onto the highway next to a T-junction, or exiting onto the T-junction.
- Has consideration been given to installing a "Slow Down. 50 kph at 400 metres" sign on Molesworth Drive approaching Mangawhai village?

3. SETTING OF SPEED LIMIT RULES

3.1. We note that the procedures being followed are not consistent with the Speed Management Guide nor with the Setting of Speed Limits Rule 2017. The Setting of Speed Limit Rule is likely to change in the near future, with the New Rule expected to be released for public consultation at any time following initial input from selected stakeholders. Major changes to speed limits set out in the SOP - such as proposed new de facto default speed limits - should await the release of the new Rule to ensure national and regional consistency.

3.2. NZTA notes that a speed review starts with a technical assessment of the road *"to find out information like crash history, average speed vehicles are travelling on the road, number of vehicles a day using the road, what is happening around the road (changes in housing, urban development, businesses etc) and other activity on the road. This helps to understand whether the current limit is safe and appropriate for the road."*

Comment: We can see no evidence to indicate that this process has been followed, other than in part.

4. NZTA's MEGA MAPS

5.1. In particular, we note that most of the urban roads proposed for a lower speed limit of 40 kph have no history of SDIs since 2000 according to NZTA's Mega Maps. Within Waipu Cove, Langs Beach, Mangawhai Heads and Mangawhai, there have been no deaths and only 3 serious injuries at Mangawhai Heads, none of which were within the main commercial area where 30 kph is now proposed. The proposed changes are inconsistent with the requirement to have regard to NZTA's data on crash history.

5.2. The Mega Maps tool uses a range of factors such as crash history, road conditions, surrounding land use and traffic volumes to calculate the theoretical ideal speed. It is designed as a planning tool, not a blanket speed limit recommendation, and the Automobile Association has previously questioned whether councils are using it correctly.

5.3. NZTA's Nic Johansson, who is part of the NZTA team working to improve safety through speed management, is reported as follows:

> "He says that while the mapping tool indicates that about 80% of New Zealand roads don't currently match the calculated 'safe and appropriate' limit, the tool is based on desktop data which needs to be checked and verified by local authorities in the real world. Just because the mapping tool gives a recommended 'safe and appropriate' speed doesn't mean the authorities should immediately go out and change the limit.
>
> Johansson says it's vital that authorities engage in genuine consultation with communities to understand how a road is being used and what people perceive its risks to be. This could show that options other than a lower speed limit are the way to go."

5. SAFE AND APPROPRIATE SPEEDS

5.1. Other RCAs in NZ have acknowledged that the Rule requires councils to set speed limits that are not just 'safe' but 'safe and appropriate'. Consideration is given to both safety and economic productivity.

5.2. Safe and appropriate operating speeds are those deemed appropriate for the road function, design, safety and use (i.e. both safety and efficiency are considered).

5.3. Are the proposed changes justified, and right for the roads involved, having regard in particular to the crash history and the roads' purposes? Are the proposed speed limits self-explaining? If not, the proposed limits are unlikely to be adhered to by drivers.

5.4. Are 'engineering up' measures such as traffic calming proposed either as an alternative to speed limit reductions or in order to maximise any benefit of speed reductions?

5.5. Do the proposed new speed limits support the safe and efficient movement of goods and people?

5.6. Once a view is formed as to the safe and appropriate speed to be adopted, five things need to happen.

(i) Firstly, the new speed limits should be "sense tested" as noted in the Speed Management Guide. A report by Professor Sam Charlton for LTNZ in 2006 noted: After the project was begun, the National Road Safety Committee and the Ministry of Transport articulated a National Speed Management Initiative which stated: *"The emphasis is not just on speed limit enforcement, it includes perceptual measures that influence the speed that a driver feels is appropriate for the section of road upon which they are driving – in effect the 'self-explaining road.'"*

(ii) Secondly, the 'new' speed zones need to be fully and properly signposted and marked. Even though there may be a huge cost involved in installing adequate signage, it is essential from the motorists' perspective that they are fully informed of speed zones. It might mean then that the changes need to be staggered, due to the costs involved.

(iii) Thirdly, there needs to be an education programme (i.e. publicity) to explain to the community why the changes are justified. The education program is needed to supplement the signage so you achieve greater buy in from the motorists. Simply imposing a lower speed limit, if it is not understood and accepted by the community, will not be effective.

(iv) Finally, there should be a review of the lowered speed limits 24 months following their introduction. This process should be robust and transparent – if they haven't worked, then they should be re-assessed. It is acknowledged that for those locations where there is no DSI history or very low DSIs as shown on NZTA's Mega Maps, this will present a real problem.

6. MoT's 'TACKLING UNSAFE SPEEDS PROGRAMME' (The 'Programme')

It is noted that the Tackling Unsafe Speeds programme was agreed by Cabinet in November 2019 and is a key action in the Road to Zero Action Plan. The Cabinet papers include the following notes on Speed Management Plans and blanket speed reductions.

(a) Regional Speed Management Plans.

"4.5 road controlling authorities determine their input to their Regional Speed Management Plan, which will include proposed speed management reviews and speed limit changes for local roads;

4.6 regional transport committees collate the inputs of individual road controlling authorities to develop Regional Speed Management Plans and consult on those Plans (similar to the land transport planning process);

4.7 the NZTA reviews Regional Speed Management Plans prior to their finalisation;"

(b) No blanket Reduction of Speed Limits

An MoT paper on the Programme includes the following:

(ref: https://www.transport.govt.nz/area-of-interest/safety/tackling-unsafe-speeds/)

"The programme has no blanket reductions to speed limits

Speed management reviews will focus on high risk roads and roads where communities have expressed strong support for safer speeds. In these areas, RCAs must consider if engineering improvements or speed limit adjustments make the most sense.

Under the Tackling Unsafe Speeds programme there will be no change to default speed limits on the network, although there will be new requirements for safer speed limits outside all schools."

Comment: The proposed blanket speed reductions appear to be inconsistent with this stated policy of the Tackling Unsafe Speeds Programme. We see no evidence of consideration of engineering improvements.

7. SPEED LIMITS AROUND SCHOOLS

7.1. The MoT paper referred to above states:

"The programme aims to lower speed limits around schools to improve safety and enable more children to walk or cycle to school.

While crashes tend to be relatively low around schools, they still occur. Reducing the speed limit encourages drivers to travel at safe speeds past schools, particularly during peak hours in the morning and afternoon."

Comment: The Programme's focus is quite clearly on safer speeds during peak hours when children are walking or cycling to school.

7.2. Currently, NZTA Traffic Note 37, Revision 2 notes that:

> "40km/h variable speed limits in school zones have been operating successfully in New Zealand since they were first installed on a trial basis in Christchurch in January 2000." The Traffic Note sets out the criteria for variable speed limits around schools.
>
> "5.1 Times of operation The Christchurch trials showed variable speed limits in school zones are effective in reducing speeds, but have the support of drivers only if there are children present when they are operating. Therefore, the times they are activated must be tightly controlled to match, as closely as possible, the times children are crossing the road or are gathered on the roadside."
>
> "The signs may operate for a maximum period of:
>
> - 35 minutes before the start of school until the start of school
> - 20 minutes at the end of school commencing no earlier than five minutes before the end of school
> - 10 minutes at any other time of day when children cross the road or enter or leave vehicles at the roadside.
>
> Unless the signs are manually turned off earlier, they must turn off automatically when the maximum period has elapsed."

7.3. In regard to the SOP's proposed 30 kph speed limits around schools:

a. In November 2019, the Associate Minister of Transport released a press statement which included: *"Kids should feel safe walking or biking to school, the Associate Transport Minister said this morning as she announced blanket speed limit cuts around schools across the country.*

Under the new rules a 40km/h speed limit will apply when driving past all urban schools, and 60km/h passing rural schools - although it could take up to 10 years for the changes to be rolled out in some areas."

b. The SOP school speed environment description states:

"School Speed Zones.

"The governments Road to Zero Road Safety Strategy prioritises lower speed limits around schools and educational institutions. Generally, these lower speed limits are 60kph outside rural schools and between 30 and 40 kph outside urban schools. The permanent speed limits that we are proposing outside schools and educational institutions meet the road to Zero Road Safety Strategy priorities; as such, we are not proposing any Variable School Speed Zones within this review area."

Comments:

(i) AA policy supports variable school speeds, as set out in Traffic Note 37..

(ii) 1 hour per day, 5 days a week, 40 weeks a year equates to about 200 hours per year of variable speed operation being required for safety. The proposal to set a lowered speed limit 24/7 (168 hours per week) for 365 days a year would appear to be unwarranted and inconsistent with the rule. It clearly exceeds, the Road to Zero Road Safety Strategy guidelines, unless the school falls within a lower speed zone because of other factors..

(iii) The above reference in the SOP to 30 kph permanent speed limits does not appear to be consistent with variable 40 kph limits referred to in either the Minister's statement, NZTA Traffic Note 37 or the MoT paper.

(iv) We are not aware of any DSIs occurring outside schools within the Whangarei or Kaipara districts where there is currently a 40 kph variable speed limit with flashing signs.

(v) If the latter has been shown to be effective, and the MoT paper notes that "*crashes tend to be relatively low around schools",* why propose lower 24/7 speeds of 30 kph that are not consistent with government policy and will not be understood by motorists as being appropriate?

8. SPEED LIMITS THROUGH URBAN SHOPPING CENTRES

8.1. In regard to proposed 30 kph zones through urban shopping centres (Mangawhai), the speed zone environment for 40 kph states: "Urban areas where there are facilities that generate significant additional pedestrian activity such as schools, shopping centres, sports facilities or other developed recreational areas, or where there are "slow street" urban design features."

8.2. The SOP states that: "key urban arterial routes that will remain at 50kph or higher." This has been applied at Mangawhai Heads but at Mangawhai, an extended zone of 30 kph over about 600 metres, in order to embrace a pre-school and school, has been proposed,

8.3. It is not acceptable for private early childhood centres to be established on arterial routes without adequate provision for pick-up and drop-off, in an expectation that RCAs will subsequently lower speed limits 24/7 (note comments in technical report regarding "Before 6 Early Childhood Centre" on Molesworth Drive).

8.4. "Roads within the [Kaipara] District have been classified under a Road Hierarchy by their priority in terms of function. For example, the highest classification rate relates to major arterial routes such as the State Highways discussed above and the lowest classification includes local roads. Each classification assigns preferential use to either through traffic or local access. Roads can be classified in the following manner: · State Highways - Roads managed by NZ Transport Agency; · Arterial Roads - Traffic function is dominant; *(Kaipara District Plan)*

Comments:

(i) 30 kph may be applicable to town and city CBDs (i.e. financial and commercial centres) but we are of the opinion that the Mangawhai does not constitute a major shopping precinct.

(ii) The proposed extended 30 kph zone in Mangawhai village is inconsistent with the Kaipara District Plan and with the SOP statement regarding arterial roads. Where there is a proven area of high risk on an arterial route, 'engineering up' options should be explored to enable the existing speed environment to be maintained.

9. SPEED LIMITS ON UNSEALED ROADS

9.1. In the experience of some of our councillors who drive frequently on unsealed roads, we regard a safe speed as totally dependent on the current state of the road. On a recently graded road with copious loose gravel, a maximum speed of 50 k/h may be appropriate, but on a well-swept road with minimal loose gravel, we would regard speeds of 70 k/h as safe. For city drivers unfamiliar with unsealed roads, signage showing a lowered speed limit would provide an appropriate warning but again, we would not want to see over-zealous enforcement.

9.2. Some unsealed roads are narrow and winding while others are wider and straight. We will continue to advocate that on unsealed roads, there should be a maximum speed limit of 70 kph. On narrow, winding unsealed roads, 50 kph may be appropriate. However, at all times, it is the driver's responsibility to drive to the conditions. The posted speed limit is never a 'target.'

9.3. Queenstown Lakes DC reports in their summary of speed limit change submissions: *"At the 2018 summit [of the International Transport Forum], a recommendation that rural unsealed roads should be reduced to 70km/h worldwide was discussed in detail. This approach was formally supported by Federated Farmers in New Zealand as reported nationally in April 2018."*

9.4. It appears likely that following the introduction of the proposed New Setting of Speed Limits Rule, RCAs will be able to set limits of 70 kph without seeking NZTA approval.

10. GENERAL COMMENTS ON SOP PREAMBLE TO PROPOSED SPEED LIMIT CHANGES

In this section, consideration is given to various aspects addressed in the pre-amble to the SOP's proposed changes.

10.1 Reasons for the proposed new speed limits

"There was a total of 7178 reported crashes in Northland between 2016 – 2020, with travel speed being the principle factor in 20% of those crashes. During the same 4½ year period, there were 39 fatal crashes involving 46 deaths and 164 serious injury crashes causing 217 serious injuries with travel speed being the principle factor. There is a real need to reduce the toll on our communities by ensuring that speed limits are safe and appropriate for the wider road environment."

(i) **Comments:** In NZ, speed as reported in crash analysis statistics generally involves inappropriate speed for the conditions, - the majority of speed-related crashes occur at or below the posted speed limit. Loss of control on bends is a major factor. Northland Road Safety Issues: 2014-2018 Crash Data (WSP 2019) reports that: on local roads, 67% of crashes involve *'bend loss of control/head on crashes'* compared with 33% *'travelling at speed.' 'There are approximately 2.5 times as many bend loss of control/head on crashes than the next highest crash movement.'*

(ii) High-risk drivers who deliberately flout the existing speed limits are no more likely to adhere to lowered limits than to the current ones.

(iii) A lower speed will always be a 'safer' speed, right down to walking speed in an environment where pedestrians are present. The focus needs to be on "safe and appropriate", not just "safe."

10.2 Speed Environments

"Matching the speed limit with the road environment achieves safer, more appropriate and predictable speeds and travel times. If you drive down one road, the speed limit should be similar to any other road that has the same look and feel to it.

• *In accordance with national guidance, 70kph zones will be discouraged, except where there is an existing 70kph zone."*

Comment: A new speed limit rule is currently out for consultation. We understand that the initial proposals are to make 70 km/h and 90 km/h zones more readily applied, without NZTA approval. It is premature to accept this present discouragement of 70 km/h zones.

AA supports the use of 70 and 90 as these may make more sense to road users on some roads that self-explain at these speeds vs. 60/80km/h.

10.3 Matters to be Considered

"Section 4.2 of the Setting of Speed Limits Rule 2017 requires Council, in its capacity as a Road Controlling Authority to have regard to:

a) NZTA information about speed management

b) National Speed Management Guidance

c) The function and use of the road

d) Crash risk for all road users

etc

…"

Comments:

There is no evidence that consideration has been given to NZTA's Mega Maps data pertaining to crash history and recommended safe and appropriate speeds, or to the function of the road. This is a key document that should be taken into account. In particular, Mega Maps do not show 30 kph to be the safe and appropriate speed for any urban road within the area under review.

Reference is also made to section 4.4(2)(c) of the Rule which requires operating speeds to be no more than 10% above the proposed limit. No information is provided regarding the current operating speeds.

10.4 Pedestrian Crash Risk Curves

It is not disputed that higher speeds result in higher crash rates and higher severity.

However, the **Wramborg** crash risk curves used by NTA are unsubstantiated and therefore somewhat misleading. Subsequent reports have been unable to ascertain the basis of Wramborg's predictions. Note: *"The Wramborg (2005) conference paper did not provide any research references or sources of information for the impact speed curves."* [Chris Jurewicz et al./ Transportation Research Procedia 14 (2016)].

'**Mackie 2018** – Speed/Injury Risk Curves' qualified the Wramborg 2005 curves by stating that the pedestrian curves approximated to *"an appropriate speed/fatality risk profile curve follows a profile that is relevant for older people and where heavy vehicles are involved."* Mackie 2018 refers to Rosen *et al* 2011 which shows the average (children, adults, elderly) pedestrian fatality risk at 50 kph to be approximately 20% and at 40 kph, 10%.

(Mackie 2018:) "*A review of the literature confirmed that more recent studies (e.g. Figure 2 below) have risk curves that are generally less steep and inflect at higher speeds.*

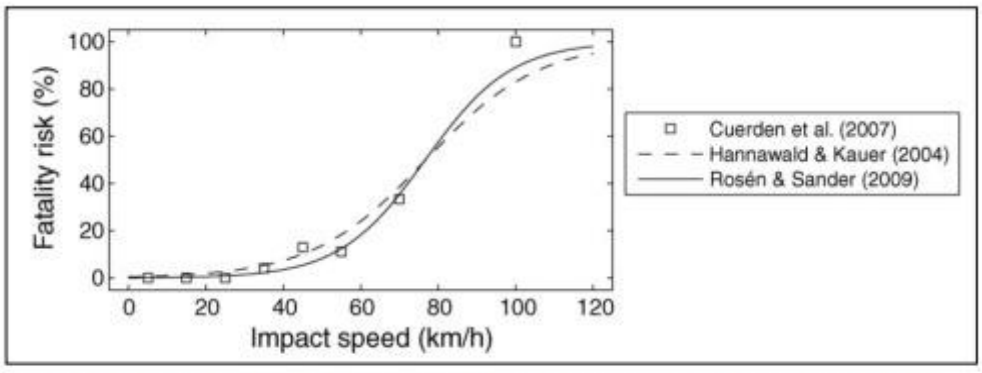


Figure 1. *The fatality rate of pedestrians in crashes with passenger cars as function of the collision speed (from Rosén et al., 2011).*

For example, the pedestrian fatality risk curve does not increase sharply until impact speeds reach 60 km/h, yet in New Zealand we know that pedestrians have been killed by buses at approximately 30 km/h.

The literature suggests that survivability has improved over time for any given speed, which poses a challenge when it comes to communicating the benefits of safer or lower speeds."

Ashton & Mackay have calculated: *"This figure shows that the estimated risk of a pedestrian being killed is approximately 9% if they are hit at a speed of 30 mph [48 kph]. The risk at an impact speed of 40 mph [64 kph] is much higher, at approximately 50%."*

Wramborg 2005 by comparison, and as quoted by NTA, shows a fatality risk of 50% at 40 kph and 90% at 50 kph.

Comment: At 50 kph, we have three possible fatality rates: 9%, 20% and an unsubstantiated 90%. NTA has provided no justification for adopting the unsupported highest value data, and ignoring more recent research.

Stephen L Westgate: for
Northland District Council,
NZ Automobile Association

APPENDIX I: Comments on Specific Speed Limit Changes.

The SOP considers speed limit changes in the following areas:

1. The Mangawhai Urban Traffic Area, including: Wood Street (Mangawhai Heads) Commercial Area, and Moir Street / Mangawhai Township (Figures 3, 4 & 5).
2. Proposed Kaiwaka Urban Traffic Area (new) (Figure 6)
3. Hakaru (Kaiwaka-Mangawhai) Catchment Review Area (Figure 7).
4. Kaiwaka West (Figure 8).

1. The Mangawhai Urban Traffic Area

The proposed changes to the Mangawhai Urban Traffic Area are intended to reflect current and future development that is occurring in both Mangawhai Township and Mangawhai Heads. The proposed changes will consolidate three separate Urban Traffic Areas into a single Mangawhai Urban Traffic Area by:

- Combining the existing Urban Traffic Areas into a single consolidated area
- Expanding the Urban Traffic Area to encompass new development including Mangawhai Central, as well as proposed future urban development
- In addition, it is proposed to make most urban residential streets within the Urban Traffic Area 40kph with some exceptions for key urban arterial routes that will remain at 50kph or higher.
- The key proposed changes are set out below:
- Most urban streets in Mangawhai Heads and Mangawhai Township to have a 40kph speed limit, except for key arterial routes.

Comments:

(i) We do not support a blanket reduction of urban streets from 50 to 40 kph. Urban streets vary in their function – they may be primary collector, secondary collector or access routes. Consideration needs to be given to the respective function and use of each road, as required by the Setting of Speed Limits Rule 2017.

(ii) Mega Maps show no DSI history within the commercial areas of Mangawhai and Mangawhai Heads. The default speed should remain at 50 kph.

- The part of Molesworth Drive that is currently 80kph reduced to 60kph

Comment: We support this. We recognise the proposed development of Mangawhai Central and the effect that roading changes associated with this development will have on traffic and traffic flow.

- Estuary Drive from Molesworth Drive to the intersection with Moir Point Road, reduced from 70kph to 50kph and the remainder of Estuary Drive (east of Moir Point Road) from 70kph to 40kph.

Comment: It appears that the current speed limit on Estuary Drive is 50 kph (Mega Maps and Google Earth). If 50 kph is considered to be safe and appropriate for part of Estuary Drive, the speed limit should be consistent along its length. Motorists will drive to the conditions.

- Old Waipu Road from Molesworth Drive to end of seal at 89 Old Waipu Road to remain 50kph, with the unsealed section to reduce to 40kph.

Comment: We do not support this. 40 kph is not a default speed for unsealed roads. There is a need for reasonable consistency, in this instance, 50 kph. Too many speed limit changes will be confusing for motorists who will drive to the conditions..

- The part of Moir Point Road that is currently 70kph reduced to 50kph.

Comment: It appears from Mega Maps that the current speed limit is 50 kph. Moir Point Road is a significant collector road and we support 50 kph..

- The part of Mangawhai Heads Road that is currently 70kph reduced to 60kph through to Cove Road.

Comment: We support this. We acknowledge the subdivision and housing development that has occurred along here.

- Jack Boyd Drive reduced from 70kph to 40kph

Comment: We do not support this. We acknowledge that a reduced speed limit is appropriate, but only to the current urban default speed of 50 kph, as recommended by MegaMaps.

- Part of Tara Road from the current 50kph boundary to Garbolino Road reduced from 100kph to 80kph (Note: there is also a proposed reduction of the speed limit on Tara Road beyond the proposed Urban Traffic Area boundary).

Comment: We support this.

- The current 50kph speed limit on Tara Road retained.

Comment: We support this.

- Part of Kaiwaka-Mangawhai Road from the current 50kph boundary to Garbolino Road from 100kph to 80kph. (Note: there is also a proposed reduction of the speed limit on Kaiwaka-Mangawhai Road beyond the proposed Urban Traffic Area boundary).

Comment: We support a speed limit of 80 kph on the majority of non-state highway arterial routes, subject to sense-testing.

- The current 50kph speed limit on Moir Street from the Mangawhai Chocolate Factory toward Tara Road to be retained.

Comment: We support this.

- The part of Insley Street that is currently 100kph reduced to 80kph (Note: there is also a proposed reduction of the speed limit on Insley Street beyond the proposed Urban Traffic Area boundary).

Comment: We support this reduction to 80 kph.

- Cove Road, along the boundary of the Urban Traffic Area from 100kph to 80kph (Note: this is part of a proposed wider reduction in the speed limit along the length of Cove Road).

Comment: We support this.

- Atkin Road from 100kph to 60kph

Comment: We support this.

- Alamar Crescent from 50kph to 30kph

Comment: We do not support this. This is a 'no exit' road leading to a boat ramp. Speeds will be self-regulating to a large extent, and should be consistent with other urban

streets in the vicinity. Too many speed limit changes will be confusing. Motorists may not know which zone they are driving in.

• We are also proposing to reduce the speed limit within the Wood Street commercial area and the Moir Street commercial area to 30kph in recognition of the high pedestrian numbers, particularly during the summer months.

Comments:

(i) We do not support the proposed 30 kph zones for the following reasons.

Figure 4: Proposed Wood Street (Mangawhai Heads) Commercial Area Speed Limits

(ii) We can see no justification for a permanent speed limit of 30 kph in the Wood Street area to cater for peak holiday traffic and pedestrian movement, when traffic speeds at such times will be largely self-regulating due to congestion. We note that most minor crashes are the result of manoeuvring movements.

Figure 5. Proposed Moir Street / Mangawhai Township Speed Limits

(iii) Molesworth Drive and Moir Street is a key arterial route through Mangawhai township.

(iv) The proposed 30 kph limit is inconsistent with the SOP's basic premise that: *"In addition, it is proposed to make most urban residential streets within the Urban Traffic Area 40kph with some exceptions for key urban arterial routes that will remain at 50kph or higher."*

(v) Mega Maps show 60 kph on Molesworth Drive and 40 kph on Moir Street between Isley Street and Molesworth Drive to be safe and appropriate speeds. We would support these speeds until such time as the vehicle crossings adjacent to the intersections are upgraded to comply with standard engineering designs of vehicle crossings near to intersections (not closer than 75m for arterial routes, 55m for collector roads). We do not support 30 kph.

APPENDIX I (cont[d]):

2. Proposed Kaiwaka Urban Traffic Area (new)

"The proposed Kaiwaka Urban Traffic Area is new. The Proposed Urban Traffic Area encompasses the urban residential area of Kaiwaka (Figure 6). All roads within the Urban Traffic Area have a speed limit of 40kph, except:

…….[etc]"

Comments: MegaMaps show the safe and appropriate speed in Kaiwaka's urban streets to be 50 kph. Given the absence of any DSI's since 2000, we do not support a lower limit of 40 kph within the urban traffic area.

APPENDIX I (cont[d]):

3. Hakaru (Kaiwaka-Mangawhai) Catchment Review Area

Arterial Routes: We support the proposed reductions from 100 to 80 kph on the three arterial routes:- Kaiwaka – Mangawhai Road, Mangawhai Road and Tomorata Road, as these are in the top 10% of highest risk roads.

Regarding the roads as listed from Bagnall Road to Valley Road, we acknowledge that the current speed limits are neither safe nor appropriate, and should be lowered.

Subject to our previous comments about 70/50 kph rather than 60/40 kph being appropriate on unsealed roads, we support the current 100 kph limit being lowered.

APPENDIX I (cont^{d}):

4. Kaiwaka West Speed Review Area

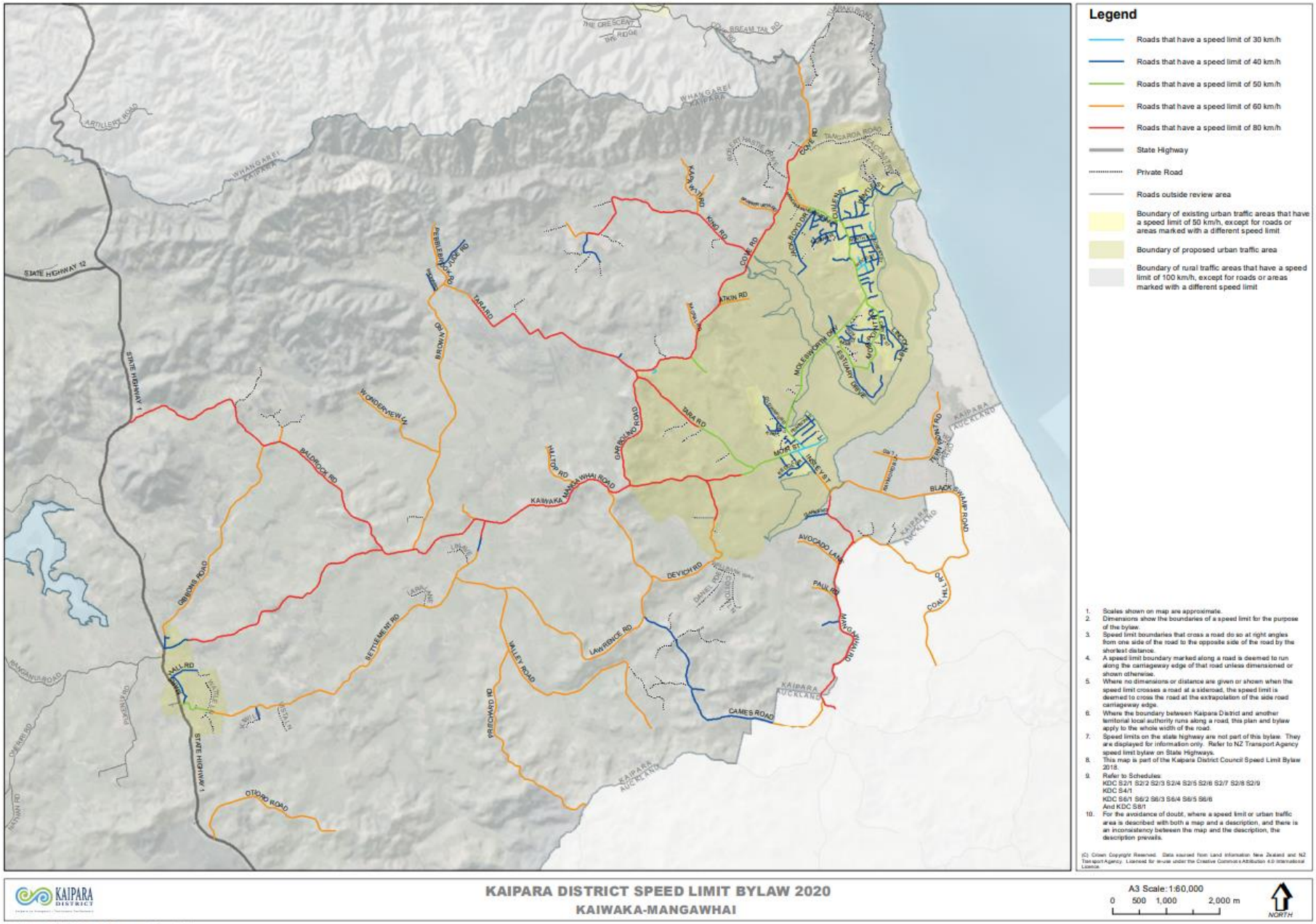
Subject to our previous comments about 70/50 kph rather than 60/40 kph being appropriate in certain situations, we support the current 100 kph limit being lowered.

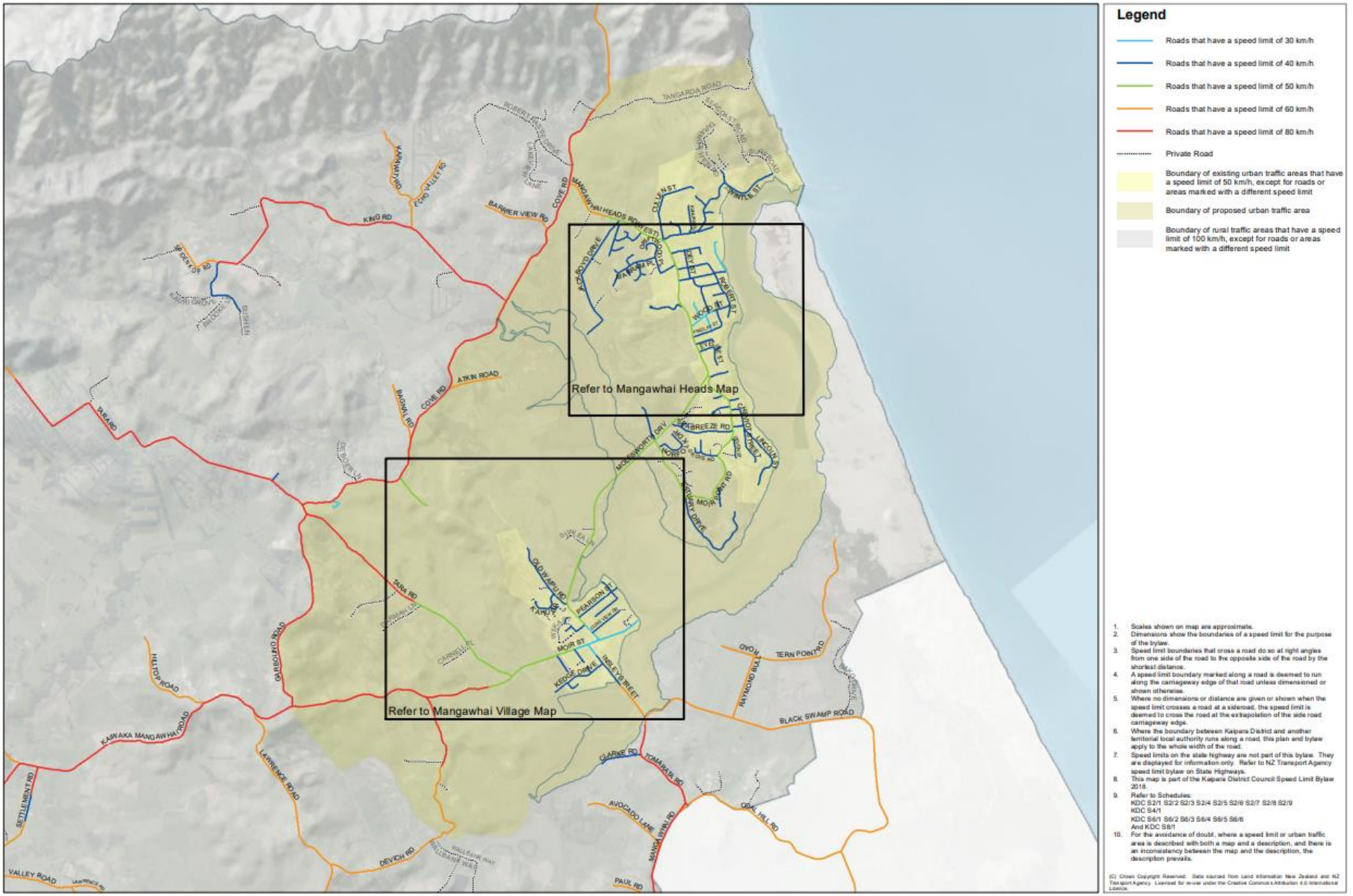
Appendix 2: Recommended Speed Limit Maps

Note: The Speed Limit Maps contained within this Appendix is indicative only. Once Council confirms that recommended speed limits in this Report, the attached maps will be updated utilising RAMM mapping data and incorporated into the overall mapping of the Speed Limits Bylaw. This may result in minor changes to the indicative map in this Report. These changes are expected to be only in the order of meters.

Any minor changes to the map is a result of identifying the optimal position of new signage and the accuracy required by the Setting of Speed Limits Rule 2017.

KDC Speed Review – Mangawhai and Kaiwaka Recommendations




Legend
Roads that have a speed limit of 30 km/h
Roads that have a speed limit of 40 km/h
Roads that have a speed limit of 50 km/h
Roads that have a speed limit of 60 km/h
Roads that have a speed limit of 80 km/h
Private Road
Boundary of existing urban traffic areas that have a speed limit of 50 km/h, except for roads or areas marked with a different speed limit
Boundary of proposed urban traffic area
Boundary of rural traffic areas that have a speed limit of 100 km/h, except for roads or areas marked with a different speed limit
Refer to Mangawhai Heads Map
Refer to Mangawhai Village Map
1. Scales shown on map are approximate.
2. Dimensions show the boundaries of a speed limit for the purpose of the bylaw.
3. Speed limit boundaries that cross a road do so at right angles from one side of the road to the opposite side of the road by the shortest distance.
4. A speed limit boundary marked along a road is deemed to run along the carriageway edge of that road unless dimensioned or shown otherwise.
5. Where no dimensions or distance are given or shown when the speed limit crosses a road at a sideroad, the speed limit is deemed to cross the road at the extrapolation of the side road carriageway edge.
6. Where the boundary between Kaipara District and another territorial local authority runs along a road, this plan and bylaw apply to the whole width of the road.
7. Speed limits on the state highway are not part of this bylaw. They are displayed for information only. Refer to NZ Transport Agency speed limit bylaw on State Highways.
8. This map is part of the Kaipara District Council Speed Limit Bylaw 2018.
9. Refer to Schedules:
KDC S2/1 S2/2 S2/3 S2/4 S2/5 S2/6 S2/7 S2/8 S2/9
KDC S4/1
KDC S6/1 S6/2 S6/3 S6/4 S6/5 S6/6
And KDC S8/1
10. For the avoidance of doubt, where a speed limit or urban traffic area is described with both a map and a description, and there is an inconsistency between the map and the description, the description prevails.
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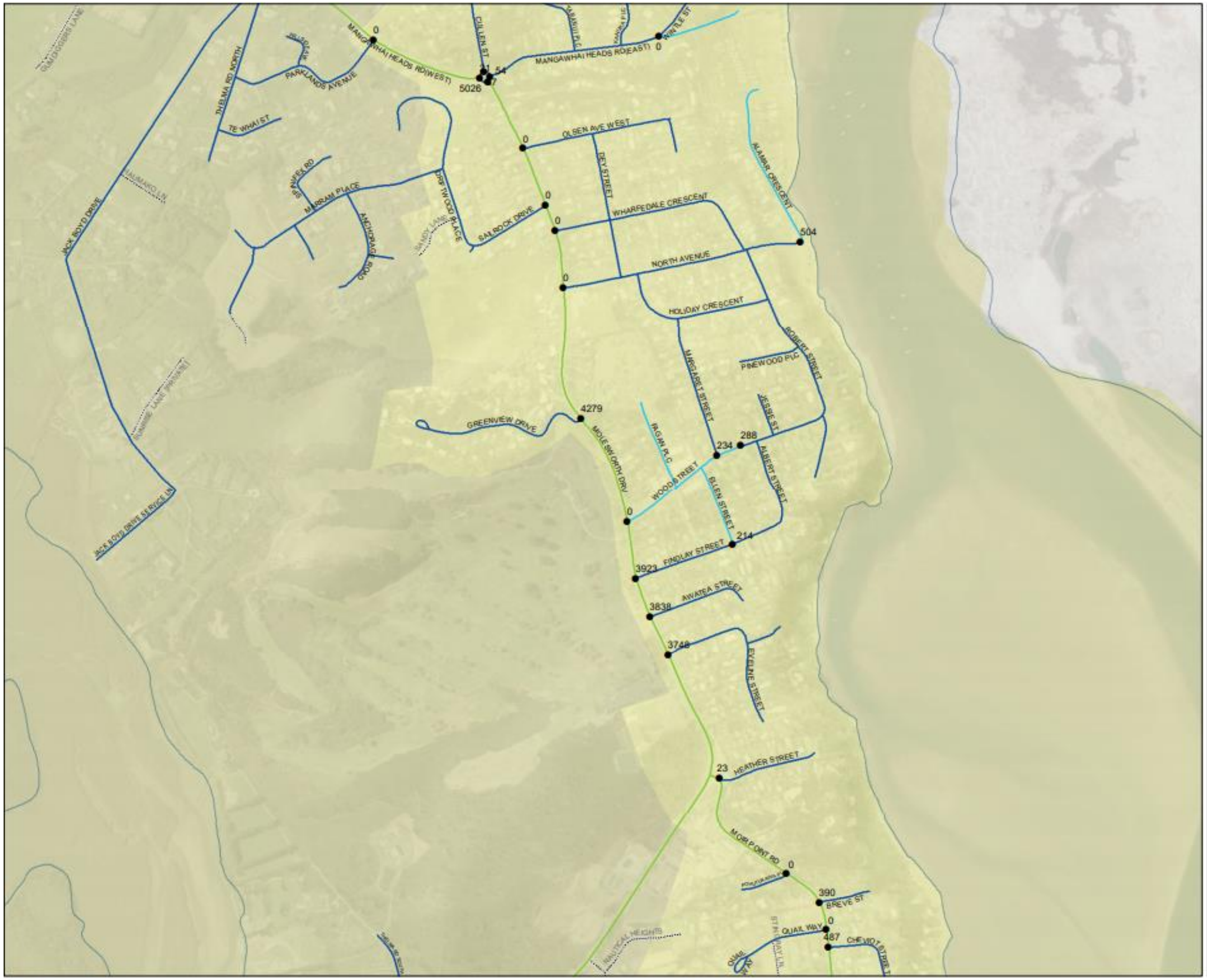
KAIPARA DISTRICT SPEED LIMIT BYLAW 2020
MANGAWHAI-URBAN TRAFFIC AREA
A3 Scale:1:35,000
0 500 1,000 m
NORTH
Date Updated:30/06/2021 Version: Recommended Speed Limits

NORTHLAND TRANSPORTATION ALLIANCE

"Moving Northland Forward"



Legend

- RAMM Data Point
- Roads that have a speed limit of 30 km/h
- Roads that have a speed limit of 40 km/h
- Roads that have a speed limit of 50 km/h
- Private Road
- Boundary of existing urban traffic areas that have a speed limit of 50 km/h, except for roads or areas marked with a different speed limit
- Boundary of proposed urban traffic area
- Boundary of rural traffic areas that have a speed limit of 100 km/h, except for roads or areas marked with a different speed limit

1. Scales shown on map are approximate.
2. Dimensions show the boundaries of a speed limit for the purpose of the bylaw.
3. Speed limit boundaries that cross a road do so at right angles from one side of the road to the opposite side of the road by the shortest distance.
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   KDC S4/1
   KDC S6/1 S6/2 S6/3 S6/4 S6/5 S6/6
   And KDC S8/1
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KAIPARA DISTRICT

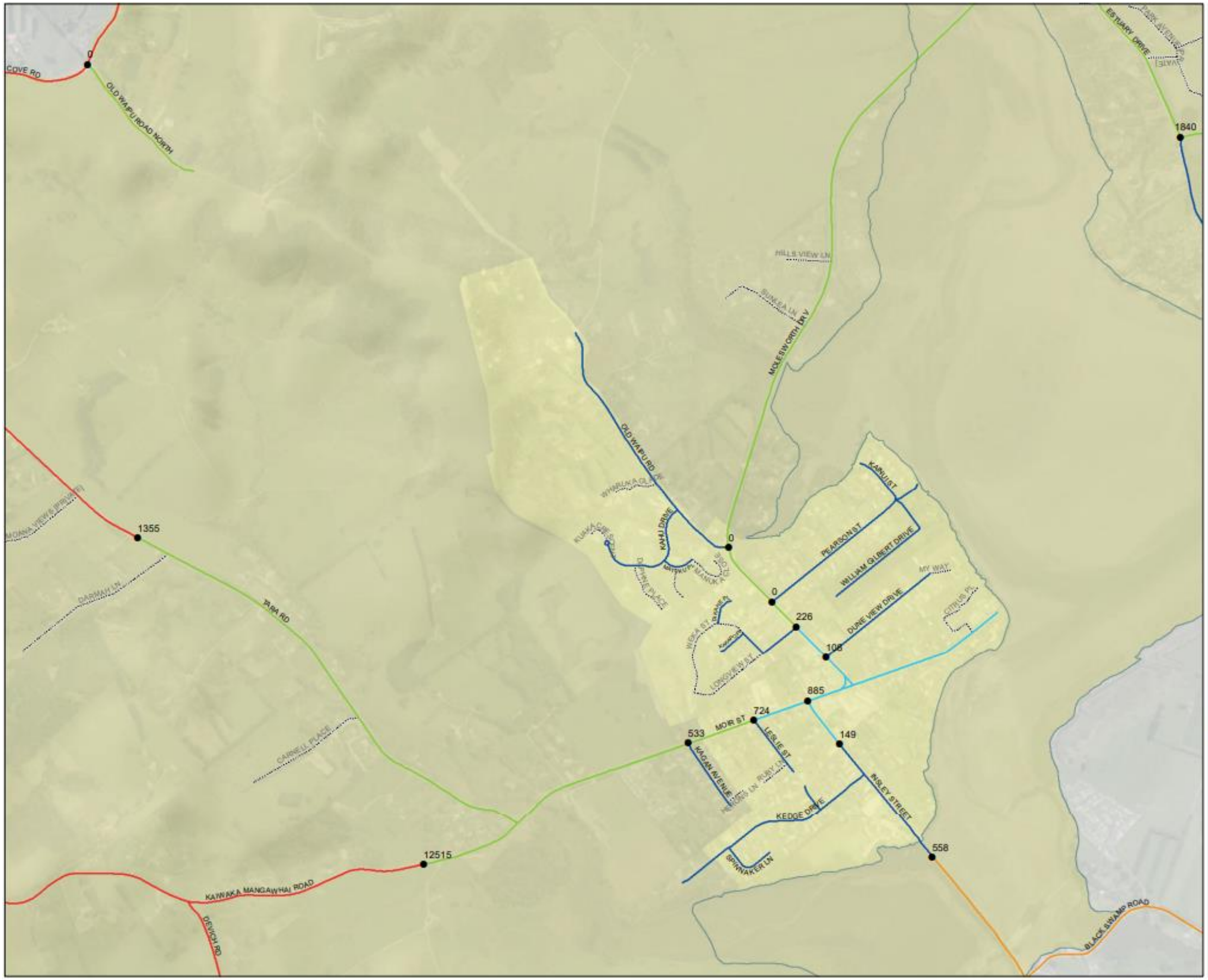
KAIPARA DISTRICT SPEED LIMIT BYLAW 2020

MANGAWHAI HEADS

A3 Scale: 1:7,500

NORTH

Date Updated:30/06/2021 Version: Recommended Speed Limits



Legend

- RAMM Data Point
- Roads that have a speed limit of 30 km/h
- Roads that have a speed limit of 40 km/h
- Roads that have a speed limit of 50 km/h
- Roads that have a speed limit of 60 km/h
- Roads that have a speed limit of 80 km/h
- Private Road
- Boundary of existing urban traffic areas that have a speed limit of 50 km/h, except for roads or areas marked with a different speed limit
- Boundary of proposed urban traffic area
- Boundary of rural traffic areas that have a speed limit of 100 km/h, except for roads or areas marked with a different speed limit

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9. Refer to Schedules:
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   KDC S4/1
   KDC S6/1 S6/2 S6/3 S6/4 S6/5 S6/6
   And KDC S8/1
10. For the avoidance of doubt, where a speed limit or urban traffic area is described with both a map and a description, and there is an inconsistency between the map and the description, the description prevails.

KAIPARA DISTRICT

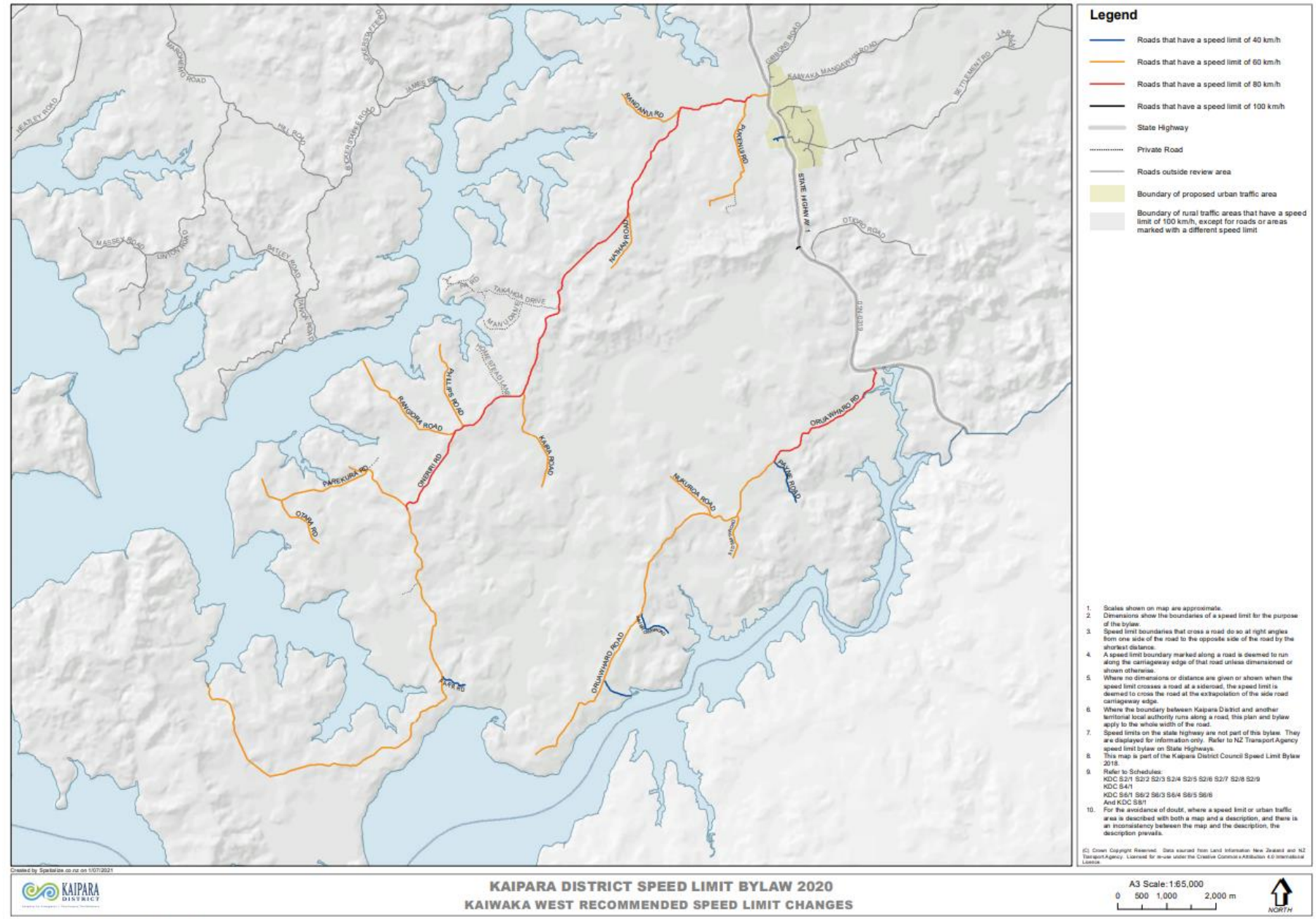
KAIPARA DISTRICT SPEED LIMIT BYLAW 2020

MANGAWHAI VILLAGE

A3 Scale: 1:10,000

NORTH

Date Updated:30/06/2021 Version: Recommended Speed Limits


Legend
Roads that have a speed limit of 40 km/h
Roads that have a speed limit of 60 km/h
Roads that have a speed limit of 80 km/h
Roads that have a speed limit of 100 km/h
State Highway
Private Road
Roads outside review area
Boundary of proposed urban traffic area
Boundary of rural traffic areas that have a speed limit of 100 km/h, except for roads or areas marked with a different speed limit
1. Scales shown on map are approximate.
2. Dimensions show the boundaries of a speed limit for the purpose of the bylaw.
3. Speed limit boundaries that cross a road do so at right angles from one side of the road to the opposite side of the road by the shortest distance.
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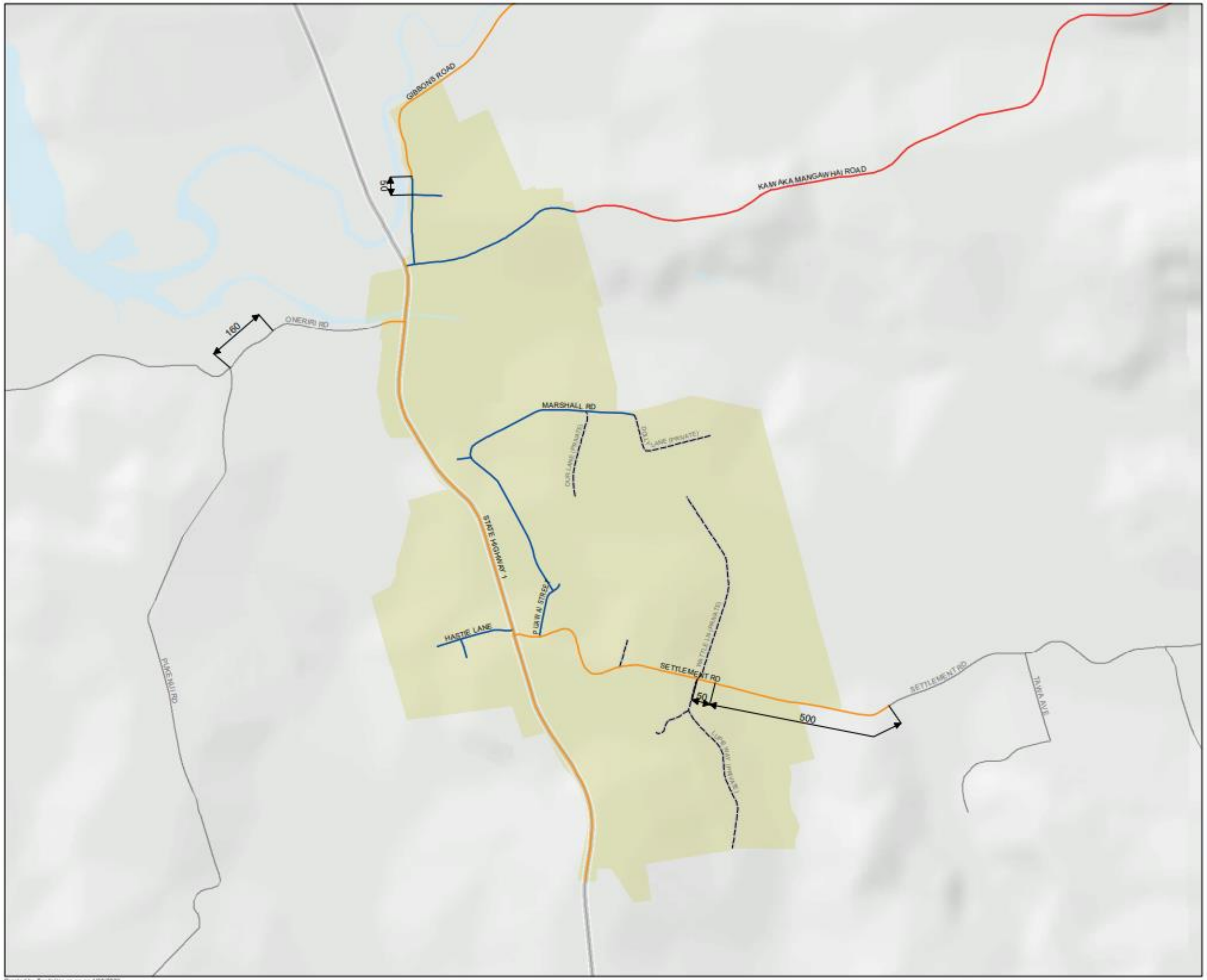
KAIPARA DISTRICT
KAIPARA DISTRICT SPEED LIMIT BYLAW 2020
KAIWAKA WEST RECOMMENDED SPEED LIMIT CHANGES
A3 Scale: 1:65,000
0 500 1,000 2,000 m
NORTH
Date Updated:1/07/2021 Version: Recommended Speed Limits

NORTHLAND TRANSPORTATION ALLIANCE
"Moving Northland Forward"



Legend

- Roads that have a speed limit of 40 km/h
- Roads that have a speed limit of 60 km/h
- Roads that have a speed limit of 80 km/h
- Private Road
- State Highway
- Roads outside urban traffic area
- Length in metres of a speed limit or distance from an intersecting road or feature shown on the map to be a speed limit boundary
- Boundary of proposed urban traffic area
- Boundary of rural traffic areas that have a speed limit of 100 km/h, except for roads or areas marked with a different speed limit

1. Scales shown on map are approximate.
2. Dimensions show the boundaries of a speed limit for the purpose of the bylaw.
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KAIPARA DISTRICT

KAIPARA DISTRICT SPEED LIMIT BYLAW 2020
KAIWAKA URBAN TRAFFIC AREA

A3 Scale: 1:10,000
0 100 200 m
NORTH

Appendix 3 – Glossary of Technical Terms

Note: Technical terms have been kept to a minimum in this Report. However, in some cases, submitters have utilised some technical terms and these have been included where the submission is set out verbatim.

Catchment Area	The catchment area incorporates the roads that naturally feed traffic into, or where traffic may directly or indirectly connect with the road of interest, similar to a river catchment area. Considering a catchment area, rather than an individual road can significantly expand the number of roads being considered.
Closed Catchment Area	A Closed Catchment Area is a relatively small and easily defined network of roads that only connect to the road of interest. An example of a Closed Catchment Area is Vinegar Hill Road.
Collective Risk	Collective Risk is a measure of the total number of fatal and serious injury crashes per kilometre over a section of road. Collective risk does not take account of the volume of traffic on the road.
High Benefit	Opportunities where changes to speed management settings will either reduce serious injury or deaths; improve efficiency; or contribute to the public credibility of speed limits.
High Benefit First 5%	A High Benefit area that should be prioritised within the first 5% of roads where a speed management review is to be undertaken.
High Benefit Second 5%	A High Benefit area that should be prioritised within the second 5% of roads where a speed management review is to be undertaken.
Infrastructure Risk Rating (IRR)	A road assessment methodology designed to assess road safety risk based on eight key design and infrastructure features, for example, whether the road is sealed or not, road alignment and geometry and other physical features about the road that impacts on overall road safety. This rating is a measure of potential risk.
Personal Risk	Personal Risk is a measure of the danger to each individual using a road. Personal risk takes into account the traffic volumes on the section of road. In many cases, infrastructure improvements may not be cost effective and other safe system interventions such as safer road use or speeds need to be explored.
Safe and Appropriate Speed (SAAR)	A travel speed that is appropriate for the road function, design, safety and use. It should be noted that the actual safe speed on parts of the road will be dependent on factors such as road condition, specific curves and other site-specific conditions. A lower speed than the overall stated safe speed may be appropriate along stretches of the road.

Appendix 4 – Traffic Note 37 and 56 Variable Speed Limits Outside Schools

NZ TRANSPORT AGENCY
WAKA KOTAHI

TRAFFIC NOTE 37
Revision 2

Date	May 2011
From	National Planning Unit, Planning and Investment
Authorisation	Glenn Bunting, Network Manager
No. of pages	11

40km/h variable speed limits in school zones - guidelines

1 Purpose

40km/h variable speed limits in school zones have been operating successfully in New Zealand since they were first installed on a trial basis in Christchurch in January 2000. In April 2011 the NZ Transport Agency (NZTA) revised the conditions of approval to give road controlling authorities more flexibility to install these speed limits at both urban and rural schools.

Land Transport Rule: Setting of Speed Limits 2003 requires the NZTA to approve a variable speed limit before a road controlling authority can make a bylaw to set such a speed limit. For 40km/h variable speed limits in school zones, the NZTA has published a revised notice in the *New Zealand Gazette*[1] (the Gazette) which approves those speed limits, sets out appropriate conditions and authorises road controlling authorities to set them. This traffic note provides guidelines to comply with the Gazette notice, based on the results of the trials in Christchurch and subsequent experience with these speed limits. Recommendations for installing variable speed limits at rural schools are also included in this traffic note.

2 Background

Roads outside schools are perceived as dangerous for children. At the time when children are arriving at or leaving school and crossing the road there can be high volumes of traffic, manoeuvring vehicles, parked vehicles obscuring visibility and vehicle speeds often appear too high. Research has shown reducing vehicle speeds to 40km/h or less significantly reduces the level of injury if a child is struck by a vehicle.

In some situations standard traffic control devices and the level of activity outside a school do not result in lower traffic speeds. This is particularly likely where the school is on an arterial or other road where there is a high volume of traffic or high speeds. In these circumstances, installation of a 40km/h variable speed limit in the school zone may be desirable to achieve a lower speed environment.

In many jurisdictions, such as some states in Australia and the United States, school zones with special speed limits are indicated by permanently displayed signs. The major drawback of any permanently displayed sign is the manner in which drivers, many of whom pass the same sign regularly without requiring any action in response to it, tend to ignore or fail to see it.

Variable signs, which are displayed only when relevant, offer a way in which this drawback can be minimised and may actually enhance driver acceptance of any restriction imposed. Variable signs were used for the Christchurch trials and the results of that study are embodied in these guidelines.[4, 5] In recent years some states in Australia have begun to retro-fit permanently displayed signs with active signs that have flashing lights or electronically displayed speed limits to improve community acceptance and compliance with speed limits in school zones.

3 Objectives of variable speed limits in school zones

Variable speed limits in school zones have the following objectives:

- provide a safer road environment outside schools
- reinforce driver expectations of the likely presence of children
- encourage safe and active travel to school.

One of the objectives of the Christchurch trial was to encourage children to walk or ride to school. A major impediment is parents' concerns about child safety. The trial indicated general parent and school belief the signs provided benefits but any shift in mode of travel by children, if it did occur, was not measurable. This reinforces the view no single initiative is likely to bring about changes of the type sought. A 40km/h variable speed limit in a school zone is unlikely to be effective by itself and must complement other initiatives aimed at enhancing safety for children undertaken at the site by the road controlling authority, the school and other organisations.

4 Warrant

A road controlling authority may set a 40km/h variable speed limit in a school zone under the following conditions:

(a) there is school-related pedestrian or cycle activity on the road outside the school, which exceeds approximately 50 children crossing the road or entering or leaving vehicles at the roadside, and the traffic on the road outside the school meets at least one of the following conditions:

  (i) the mean speed of free-running vehicles is greater than 45km/h (measured when the 40km/h variable speed limit is not operating), or

  (ii) the 85th percentile speed of free-running vehicles is greater than 50km/h (measured when the 40km/h variable speed limit is not operating), or

  (iii) there have been pedestrian, cycle or speed-related crashes near the school in the previous five years, or

  (iv) the school-related activity occurs on a main traffic route, or

(b) there is school-related pedestrian or cycle activity on the road outside the school, with children crossing the road or entering or leaving vehicles at the roadside, and safe and appropriate traffic engineering measures are installed so that the mean operating speed of free-running vehicles on the road outside the school does not exceed 40km/h when the 40km/h variable speed limit is operating.

Evaluations in Christchurch found locations most likely to benefit from a variable speed limit in a school zone are those where there is a high level of school-related activity on the road outside the school and:

- are on arterial routes or multi-lane roads or high speed environments, and
- have on-road, school-related activity at an obscured school frontage (ie where the presence of the school is not immediately obvious to approaching traffic).

5 Best practice guidelines

Factors required for the successful operation of a 40km/h variable speed limit in a school zone are:

- having times of operation coinciding with on-road, school-related activity
- approved advisory signs and regulatory displays that alert motorists they are travelling through a school zone
- appropriate levels of enforcement by the police
- long-term commitment by the principal and Board of Trustees for the correct operation of a 40km/h variable speed limit at their school.

5.1 Times of operation

The Christchurch trials showed variable speed limits in school zones are effective in reducing speeds, but have the support of drivers only if there are children present when they are operating. Therefore, the times they are activated must be tightly controlled to match, as closely as possible, the times children are crossing the road or are gathered on the roadside. These times may vary from school to school and from time to time. An accurate time clock is therefore a necessary component of a variable speed limit in a school zone.

It is preferable that the 'School zone variable' signs are turned on manually by a supervisor approved by the school principal each time they are required. However, it is permissible to programme the system to operate at the standard times on school days only, provided the signs do not operate on holidays and can be switched on or off manually for special events or if they are not required for the maximum period of operation on any particular day. A system that is programmed to operate automatically must include a record of the times the signs are switched on and off each day. Even if the signs operate automatically, the school principal must still appoint a supervisor to oversee the operation on each occasion they are used. The signs may operate for a maximum period of:

- 35 minutes before the start of school until the start of school
- 20 minutes at the end of school commencing no earlier than five minutes before the end of school
- 10 minutes at any other time of day when children cross the road or enter or leave vehicles at the roadside.

Unless the signs are manually turned off earlier, they must turn off automatically when the maximum period has elapsed.

5.2 Length of variable speed limits in school zones

Variable speed limits in school zones should be installed to avoid, as far as possible, side roads with no school frontage. They should be as short as practicable; between 300 metres and 500 metres long.

There may be shorter lengths on no exit roads or minor roads with give way or stop control at the intersection with the school zone, provided the variable speed limit on these roads is adjoining the variable speed limit on the main road outside the school.

5.3 Signs

The signs for variable speed limits in school zones must comply with Land Transport Rule: Traffic Control Devices 2004. Signs with changeable speed limit numerals have been specified by the NZTA in the Gazette' as a condition of setting a variable speed limit in a school zone. The signs required are described below.

(a) R1-6 'School zone variable' sign:

The R1-6 'School zone variable' sign comprises a variable speed limit sign above a 'School zone' supplementary sign. The R1-2 or R1-2.1 variable speed limit sign displays the 40km/h speed limit only during the period when it applies. At all other times the sign is blank or displays the permanent speed limit. These signs must be installed on the main road passing the school entrance and on any significant road adjoining the school zone.

The Gazette notice specifies that at least one variable sign is required at each end of the speed limit on the main road outside the school and on major roads that intersect with the school zone. This condition in the Gazette notice is in accordance with clause 6.1 and subclause 8.4(1) of Land Transport Rule: Setting of Speed Limits 2003 and overrides the general requirement in *8.1(2)(a)* to have signs on both sides of the road if the traffic volume exceed 500 vehicles per day. However, there should be at least two of these signs facing traffic entering the variable speed limit on multi-lane roads, if the roadway is more than 15 metres wide or has a permanent speed limit of more than 70km/h.

The two options permitted for variable speed limit signs use different technology.

- R1-2: the speed limit numerals, roundel and background are displayed in the same colours as permanent speed limit signs, namely black, red and white respectively. Mechanical elements are used to display the speed limit and the message is depicted entirely with retro-reflective material.
- R1-2.1: the speed limit numerals are displayed using yellow or white, lit pixels (eg light emitting diodes, fibre optics). The background is black and unlit. For signs that display only the 40km/h variable speed limit and are blank for the rest of the time, the roundel is displayed with red, lit pixels. Alternatively, for signs that display the permanent speed limit at times when the variable speed limit does not apply, the roundel may be displayed with either red, lit pixels or with red retro-reflective material.

R1-6 using R1-2

R1-6 using R1-2.1

For each of these two variable speed limit signs:

- when not operating, the underlying message on the speed limit sign must not be discernible to approaching drivers, and
- yellow or white lights, of sufficient brightness to draw attention to, but not distract from, the sign nor dazzle, should be fitted in each corner and must operate by flashing in alternate diagonal pairs when the 40km/h variable speed limit is displayed, and
- the 'School zone' supplementary sign, fitted below the variable speed limit sign, must be displayed permanently. The 'School zone' supplementary sign has a black legend and border on a retro-reflective, fluorescent, yellow-green background.

Where the road controlling authority sets a 40km/h variable speed limit that may operate at other than the standard times, all the signs at the beginning of the school zone must be variable signs. This requirement includes all side roads intersecting with the school zone because fixed signs cannot provide accurate times of operation.

(b) R1-6.1 'School zone fixed' sign

The R1-6.1 'School zone fixed' sign has a black legend, red roundel and border on a white background. The roundel, border and background are retro-reflective. The legend showing the time must notify the times during which the 40km/h variable speed limit is in effect and must be specific for each school zone.

Instead of a 'School zone variable' sign a 'School zone fixed' sign may be installed on no exit or minor stop or give way controlled side roads adjoining the school zone. This is based on assumptions that:

- most traffic using such a road will be local and the drivers will be aware of, and responsive to, the school zone operation, or
- the speed of vehicles entering from the side road and passing through the school zone is unlikely to exceed 40km/h.

If these conditions do not apply, R1-6 'School zone variable' signs must be installed on the side road.

Likewise 'School zone variable' signs must be used if the times when the variable speed limit operates are likely to vary because:

- the variable speed limit may operate only at the times specified on a 'School zone fixed' sign; and
- it is not reasonable to expect drivers to read and react to messages longer than the standard operating times displayed on the 'School zone fixed' sign.

(c) R1-7 'School zone ends' sign

At least one R1-7 'School zone ends' sign must be used on each road leaving the school zone. There should be at least two of these signs on multi-lane roads, if the roadway is more than 15 metres wide or has a permanent speed limit of more than 70km/h.

A 'School zone ends' sign comprises a R1-1 speed limit sign above a 'School zone ends' supplementary sign. Both signs are mounted on a white retro-reflective backing board. The 'School zone ends' sign has a black legend and border on a retro-reflective, fluorescent, yellow-green background. The speed limit sign displays the permanent speed limit for the road.

(d) Sign layout

Appendix 1 has a diagram showing a typical layout of signs for a variable speed limit in a school zone.

5.4 Police enforcement

To be effective the variable speed limit in a school zone must be able to be enforced. The length of the zone, visibility of the signs, proof of display and other issues are all matters the Police must take into account in determining whether they are able to proceed with enforcement and subsequent action. It is therefore imperative any variable speed limit considerations involve the District Road Policing Manager of NZ Police.

The necessary enforcement precedents have been set to enable the police to enforce the 40km/h speed limit in school zones.

5.5 School commitment and activity

It is essential there be formal involvement by the school in the decision to introduce a 40km/h variable speed limit in a school zone. The school is often the prime instigator for consideration of a speed limit but they must understand that once installed there are functions the school must carry out for the speed limit to be effectively managed and for it to achieve the desired outcomes.
For example:

- The operation of the 'School zone variable' signs must be supervised by a person authorised by the school principal.
- Any defined school crossing facility for children must have an adult supervisor when it is operating.
- The signs must be activated and deactivated simultaneously (eg by radio signal or hard-wired) with a secure system which is accessible only by means such as a key or swipe card. This applies whether they are switched manually or automatically.
- The principal must agree to keep an accurate log of the occasions and times the 40km/h speed limit is operating unless these times are stored automatically by the equipment and can be retrieved by the road controlling authority. The log is essential for enforcement purposes (to demonstrate not only that the signs were operating at a particular time but, also to show the conditions of operation set out in the speed limit bylaw are being effectively managed). It can also be useful to determine justifiable changes to time or other aspects of the operation of the speed limit.

5.6 Rural schools

Records of crashes involving school-age pedestrians or cyclists in the vicinity of rural schools show that there have been very few injury crashes in recent years. One of the main reasons for the low number of crashes is that very few children walk or cycle to schools in rural areas. Most of the activity outside a rural school is the parking and manoeuvring of vehicles as parents and caregivers drop-off or pick-up their children. The most appropriate safety measure for this type of activity is to provide a set-down and pick-up facility clear of through traffic lanes. Ideally this would be in the school grounds or on a side road with low traffic volume.

Another measure that has proven successful in lowering speeds outside schools is active school warning signs. See *Traffic note 56* for more detail on active warning signs in school zones.

40km/h variable speed limits in school zones were originally intended for installation in urban or semi-urban areas where the permanent speed limit is 70km/h or less. Some Australian states allow school zone speed limits of 60 or 80km/h in areas where the permanent speed limit is over 80km/h. However, allowing a higher variable speed limit in a rural school zone would not provide an appropriate level of safety when considered from a Safe System perspective. The probability of a pedestrian being killed if struck by a car rises rapidly at impact speeds over 30km/h. Having a speed limit of 40km/h relies on there being some speed reduction before impact in a crash involving a car hitting a pedestrian. If the school zone speed limit was higher, impact speeds would be too high, even if there was some speed reduction before impact. So, regardless of the permanent speed limit, the maximum safe speed limit in a school zone is 40km/h.

In areas with a speed limit over 80km/h it is unlikely that motorists will slow to 40km/h within the short length of a school zone. However, there are some examples of 40km/h variable speed limits in rural school zones that operate satisfactorily on roads with a permanent speed limit of 80km/h. This suggests that where the permanent speed limit is higher than 80 km/h it will need to be reduced. This must be done in accordance with Land Transport Rule: Setting of Speed Limits 2003. In situations where the calculated speed limit is higher than 80km/h, it may be desirable to review the speed limit for the surrounding area in accordance with the Safe System Approach for managing safety on rural roads. *Traffic Note 61* provides more information on Safe System rural speed management.

Regardless of the criteria upon which an 80km/h speed limit is justified, it is essential that it operates safely with mean speeds at or below 80km/h. Some of the following measures will probably be necessary to achieve good compliance with a permanent 80km/h speed limit at a rural school:

- Thresholds (see www.nzta.govt.nz/resources/road-traffic-standards/docs/rts-15.pdf).
- Lane narrowing – (install median or increase shoulder width).
- Textured and or coloured road surface.
- Vertical elements, eg thresholds and planting, but care is necessary to avoid restricting sight lines that might obscure pedestrians in the school zone.
- Speed indicator devices, publicity and education.
- Enforcement.

6 Application

6.1 Implementation

A 40km/h variable speed limit in a school zone can only be implemented by a road controlling authority if:

- the conditions approved by the NZTA in the Gazette[1] are complied with
- consultation is undertaken in accordance with Land Transport Rule: Setting of Speed Limits 2003, and the people consulted are provided with details of the proposed speed limit including changes to the permanent speed limit, times of operation of the variable speed limit, placement of signs and method for controlling the variable signs
- written consent is obtained from the principal of the school concerned (agreeing to operate the school zone in accordance with the operating conditions)
- the speed limit is set by bylaw in accordance with Land Transport Rule: Setting of Speed Limits 2003.

6.2 Monitoring, review or removal of a variable speed limit in a school zone

It is important that a 40km/h variable speed limit that is installed in accordance with condition 5(b) of the Gazette[1] notice is monitored regularly to confirm the conditions of approval are being met (ie the mean speed of traffic in the school zone is no more than 40km/h when the 40km/h speed limit is operating). If traffic is not complying with the speed limit then safety within the school zone will be compromised and the road controlling authority will not be complying with its obligations under Land Transport Rule: Setting of Speed Limits 2003. The risk to children within the zone may be worse than without a variable speed limit, especially if their behaviour is influenced by a misconception that traffic will slow down.

A 40km/h variable speed limit in a school zone must be reviewed by the road controlling authority if:

- there is a change in the road or school environment resulting in the conditions specified by the NZTA in the Gazette[1] not being met, or
- requested to do so, in writing, by the principal of the school or the District Road Policing Manager of the NZ Police, or
- instructed to do so by the NZTA.

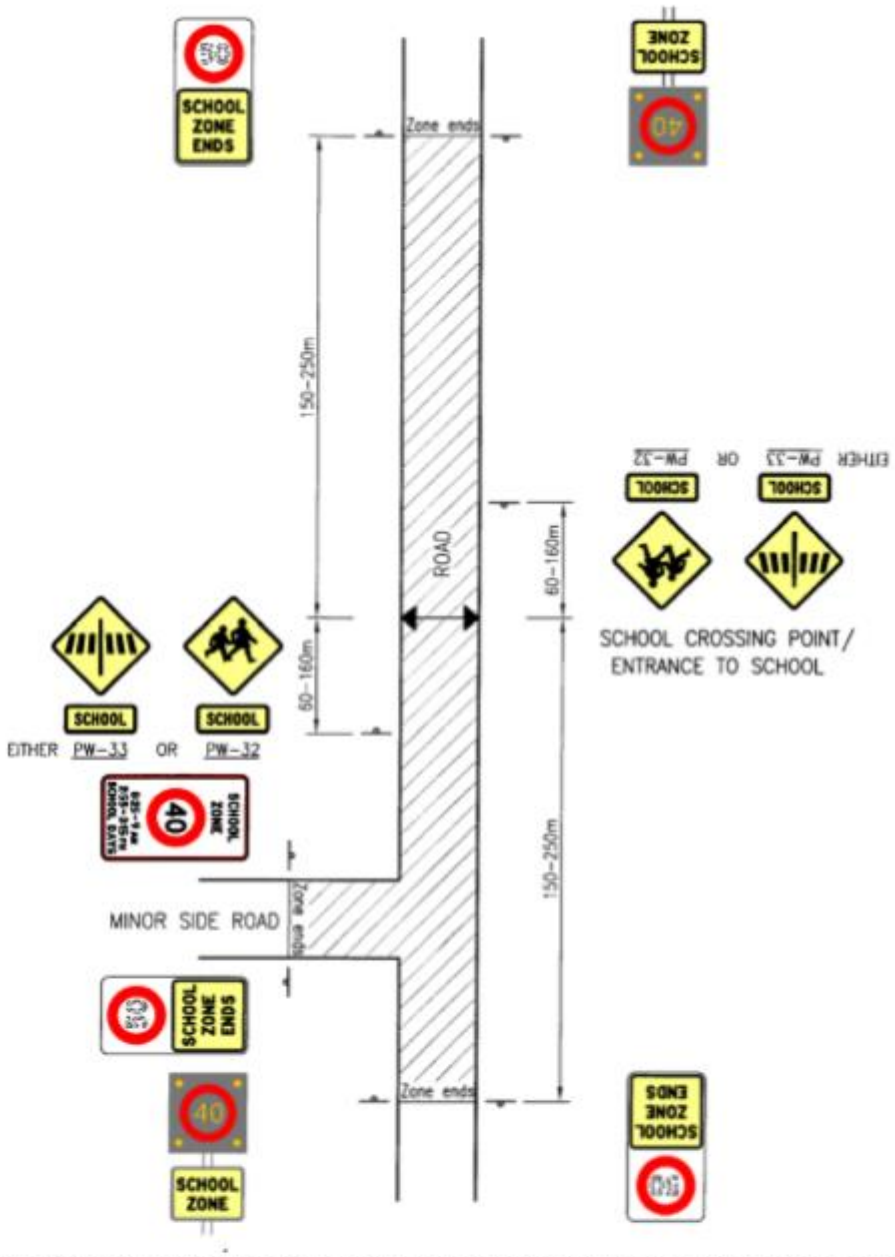
A 40km/h variable speed limit in a school zone must be removed by the road controlling authority if:

- the variable speed limit is not operated in accordance with the conditions specified by the NZTA in the Gazette[1], or
- instructed to do so by the NZTA.

Acknowledgement:
The NZ Transport Agency acknowledges the valuable input of the Christchurch City Council through the school zone trial and their assistance with the development of these guidelines.

[1] *New Zealand Gazette* dated 21 April 2011, No. 55, page 1284 [see Appendix 2].
[2] Cottam, Paul. 2001. *Christchurch's 40 km/h part-time school speed zone trial: Community perceptions and attitudes.*
[3] Osmers, Wayne. 2001. *The effect on vehicle speeds of electronically-signed part-time speed limits outside schools.*
Both papers were presented at the Road Safety Research, Policing and Education Conference 18–20 November 2001, Melbourne.

Appendix 1: Typical layout – 40km/h variable speed limit in a school zone



In this diagram the sign numbers quoted are those appearing in MOTSAM. These numbers and descriptions are cross-referenced to signs in Land Transport Rule: Traffic Control Devices 2004 (the TCD Rule) as follows:

MOTSAM	Description	TCD Rule
PW-32	Symbol of two children with 'School' supplementary	W16-4 with W16-5.1
PW-33	Symbol of pedestrian crossing with 'School' supplementary	W16-2 with W16-5.1

Appendix 2

Extract from *New Zealand Gazette*, 21/4/2011, No. 55, p. 1284

Variable Speed Limit in School Zones

Pursuant to clause 6.1 of Land Transport Rule: Setting of Speed Limits 2003 and a delegation from the NZ Transport Agency, I, Glenn Bunting, Network Manager, approve variable speed limits in school zones in accordance with the conditions set out in this notice.

Conditions

1. Variable Speed Limit

A road controlling authority may set a speed limit of 40km/h that operates in a school zone during the periods specified in condition 2 of this notice. At all other times, the speed limit is the permanent speed limit for the road.

2. Periods of Operation

The 40km/h speed limit may operate for a maximum period of:

(a) 35 minutes before the start of school until the start of school;

(b) 20 minutes at the end of school, beginning no earlier than 5 minutes before the end of school;

(c) 10 minutes at any other time when children cross the road or enter or leave vehicles at the roadside.

3. Signs

Signs that comply with Land Transport Rule: Traffic Control Devices 2004 must be installed to mark the beginning and end of the variable speed limit in the school zone as follows:

(a) At least one R1-6 "School zone variable" sign at each end of the variable speed limit on the main road outside the school, facing road users travelling towards the variable speed limit; and

(b) at least one R1-6 "School zone variable" sign facing road users travelling towards the variable speed limit on each side road that intersects with the school zone, where that side road is a major road; and

(c) at least one R1-6 "School zone variable" sign or R1-6.1 "School zone fixed" sign facing road users travelling towards the variable speed limit on each side road that intersects with the school zone, where that side road is a no exit road or is a minor road controlled by Give-way or Stop signs at the intersection with the school zone; and

(d) at least one R1-7 "School zone ends" sign at each end of the variable speed limit on every road, facing road users leaving the variable speed limit.

4. Length of Variable Speed Limit

A variable speed limit in a school zone must be a minimum length of 300 metres, unless this condition is impractical, but should not be longer than 500 metres. The length of variable speed limit on side roads that intersect with the school zone may be shorter than 300 metres.

5. Warrant

A road controlling authority may set a variable speed limit in a school zone that meets the requirements in (a) or (b) as follows:

(a) There is school-related pedestrian or cycle activity on the road outside the school, which exceeds approximately 50 children crossing the road or entering or leaving vehicles at the roadside, and traffic on the road outside the school meets at least one of the following conditions:

(i) the mean speed of free-running vehicles is greater than 45km/h (measured when the 40km/h variable speed limit is not operating); or

(ii) the 85th percentile speed of free-running vehicles is greater than 50km/h (measured when the 40km/h variable speed limit is not operating); or

(iii) there have been pedestrian, cycle or speed-related crashes near the school in the previous five years; or

(iv) the school-related activity in condition 5(a) occurs on a main traffic route; or

(b) there is school-related pedestrian or cycle activity on the road outside the school, with children crossing the road or entering or leaving vehicles at the roadside and safe and appropriate traffic engineering measures are installed so that the mean operating speed of free-running vehicles on the road outside the school does not exceed 40km/h when the 40km/h variable speed limit is operating.

6. Bylaw

A road controlling authority must set a variable speed limit in a school zone by making a bylaw in accordance with Land Transport Rule: Setting of Speed Limits 2003.

Revocation and Replacement

The notice dated the 31st day of May 2005, and published in the *New Zealand Gazette*, 2 June 2005, No. 86, page 2051, relating to variable speed limits in school zones is hereby revoked and replaced by this notice.

A 40km/h variable speed limit in a school zone that was set in accordance with the conditions of the notice published in the *New Zealand Gazette*, 2 June 2005, No. 86, page 2051, is considered to be set in accordance with the conditions of this notice and remains in force until amended or revoked in accordance with Land Transport Rule: Setting of Speed Limits 2003.

Definition:

School zone means a length of road outside a pre-school, primary school, intermediate school or secondary school.

Signed at Wellington this 19th day of April 2011.

GLENN BUNTING, Network Manager.

NZ TRANSPORT AGENCY
WAKA KOTAHI

TRAFFIC NOTE 56

Revision 1

Date	January 2011
From	National Planning Unit, Regional Partnerships and Planning
Authorisation	Glenn Bunting, Network Manager
No. of pages	12

Active school warning signs – Guidelines

1 Purpose

This ***Traffic note*** provides guidance for road controlling authorities (RCAs) on the use of active school warning signs - that is those warning signs that have an electronic display component which becomes active when children are likely to be present on or near the roadway. It should also be read in conjunction with ***Traffic note 37*** 40km/h variable speed limits in school zones [(1)]. Active school warning signs should be implemented in conjunction with other complementary initiatives such as neighbourhood accessibility plans [(2)], school travel plans (see ***School travel plan coordinator's guide*** [(3)]) or a local authority travel behaviour change strategy.

Active school zone warning signs were approved by notice in the ***NZ Gazette*** on 24 July 2008 and subsequently incorporated into the Land Transport Rule: Traffic Control Devices through the 2010 amendment to that rule.

2 Background

In 2004 Land Transport New Zealand (now NZ Transport Agency (NZTA)) approved a trial of active school warning signs in Timaru District and Invercargill City. This initial trial was inconclusive and in 2006 approval was given to extend the trial to sites in Dunedin City.

The Dunedin City trial aimed to assess the effectiveness of these 'active' school warning signs on driver awareness of the risk posed by school activity and any subsequent impact on road user behaviour, including the effect on vehicle speeds. The results demonstrated strong community support for the signs, reduction in speeds at 'high' speed sites and an increase in motorists' awareness of the signs.

Roads around schools are often perceived as dangerous for children due to high traffic speeds, manoeuvring vehicles, parked vehicles and other features which restrict a driver's visibility. Often there can be a mixture of pedestrians, cyclists and drivers using the same road. In particular, the risk at the beginning and end of the school day is seen as much greater than during other periods of the day and there is a need to manage and minimise this risk.

One disadvantage of any permanently displayed sign is drivers tend to ignore it or fail to see it, particularly if they pass the same sign regularly without requiring any action in response to it. Active signs incorporate flashing lights and/or lit (LED) components which are displayed only when relevant. Introduction of these types of signs may heighten the visibility of these signs compared with standard (non-flashing) warning signs thereby enhancing driver awareness of the risk.

Internationally, flashing lights have been used to give additional emphasis to the warning or instruction given on a sign. In New Zealand the use of these lights has been restricted to variable message signs including those installed on Auckland and Wellington motorways, some roadwork vehicles, variable speed limits in school zones and advance warning of traffic signals. In many situations however, the cost of a full variable message sign cannot be justified.

For this reason the trial of less costly warning signs (rectangular in shape with two yellow orange flashing lights and yellow/green children symbols on a black background) was conducted. The ***Dunedin active school warning signs trial: evaluation report*** [4] (the Evaluation report) prepared by Dunedin City Council provides details and sets out the results of the Dunedin City trial. The trial results are embodied within this note.

3 Objectives of active school warning signs in school zones

Active school warning signs on roads near schools are intended to meet the following objectives:

- provide a safer environment outside schools during times of peak school activity
- reinforce driver expectation of the likely presence of children
- reinforce driver awareness of a school where the visibility of the school or its entrance is limited
- encourage active modes of travel (walking and cycling) to school.

School zones are parts of roads near schools which include both:

(a) the length of roadside used for short-term parking, bus stops, crossing facilities and school entrances etc before and after the hours when the school is in session (called the 'hazard area'), and

(b) the distance from the warning sign to the hazard area in each direction (which depends of the speed of approaching traffic).

The Dunedin trial attempted to assess whether these types of signs had any effect on increasing driver awareness to school activity on or near the road, including reducing driver reaction time and vehicle stopping distances and speeds. The trial included schools where the average vehicle speed was higher than 45km/h as well as schools located adjacent to congested urban roads. Three types of evaluation measures were used to assess the effect of these signs - vehicle speed surveys, driver awareness and pedestrian delay surveys.

Feedback from the schools has indicated the objective to increase active modes of travel to school has not happened to date. Achieving this objective will most likely require a package of activities.

4 Complementary school travel initiatives

Active school warning signs should be implemented as part of a package including engineering, education and enforcement to reduce speeds and the risk to children around schools.

The active school warning signs could be installed as a component of the following complementary initiatives.

4.1 Neighbourhood accessibility planning

Neighbourhood accessibility plans seek to ensure, at the neighbourhood level, the provision of safe and sustainable transport modes focusing on active and shared modes. Further information can be found on the NZTA website at:

http://www.nzta.govt.nz/resources/neighbourhood-accessibility-plans/index.html

4.2 School travel plans

The preparation and implementation of a school travel plan is a process of developing a package of measures to encourage the choice of safe and sustainable transport options for travel to and from school. Further information can be found on the NZTA website at:

http://www.nzta.govt.nz/resources/school-travel-plan-coordinators-guide/docs/school-travel-plan.pdf

The NZTA education website will also provide useful resources. This can be found at:

http://www.education.nzta.govt.nz/home

4.3 Integrated planning

There is not necessarily a single best option for providing safety for children travelling to and from school. The NZTA's ***Integrated planning toolkit*** presents a wide range of transport and land use relevant tools, processes and concepts. It encourages linkages and enables the identification of ideas that may not be familiar to the user. The toolkit can be found at:

http://www.nzta.govt.nz/planning/process/trial-ip-toolkit/

5 Selection criteria

5.1 Selecting sites and appropriate traffic control devices

Figure 1, based on ***Traffic note 37*** and the Evaluation report, is a flow chart of recommended selection criteria for the use of traffic control devices at school sites.

In urban areas there are several sign variations that can be used depending on the type of environment, including school activity, crash history and speed profile.

In rural areas, the selection of a suitable sign type can be more limited. The 40km/h variable speed limit is generally not regarded as appropriate in most open road speed areas (that is, where speed limits are greater than 80km/h). However, in these areas active warning signs could be suitable to encourage slower speeds during periods when children are present.

5.2 Area and site-specific treatments

Active school warning signs have the potential to cover an area incorporating a number of schools in addition to a specific school site. Where there are schools in close proximity and where school times vary, RCAs may choose to select an area-wide or route treatment for schools rather than undertake individual school site improvements. In such instances, it may be more appropriate to use active school warning signs rather than 40km/h variable speed limit signs which are more specific to individual schools. If this is the case, it is recommended the RCA plan a sign regime (including times of operation for active signs) for the area covering the different school locations and develop safer routes for children to travel. Further information on this can be obtained from the Evaluation report, neighbourhood accessibility plans and the NZTA website.

5.3 Prioritising sites

Once the type of traffic control device has been identified, its appropriateness and clarity within the surrounding environment and proximity to other schools and message systems determined, the site, area or route should be prioritised for implementation. This prioritisation process is managed through local policy based on factors such as traffic volumes, school roll number, ages of school pupils, crash data and speed of through traffic. Further information, including a suggested rating system for finding suitable sites and then prioritising each one, can be found within the Evaluation report.

5.4 Other signs

The possible use of active school warning signs must be considered in conjunction with other existing or proposed signs in that area (for example a pedestrian crossing sign). Their use in conjunction with, or within close proximity to, other variable or flashing signs (such as a 40km/h variable speed limit sign) needs to be carefully considered to ensure the intended (combined) message to drivers is consistent and will not be confusing or ineffective.

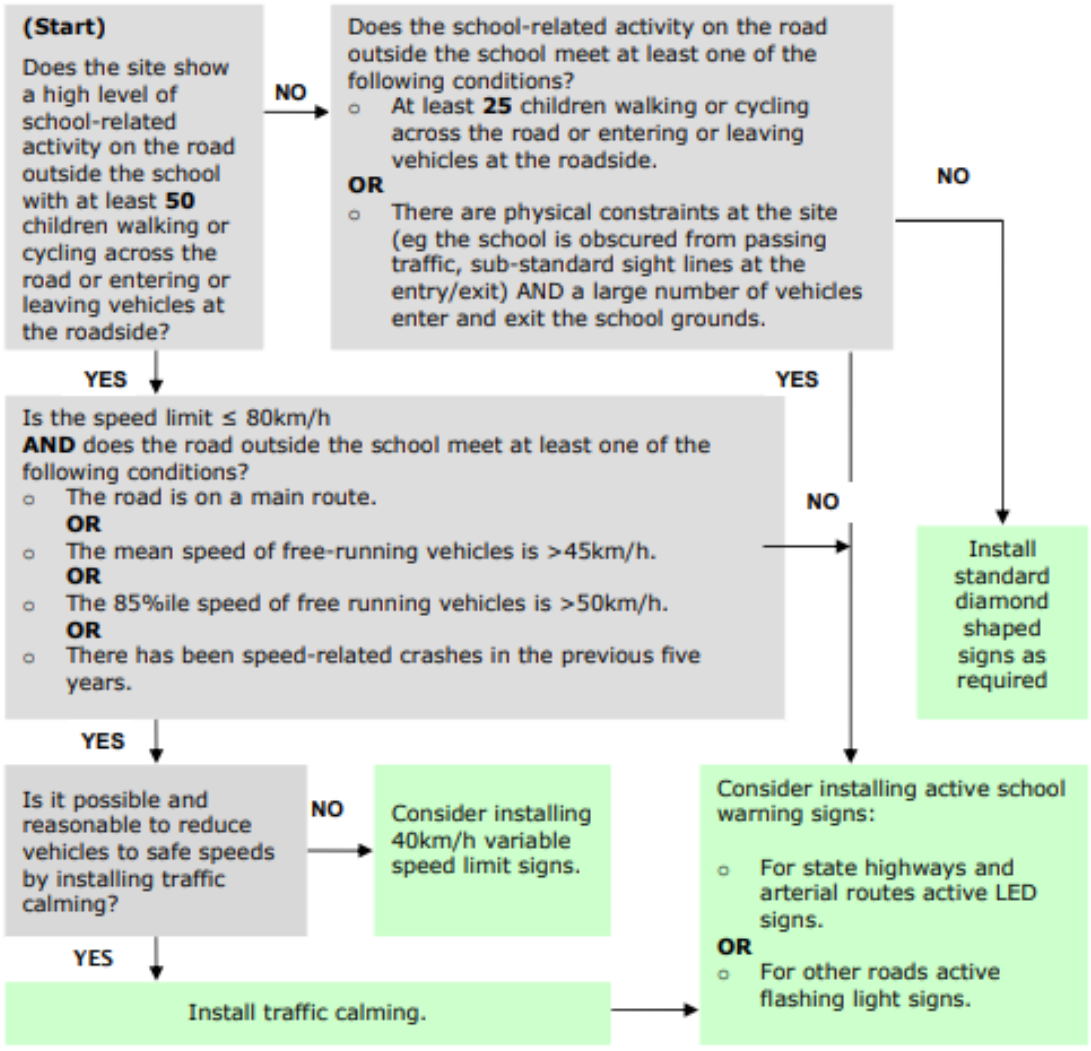


Figure 1: Selection criteria for the appropriate use of traffic control devices near schools

6 Best practice guidelines

Factors required for the successful operation of an active school warning sign are:

- coinciding times of operation with on-road school related activity (see section 6.4)
- good visibility of the signs by motorists
- long-term commitment to their correct use.

6.1 Signs – general principles

Standard reflective diamond shape school warning signs should be installed on all roads where there is an entrance to a school (unless they are replaced by active school warning signs as set out below). The standard sign is depicted in figure 2. Other signs may be used in these locations such as 'school pedestrian crossing' or 'school bus route'.

Figure 2: Standard school warning sign

Active school warning signs should be installed in place of the standard sign where additional awareness of children is considered necessary in and around schools in areas and sites meeting the criteria set out in figure 1

6.2 Active school warning signs

The type of school warning signs used to indicate a school zone should be prioritised by risk using the selection criteria shown at figure 1. Where the RCA determines an active sign is appropriate there are two versions of sign – flashing light and full LED displays.

6.2.1 'Children' symbol and 'school zone' with backing board with two flashing lights (active –flashing light type)

The 'children' symbol and the words 'school zone' depicted in figure 3 are reflectorised, fluorescent yellow-green in colour while the sign has a plain black, unlit background. There are two orange flashing lights located on the top of the sign at each side which light alternately when in use. Outside school hours the board shows the 'children' symbol and the words 'school zone'.

Figure 3: Active – flashing light school warning sign

6.2.2 'Children' symbol and 'school zone' with full LED display (active LED type)

When activated, the 'children' symbol and the words 'school zone' depicted in figure 4 are displayed using light emitting diodes (LEDs) on a black unlit background. Two orange flashing lights (which may be LED) are located in the top left and right corner of the sign. When the sign is activated the two lights are not illuminated unless the RCA has set an appropriate condition which would trigger them to be illuminated. This condition could be that an approaching vehicle is detected (by a radar unit mounted in or beside the sign) exceeding a pre-set speed. The orange lights will then flash alternately for a short period until the vehicle has passed the sign. Such a pre-set speed will depend on the speed limit and the circumstances relating to a particular school.

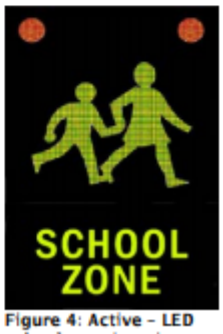


Figure 4: Active – LED school warning sign

When the symbol and text LEDs are turned off this sign displays a black rectangular panel.

Where the selection criteria (figure 1) suggests the use of an active sign could be appropriate the RCA can consider either option. The 'active – LED' sign may be considered over the 'active – flashing light' sign if the RCA determines the risk is higher. This may be based on traffic volumes, road hierarchy and whether they are part of a set of signs in an area treatment or are site-specific. For example, if an RCA is developing an area treatment, the 'active – LED' signs may be placed on the highest risk road (that is the one with higher vehicle and pedestrian volumes) while the 'active – flashing light' signs might be located on roads with lower risk sites.

For both of the above signs the orange lights must be of sufficient brightness to draw attention to, but not distract from, the sign or dazzle drivers. They must operate by flashing alternatively at a rate of 1 hertz.

Further technical and operational information for these signs is provided in appendix A.

6.2.3 40km/h variable school zone speed limits (see *Traffic note 37*)

If active school warning signs are proposed near other variable message signs (such as 40km/h variable speed limit signs depicted in figure 5) a careful evaluation of all relevant factors (and options) needs to undertaken. This is important to avoid the signs' messages being confused or their effectiveness being compromised.

Figure 5: Variable 40km/h speed limit sign

6.2.4 Different (permanent) speed limits near school

If the school is located near roads with different (permanent) speed limits, then a careful evaluation of all the children's routes and options for improvement should undertaken so that the cost of each option can be established. If a 40km/h variable speed limit is placed over roads with more than one underlying "permanent" speed limit, then (in addition to the 40km/h variable signs) special variable speed limit signs will be needed where the 'permanent' speed limits change. These special signs will be blank when the 40km/h speed limit signs are on but they need to show the 'permanent' speed limit at all other times. Most 40km/h variable speed limits are located on main traffic routes. If the annual average traffic flow on the road is more than 500 vehicles per day, then these signs indicating a change of permanent speed limit must be installed on both the left hand side and on the right hand side (or on a solid median) [see clause 8.1(2)(a) of the Land Transport Rule: Setting of Speed Limits 2003]. If this is the case, then four of these special signs will be needed, possibly placed back to back.

6.2.5 Children on or near the roadway

Both standard diamond shape and active school warning signs could be considered where the RCA considers there are likely to be school children on or near the roadway. Special consideration should be given where children often congregate near a school on sections of road without footpaths or where children gather at a recreation reserve abutting a road which has a speed limit higher than 50km/h. RCAs should also investigate the provision of adequate footpaths and other pedestrian or cyclist facilities in these cases.

6.3 Layout of signs

The active school warning signs should be positioned as illustrated in figure 6.

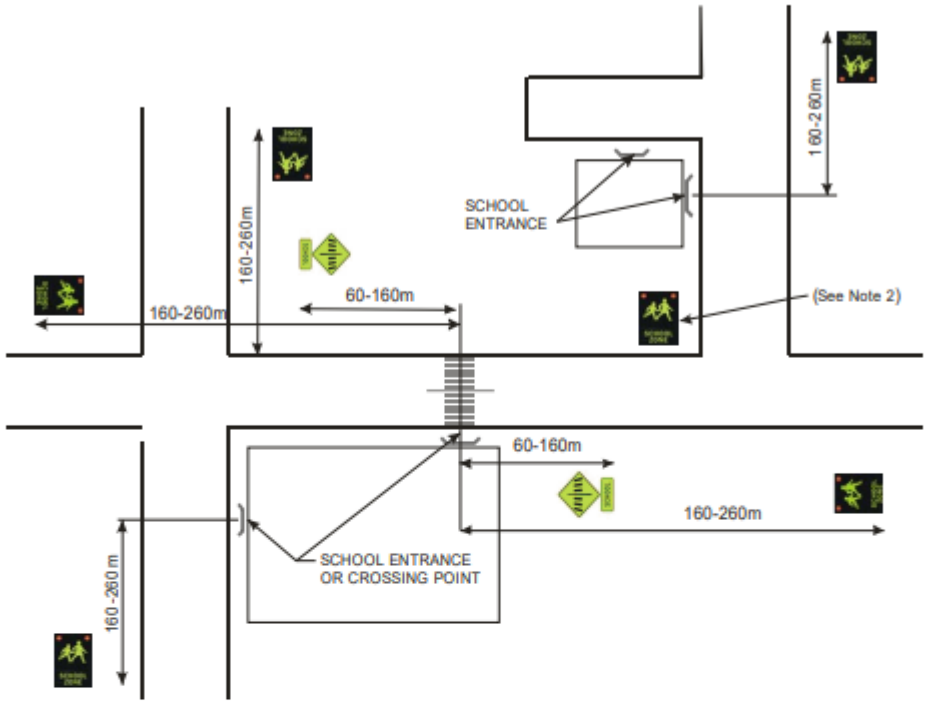


Figure 6: Example of a road and area layout for the use of active warning signs

Note 1: If a formal pedestrian crossing is present (ie a zebra crossing) then a diamond shaped pedestrian crossing warning sign must be installed in addition to the active warning sign. Active warning signs can be installed within 160m-260m from the school entrance or informal crossing point, to give a school zone length of 320 to 520 metres. The length of the school zone will be the sum of:

(a) the length of roadside used for short term parking, bus stops, crossing facilities and school entrances etc before and after the hours when the school is in session (called the 'hazard area'), and

(b) the warning sign approach distance from each direction (which depends of the speed of approaching traffic). For higher speeds, the warning sign needs to be located further in advance of the hazard area (see appendix A). If there is a cluster of schools then the school zone could be longer than 520 metres.

Note 2: Where a second school is located on a side road close to the main road junction and is reasonably obvious to drivers who turn from the main road then this active warning sign may not be necessary and could be replaced by a standard diamond shaped reflective sign.

6.4 Times of operation

As previously stated, where signs are used continuously to highlight a particular activity occurring only during short periods of the day, drivers become accustomed to their presence and may not adapt their driving during times of high risk. With this principle in mind, and supported by information provided within the Evaluation report and ***Traffic note 37***, it is recommended that the times of operation for active school warning should be as follows:

- Before and after school:
  - 35 minutes before the start of school until the start of school
  - 20 minutes at the end of school, beginning no earlier than 5 minutes before the end of school.
- During times when school activities may create additional risk to children (eg early finish times, school functions) the signs should be active for at least 10 minutes and normally not more than 30 minutes.

Times of operation must be agreed between the school and RCA.

6.5 School commitment and activity

It is essential schools are formally involved in the decision to introduce active warning signs. For these signs to be effective and remain so they must only be switched on when activity relating to the school is occurring on or alongside the road to highlight risk and to achieve the desired outcomes.

Conditions of operation of the active signs should be agreed between the school and RCA and should include the following requirements:

- The signs must only be activated by a person authorised by the school principal.
- The signs must not be used at times of day where there are no children present.

7 Acknowledgements

Dunedin City Council has developed additional notes on the trial and evaluation of active school warning signs, including detailed information on prioritising sites for their use, and technical information on their installation. Road controlling authorities and other parties interested in these types of signs are welcome to approach them seeking a copy of this information.

The NZTA acknowledges the valuable input of Dunedin City Council, Timaru District Council, Invercargill City Council, Auckland City Council and the former Transit New Zealand with regards to both the information supplied and the review of these guidelines.

References

1. NZTA/Land Transport New Zealand, Traffic Note 37, ***40km/h variable speed limits in school zones – guidelines.***
2. Dunedin City Council ***Dunedin active school warning signs trial: Evaluation report,*** October 2007.

Appendix A: Technical and installation information on active school signs

A Locations of signs in relation to the school activity

The active warning signs can be used in addition to permanent 'pedestrian crossing' signs or in place of 'school children' signs. Where a formal pedestrian (zebra) crossing is marked the diamond shaped 'pedestrian crossing' sign must still be placed in its normal position in advance of the crossing. (See figure 2 in section 6.3.)

A school warning sign (either the standard diamond shape reflective or one of the active types) should be located where approaching drivers have an uninterrupted view of it over a distance of at least 120m in rural areas and at least 60m in urban areas. The sign should be erected in advance of the hazard area (which can include the pedestrian crossing point, school entrances, bus stops, and short term roadside 'drop off and pick up' parking) by not less than the distance shown in the following table:

Operating speed	Distance
50km/h	65m
60km/h	80m
70km/h	100m
80km/h	120m
90km/h	140m
100km/h	160m

Where there are several schools in close proximity an area treatment may be more suitable. Specific details on sign placement may be at the discretion of the RCA and can be prioritised with respect to risk and criteria as outlined in section 5.

B Sign specifications

Active – flashing light (with reflective symbol and text)
(minimum size as specified for sign W19-2.2 (with symbol W16-4 'children'))

Shape and size:	rectangle 700 x 900mm
Background:	black
Symbol:	children - 600mm wide x 480mm high retroreflective, fluorescent yellow-green
Text:	'SCHOOL ZONE' 100mm high/14mm stroke width retroreflective, fluorescent yellow-green

Figure A1: Active – flashing light

Note: The size of sign used in the trials in Dunedin, Timaru and Invercargill was larger (900mm wide x 1200mm high) and this size can be used in 50km/h areas if considered appropriate. Larger sizes may be used, particularly where the speed limit is above 50km/h or there is a wide or divided carriageway.

Active – LED (light emitting diodes)

Shape and size:	rectangle 700 mm wide x 1000 mm high
Background:	black
Symbol:	children - 600mm wide x 480mm high yellow LED
Legend:	'SCHOOL ZONE' yellow LED, letters 160mm high/25mm wide

Figure A2 Active – LED

Note: This is the minimum size as specified in the Gazette notice. Larger sizes may be used, particularly where the speed limit is above 50km/h or there is a wide or divided carriageway.

C Flashing light specifications

The lights should:

- be placed in the top left and right hand corners of the sign
- be coloured orange
- be at least 60 square centimetres each in area
- be set to flash alternately at a rate of 1 hertz, and
- have cowls installed if sun strike is likely to be an issue.

There may be a need to have an indicator light that can be seen from the rear of the sign from the school or crossing point to indicate when the lights are operating.

D Power supply

Options to be considered for supplying power to the active sign units include:

- solar power (which worked well within the trial process) and is generally most suitable for rural areas)
- linking the battery for the sign to an adjacent street light
- run the signs by cable from the school's power supply.

E Installation of the signs

Signs can be attached to power poles so the units have a solid base. Where new support structures have to be erected they should be at least 100mm diameter with a foundation design that will prevent twisting yet remain frangible.

They should be mounted high enough to provide a suitable clearance above the footpath or ground so they are less likely to be tampered with. MOTSAM recommends a clearance of 2.5 metres above footpaths. However if the support pole is located close to the kerb where large vehicles (such as buses) are likely to stop, then a higher mounting height of 4.4 metres or more may be needed so that the sign is not damaged by high vehicles.

Signs should be placed so the driver's view of them is not obscured by vegetation. If necessary, trees located near the roadway should be pruned regularly to maintain the effectiveness of these signs.

At some sites where there is a special need to highlight the presence of the school to drivers, a duplicate active school zone warning sign can be placed on the right hand side of the road or on a solid median.

F Activation of the lights and LED displays

There are different types of activation systems depending on the sign type and operation. These include:

- automatic activation by wireless control. An antenna is placed on the outside of the school building and connected to the control box. Ideally there should be a direct line of sight from the antenna to the receivers (located on the signs) - while this is more effective, it may not be essential. However, at some sites there could be difficulty obtaining reception for the units and care will be needed to place them so this can be achieved. Checks should be made for possible interference from other nearby electronic equipment
- manual activation by hand held remote control units
- activation from a control box by wired connection direct to the signs.

The control box or activation unit should be located at a secure place within the school grounds where only authorised personnel can have access to it.

G Programming systems

If a programming system is used, it needs to allow for any variations to normal school operating hours including holidays and events that may be held at the school outside normal hours. The activation units need to be programmed to allow information to be entered into the system for set school activity times, holidays and daylight saving time changes together with a manual override system to allow for one-off special events.

The times when the signs operate should coincide with the school activity times as agreed in writing by the school and RCA.

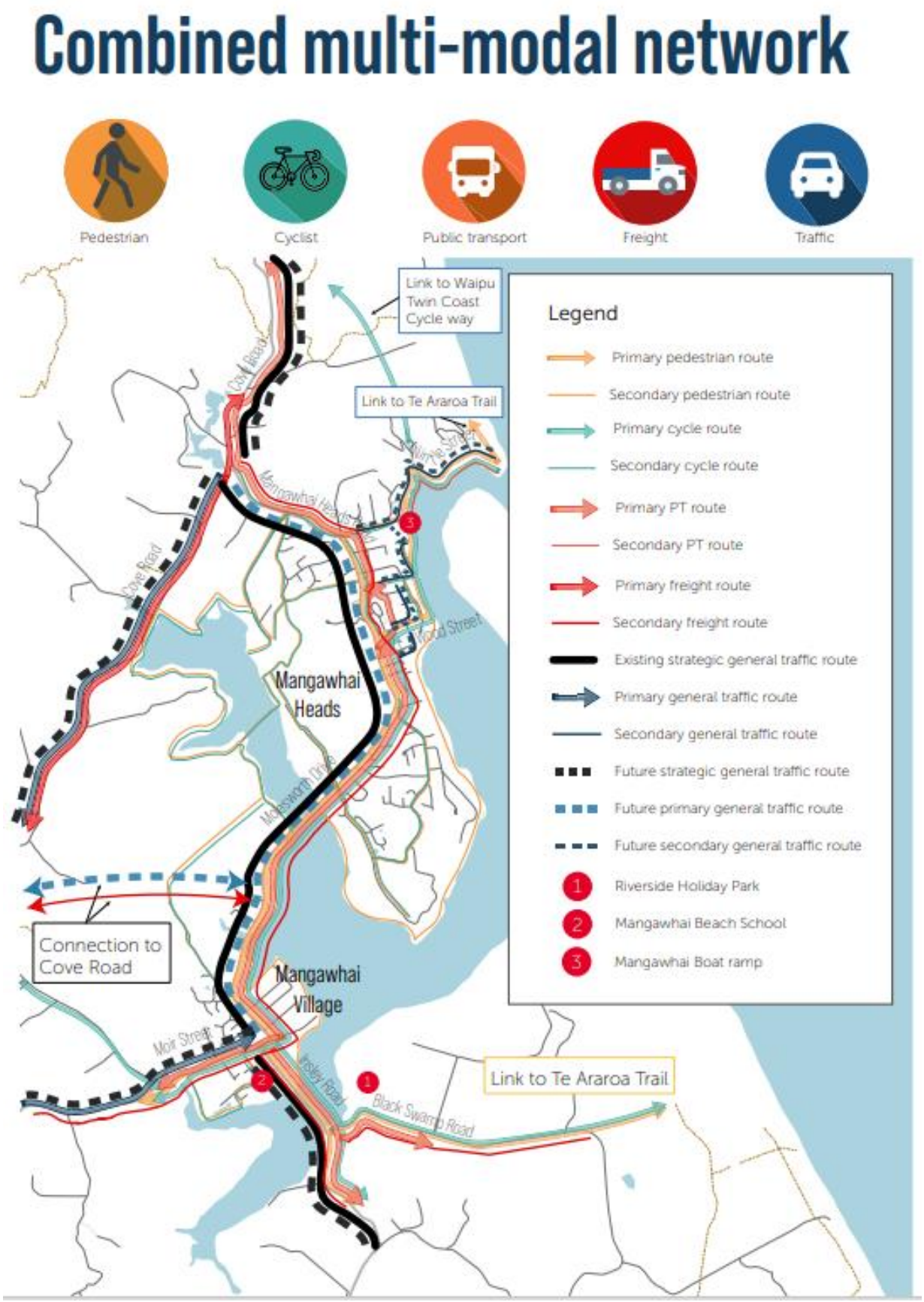
A time-out facility should be installed so that the signs automatically switch off after a maximum time (possibly 1 hour for normal use and possibly 30 minutes for one-off events) if the unit has not been manually switched off.

The programming system can be completed by installation of specific software. Further information can be obtained from Dunedin City Council or the sign supplier.

H Maintenance

It is essential that regular checks are made to ensure the active device is working correctly. The RCA needs to ensure that appropriate inspection and maintenance systems are in place as part of its agreement with those authorised to operate the system. The respective maintenance responsibilities of the RCA and the school should be clearly set out in this written agreement.

Appendix 5 – Draft Network Operating Framework for Mangawhai


Combined multi-modal network
Pedestrian
Cyclist
Public transport
Freight
Traffic
Link to Waipu Twin Coast Cycle way
Link to Te Araroa Trail
Cove Road
Mangawhai Heads Road
Moir Street
Molesworth Drive
Mangawhai Heads
Connection to Cove Road
Mangawhai Village
Jack Boyd Drive
Insley Road
Black Swamp Road
Link to Te Araroa Trail
Legend
Primary pedestrian route
Secondary pedestrian route
Primary cycle route
Secondary cycle route
Primary PT route
Secondary PT route
Primary freight route
Secondary freight route
Existing strategic general traffic route
Primary general traffic route
Secondary general traffic route
Future strategic general traffic route
Future primary general traffic route
Future secondary general traffic route
1 Riverside Holiday Park
2 Mangawhai Beach School
3 Mangawhai Boat ramp