SPEED MANAGEMENT PLAN

PREPARED FOR TAIRĀWHITI GISBORNE DISTRICT COUNCIL

March 2021

Stantec

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REVISION SCHEDULE

Rev No.	Date	Description	Signature or Typed Name (documentation on file)			
			Prepared by	Checked by	Reviewed by	Approved by
1	25/6/20	Draft for Comment	TL	LY	MM	LY
2	12/8/20	Updated draft to incl. GDC feedback	TL	LY	MM	LY
3	9/11/20	Updated Draft incl. GDC maps	TL	LY	MM	LY
4	03/03/21	Draft for Engagement	TL	JB	MM	LY

Executive Summary

Stantec has been commissioned by Tairāwhiti Gisborne District Council to prepare a speed management plan for Gisborne District area. The Speed Management Plan for the Tairāwhiti Gisborne District follows the Waka Kotahi NZ Transport Agency Speed Management Guide and will provide an implementation plan related to safer speeds in Gisborne District. The project comprises two stages with the details as follows:

Stage 1: Prepare the Draft Speed Management Plan

- Produce a draft Speed Management Plan document for client review. As requested by GDC, initial maps showing crashes caused by inappropriate speed over the last 10 years (2010-2019) in Te Araroa and Matawai townships at this phase were to be prepared for consideration prior to reviewing all townships and the Gisborne urban area.
- Allow for Gisborne District Council (GDC) and Waka Kotahi NZ Transport Agency (NZTA) review and to provide feedback on the draft document.
- Prepare revised draft Speed Management Plan, in readiness for stakeholder and community engagement (including a map of crashes caused by inappropriate speed over the last 10 years (2010-2019) in Gisborne District).

Stage 2: Prepare the Final Speed Management Plan

- Prepare final documentation on receipt of any further GDC and Waka Kotahi feedback together with the outcomes from the stakeholder and community consultation.

This document version is prepared for the first phase of Stage 1- for Gisborne District Council and Waka Kotahi review and to provide feedback prior to community and key stakeholder engagement.

Tairāwhiti Gisborne District Council

Speed Management Plan

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1. Purpose of this Document

The purpose of this document is to take the information provided in the NZ Transport Agency Speed Management Guide to create an implementation plan related to safer speeds in Tairāwhiti Gisborne District.

"We all make mistakes from time to time. We need to stop simple mistakes turning into tragedies[1]*"*

The Government's road safety strategy 2020-2030 "Road to Zero" establishes a vision that no loss of life on New Zealand roads is acceptable. Gisborne District Council determines to make our roads as safe as they can be for all road users.

Road safety risk can be reduced by investigating and financing in infrastructure improvements to make a road safer at current speeds, and by reducing travelling speeds to a safe and appropriate speed for road function, design, safety and use.

The plan sets out what work needs to be done, by who and where, with a focus in this financial year (2020/2021) leading into the 2021/2022-2030/2031 ten-year plan.

2. The Effects of Speed

There are well established relationships between speed and crashes, and the effects of speed on injury severity in crashes. As impact speed increases, the forces that vehicle occupants must absorb in a crash increase dramatically, in accordance with kinetic energy principles. Occupant protection systems are effective at low and moderate speeds; however, they cannot adequately protect occupants from these kinetic forces at high impact speeds.

People who walk, cycle, or ride a motorcycle are particularly exposed to vehicle impacts, especially at speeds which are above the limits of human tolerance. The elderly and the very young are also more vulnerable to being injured in a crash than other age groups.

Excessive vehicle speed affects road safety in two ways, by increasing the:

- Risk of having a crash, because there is less time for a driver to respond to hazards.
- Risk of death and severity of injuries in a crash when one does occur.

[1] *Vision Zero and the Safe System, NZTA*

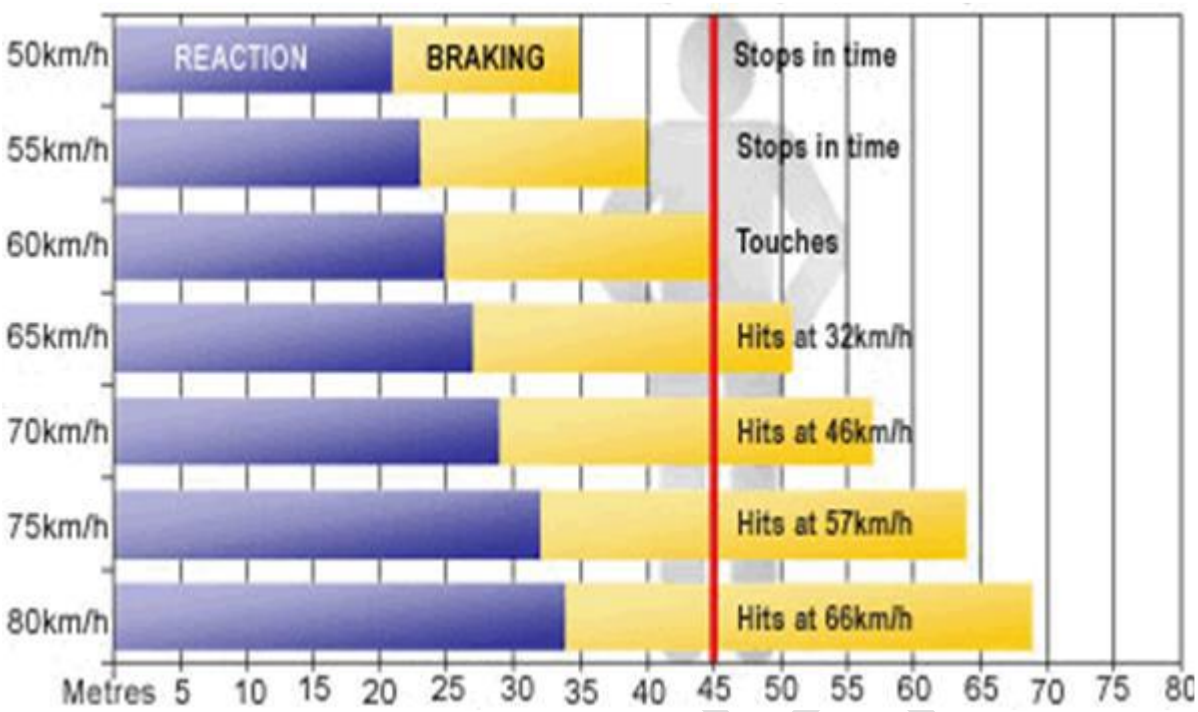

Figure 2-1: Reaction, Braking and Impact Speeds in dry conditions (Source: NZTA)

Higher speed creates more serious injuries because crash forces are disproportionately greater. The physics of crashes means that a twofold increase in crash impact speed will result in a fourfold increase in the energy of a crash. These sudden crash forces and the high deceleration in a crash is what causes harm to drivers and passengers. People walking and cycling, children, the elderly, and those struck by heavy vehicles are more likely to be injured or killed at relatively lower speeds.

The impact of a collision increases disproportionately with the increase in vehicle speed:

- A collision at 50km/h is equivalent to the vehicle falling from a 3-storey building.
- A collision at 100km/h is equivalent to a vehicle falling from a 13-story building.

Research has also shown that a person is:

- Twice as likely to die in a crash at 120km/h as at 100km/h; and
- Four times more likely to die at 130km/h.

In urban areas, the risk of death to a pedestrian if hit by a vehicle increases from just 10% at 30km/h to 80% at 50km/h and 95% at 60km/h (as shown in Figure 2-2below).

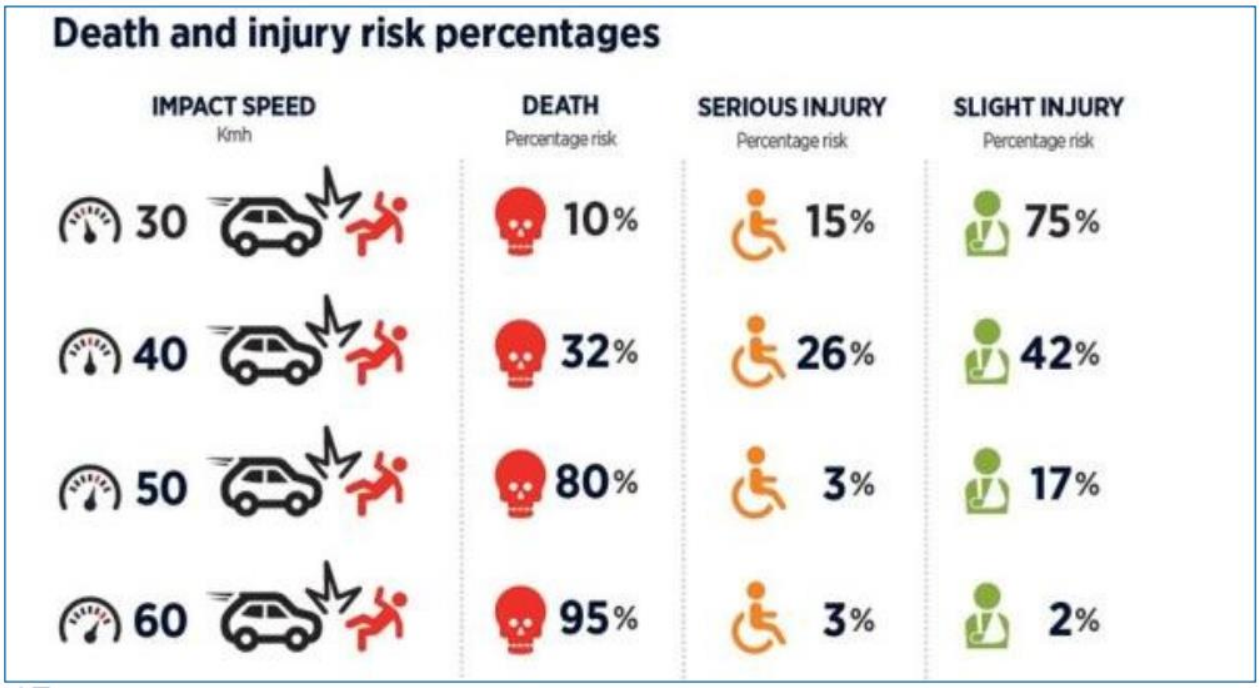

Figure 2-2: Safe Speed for Pedestrians (Source: Auckland Transport[2])

Some cities or residential areas in New Zealand, Australia and Europe have applied the above risk indicator to develop their speed management strategies, gaining significant success and support from communities.

In Hamilton City, New Zealand, the Council had developed a Speed Management Policy which set out the high-level approach to Speed Management that was used for a number of years to guide Hamilton City Council's decision making. A detailed Speed Management Map for Hamilton City was developed in 2019, which sets out speed limits of 30km/h at schools during school hours and speed limits of 40km/h on residential local roads. Similar measures have been implemented by other local authorities around New Zealand.

3. Speed Management – Why is it Important?

Speed management is about achieving safe and appropriate speeds on the road network, reflecting different road types with diverse functions and use, and the risks that exist on them. Speed management requires input from policy makers, engineers, educators, the Police and the general public in order to be effective. Inappropriate speeding is a widespread social problem, as a majority of drivers regularly break speed limits on all classes of roads, regardless of the time of day or day of week. Many drivers do not even consider speeding to be an offence. However, many law-abiding drivers also travel at speeds that are too fast for the conditions, and this is also considered to be speeding.

Apart from increasing the risk of being involved in a crash, speeding also contributes to environmental damage through increased greenhouse gases and other pollutants from exhaust emissions, plus increased fuel consumption and noise. Speed management therefore offers significant social, environmental and economic benefits.

Speed management can help achieve appropriate speeds that achieve both safety and efficiency objectives.

[2] https://at.govt.nz/media/1979121/attachment-5-to-item-81-safe-speed-plan-frequently-asked-questions.pdf

3.1 Proposed Approach to Speed Management – Draft Land Transport Rule: Setting of Speed Limits

The Government is developing the Setting of Speed Limits Rule as part of its Tackling Unsafe Speeds programme. This rule is expected to give effect to a new regulatory framework for speed management and the requirements for safer speed limits around schools and would replace the Land Transport Rule: Setting of Speed Limits 2017.

The draft rule sets out some key components as follows:

- Waka Kotahi would be required to produce a State Highway speed management plan. This plan would set out proposed speed management reviews and safety infrastructure changes on the State Highway network over a 10-year period. Plans would be developed every six years, with allowance for variation every three years (plans would provide more specific details about proposals for the first three years of the plan). An independent speed management committee would be established to certify this plan.
- RCAs would be required to work collaboratively with their regional transport committee and Waka Kotahi to produce regional speed management plans, setting out speed management treatments in the region over a 10-year period. These plans would be developed every six years, and would be updated every three years, to align with the land transport planning process. Waka Kotahi (as regulator) would be responsible for certifying regional speed management plans. All speed management plans would be made publicly available on the Waka Kotahi website.
- RCAs would be required to reduce speed limits around urban schools to 30 km/h (or 40 km/h where appropriate) and around rural schools to a maximum of 60 km/h. These could be variable speed limits where appropriate, with the lower speed applying during school travel times.

Figure 3-1 below illustrates the key components of the new regulatory framework, and the new functions and responsibilities that are being introduced in the draft rule.

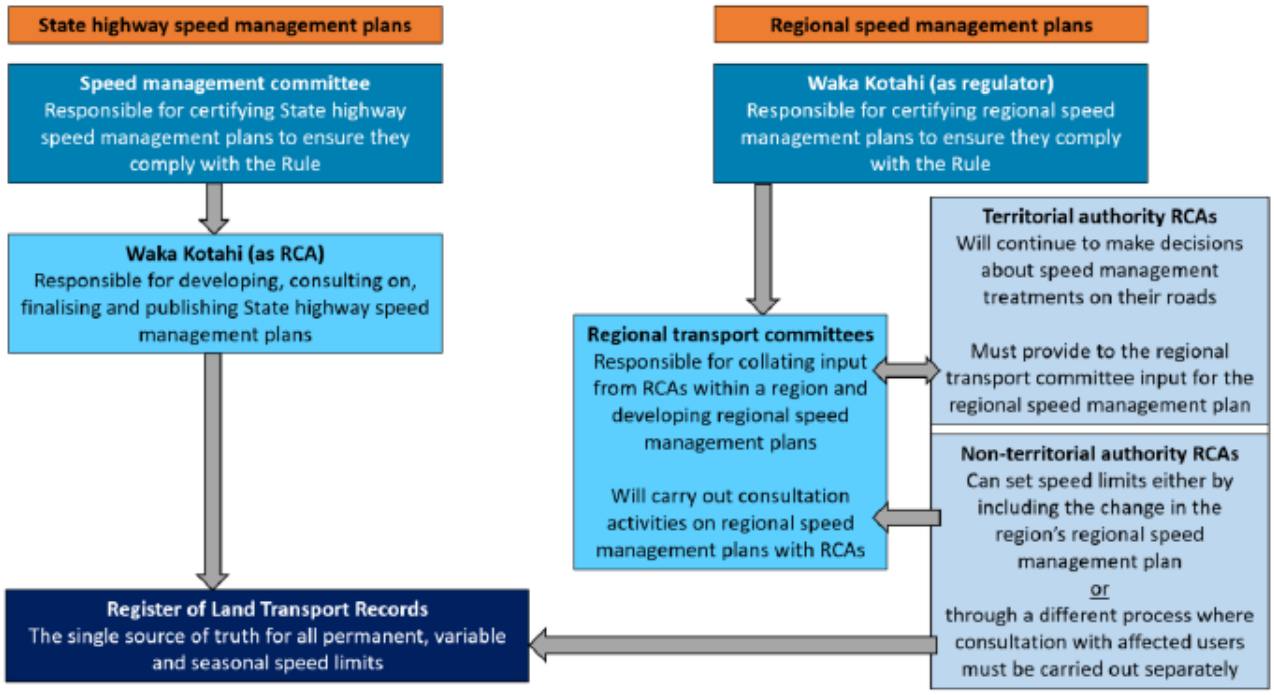

Figure 3-1: Key components of the new regulatory framework

3.2 Government Policy Statement on Land Transport

Generally, the GPS sets out how investment will be allocated across the land transport system and provides strategic priorities to achieve a land transport system.

The GPS 2018 identified four strategic priorities that are:

- **Safety** - is a safe system, free of death and serious injury.
- **Access** - provides increased access to economic and social opportunities, enables transport choice and access, and is resilient.
- **Environment** – reduces greenhouse gas emissions, as well as adverse effects on the local environment and public health.
- **Value for Money** – Delivers the right infrastructure and services to the right level at the best cost.

Early this year, a draft Government Policy Statement on Land Transport 2021/22-2030/31 (the draft GPS 2021) was released for public feedback. This is the second GPS, and it is essentially building on the previously established GPS but provides stronger guidance on what Government is seeking from land transport investments. The strategic priorities of Climate Change and Safety have been updated to reflect policy work that has taken place since GPS 2018 was published, such as the development of Road to Zero Road Safety Strategy 2020-2030. Access has been separated into Better Travel Options and Improving Freight Connections. Value for money is expressed as a principle that can be applied to all investments, rather than a strategic priority that could change as Government changes.

Details of the four strategic priorities in the draft GPS 2021 are as follows:

- **Safety** - Developing a transport system where no-one is killed or seriously injured.
- **Better Travel Options** - Providing people with better transport options to access social and economic opportunities.
- **Climate Change** - Developing a low carbon transport system that supports the emission reductions, while improving safety and inclusive access.
- **Improving Freight Connections** - Improving freight connections for economic development.

Figure 3-2: Strategic Direction of the GPS 2018 (Source: NZTA)

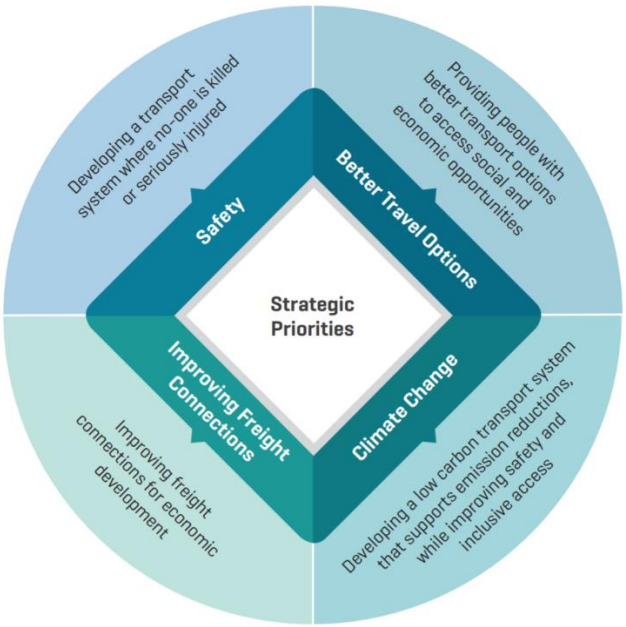

Figure 3-3: Strategic Direction of the Draft GPS 2021 (Source: NZTA)

The draft GPS 2021 supports investment through the Road Zero activity class, which targets towards those interventions identified as being key to achieving the target reductions in deaths and serious injuries sought through Road to Zero.

3.3 Vision Zero and the Safe System

Vision Zero is the world-leading approach to road safety, which emphasises:

- No loss of life on the roads is acceptable.

- Road deaths and serious injuries are preventable.
- People make mistakes and are vulnerable – we need to stop simple mistakes turning to tragedies.
- Safety should be a critical decision-making priority in our transport decisions.
- We need to focus on shared responsibility between road users, and the people who design and operate our roads.

This means no longer viewing the deaths on our roads as a 'toll' that we are prepared to pay for mobility. Systems cannot be designed to prevent every crash. But they can (and should) keep people alive when crashes happen.

Vision Zero is founded on the Safe System approach, which declares that while we all have a responsibility to make good choices, people make mistakes, so we need to build a more forgiving road system that protects people from death and serious injury in the event of a crash.

Road Safety System looks at all elements of road safety working together, which targets:

- Improve the safety of our roads, for example with median barriers, improved roadsides, safer intersections and separated cycle lanes and foot paths.
- Strive for travel speeds to be safe and appropriate for the function and use of the road so that road users can survive the crashes that happen.
- Improve the safety of our vehicles, for example with electronic stability control, front and side curtain airbags, and collision avoidance systems.
- Support road users who are competent, alert and unimpaired; they comply with road rules, take steps to improve road safety and expect safety improvements.

Road to Zero - the government's road safety strategy for 2020-2030 was developed based on Vision Zero, while the previous Safer Journeys 2010-2020 strategy was based on a Safe System approach.

3.4 Road to Zero

Road to Zero[3] is the Government's road safety strategy 2020-2030, replacing Safer Journeys 2010-2020. Road to Zero establishes a vision of a New Zealand where no one is killed or seriously injured in road crashes, based on the world-leading "Vision Zero" approach where no death or serious injury while travelling on our roads is acceptable.

Road to Zero targets are to reduce death and serious injuries on New Zealand road by 40% over the next decade. Steady progress towards this would mean around 750 fewer people would be killed on our roads over the next 10 years, compared to 2018.

Road to Zero establishes five focus areas over the next decade, and strategic directions that are needed to address them. The five focus areas are:

1. **Infrastructure improvements and speed management** – Improve road safety of our cities and regions through infrastructure improvements and speed management.
2. **Vehicle safety** – Significantly improve the safety performance of the vehicle fleet.
3. **Work-related road safety** – Ensure that business and other organisations treat road safety as a critical health and safety issue.
4. **Road user choices** – Encourage safer choices and safer behaviour on our roads.
5. **System management** – Develop a management system that reflects international best practice.

[3] https://www.transport.govt.nz/multi-modal/keystrategiesandplans/road-safety-strategy/

Figure 3-4:Road to Zero – Focus areas

We have reviewed the actual road safety performance in the Gisborne District and the impact of speed on fatal and serious injuries. A crash analysis is contained in Appendices E and G of this report.

3.5 Gisborne Regional Land Transport Plan 2018-2028[4]

The Gisborne Regional Land Transport Plan 2018-2028 has identified six strategic objectives as follows:

- **Safety:** Deaths and serious injuries on the region's transport system are reduced and significant safety risks are identified and managed
- **Long Term Planning:** Long term planning addresses current and future demand, supports public transport and encourages walking and cycling while supporting enhanced community amenity projects.
- **Resilience:** The regional transport system is resilient and reliable supporting 'just in time' freight logistics and community connections.
- **Economic Performance:** The regional transport system is integrated with well planned development, enabling the efficient and reliable movement of people and goods to, from and throughout the region.
- **Affordability:** Investment in the regional transport system maximises available resources and achieves value for money.
- **Sustainability:** The environmental effects arising from the use of the transport system are minimised and energy efficiency initiatives are supported.

Speed management has a key role to play in all of these.

[4] https://www.gdc.govt.nz/council/plans-policies-and-bylaws/plans/regional-land-transport-plan

3.6 One Network Road Classification (ONRC)

The One Network Road Classification (ONRC) is a classification system which divides New Zealand's roads into six categories based on how busy they are, whether they connect to important destinations, or are the only route available:

- National
- Arterial
- Regional
- Primary collector
- Secondary collector
- Access.

The ONRC is the primary tool to enable operational and culture change in road activity management.

Using the ONRC, local authorities and NZ Transport Agency can compare the state of roads across the country, and direct investment where it is needed most. The Speed Management Guide also takes advantage of this consistent tool to describe and mange road function across the country.

Refer to Figure 3-5 for a summary of the ONRC road classifications.

Figure 3-5: Road Classifications (Source: NZTA)

3.6.1 Draft One Network Framework

The One Network Road Classification (ONRC) system has become a core element of New Zealand's land transport management system, providing a consistent and well-understood classification baseline for a myriad of planning processes. Eight years after its inception, the time has come to evolve the classification and align it more closely with the Government's new outcomes focus areas. The One Network Framework (ONF), which is under development as the evolution of the ONRC, recognises the value of integrated land-use and transport planning for creating greater liveability and increased economic prosperity, as well as acknowledging the distinct geographical challenges and diversity of New Zealand's land transport network.

The principles for change in the draft ONF are:

- Be relevant for both urban and rural settings, by developing a common language that all practitioners can use.
- Consider movement of people and goods via all modes of transport, rather than just vehicles.

- Differentiate strategic networks of different modes of transport.
- Consider movement in the context of place.
- Prioritise and protect human life and help embed the Safe System approach
- Be simple to understand, use and interpret, providing additional layers of complexity only where needed.
- Align with spatial planning processes, tools and frameworks.
- Guide planning, operation and investment decisions in the short and long term.

The ONF Stage 1 is completed which scoped the draft high-level design concepts aiming to introduce a 'movement and place' approach to the ONRC. Stage 2 involves updating the high-level design document and development of end user performance measures and training tools, with completion in late 2020, before a full roll-out of the framework. Road Controlling Authorities are being encouraged to trial the ONF in their Network Operating Frameworks (NOF) and in their Activity and Asset Management Plans (AMPs).

3.7 Speed Management Guide and Speed Management Framework

Previous speed frameworks and speed management processes were developed when there was no overarching road classification system. While speed limit reviews involve a consistent process that takes land use and road use into account, they do not give sufficient weight to road classification, design, geometric characteristics, or network efficiency. The result is that travel speeds on some roads are not appropriate to road use and function.

The current Speed Management Guide addresses these issues primarily through the Speed Management Framework, which provides safe and appropriate travel speeds for roads of different function, safety and use. The Framework thus supports both safety and efficiency.

The Speed Management Framework provides a single assessment method for determining safe and appropriate speeds on New Zealand's entire road network. This means travelling speeds will align with road function, design, safety and use because the ONRC takes traffic volumes, freight volume and place functions into account.

With these in mind, the proposed safe and appropriate speeds for different types of road fall within the ranges shown in Figure 3-6. The proposed speed ranges are not in themselves speed limits, and no changes to the default limits are proposed. Risks can be reduced by investing in infrastructure improvements to make a road safer at current speeds, or by managing speeds down through a combination of road design, risk targeted enforcement and safe behaviour, all reinforced by the speed limit appropriate for the road.

Classification	Straight open road /urban motorways	Curved open road	Winding open road	Urban (not motorway)
Class 1 High volume national	**100–110km/h**[4] Depends on design and safety risk (e.g. divided 4–5 star, grade separated intersections, safety barriers) and factoring in enforcement thresholds			
Class 2 National, Regional, Arterial	**80–100km/h** Depends on safety risk and whether volumes justify investment to bring the road up to 3 star equivalent, also enforcement thresholds		**60–80km/h**	50km/h 60–80km/h where safety risk allows, e.g. fewer intersections, mode separation for active users
Class 3 Primary and secondary collector				30–50km/h
Class 4 Access and low-volume access All winding/tortuous	**60–80**km/h Depending on roadside development, pedestrian and cyclist volumes, whether sealed or not			30km/h if high volumes of cyclists/pedestrians Recognise access and place 10km/h for Shared Spaces

Figure 3-6: Recommended Safe and Appropriate Speed ranges (Source: NZTA Speed Management Guide)

3.8 Safe and appropriate travel speed and speed limit

The One Network Framework of safe and appropriate speeds, supported by the Speed Management Guide, are intended to increase consistency over the longer term so that speed management makes more sense to the public. They are also designed to prioritise speed management activity towards reducing death and serious injury.

When the Framework is applied, road users can expect to understand road safety risk more accurately and receive more consistent advice on what speeds are safe on different kinds of roads. There will be more differentiation of speeds based on the classification system, and the relationship between the safe speed and the standard of the road will be clearer.

The best outcomes will result if community and stakeholder groups are engaged, kept informed and are part of the process, and support local and regional speed management planning.

A classification method to identify what safe and appropriate speeds should be for different roads in the ONRC has been provided in the Speed Management Guide[5], which considers the road function, safety performance and a suite of factors that impact on safety risk, such as alignment, the nature of roadside hazards and adjacent land use. It is important to stress that it is a long-term objective to align both travel speeds and speed limits to road function, design, safety and use. There is no expectation there will be wholesale change in the short-term. Speed management needs to take into account community priorities and concerns and should happen at a pace that builds and is built on, better public understanding, engagement and support.

[5] Pg. 19-21 – NZTA Speed Management Guide First Edition

Variable speed limits have been used around urban schools for some time. More recently a number of successful trials of rural variable speed limits have been carried out around rural schools and high-risk intersections and are in various stages of implementation.

3.9 What has Gisborne District done about speed management in the past?

Gisborne District Council has been active in the area of Speed Management, with the development of the Speed Limits Bylaw in 2013. Also, various programmes have been implemented to provide speed management measures for road users which include speed humps, chicanes, splitter islands, kerb buildouts and so on.

The two highlighted programmes that have been on-going are the School Safety Assessment and Residential Traffic Calming Programmes.

3.9.1 Gisborne District Council Speed Limits Bylaw 2013

The Gisborne District Council Speed Limits Bylaw 2013[6] details which posted speed limits are specified and mapped in the following schedules:

- Schedule 1: Urban Traffic Areas – Roads that have a Speed Limit of 50 km/h.
- Schedule 2: Roads that have a Speed Limit of 70 km/h.
- Schedule 3: Roads that have a Speed Limit of 80 km/h.
- Schedule 4: Rural Areas – Roads that have a Speed Limit of 100 km/h.
- Schedule 5: Roads that have a Variable Speed Limit, where the posted speed limit dropped at school zone.
- Schedule 6: New additions to the Bylaw.

Under the Speed Limit Bylaw 2013, the urban school zones that introduced 40km/h speed limits are Lytton High and Riverdale Schools, Mangapapa School, Gisborne Intermediate and Illminster Intermediate Schools. Waerenga-o-Kuri School is located in the rural area and has a posted school zone speed limit of 70km/h.

3.9.2 School Safety Programme

In 2018, a School Safety Assessment was conducted for all schools in Gisborne City, which identified another 20 schools with high safety risks to implement school zone programmes. The detailed school list is provided in Section 2 of the Supporting Information Document.

A delivery mechanism was provided to target concerns at the school, within the school zone and the wider journey to/from school.

[6] https://www.gdc.govt.nz/council/plans-policies-and-bylaws/bylaws/speed-limits-bylaw

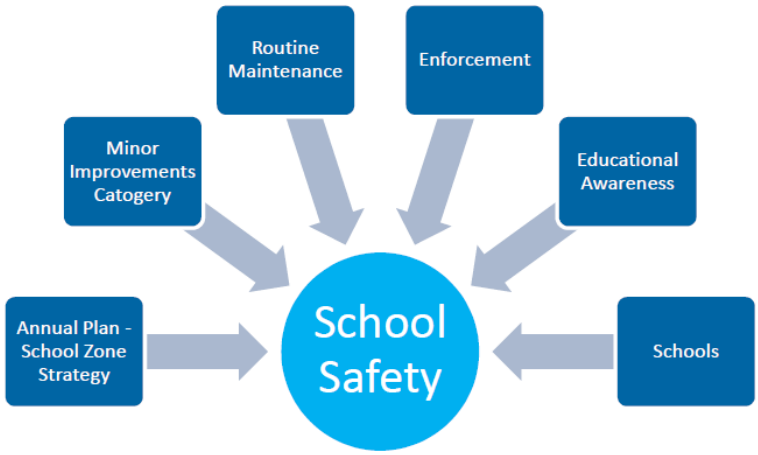

Figure 3-7: School Safety – Delivery Mechanisms

Section 1 of the Supporting Information Document summarises all the rural schools located in the Tairāwhiti Gisborne District which would benefit from a review of the speed limits on the roads adjacent to these schools.

3.9.3 Residential Traffic Calming

A traffic calming programme targeting speed management in residential areas has been actively implemented by the District with traffic calming measures including speed humps, chicanes and intersection narrowing in order to tackle two main issues:

- Motorists travelling faster than the posted speed limit.
- Vehicles using residential streets as a thoroughfare.

The programme has been posted on the District website, with all criteria clearly listed out so that residents can apply if they have concerns regarding speed in their local area. The Residential Traffic Calming programme has received good feedback and support from the local communities.

The predominant traffic calming measures implemented in urban areas include speed humps, kerb buildouts and splitter islands. Information has been obtained from RAMM records for the measures installed either as a result of general minor safety improvements or the residential traffic calming programmes.

Table 3-1: Vertical traffic calming measures

Street	Number of speed humps
Abbott Street	3
Aberdeen Road	3
Beach Road	1
Bloomfied Road (Tehapara)	1
Centennial Marine Parade	2
Endcliffe Road	2
Herschell Road	2
Hurahura Road	1
Huxley Road	3
Kaiti Beach Road	2
Kowhai Street	1
Makarika Road	2
Makorori Beach Road	6
Tata Road (Lower)	1

Street	Number of speed humps
Munro Street	4
Onepoto Road	2
Queens Drive	1
Railway Lane	15
Ranggitukia Road	2
Riperata Street	1
Te Whiwhi Street	1
Rua Street	1
Score Road	1
Tamanuhiri Road	2
Tapuearoa Road	6
Te Whiwhi Street	2
Waihirehre Domain Road	6
Waima Road	1
Waiomatatini Road	1

Other horizontal traffic calming measures including kerb buildouts, splitter islands, medians or roundabouts have been installed in the following streets.

Table 3-2: Horizontal traffic calming measures

Street	Type of traffic calming
Endcliffe Road	Build-out, splitter island, roundabout and median
Pohutukawa Grove	Parking / Planted Landscaping
Ruru Avenue	Splitter island
Silverstone Place	Roundabout
Commerce Place	Roundabout
Russell Street	Splitter island
Davy Place	Large turning island
Einstein Street	Splitter island
Commerce Place	Median
Cambridge Terrace	Splitter island
Russell Street	Splitter island
Grey Street	Splitter island
Cliff Road	Build-out
Library Road	Splitter island
Fortis Place	Roundabout

3.10 Proposed Speed Management Approach for Gisborne District

We want everyone who calls Gisborne home, or visitors to our District, to feel safe when using our streets and roads. To achieve that, we need travel speeds that are safe and appropriate for road function, design and safety for all road users.

Following the Vision Zero approach for road safety – we do not believe any loss of life is acceptable in our transport network. Our District is also steadily growing and attracting more visitors, which means there will be more and more people going to use our streets and roads.

Drawing on the principles set forward in the NZ Transport Agency's Speed Management Guide and the Government's road safety strategy 2020-2030 "Road to Zero", we have initially defined eight principles to guide the work we will do and what we will give priority to.

3.10.1 Speed Management Principles

The following principles will guide the application of speed management within Gisborne District:

- The speed environment around schools at school times (the start and end of the school day) will be 30km/h for urban schools, and 60km/h for rural schools.
- Where there are high numbers of people walking, cycling and crossing the road, the speed environment will be 30km/h. This will cover areas including roads around Maraes which are key local community hubs, similar to schools.
- Speed limits across the Gisborne CBD inner city streets will be reduced to 30km/h, excluding some major streets.
- Residential local roads will be constructed for a 40km/h environment within Gisborne City.
- Speed limits of 40km/h to be applied in the rural townships, to ensure consistency with Waka Kotahi state highway speed limits.
- New roads will be constructed appropriate to the function and to create a safe and appropriate environment.
- Existing roads may be upgraded appropriate to their function and to create a safe and appropriate environment.
- A logical, area-based approach will be used for the implementation of speed management.
- Where vehicular access to beaches is available, for example Makorori Beach, consider limiting access and applying 20km/h speed limits.
- Investment will be targeted to achieve the best access and safety outcomes.
- We will work with partnering RCAs as required to provide a consistent approach in line with the Speed Management Guide.

Ideally the preference is to ensure speed limits are consistent across the network, for example 100km/h becomes 80km/h and 50km/h becomes 40km/h, with the exception of the Gisborne CBD which becomes 30km/h. Within the townships and urban areas, 30km/h speed environment around urban schools will remain an option, but until the rule is approved, the maps provided separately to this draft report show 40km/h in the urban and township areas.

3.10.2 Speed Management Priorities

We need to be able to prioritise our work, and we plan to give priority to:

- High benefit routes which deliver maximum benefit in reducing deaths and serious injuries.
- Places where there is strong community demand for change.
- Supporting changes in neighbouring areas to achieve consistent and logical implementation.
- Places where many people walk or cycle, or where they will soon walk and cycle.

3.10.3 How we will use these principles and priorities

Using tools provided by NZ Transport Agency, along with these guiding principles, a map of the proposed speed management vision for Gisborne District will be developed.

Once the speed management vision for Gisborne District is developed, the Council can work out how and when they deliver this by using the above priorities alongside the national speed management programme.

3.10.4 The Speed Management Toolbox

Speed management is about more than just speed limits. The treatment philosophies for safe and appropriate speeds includes engineering and infrastructure improvements, community engagement, education and enforcement.

3.10.4.1 Engineering and Infrastructure

Streets and roads must be built to support the way they are used and their function. For example, streets in residential areas may require raised safety platforms, pedestrian refuges or cycle lanes to be installed. These are physical signals to drivers to drive at a safer lower speed, and to share the road with other active/vulnerable road users.

Figure 3-8: An example of raised platform (Source: Auckland Transport)

Figure 3-9: An example of safe pedestrian and cyclist crossing with signals (Source: NZTA)

On roads expected to move more vehicles at higher speeds, off-road walking and cycling paths may be considered as well as other safety features such as separating oncoming traffic using median barriers or plantings.

Figure 3-10: Median barriers and white audio tactile markings on State Highway 2 (Source: Google map)

Figure 3-11: Median and roadside barriers on State Highway 1 (Source: NZTA)

3.10.4.2 Stakeholder and Community Engagement

Gisborne District Council will work closely with industry stakeholders, with communities, schools and businesses to ensure proposed changes to speed limits or infrastructure will improve safety and access for all and any measures implemented will reflect what community has told the Council about their streets. Stakeholder and local communities will always be kept informed on any proposed infrastructure changes.

During the speed management review, if a change to a speed limit is required or desirable, a legal process has to be followed using Land Transport Rule – Setting of Speed Limits 2017. The Council will always consult with stakeholders and the community before asking the Council to approve any changes to the register of speed limits.

3.10.4.3 Education and Enforcement

Gisborne District Council works closely with their road safety partners at the NZ Transport Agency and the NZ Police on various campaigns to inform and educate all road users on road safety and speed. The Council supports the NZ Police with their enforcement activities and also works with community organisations such as Plunket on road safety initiatives.

Gisborne District Council's road safety promotions are targeted to risk and include activities such as:

- School Safety: School Environment Speed, Crossing Provisions
- Back to Schools Road Safe Campaigns
- Whakamanahia in schools: Alcohol Education
- Traffic Safety Education day for School Patrols
- Seatbelt and Child Restraints installation and education
- Cycle Education in schools and community
- Young Drivers Education
- Alcohol Awareness / Drink Driving
- East Coast WOF
- Smart and Safe Choice on the road
- Make Motorcycling Safer.

Section 3 of the Supporting Information Document includes a summary of the road safety promotion activities undertaken between July 2019 and January 2020.

4. Mega Maps Tool

The Safer Journeys Risk Assessment Tool – Mega Maps is a nationwide application managed by Waka Kotahi that provides a range of data for each road link in the country and from that provides an indication of what the safe and appropriate speed is (SAAS). A number of the measures are simple while some such as Infrastructure Risk Rating (IRR) are relatively complicated yet plays a crucial part in determining the speed limit under the current guidelines. The IRR calculates a figure based on nine separate items:

- Road type
- Alignment
- Carriageway width
- Roadside hazards
- Land use
- Intersection density
- Access density
- Traffic volume

This calculation produces a figure that falls into one of five risk bands. This band is then considered against the ONRC, collective risk and personal risk and from that a safe and appropriate speed is presented. Where the resulting SAAS is lower than the posted speed limit the primary reason for this is provided, such as the road being unsealed.

Mega Maps is a nationwide application of the Speed Management Framework therefore it was not practicable to manually code or check the input variables for every road in the country. Some anomalies do therefore exist and for this reason a sense check of the variables that influence the SAAS can be, and often needs to be, carried out. By showing the Gisborne speed limits on a GIS platform the inconsistencies in Mega Maps can be identified, reviewed and where necessary corrected to provide a logical and common-sense speed limit regime.

Below in Figure 4-1 is screenshot of the Safe and Appropriate Speeds west of Gisborne near Patuhahi.

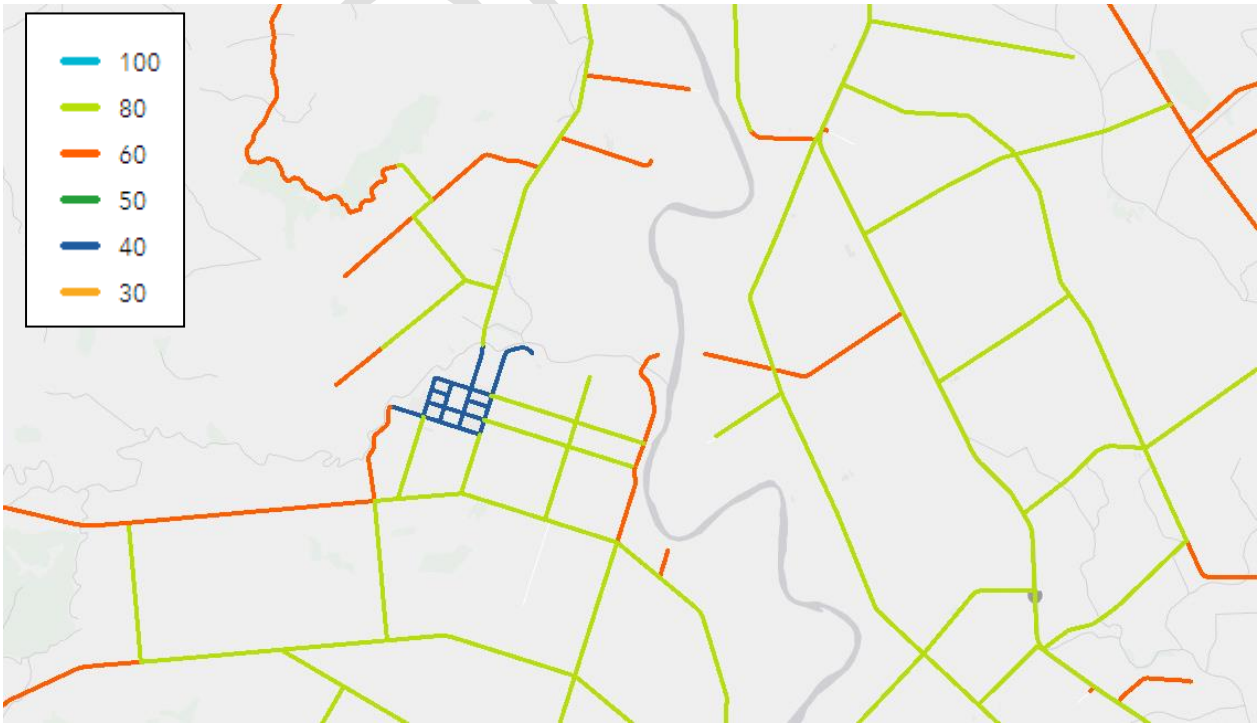

Figure 4-1: Mega Maps extract of Safe and Appropriate Speeds

The following Figure 4-2 shows the proposed speed limits in the same area from the Gisborne DC GIS system.

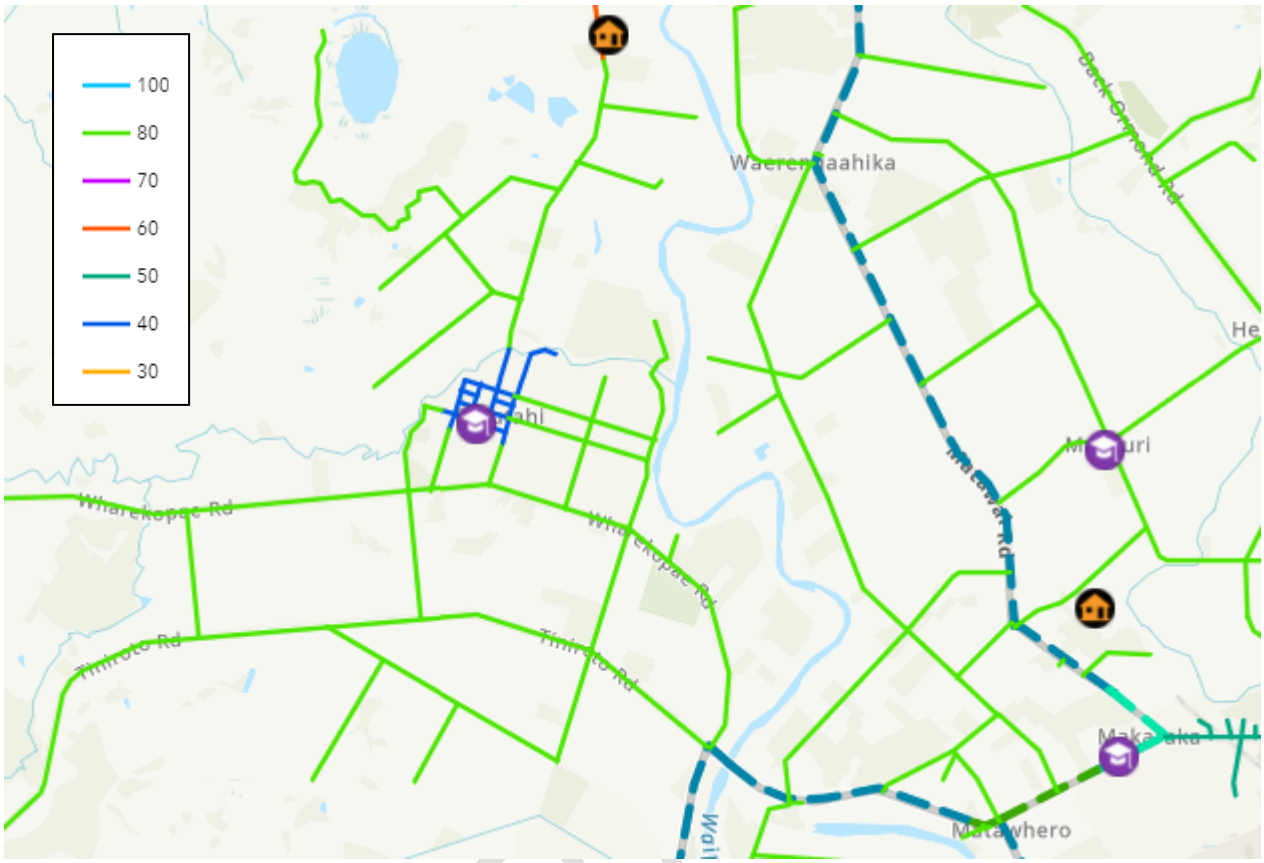

Figure 4-2: Gisborne DC proposed speed limits

Mega Maps shows a number of links with a SAAS of 60km/h where the reality is that short sections or no through routes would not be signed as such. The GIS maps have ironed out those anomalies and present a consistent speed limit framework which is likely to result in improved compliance.

5. Proposed Speed Limit Applications for Urban Areas and Townships

5.1 Suggested Speed Limits in Te Araroa Township

The local road network within the Te Araroa township (which currently has a 70km/h posted speed limit) is rated as Low Collective Risk and Low Personal Risk with Low Medium Infrastructure Risk Rating[7] (IRR). The Safer Journeys Assessment Tool suggests a safe and appropriate speed limit in this area is 40km/h.

Following the proposed principles regarding the safe speed environment around schools, the speed limits in Wiira Street and Paikea Street West, which Rerekohu School has direct access to, are recommended to reduce to a 30km/h posted speed limit. It is noted that Hinerupe Marae is a significant community facility for both locals and visitors; therefore, it is recommended to reduce speeds on roads around the Marae to a minimum of 40km/h speed limit, but ideally 30km/h. These roads are Koao Street, Paikea Street East and Pakiakanui Street. The other roads in the township can be reduced to 40km/h following the Safer Journeys Assessment Tool. Given the size of the township, the alternative option is to reduce all streets to a 40km/h posted speed limit for a consistent speed management approach until such time that the Land Transport Rule: Setting of Speed Limits is signed off and the lower 30km/h speed limits can be applied for roads around urban schools.

East Cape Road starts from the eastern end of the township, travelling along the beach towards the East Cape Lighthouse. This road has suffered damage from weather events and is currently closed. East Cape Road has a Low Collective Risk and Low Personal Risk, with a High to Medium High Infrastructure Risk Rating. The Safer Journeys Assessment Tool suggests a safe and appropriate speed limit of 80km/h on this road. Figure 5-1 illustrates the suggested posted speed limit changes in the Te Araroa township and on East Cape Road.

Figure 5-1: Suggested Speed Limit in the Te Araroa Township

5.2 Suggested Speed Limits in Matawai Township

The local road network in the Matawai township (which currently has a 50km/h posted speed limit) is classified as Low Collective and Low Personal Risk with Low Medium Infrastructure Risk Rating. The Safer Journeys Assessment Tool suggests a safe and appropriate posted speed limit on these roads is 60km/h. This

[7] https://megamaps.abley.com/Maps/

is due to the tool recognising these roads as Access Roads in a rural area. If these roads were considered to be urban roads, the appropriate posted speed limit would then be 40km/h.

Following the proposed principles regarding the safe speed environment around schools in urban areas, the speed limit in Raumati Street, Terrace Street, Kerei Street and Kirk Street should be reduced to a 30km/h posted speed limit. For a consistent speed across the local road network, the urban sections of Motu Road should also be reduced to 40km/h speed limit. Given the size of the township, the alternative option is to reduce all streets to a 40km/h posted speed limit for a consistent speed management approach until such time that the Land Transport Rule: Setting of Speed Limits is signed off and the lower 30km/h speed limits can be applied for roads around urban schools.

The urban road section of SH2 through the township is managed by Waka Kotahi and is currently not considered under this speed management plan.

The rural section of Motu Road (from the 50 /100 km/h speed limit signs to the north) has a Low Collective Risk and Medium High Personal Risk, with the IRR band of Medium. The Safer Journeys Assessment Tool suggests a safe and appropriate speed of 80km/h for this section of Motu Road. The operating speeds recorded in the tool suggest that vehicles are already travelling around 75-79km/h, therefore this data confirms that an 80km/h speed limit is supported. Figure 5-2 illustrates what the suggested speed limit application would look like in the Matawai township.

Figure 5-2: Suggested Speed Limits in the Matawai Township

5.3 Other Urban and Rural Areas

Proposed Speed Limit maps have been prepared for the other urban areas (including the Gisborne Central Business District), rural townships and rural roads in the Gisborne District. These are provided as a separate document.

5.4 Beaches

A number of beaches within the Gisborne District allow vehicular access which introduces the obvious potential for conflict between vehicles and other beach users. As part of this review Council wishes to introduce a 20km/h speed limit at these locations, such as at Makorori Beach, through identifying them as 'designated locations' in accordance with the 2017 Setting of Speed Limits Rule.

Due to technical issues, it is difficult to map beaches in GIS therefore Council are exploring options as to how best to record and present them to be in accordance with the Rule.

6. Next Steps

Steps to implement Tairāwhiti Gisborne District Council's Speed Management Plan are detailed in the figure below. We are currently at step 2, and wanting your thoughts on the principles and priorities, and any speed concerns.

Step 1: Development of speed management plan principles and priorities together with draft Speed Management Plan

WE ARE HERE

Step 2: Stakeholder views sought on the principles and priorities, and speed concerns.

Step 3: Second draft of the Speed Management Plan developed.

Step 4: Engagement with the community and stakeholders on the draft Speed Management Plan.

Step 5: Consultation feedback incorporated into the final draft Plan. Presented to Council for consideration.

Step 6: Development of speed management measures together with implementation priorities and speed limit changes assessed using the Setting of Speed Limit 2017 rule process.

Step 7: Further community and stakeholders' feedback on proposed works and speed limit changes.

Step 8: Speed Management Plan and implementation priorities approved.

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