

## Approach to Speed Management

In confidence

<b>Meeting Date</b>	<b>2 March 2022</b>
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### Purpose

This paper provides the Board with an overview of the approach for the setting of safe and appropriate speeds alongside infrastructure interventions and sets out changes proposed under the new Speed Rule.

### Recommendations

It is recommended the Board:

- **Note** the strategic context of speed and infrastructure interventions
- **Note** the current approach to setting speed limits under the current and proposed new speed rule
- **Note** the impact of the proposed new speed Rule on the setting of speed limits
- **Approve** the adoption of a phased approach for Speed Reviews which aims to keep pace with community support while continuing to work towards the same long term Road to Zero outcomes

### Strategic relevance

The Government Policy Statement (GPS) on land transport recognises road safety as a strategic priority and is the primary guide for the investment we make in the land transport system. This is further reinforced within Te Kāpehu | Our compass, with improved road safety forming a key part. Waka Kotahi has now embedded a Road to Zero Portfolio approach to ensure appropriate governance, leadership, monitoring and reporting in order to deliver on our commitments, set out in New Zealand's Road to Zero Strategy and Action Plan.

The Speed and Infrastructure Programme is one of the key programmes within the Road to Zero Strategy, aiming to contribute 35% (or 600-650 fewer deaths and serious injuries) towards the 40% targeted reduction in deaths and serious injuries by 2030 against 2018 levels.

## Background

Speed is a critical contributor to road safety. In 2021, 73% of deaths occurred on roads with a speed limit set above the Safe and Appropriate Speed. Recent research estimates that speeding is involved in around 60% of fatal crashes in New Zealand.<sup>1</sup> Speed increases the likelihood of a crash and the severity of the crash if it happens.

Road to Zero sets us on a path towards a Safe System. Creating a Safe System is fundamentally about managing the speed at which interactions occur between vehicles and the road environment to ensure people are not exposed to forces that cause serious injury. Substantial research and evidence shows that there are limits to how much force the human body can withstand in a crash and that people need to be protected from crashes above certain limits<sup>2</sup>. For head-on crashes on rural roads, this limit is 70km/h. Above this level, the risk of fatality increases exponentially (refer to Attachment 1 – Supporting Speed Evidence).

In general, and similar to best-performing countries like Sweden and Norway, Waka Kotahi has considered 80km/h the maximum speed limit in this situation (where infrastructure to prevent head on conflicts is not in place) and has predominantly worked within this regulatory limit under these conditions.

A safe system can be achieved fundamentally in two ways: through 1) physical separation (for example median barriers) in which case speeds can stay higher; or 2) energy management (for example lower speed limits, safety cameras, etc). It is anticipated that, over time, technology will play a greater role in preventing crashes.

Given the topography of much of New Zealand, and the complexity associated with retrofitting and installing infrastructure such as median barriers, speed management is a key safe system intervention for New Zealand roads. This acknowledges that, while the transformation necessary to achieve a Safe System 'end-state' could take some decades, we should always be working in a general direction towards separation of conflict on higher traffic volume roads. Where this cannot be achieved, we should create lower speed environments, or, if there is a mix of road users, create spaces where place is prioritised over movement and people are prioritised over vehicles.

Waka Kotahi seeks to implement the right combination of interventions to deliver a Safe System, including the setting of Safe and Appropriate Speeds within the current regulatory framework. Where infrastructure investment cannot be achieved on high risk areas of the network, speed reductions become a necessary default.

## Setting of Speed Limits

Waka Kotahi is both a Road Controlling Authority (RCA) and the Land Transport regulator.

The Land Transport Rule: Setting of Speed Limits 2017 (the Rule) sets out roles and responsibilities for setting and reviewing speed limits. Under the Land Transport Act 1998, RCAs have the power to manage and set speed limits. The Rule establishes procedures and requirements whereby RCAs may set enforceable speed limits on roads within their jurisdictions.

<sup>1</sup> R.F. Soames Job and Colin Brodie (2022) Understanding the role of Speeding and Speed in Serious Crash Trauma: A Case Study of New Zealand. Journal of Road Safety – Volume 33, Issue 1, 2022 - <https://doi.org/10.33492/JRS-33-1>

<sup>2</sup> ITF (2016), *Zero Road Deaths and Serious Injuries: Leading a Paradigm Shift to a Safe System*, OECD Publishing, Paris. <https://www.itf-oecd.org/sites/default/files/docs/zero-road-deaths.pdf>

Waka Kotahi in its regulatory role provides tools and guidance to RCAs to use in reviewing and setting speed limits. This guidance requires RCAs to set speeds that are, in the RCA's view, safe and appropriate and allows RCAs to set speed limits from a pre-approved list of speed limits ranging from 10km/h to 110km/h. Under the current Rule (2017), when an RCA proposes a 70km/h or 90km/h speed limit, either permanently or temporarily, approval must be sought from the Land Transport regulator prior to use. This requirement is removed under the proposed new Speed Rule.

A new Speed Rule is being proposed (subject to cabinet approval) to come into effect in May 2022. The purpose of the proposed new Speed Rule (the Rule) is to support a new, more co-ordinated approach to speed management. It requires the development of speed management plans which will consider a longer-term financial plan (10 years) and approach for safe and appropriate speeds alongside infrastructure and safety camera interventions, to be reviewed every three years aligned to the NLTP cycle.

The changes provide role clarity within Waka Kotahi (where Waka Kotahi is currently acting as both a regulator as well as an RCA) through the establishment of an independent speed management committee to certify speed management plans. The approval of RCA speed management plans will be performed by the Director of Land Transport, along with functions including the publishing of plans, guidance and setting of timelines.

Waka Kotahi provides tools and guidance to support RCAs to achieve the standard required on the land transport network. In this regulatory capacity, accompanying the new Speed Rule is a new Speed Management Guide. This provides a principles-based approach to supporting achievement of a Safe System, with responsibility residing with RCAs on how they get there.

### ***Impact of the proposed Speed Rule and Guide***

Under the new Speed Rule and Guide, rural safe speeds are expected to progressively transform across the network towards Safe System outcomes with roads set at 80km/h when not fitted with a median barrier. While the new Guide will move to a more principles-based approach, the recommended Safe and Appropriate speed on rural roads will stay similar to current safe speeds under the current Speed Management Guide. Under the current Guide, 97% of the rural road network has a Safe and Appropriate Speed of 80km/h or lower, due in part to the topography of much of rural New Zealand. The remainder of the state highway network requires physical separation in order to safely justify speeds over 80km/h.

In urban areas, most streets and local roads will have a safe speed of 30km/h. This aligns with the recommendations from the 2020 Global Ministerial Conference on Road Safety that a maximum speed limit of 30km/h be mandated in urban areas in order to protect vulnerable road users (refer to Attachment 1 – Supporting Speed Evidence), and achieve sustainability goals for liveable cities, health and security.

Targets have been set for the safer speeds around schools, moving towards 30km/h in urban areas and 60km/h or less in rural areas.

While the new Rule and Guide drive alignment to Road to Zero strategic outcomes and Safe System, RCAs have flexibility on how they move towards achieving the ideal Safe System “end state”, and must consider a whole of system approach, which includes integrating with neighbouring parts of the network.

### ***Programme of Speed Changes***

Waka Kotahi, as the RCA for the state highway network, leads the delivery of the Speed and Infrastructure programme. As a contribution towards a Safe System, and as a direct contribution to the Road to Zero 40% DSI reduction target, the Speed and Infrastructure Programme (SIP) aims to achieve at least 1,000kms of median barriers and 10,000kms of network treated with speed

management by 2030. This represents a step towards the “end state”, targeting around 10% of the network by 2030.

Within the current NLTP 2021-24, the Speed and Infrastructure delivery programme is intending to review 4,100 kilometres of the State Highway network and assess for potential speed changes. Of this, 3,000km is forecasted to be implemented during this period.

Changes across the state highway network represent a significant level of change, requiring strong engagement and stakeholder management in order to support this change alongside other road safety interventions.

## **Key issues**

To achieve the 40% targeted reduction in deaths and serious injuries by 2030 and set New Zealand on a path towards Vision Zero, Waka Kotahi and delivery partners need to drive change across the system and gain buy-in from communities and stakeholders to implement the required interventions which will deliver the most benefit.

### ***Stakeholder appetite for change***

While there is some support from communities and stakeholders for speed reductions on some of the network, recent speed reviews, such as the State Highway 5 Taupō to Bay View corridor, have received strong opposition to reductions, citing economic and social impacts along parts of strategic freight corridors in particular.

For Northland and north Auckland, engagement was completed in late 2021 on a regional approach to speed reviews across 11 corridors. Engagement themes included a need for improved road conditions and maintenance across corridors, lower speed limits needed before and within urban areas, particularly on urban fringes, near schools and marae, or on narrow winding sections, and retention of 100km/h speed limits in rural environments and areas where the road is suitable. There are also concerns over driver behaviour.

While some speed reductions on some of the far north corridors will be well received – and have been demanded for some time – there is likely to be strong push-back in response to proposed 80km/h limits on higher volume relatively straight rural freight corridors where current infrastructure investment is not enough to justify speeds over 80km/h. Consultation was signalled to commence mid- February 2022 and has been paused at this time, partly to due COVID impacts on planned hui.

### ***Creating social licence***

The new public awareness campaign, launched in February 2022, is still in its very early stages. The intent of this campaign is to disrupt the general sense of resignation when it comes to road safety and deaths and serious injuries. It is also intended to create a social licence with a goal of people not only supporting the measures which make our roads safer, but demanding them. However, we are only at the start of a planned three-year programme that forms part of a decade-long effort to raise awareness, and baseline levels of Road to Zero are very low, at 15%.

### ***Infrastructure investment***

Recent speed management consultation and engagement indicates strong opposition for speed reductions amongst some sectors. The public and stakeholders view the state highway network and rural roads as key economic and social connections. This is predominantly on rural roads with historic limits of 100km/h. As more speed reviews roll out, technical assessments, alongside planned infrastructure investment within the current regulatory settings, will likely recommend reductions to 80km/h over time across much of rural New Zealand in order to meet best practice road safety outcomes.



While these changes are necessary to achieve our long term Road to Zero commitments and contribution towards a 40% reduction in deaths and serious injuries by 2030, there is a short-term risk of further alienation of stakeholders, at a time when building strong support and road safety advocacy is key to achieve longer-term Safe System outcomes.

## Options and recommendations

While reducing deaths and serious injuries on our roads is of paramount importance, long-term Vision Zero success requires Waka Kotahi to build buy-in and support with communities and stakeholders. There is considerable risk in getting too far ahead of community or stakeholder opinions. Recently implemented speed reviews and engagements have provided an opportunity to gauge current public and stakeholder appetite and support.

The Road to Zero executive sub committee recently discussed the lessons learnt from recent engagements, and in particular the considerable pushback received on changing sections of SH5 from 100km to 80km.

There is considerable concern from our regional teams about pushing ahead with other sensitive speed reviews and consequential loss of government support and reputational damage. However, this must be balanced against our core purpose of achieving the long-term reduction in deaths and serious injuries set out in Road to Zero.

To mitigate future risk, the sub-committee has agreed that future high profile or sensitive speed reviews will come to the committee for discussion before we undertake public engagement. In addition, the sub-committee also discussed other options, such as larger suite of speed limit tools and looking at the pace of change in the short term.

Two options for future speed reviews are set out in Table 1 for consideration by the Board, alongside associated benefits and risks. The sub-committee has a preference for Option 2.

Options	Details	Benefits	Risks
<b>Option 1 - No change</b>	Proceed at pace with the current approach to speed reviews, according to the current regulatory framework.	<ul style="list-style-type: none"> <li>Maximises reductions in deaths and serious injuries on roads</li> </ul>	<ul style="list-style-type: none"> <li>Loss of support from public and stakeholders for Road to Zero</li> <li>Loss of confidence in Safe System interventions</li> <li>Perceived economic and social impact to communities</li> <li>Legal challenges from communities</li> </ul>
<b>Option 2 – Phased approach</b>	Working towards the same long-term Road to Zero outcomes, implementing a phased approach in the short term. This approach would proceed at pace with community supported speed reviews and looks to build social licence and offer short-term options for more contentious review, eg this could include the interim use of 90km/h based on a certain set of criteria	<ul style="list-style-type: none"> <li>Ability to develop a longer term strategic view of feasibility to achieve infrastructure investment to address stakeholder feedback</li> <li>Ability to continue to drive change where there is social licence</li> <li>Allows for further embedding of the public awareness campaign</li> <li>Allows for the consideration of 90km/h as an interim solution, but alongside other options</li> </ul>	<ul style="list-style-type: none"> <li>Delays the treatment of some high-risk areas of the network</li> <li>Perception of Waka Kotahi backing down from tough conversations</li> <li>May impact ability to meet targets set out in the Road to Zero Strategy</li> <li>Short-term delay for in flight speed reviews which could be impacted by this approach (for example Northland)</li> </ul>

*Table 1 Speed review options and associated benefits and risks*

When considering the application of these options to the Northland and north Auckland regional speed review, Option 1 would see consultation proceeding as per current best-practice

recommendations and not slow down necessary speed reviews, many of which have been demanded for some time. **section 9(2)(g)(i)**

## Out of scope

Option 2 would provide a phased approach to balance the transformation of the road network over time towards Safe System outcomes and bringing communities and stakeholders towards greater buy-in and support.

For the Northland and north Auckland regional speed review, with some amendment required to consultation collateral, Option 2 would see a two-phase approach, with phase one consisting community-supported corridors proceeding to consultation, while holding back on some of the more contentious corridors in order to complete further optioneering in response to engagement feedback. This would enable further consideration of the use of 90km/h under set criteria and subject to Regulatory approval, and/or retaining 100km/h alongside the likelihood of potential future infrastructure investment. This option would delay phase 1 by 2-3 months, and phase 2 by 12-18 months.

It is recommended the Board approves Option 2, allowing for the adoption of a pragmatic approach towards achieving long term road safety outcomes.

## Health & safety, customer/stakeholder & environmental impact

The impact of this decision is considered by Waka Kotahi to be positive in terms of health and safety, of the public and other stakeholders, and the environment.

## Attachments

**Attachment 1** Supporting Speed Evidence



## Attachment 1

### Supporting speed evidence

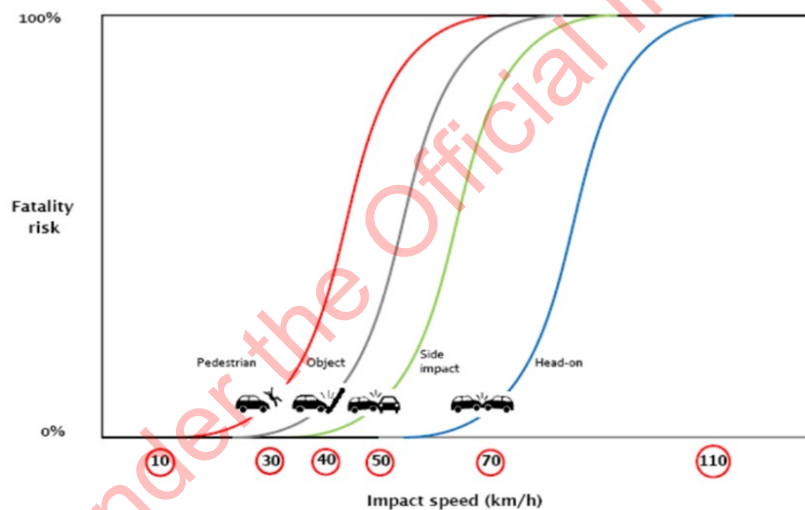
#### 1. Safe system speed targets for road users, based on road and section types

Table 5.1. Safe impact speeds for different situations

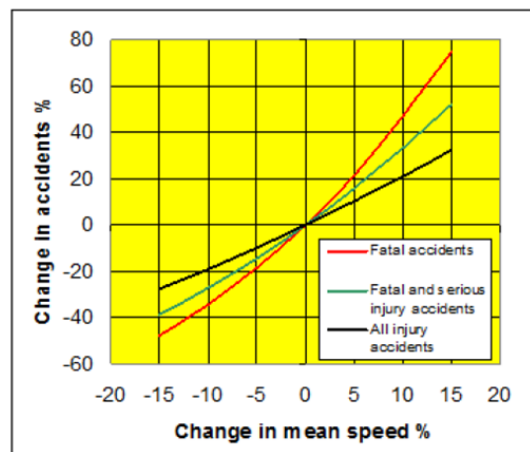
Road and section types combined with road users	Target Safe System speed
Roads and sections used by cars and vulnerable users	30 km/h
Intersections with possible side-on conflicts between cars	50 km/h
Roads with possible frontal conflicts between cars	70 km/h
Roads with no possible frontal or side-on conflicts between vehicles and no vulnerable road users	$\geq 100$ km/h

Source: ECMT, 2006.

#### 2. Effects of impact speed on fatality risk for road user and crash type



#### 3. Relationship between mean speeds and change in accident percentage



Source: Nilsson (2004)