

Treatment of a 90km/h Speed Limit

In confidence

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Purpose

This paper aims to provide the Board with an overview of the current use of a 90km/h speed limit and the risks associated with this approach.

Recommendations

It is recommended the Board:

- **Note** the current approach to setting speed limits within the existing regulatory framework and
- **Note** the use of 90km/h under the current and future Speed Rule
- **Note** risks associated with the use of 90km/h and recommendations to consider its use only under a specific set of conditions as an interim measure and alongside a strategic infrastructure investment assessment

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 deaths and serious injuries) towards the 40% targeted reduction in deaths and serious injuries by 2030 against 2018 levels.

Background

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

The Land Transport Rule: Setting of Speed Limits 2017 sets out roles and responsibilities for setting speed limits 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.

Waka Kotahi in its regulatory role can add any conditions it considers appropriate to approvals and these are published by notice in the Gazette. In general, the approach from Waka Kotahi has been to limit approval of 90km/h speed limits with a view to minimising the number of different speed limits and speed limit changes across the network.

The new speed rule (still to be approved by Cabinet) removes this formal approval requirement, to provide RCAs more flexibility, but does require a review of any new or existing 90km/h speed limits in the next scheduled speed management plan to either confirm continued use of 90km/h or confirm a change to 80km/h or 100km/h. Under the new rule, the Director will certify the process that RCAs take to review and set speed limits in their speed management plans. Under the current rule, the Director is consulted on and approves proposed speed changes of 70km/h, 90km/h and 110km.

Waka Kotahi (RCA) approach to setting current speed limits

Speed limits start with an indicative Safe and Appropriate Speed set out in MegaMaps, reflecting the criteria set out in the current Speed Management Guide. These criteria include crash history, current operating speeds, traffic volumes, road classification and various characteristics of the road environment including carriageway width, road alignment, roadside hazards and roadside development. RCAs use this information to then undertake speed reviews by way of a technical assessment. The assessment reviews and refines the assumptions that underpin the indicative Safe and Appropriate Speed based on a detailed review of local and site specific conditions. This process helps to refine and confirm the relevant safe and appropriate for the specific road.

Under Road to Zero, Waka Kotahi is committed to applying a Safe System approach to setting safe and appropriate speed limits. A Safe System approach is 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. Evidence shows that people should be protected from impact speeds above 70km/h on rural roads without infrastructure to prevent head on conflicts.

In line with international practice, which has been adopted by the best-performing countries like Sweden and Norway, 80km/h is considered the maximum speed limit in this situation (where infrastructure to prevent head on conflicts is not in place). Waka Kotahi has been working within this regulatory limit in accordance with these conditions.

Current use of a 90km/h speed limit

A small number of sections of the state highway network have previously been granted approval for 90km/h on a temporary basis, in lieu of either future infrastructure improvements to support a 100km/h speed limit or a future change to 80km/h. This includes implementation on rural open-road sections of SH6 Blenheim to Nelson in late 2020 in response to strong opposition to proposed reductions to 80km/h. These are proposed to remain in place until June 2023 at which time they will

be reviewed to determine whether they are still appropriate and to ensure they are achieving the desired reduction in deaths and serious injuries.

At the time, this went some way to addressing concerns from the freight industry, while still enabling a reduction in the risk of deaths of serious injuries associated with the previous 100km/h speed limit along this section of the corridor.

Early signs are that there has been a noticeable reduction in serious crashes since the safer speed limits were introduced, with no fatal crashes and only one serious injury crash recorded since the speed changes as at 30 November 2021. As of early January 2022, there had been no further fatal crashes since 30 November 2021. There has also been a sharp drop in the number of non-injury crashes. While the results are encouraging, it must be noted that the one year timeframe post implementation is still very early days, and has included several weeks of Covid-19 lockdowns and lower traffic volumes with no tourist traffic (typically evaluations are based on 5-years pre and post data).

Key issues

The current speed management consultation and engagement on a number of corridors indicates strong opposition to speed reductions. 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 across much of rural New Zealand in order to align with Safe System principles and to meet best practice road safety outcomes as fast as possible.

While safety infrastructure improvements are targeted towards higher volume, higher crash density corridors, much of the rural New Zealand road network will not receive significant infrastructure upgrades over the coming decade. For context, the Speed and Infrastructure Programme is targeting 1,000kms of median barrier and roughly a further 2,000kms of infrastructure improvements by 2030. Not only will it take time to implement these improvements, but this leaves much of New Zealand's rural road network where we are not able to safely justify speeds over 80km/h on state highways.

As the outcomes of speed reviews, and uncertainty around the timing and ability to achieve infrastructure investment, result in recommendations for lower speeds, 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 achieving longer-term Safe System outcomes.

Risks with the use of 90km/h

Research shows that the risk of fatality increases exponentially for head-on crashes at speeds above 70km/h where there is not physical separation (for example median barriers) in place as shown in Figure 1.

Therefore, while 90km/h is allowable under the current (subject to approval by the regulator) and future speed rule, adoption of a 90km/h speed limit where physical separation cannot be achieved is not in line with Safe System or international best-practice and will increase the risk of deaths and serious injuries as compared with 80km/h.

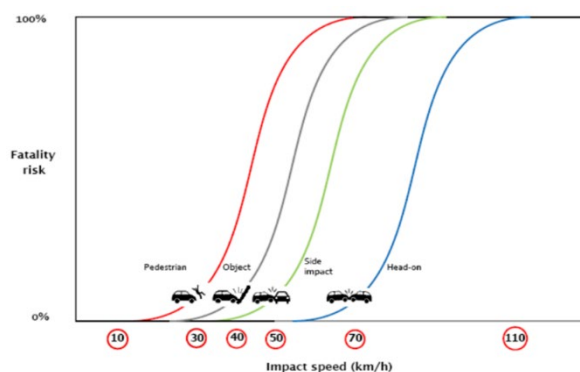


Figure 1 Fatality risk associated with increasing speeds

In addition, use of 90km/h will not fix all of the backlash associated with reducing speeds and instead risks creating confusion and a precedent for future use.

Recommendation and next steps

To achieve an initial 40% reduction in deaths and serious injuries and put New Zealand on a path towards Vision Zero, achievement of best practice safe and appropriate speeds is fundamental. While 90km/h still reduces deaths and serious injury risk as compared with 100km/h limits, it is not recommended to consider a blanket use of 90km/h.

The evidence clearly points to a speed limit of 80km/h where a median barrier is not installed to align with the Safe System principles adopted under Road to Zero. Noting that this is recognised as an “end-state” in terms of applying internationally bench-marked regulatory standards, there is room for some flexibility in how RCAs work towards this. An option is to establish conditions under which it may be appropriate to consider 90km/h speed limits as an interim step on targeted parts of the network.

The use of 90km/h should not be considered in isolation of other speed options (such as 100km/h where still appropriate) and should only be applied under a specific set of criteria and on an interim basis. Examples of potential criteria include:

1. *Where the corridor or sections of the corridor are subject to significant (ideally transformational, or safer corridor) infrastructure upgrades within the next 10-year SIP programme;*
AND
Where the corridor has a KiwiRAP/iRAP¹ or equivalent 3 Star minimum (i.e. reasonably high standard roads where funding for infrastructure is likely in the future but not in the short to medium term); a reduction to 90km/h could be considered in the interim;
OR
2. *Where the corridor or sections of the corridor have an ONF classification of inter-regional or rural connector typically with a movement rating of M1-M3 (targeting ONRC classification of primary collector or above);*
AND
Where the corridor has a KiwiRAP/iRAP or equivalent 3 Star minimum (i.e. if the corridor does not meet the above criteria and thus likely subject to a future 80km/h limit but is a reasonably high standard road and significant national / regional freight route).
3. *The above criteria would not apply where current operating speeds on the corridor or sections of the corridor are ≥85km/h (i.e. roads with operating speeds that are already reasonably aligned with 80km/h would be excluded).*

It is important to note that the potential criteria outlined above is preliminary in nature and requires further testing and refinement. The intent would be to restrict consideration of 90km/h as an interim step and reserved for relatively flat and straight, reasonable standard, high freight routes. It is noted that in some cases there may still be justification for leaving some corridors at 100km/h for interim periods, particularly with regard to the timing of future infrastructure improvements.

It is noted that the resulting locations where 90km/h could possibly be considered as an option, represents a relatively small proportion of the network and would therefore only go some way to alleviating current public and stakeholder tensions associated with speed reductions from 100km/h to 80km/h.

Waka Kotahi will seek to further refine these conditions and test which areas of the network could be considered under these conditions. Alongside this we will develop a strategic view of what infrastructure investment would be required to achieve best practice Safe System outcomes to support retaining higher speed limits.

¹ KiwiRAP (also known as iRAP) is the New Zealand Road Assessment programme which is a set of tools and methodologies used to provide a safety performance rating for roads

Together, this will inform a proposed future approach and potential use of 90km/h alongside the continued interim use of 100km/h.

In addition, to reach our road safety outcomes, we must seek to achieve physical separation, which can help to support higher speeds. This should remain our strategy on strategic freight corridors and rural connectors.

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.

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