

MINISTERIAL BRIEFING NOTE

Subject	12-month review of speed changes on State Highway 5 (Rangitaiki to Esk Valley)
Date	7 September 2023
Briefing number	BRI-2680

Contact(s) for telephone discussion (if required)				
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Action taken by Office of the Minister

- ☐ Noted
- ☐ Seen by Minister
- ☐ Agreed
- ☐ Feedback provided
- ☐ Forwarded to
- ☐ Needs change [please specify]
- ☐ Withdrawn
- ☐ Overtaken by events

7 September 2023

Hon David Parker – Minister of Transport

12 MONTH REVIEW OF SPEED CHANGES ON STATE HIGHWAY 5

Purpose

1. The purpose of this briefing is to inform you of the outcome of the independent review of speed changes on State Highway 5 (SH5) which came into effect in February 2022.

Background and context

2. The Road to Zero Strategy and Action Plan 2020-2022 requires Waka Kotahi NZ Transport Agency to implement speed management changes on the state highway network to contribute to the Road to Zero target by 2030.
3. On 18 February 2022, a section of SH5 from Rangitaiki to Esk Valley had its permanent speed reduced from 100 km/h to 80 km/h. There was considerable negative reaction to the speed changes. The former Minister of Transport, Hon Michael Wood requested a review of the impact of speed changes on SH5 Rangitaiki to Esk Valley.
4. An independent review was commissioned from Ernst & Young and a separate peer review was provided by Ascari.

The reports and conclusions

5. In January 2022, Waka Kotahi commissioned an evaluation of the impact of the speed limit reduction, considering the safety, social, and economic impact in response to key partners and community leaders who desired further analysis and evidence demonstrating the wider appropriateness of the reduced speed limit.

Ernst & Young Report

6. Ernst & Young was commissioned to undertake an independent evaluation of the economic impact of reducing the speed limit on SH5 Rangitaiki to Esk Valley on both costs and benefits for the 12-month period from the implementation date of 18 February 2022 until February 2023. This involved estimating the road safety outcomes and measuring the result as an overall net cost. A range of benefits and dis-benefits have been estimated to allow for a variety of safety outcomes. The report also examines the social cost for death or serious injury to occur in a crash; the increase in travel time costs; a reduction in vehicle operating costs and reduced emission costing to come to an overall conclusion.

7. The conclusion in the executive summary states:

*'We estimate the economic impact of the speed limit change on SH5 to be \$92.6 million in net benefits for the period March 2022 – February 2023. Sensitivity analysis, using alternative modelling assumptions, leads to a range in net benefits of \$65m to \$120m. Waka Kotahi can be confident that the speed limit change on SH5 has led to improved economic outcomes for New Zealanders.'*¹

8. The report (Appendix 1) is a comprehensive economic analysis of the benefits of the potential crashes avoided in the March 2022 to February 2023 period, while allowing for the travel time cost dis-benefit to all corridor users.
9. It should be noted that the economic cost of a death or serious injury (DSI) was recently increased by Te Manatū Waka Ministry of Transport, which results in a higher benefit cost ratio than would have previously been calculated.

Ascari Peer Review

10. Aligned with industry best practice the evaluation included a peer review being conducted to ensure the robustness of the original findings and consistent with relevant guidelines and methodologies. The purpose of the peer review is to provide an additional level of assurance on conclusions made in the original.
11. In August 2023, Ascari was appointed to undertake the peer review. The reviewer focused on the conformity of the Ernst & Young review with best practice and relevant guidelines and concentrated on the areas below:
- Economic methodology – scope of benefits, assumptions and input parameters.
 - Validity and reliability of input data.
 - Consideration of alignment with the methodology applied in other similar reviews.
 - Additionally, the review also considers:
 - Whether the evidence provided supports and aligns with the findings of the Review.
 - Whether there are any clarifications needed to ensure that readers are very clear about the approach, assumptions, methodology and results.
12. Notwithstanding recommendations that the peer reviewer would consider for incorporation in the original report, the summary from the peer review (Appendix 2) states:
- 'Overall the EY SH5 Rangitaiki to Esk Valley Speed Reduction Review can be considered to be a reliable, evidence based assessment of the effects of the SH5 speed reduction on the number and severity of crashes and on travel time, vehicle operating costs and vehicle emissions.'*²
13. This concurs with the original report conclusion that the benefits of the reduction in number and severity of crashes, would outweigh the negative impacts of lowering a speed limit.

¹ Waka Kotahi Speed Review 2023 - Economic impact analysis – June 2023.

² Peer Review: State Highway 5 Rangitaiki to Esk Valley Speed Reduction Review undertaken by EY August 2023.

Waka Kotahi Response

14. After an internal Waka Kotahi review with the road safety subject matter experts, it was identified that the benefits were noticeably higher than would normally be expected for a speed limit reduction of 20km/h. This is a particularly significant factor on a length of corridor that would have been unlikely to realise a mean operating speed close to the original posted speed limit due to the winding nature of the route. It was agreed that an independent Road Safety Consultancy would assess the road safety assumptions made by Ernst & Young to help refine the benefits and fine-tune the resultant monetary valuation.

AECOM Road Safety Assessment

15. Waka Kotahi engaged AECOM to review both the Ernst and Young report and the Ascari peer review. As the monetary benefits rely on the road safety benefit calculations, the AECOM assessment (Appendix three) focused solely on the assumptions on the technical approach made in determining these benefits.

16. They conclude that there are some areas that could benefit from further, more robust review to provide a more accurate economic valuation.

*'There are several concerns with the Economic Analysis that could have significant impacts on the reported benefits related to the speed limit reduction on SH5 from Rangitaiki to Esk Valley and AECOM recommends a subsequent review of the findings to confirm the validity of the results.'*³

17. Specifically, the AECOM review did note that there have been infrastructure improvements, increased policing, safety billboards etc., the benefit of which, could not be separated out. It was also noted that the data was only for 12 months – and therefore there was a limited ability to consider natural fluctuations over time. AECOM recognises that Ernst & Young presents ranges of benefit that considers some of the variability.
18. The conclusion from AECOM does not refute the results from the Ernst & Young report, however, as aligned with the Ascari peer review, AECOM seeks clarification and refinement of the safety benefit assumptions and reassessment of the monetary benefit.
19. Waka Kotahi will take the feedback from AECOM when it conducts its next review.

Release of the reports

20. Key stakeholders will be advised of the reports' availability, followed by publication on Waka Kotahi website here: www.nzta.govt.nz/projects/sh5-permanent-speed-limits/. A media statement has been drafted in preparation for any media interest.

Conclusion

21. Based on the 12-month data used in the Ernst & Young review, there are economic benefits arising from the SH5 speed review.

³ Re: Review of Economic Impact Analysis for SH5: Rangitaiki to Esk Valley.

22. The benefits will look higher than previous analyses because of the change in the figure used for the economic impact of a DSI.

23. As noted above, there are limitations on the review as it is only based on 12 months of data.

24. A more comprehensive review will be done at a later date with a longer data set (about 4 years of data).

It is recommended that you:

1. **Note** the content of this briefing



Brett Gliddon

Group General Manager – Transport Services

Hon David Parker, Minister of Transport

Date: 2023