

MINISTERIAL BRIEFING NOTE

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| Subject | Accelerating median barrier delivery |
| Date | 7 December 2022 |
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| 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- ☐ Withdrawn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 December 2022

Hon Michael Wood – Minister of Transport

ACCELERATING MEDIAN BARRIER DELIVERY

Purpose

1. This briefing sets out how Waka Kotahi NZ Transport Agency will accelerate median barrier delivery through to 2030 to achieve the Road to Zero targets.

Key points

2. Median barrier delivery on state highways and local roads is currently not tracking to meet the 1,000km by 2030 target. The key issues include local council funding constraints, the realistic pace of construction of retrofitting works, property acquisition, impacts on utility services, and consent requirements.
3. Waka Kotahi is committed to meeting the target through:
 - accelerating the rate of delivery to 100 percent by 2024
 - over-programming to ensure long-term transformation of the network can be achieved; delivering more barriers on highways to compensate for any under-delivery on local roads.
4. This acceleration will require some significant changes in our approach, including focusing on pragmatic design, treatment lengths, streamlining procurement, and staged funding. To drive the longer-term shifts needed, we are focusing on moving away from project-by-project funding and moving to long-term partnerships with industry. Awareness and support from external stakeholders and the community will play a critical part in achieving the 2030 target, including clear communications and engagement.
5. With these acceleration initiatives we will be on track to deliver 1,000km of barrier on state highways and local roads by 2030.
6. We are also exploring potential changes to broader policy settings which could enable more efficient delivery and will seek the Waka Kotahi Board's direction on this in early 2023.

Background and context

7. To achieve the Road to Zero goal of reducing deaths and serious injuries by 40 percent by 2030, we need to transform at least 1,000km of the road network with flexible median barriers. The 1,000km overall target is split between 200km on local roads and 800km on highways.
8. Across both highway and local road programmes, the current delivery is not tracking to meet this target. Key factors impacting the rate of median barrier delivery include:
 - Funding constraints – Local council share of funding is constrained due to rate rise pressures and other infrastructure funding needs.

- Social licence – Lack of public acceptance of median barriers, particularly for residents adjoining the road, heavy and oversize haulage operators, and road/utility maintenance operators.
 - Retrofitting – Retrofit construction works are inherently slower and more complex than greenfield construction due to working alongside live lanes, aligning with maintenance operations, maintaining an operating network and the linear nature of the work.
 - Utility impacts – Widening the road to accommodate median barrier often impacts on existing underground and overhead utility services which require relocation or additional protection.
 - Property acquisition – Negotiation with landowners for partial (often minor) land purchase is complex as it includes impact on how they access the property, hence for businesses and farms involves wider financial impacts.
 - Consent requirements – Minor changes to drainage patterns or drainage infrastructure can often trigger the need for consents. The new consents require current non-compliant run-off to be addressed which requires significant additional work as well as additional land purchase.
9. The original Road to Zero modelling was based on 2018 network data. The current speed and Infrastructure Programme (SIP) was developed using the same 2018 data and network plans at the time. Many of the corridors originally identified for median barrier installation have since been earmarked for accelerated urban development, which has reduced the amount of median barrier or in some cases eliminated it entirely. While some network changes were anticipated, the actual impact has been far greater.
10. Waka Kotahi is committed to meeting the 2030 target through:
- accelerating delivery of the programme to achieve the desired delivery rate, including doubling delivery before the next National Land Transport Programme (NLTP 2024-27)
 - over-programming to ensure long-term transformation of the network can be achieved; delivering more barriers on highways to compensate for potential under-delivery on local roads.

Short-term improvements

11. Waka Kotahi is making the following changes to improve the short-term delivery of median barrier, which will allow significant additional construction activities in the current construction season (October 2022-March 2023):
- Treatment length approach – Identifying what sections of projects we can progress now which need basic design and are not controversial. There will be complex parts of corridors which will need to move slower, but these elements should not dictate the pace of the wider project.
 - Pragmatic design approach – Identifying repeatable design elements which can be standardised. This will reduce time spent during the design phase, as well as allow scarce design resources to focus on elements which require bespoke solutions.

- Staged funding – A staged release of funding to align with the above treatment length approach is required to enable earlier construction (implementation and property). Typically, a project will be fully designed before seeking release of implementation funding.
- Streamlined procurement – Streamlining our procurement approach which will reduce tendering time (typically three months) and help to balance supplier resources in the short term.
- Construction approach – Exploring alternative construction methodologies such as targeted highway closures to allow full access to site. Note this will require significant external engagement to ensure awareness and may receive criticism about the short term impacts.

Longer-term initiatives

12. Further to the initiatives above, Waka Kotahi is working on the following changes to ensure the pipeline of projects is secure through to 2030 and higher delivery rates can be sustained and to improve future delivery confidence:
 - Programme funding – we are moving away from project-by-project funding to allow for more flexibility and agility in delivery, including better alignment with planned maintenance and renewal activities. This approach is well progressed and has support from the Treasury. The 2024-27 NLTP will use the full programme funding mechanism, however we are implementing a number of steps towards this approach in the meantime. This will enable delivery at pace, such as funding early works to allow construction in stages and enabling works to allow alignment with renewal works.
 - Long-term partnerships with industry – Moving to a long-term partnership approach with the construction industry. We are establishing three framework contracts for the Upper North Island, Lower North Island and South Island. This will provide them more certainty and security to invest in resources to support delivery of the programme, particularly securing personnel in regional centres. This also allows our partners to invest in specialist resources such as barrier install and line-marking equipment which are currently all stretched to support SIP and ongoing increases in network maintenance. We are working to procure regional frameworks through 2023 and have them established to start delivery in the 2023/24 construction season.

Local roads

13. The original 10-year programme included 200km of planned median barrier on local roads. 18km of median barrier is currently in design with Auckland Transport and will likely be constructed in this NLTP. We have explored accelerating delivery with councils, but any acceleration is unlikely due to the funding pressures they are experiencing.
14. Delivery of median barriers on local roads will likely continue to struggle. Without significant changes in funding rules, we estimate that councils will achieve around 70km by 2030. This shortfall on local roads could be absorbed with the over-programming on highways.

Over-programming to achieve 2030 outcomes

15. To deliver against the 2030 Road to Zero outcomes we have considered the lessons learned from the programme to date to ensure we have the right balance of interventions and corridors.

16. On top of the 460km of median barrier corridor projects that are completed or underway, we have identified approximately 560km of candidate median barrier corridors for inclusion in the programme from 24-27 NLTP onwards. This will enable us to achieve the target of 1,000 km of highway and local roads. Maps of the corridors are included in Attachments 1 and 2.
17. The 560km includes approximately 25 percent of additional corridors to be included as over-programming. These corridors still require ground-truthing to establish the actual length of median barrier that can be achieved. The corridors all meet the same safety risk criteria as assumed in the original Programme Business Case and underlying modelling and have a lower delivery complexity. Beyond this list, we consider the corridors to be more complex and we need to balance a number of outcomes, making delivery by 2030 difficult and very costly or considering a lower safety risk which will be picked up in the 2050 modelling for Road to Zero.

Risks and mitigations

18. Accelerating and making fundamental changes to SIP delivery will require understanding, awareness and support from external stakeholders and the community. This may be challenging to achieve given the current lack of public acceptance of median barriers, particularly for residents adjoining the road, heavy and oversize haulage operators, and road/utility maintenance operators. Clear communications and engagement will be required to help manage this risk, and to underline the importance of the 2030 target.
19. In addition, as with all infrastructure programmes and projects in the current operating environment, the works delivered under Road to Zero are subject to significant cost escalation. Recent tenders received on projects in the \$20-30 million range have been up to 20 percent higher than estimated. While the longer-term procurement and partnership approach we are taking should mitigate this to an extent, a number of factors will continue to put pressure on cost.
20. The impact of cost escalation will be fully assessed as part of the SIP Programme Business Case refresh. This involves resetting the baseline costs from the previous 2018 base modelling and estimates on which the strategy and programme is based. The Government Policy Statement on Land Transport (GPS) funding limits may also drive re-prioritisation of the programme.

Median barrier being delivered on new build projects

21. We note that median barrier is included on most new build projects, as the Expressway and Motorway standards require median separation. While these projects do not contribute to the 800km target under Road to Zero, Waka Kotahi will in future be reporting this alongside the retrofit improvements being made and planned.

Broader policy settings to support delivery

22. Waka Kotahi is exploring potential changes to broader policy settings which could enable more efficient delivery. If there is merit in any changes these will be discussed with the Waka Kotahi Board in the new year. Initial topics being considered include:

- Targeted Enhanced Funding Assistance Rates (TEFAR) for Councils on key infrastructure interventions
- streamlining consenting to provide certainty on timing and allow delivery at pace
- alternative funding sources to take pressure off the National Land Transport Fund.

Next steps

23. The above programme adjustments are being worked on in conjunction with development of the 24-27 NLTP. Opportunities to bring works forward will be actively promoted through the remainder of this NLTP.
24. The over-programming will be considered as part of the SIP Programme Business Case and State Highway Investment Proposal, both due for submission to the Waka Kotahi Board in mid-2023.

It is recommended that you:

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

**Brett Gliddon**

General Manager, Transport Services

Hon Michael Wood, Minister of Transport

Date: 2022

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