

BOARD PAPER

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Meeting date:	15 August 2014
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Recommended by:	Tommy Parker, Group Manager (Highways and Network Operations)
Board function:	Setting sector and organisational direction
Subject:	Support for release of draft SHAMP to regional transport committees



PURPOSE

1. To seek NZ Transport Agency Board approval to release the draft State Highway Activity Management Plan 2015-18 (SHAMP) to Regional Transport Committees on 22 August as part of the Regional Land Transport Plan/National Land Transport Programme development process.
2. To support a conversation about the balance between investment in activities that support economic growth and those that promote safety; the maintenance risk around the need to do more repair works than budgeted; and the way in which resilience will play out in the 2015-18 NLTP.



SUMMARY

3. The SHAMP is the basis for the state highway bid for future maintenance, renewals operations and improvements funding from the NLTP.
4. The Investment and Operations Board Committee (I&O Paper Number 14/07/118) received an overview in July of the proposed approach for developing the SHAMP 2015-18, acknowledging and understanding some of the risks and challenges ahead.
5. Our proposed approach to maintenance and renewals is to target continued efficiency gains across our business, through smarter ways of delivering levels of service on all classifications of state highway, and by targeting the levels of service appropriate to each classification under the One Network Road Classification framework. With this approach comes a growing risk that increased repairs are required to retain appropriate levels of service.

6. The proposed 10-year programme places greater emphasis on investment to achieve safety outcomes than our present commitments. This would result in an overall programme emphasis of around 80:20 economic growth:safety versus the 90:10 trajectory of our current commitments.
7. In the important area of resilience, for the 2015-18 NLTP our focus will lie on a programme of targeted priority spot treatments coupled with programme development of our highest risk corridors.
8. We seek Board approval for the final draft SHAMP (located in the Boardbooks Resource Centre) and its release to Regional Transport Committees so that the RLTPs can be developed. The first deadline is the Waikato RTC, which requires our draft SHAMP by 25 August.
9. The draft SHAMP is based on the direction and funding forecasts set within the draft GPS and current 2012-2015 Investment and Revenue Assessment Framework. This places the SHAMP in the same context as our approved organisation (AO) partners. We will be updating and amending the draft SHAMP in response to emerging NLTP guidance as it is made available to AOs through the RLTP development process.



RECOMMENDATION

10. That the New Zealand Transport Agency Board **approves** the release the draft State Highway Activity Management Plan 2015-18 to regional transport committees as part of the RLTP / NLTP development process.



BACKGROUND

11. The SHAMP is the basis for the state highway bid for future maintenance, renewals operations and improvements funding from the NLTP. It is a 10 year programme with detailed three and six year programmes aligned to meet the requirements of the NLTP and RLTP processes respectively.
12. The SHAMP has been prepared as a business case. The strategic case for the SHAMP identified there will be an increasing mismatch between service levels (both under and over supply against our One Network Road Classification) and demand on our state highways over the next ten years, potentially leading to inefficiencies when it comes to moving people and goods. This is coupled with the recognition that some highways are still not sufficiently forgiving for the way they are used, exacerbating the safety risk to road users.
13. The strategic case concluded that the SHAMP should focus on these two elements with our key focus remaining on enabling economic growth. This focus is well aligned with the draft GPS for 2015-2024 and our *Early Investment Signals* which set out some clear expectations around investment priorities for the 2015-2018 National Land Transport Fund.
14. We have taken a nationally planned approach to the SHAMP. Our regional teams have developed regional programmes that have then been moderated to form an overall national programme. In developing the SHAMP we have been guided by the draft GPS and our overarching strategy and operational policy direction including:
 - our Statement of Intent 2014-18
 - the One Network Road Classification and key journeys
 - intervention hierarchy

- Early Investment Signals.
15. A key difference to the way we have developed this SHAMP is the consideration of delivering improvements through a whole corridor and network approach, coupled with a greater overall national direction on key focus areas, particularly around safety, resilience and freight productivity.
 16. While in previous NLTP periods we have been able to promote programmes and packages of work, the adoption of this approach has been somewhat limited and, in the main, our programme has consisted of individual projects across the network. A drive for greater value and tangible outcomes has led us to give greater emphasis in the next SHAMP towards corridor/urban network programmes that collectively yield greater overall benefits.



MAINTAINING OUR NETWORK

17. Our proposed approach to maintenance and renewals within the draft SHAMP is to target continued efficiency gains across all aspects of our business. This happens both through smarter ways of delivering levels of service on all classifications of state highway, and by targeting the levels of service appropriate to each classification of state highway under the One Network Road Classification framework. A significant contribution is made on lower classification state highways by continuing to work infrastructure for longer before it is renewed, and by implementing further improvements to our maintenance practices.
18. The extended cycle times will cause a gradual worsening in the condition of network infrastructure on lower classification state highways, but no less safe than it is today because only about 10 percent will be in service for a year longer than before.

19. The cost of this programme is expected to fit within the funding range of the GPS. This is consistent with prior estimates of costs. The costs over 2015-18 are about \$25 million to \$30 million per year less than the top of the GPS funding range but about \$120 million more than the bottom of the range. We expect that there is sufficient headway in the funding ranges to respond to any unexpected costs arising from the risks in this programme, should they transpire.
20. The forward programme for maintenance and renewals reflects the net impact of targeting:
 - the One Network Road Classification customer levels of service
 - our continued successful implementation of efficiency gains over 2012-15
 - the impacts of growth in demand and in the extent and complexity of the state highway network, which are forecast to add about \$20 million cost per year by 2018 and about \$60 million per year or 12 percent of core maintenance by 2025.
21. The expenditure over 2012-15 is expected to be at the level required to achieve the \$160 million savings target against prior trends. The target for 2015-18 is to continue these savings and make additional savings of a similar amount.
22. We have assumed that our continual improvement approach will yield 4 percent per year savings beyond 2015/18. This is an optimistic target and will require a concerted effort over the next three years.



CUSTOMER IMPACTS OF OUR MAINTENANCE APPROACH

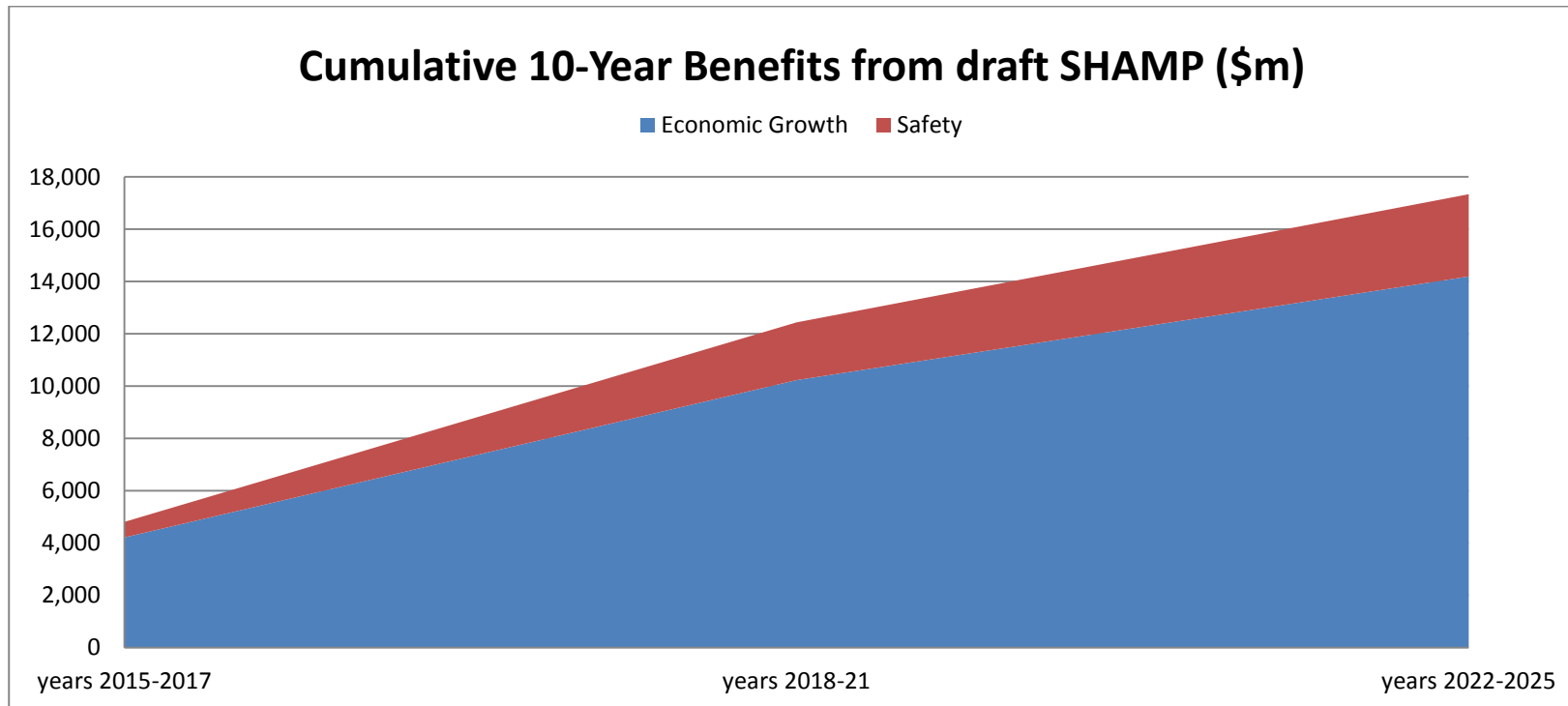
23. The proposed programme aims to deliver the service levels of the One Network Road Classification. We are seeking a good balance between the increased cost of repairs, the savings made to the renewals programme and the impact of repair work on our customers.
24. Because we are aligning our maintenance activities to the One Network Road Classification levels of service by keeping road surfaces in service longer, we anticipate that some roads will deteriorate to a greater extent than currently. In a few cases, this may require more extensive repair works than are optimal. All faults that occur will be repaired to ensure that roads continue to be as safe to use as in the recent past, and the skid resistance of the roads surface will be maintained at our current levels. However, we anticipate more roads with more patches and rougher surfaces than previously as we work road surfaces and pavements harder by leaving them in service longer.
25. We will monitor the frequency of such occurrences. The information will be used to both direct our repair and renewals programme under the 2015-18 period, and quantify the risks we are taking through this approach to better inform our forward programme scope and cost.



THE BALANCE OF OUR PROPOSED IMPROVEMENTS PROGRAMME

26. We have a significant current programme of committed improvements work including the RoNS and Auckland acceleration projects. The outcomes emphasis of our current commitments is approximately 90 percent of improvements supporting economic growth and 10 percent safety.

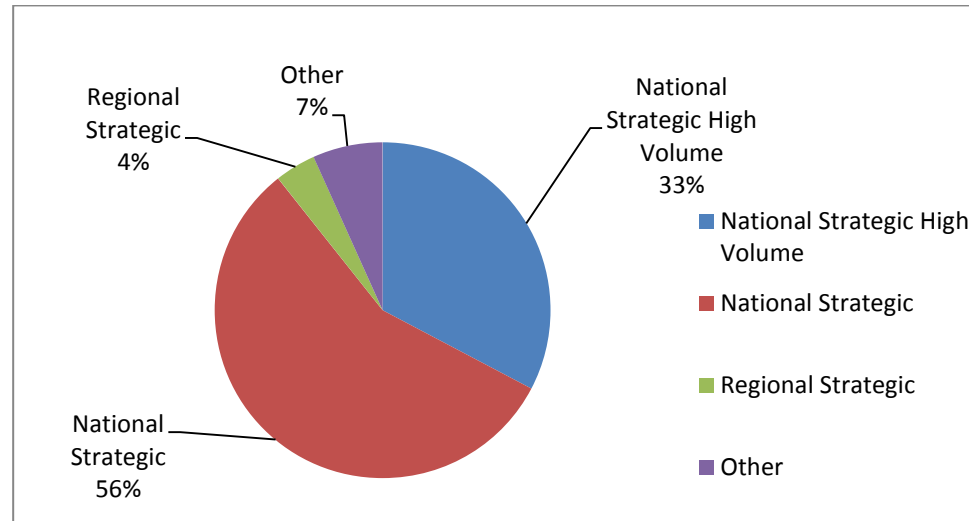
27. The proposed 10-year programme places greater emphasis on investment in achieving safety outcomes than our present commitments to provide an overall programme emphasis of around 80:20 economic growth:safety versus the 90:10 trajectory of our current commitments.



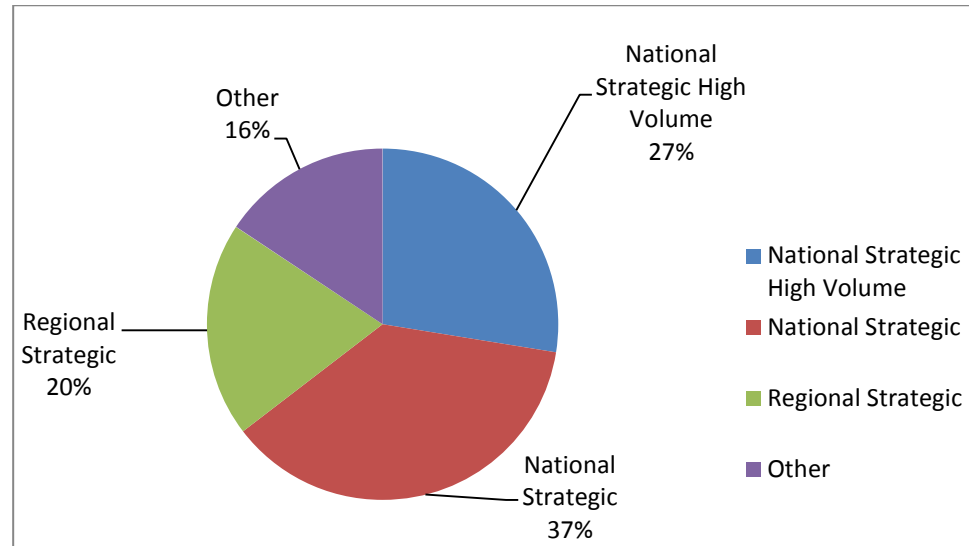
28. Our Safety Outcomes are primarily achieved through investment in a national roads and roadside programme which, over 10 years, aims to improve 24 intersections and 66 corridors and invest around \$750 million with the aim of reducing deaths and serious injuries by around 1,400 and improving the KiwiRAP rating of over 400km of state highway.

29. The figures below show the distribution of benefits by One Network Road Classification. This shows that the proposed programme continues to target our highest classification roads.

Distribution of economic growth benefits by road classification



Distribution of safety benefits by road classification



30. We will continue to invest in freight efficiency measures through a further \$20 million in delivering a second tranche of HPMV aimed at adding a further 1,000km to the strategic freight network coupled with a further \$26 million investment in priority weigh stations activities.
31. To improve network integration and to make the most of urban network capacity we have established a minor works programme targeted at operational and low cost capital improvements in the highest priority areas identified in the Auckland, Wellington and Christchurch network operating plans.
32. We will continue to deliver on R-funded activities to give effect to regional priorities and, in addition, will operate a series of minor improvements programmes. These will be targeted at

safety, network optimisation, resilience and Health and Safety physical works improvements to address the requirements of the new legislation.

RESILIENCE

33. The proposed programme of works addressing resilience of the state highway network is:
- Planning for priority corridors: Corridor strategic and programme business cases are proposed along priority high volume national corridors being the first with the aim of understanding in greater detail what the resilience risks and possible treatments are. These corridor business cases will be developed during the NLTP period 2015–18.
 - High priority risks treatment: A \$20 million per year works programme focussing on known high priority risks spot treatments including activities associated with scour, bridge seismic retrofit and rockfall programmes. The activity includes enhanced preventative maintenance and work funded under the minor improvements work category.
 - Resilience management and preparedness: This activity aims to improve emergency planning, incident planning, communications, and emergency access to isolated communities, alternative route planning and business continuity planning.

Maintenance programme risks

34. A consequence of our approach on repair costs and levels of service, whilst small to date, is a growing risk that the condition of the network may reach a point where increased repairs are required to retain its serviceability. We are monitoring this risk, particularly over winter when it is greatest, and are ready to respond with suitable repairs or more extensive works should the need arise.
35. There is a mid-term risk that the amount of renewal work could fall below the sustainable level before it is apparent and a greater than expected amount of repair work is subsequently needed. We expect that any impact in 2015-18 will be manageable within the GPS funding range for state highway maintenance, and that we will be better placed to quantify this risk for 2018-21 as a result of the monitoring now underway. The proposed maintenance programme is about \$15 million (3%) per year smaller than the estimated long run average sustainable level.
36. We are proposing a programme that has an input price risk of about \$15 million over 2015/18. We are assuming input prices will only rise slightly faster than the consumer price index as has occurred recently. BERL's advice to local government is the growing construction sector will put abnormal pressure on construction costs and cause a higher inflation rate in the construction sector. We have taken a less pessimistic approach than BERL as the majority of maintenance works are outside the Christchurch arena and are less likely to be affected by those inflationary trends.
37. There is a risk that unbudgeted repair works are required to restore service in areas where greater than expected deterioration of road surfaces and pavements results in rapid and widespread decay of sections of lower classification roads, where we are working current

infrastructure harder as part of our efficiency programme. We are monitoring the condition of pavements and have established a nationwide approach to managing this risk.

38. There is a risk that our ability to deliver ongoing efficiency dividends of 4 percent per year over all ten years beyond those delivered through the tightly focussed renewals programme, as assumed, will diminish requiring either a change to target levels of service or budgets.
39. The funding sought for emergency works is thought sufficient for the commonly experienced range of events common over three years in total, but has no allowance for widespread extreme events. This is the same approach as previous years.

External risks

40. We will provide the state highways component the RLTP's to RTC's in August. This means we are developing the SHAMP in parallel with consultation on the draft GPS and the subsequent development of our Investment Assessment Framework (IAF), which in turn will guide the development and emphasis of the types of project in the 2015-18 NLTP. Changes to the draft GPS or IAF may have an impact on the shape of the draft SHAMP. However, this is balanced by the fact that the programme is (a) heavily constrained by our current commitments and (b) has been developed with strong alignment to our *Early Investment Signals*.



FINANCIAL IMPLICATIONS

41. The draft SHAMP presents a proposed \$20 billion programme of investment over the next ten years against a draft GPS forecast of between \$16 billion and \$23 billion.
42. There are no financial commitments in releasing the draft SHAMP for input into the RLTP process.

43. We are proposing a maintenance programme that has a risk of about \$40 million over 2015-18. Our programme is based on carrying minimal contingency, this means there is a greater likelihood that costs will rise than fall compared to budget.
44. For the 2015-18 NLTP we are proposing a \$4.2 billion improvements programme plus a further \$260 million contingent programme. Incorporating a contingent programme of activity into the NLTP allows us to be agile in responding to cash flow and value for money opportunities as they arise, as we have in previous years.



COMMUNICATION AND ENGAGEMENT

45. Our regional staff will work with the RTCs to integrate the draft SHAMP into the RLTP process. These regional conversations will be supported by communications material formed around the following key messages :
 - We expect the level of revenue, coupled with a high level of commitments in 2015-18, to lead to a constrained programme of new activity.
 - This is the biggest SH improvements programmes that we have ever had.
 - Investment is focused on national priority outcomes and key corridors to give greatest effect on economic growth and productivity, and safety.
 - The programme is focused on the high capacity improvements of the Roads of National Significance programme, HPMV improvements, the capacity improvements in Auckland, safer roads and roadsides, resilience, and Network Operating Plan improvements.

- The new regional infrastructure activity class will allow investment beyond the national thresholds, and enables investment to reach into areas that would not otherwise have sufficient priority.
46. In giving best effect to the draft GPS and Investment and Revenue Assessment Framework we have needed to take a national approach to the programme. Regional priorities have been considered in the regional planning and programme submissions into the SHAMP. Further, we continue to invest in R-funded initiatives to realise regional priorities.
 47. We have been monitoring our customer feedback over the last year as we begin to embed our maintenance ONRC levels of service through our new maintenance contracts. At present our customer feedback has not been impacted negatively. We do not propose at this time to undertake any proactive communications with regard our maintenance proposals and we will continue to monitor customer feedback and respond accordingly.
 48. In developing activities forming the SHAMP we have embedded practices to fulfil our LTMA obligations to consult Maori affected by our activities. The SHAMP is a non-statutory input to RLTPs and as such Maori engagement is not required. However, engagement on the State highway component is achieved through the LTMA section 18 requirement for consultation on the development of RLTP's, and the LTMA section 18G requirement for consultation on specific activity proposals which directly affect Maori interests. The approach to Maori engagement on the SHAMP is consistent with that undertaken with other stakeholder groups which we consider fulfils our obligations under the Land Transport Management Act (LTMA) section 4.



ATTACHMENTS

49. There are no attachments.