

2021/22 Annual Report on the Rail Network Investment Programme

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Chief Executives' Forward

The Rail Network Investment Programme (RNIP) has brought a transformational shift for KiwiRail in how we can plan and deliver our core renewals and maintenance programme. The uplift has allowed us to begin reducing the backlog of underinvestment, which is critical in delivering a resilient and reliable national rail network for New Zealand.

The benefits flow much further than just an increased level of activity. The funding certainty that we have over the first triennium and commitment through the inaugural RNIP allows us to resource appropriately, plan early and deliver the best long-term solutions for our network. We have brought on an additional 197 staff and our teams have over the last six months been able to plan for the upcoming years. These changes allow us to deliver work more efficiently and build a more reliable network for our customers.

In the current environment it is no surprise that the RNIP programme is facing some of the same challenges as the wider construction industry. Supply chain issues, resource availability and COVID-19 have all impacted the first year of RNIP delivery.

We continue to respond to these challenges. As an example, delays in rail shipments meant that we simply did not have the materials to complete the planned works. However, we reprioritised the programme and delivered more than a 20% increase in sleeper renewals compared to our original plan. We have also increased our inventory and now have sufficient rail for the full year of planned works.

KiwiRail has a strong commitment to improving our asset management practices. Through our continuous improvement programme, we have had the opportunity to collaborate with Waka Kotahi and are making good progress in delivering on our asset management KPIs. We are excited to deliver the remainder of the RNIP and look forward to further collaboration with Waka Kotahi.

David Gordon – Acting Chief Executive KiwiRail (at 30 June 2022)

Significant progress has been made towards building greater resilience and reliability into the national rail network from the first year of delivering the Rail Network Investment Programme. I would like to acknowledge KiwiRail and the important work they have done over the last 12 months to lay the foundation for unlocking the full potential of rail in New Zealand.

It has been a challenging year for both Waka Kotahi and KiwiRail. The Programme was affected by the same supply chains issues and staffing constraints that have impacted the wider construction industry. I recognise the responsiveness and agility KiwiRail has demonstrated to maximise delivery over this period.

Our two organisations have also started working together more collaboratively through the new planning and funding framework on areas such as asset management, cost estimation and 30-year network planning. We look forward to further strengthening our relationship and developing more timely, open, and transparent communications at all levels of our organisations.

The work within the RNIP is expected to grow significantly over the next two years. To improve efficiency to meet this large workload we will work with KiwiRail to understand their ongoing productivity initiatives. We would also support KiwiRail investigating options for investing in plant and equipment to support them to further increase their efficiency.

While not all outputs were achieved within this first year, this is the start of a 10-year programme, and momentum is being built.

Nicole Rosie – Chief Executive Waka Kotahi

Section 1: Purpose and scope

1. To provide you with the Waka Kotahi NZ Transport Agency annual report on the Rail Network Investment Programme (RNIP) as required under section 102A of the Land Transport Management Act 2003 (LTMA).
2. Under this provision, Waka Kotahi must:
 - monitor the provision of rail activities or combinations of rail activities approved by the Minister under section 22F; and
 - monitor the extent to which the rail network investment programme –
 - contributes to the purposes of this Act; and
 - is consistent with the Government Policy Statement on land transport; and
 - report annually on its findings to the Minister.

Section 2: Background and context

New Planning and Investment Framework for Rail

3. Changes to the LTMA came into effect on 1 July 2020 setting out a long-term planning and funding framework for the national rail network. The purpose of the new framework is to provide KiwiRail with a greater level of long-term funding certainty and partially integrate the rail network into the planning and funding framework established in the LTMA. Funding from the National Land Transport Fund (NLTF) will be supplemented by the Crown and through Track User Charges.
4. The New Zealand Rail Plan (Rail Plan) sets out the strategic investment priorities for New Zealand's rail network and informs the development of the RNIP. The key focus of the Rail Plan is delivering a 'resilient and reliable' rail network. The Rail Plan sets out the following strategic priorities to guide investment in the rail network over the next decade:
 - investing in the national rail network to restore rail freight and provide a platform for future investments for growth
 - investing in metropolitan rail to support growth and productivity in our largest cities.
5. Every three years KiwiRail must prepare an RNIP to apply for the following three-year National Land Transport Programme (NLTP) period. The RNIP must set out KiwiRail's recommendations for the rail activities to be funded from the NLTF and include a 10-year forecast. The focus of the first RNIP has been to commence the delivery of the 10-year resilient and reliable network renewals programme, with supporting metro improvements, largely to support the opening of the City Rail Link.
6. The 2021-24 Government Policy Statement on Land Transport (GPS 2021) identifies the Rail Plan as one of four Government commitments that the Government expects to be met in National Land Transport Programmes (NLTP). The approval of the RNIP gives effect to this commitment. RNIP assessment process and monitoring approach
7. Waka Kotahi is responsible for preparing the NLTP and making decisions about which activities should receive NLTF contributions. In assessing the RNIP we leveraged our internal NLTP expertise to inform our assessment and to ensure consistency (as far as possible) with how activities are assessed for inclusion in the NLTP.
8. We also supplemented this internal expertise by contracting an external expert in the rail network to inform our assessment. The external review was focused on several matters we consider to be important to an assessment including evaluating the robustness of KiwiRail's costing methodologies, how KiwiRail prioritises work, its asset management planning processes and ability to deliver.

9. Ongoing RNIP activity assessments (to support your decision making under section 22F) follow standard Waka Kotahi investment decision making processes, including Investment Quality Assurance reviews and recommendations through a delegations committee for support.
10. As monitor of the RNIP, Waka Kotahi has developed a monitoring plan to formalise our focus and detail the specific monitoring activities we will carry out. This plan has been socialised with KiwiRail, Te Manatū Waka Ministry of Transport, and approved internally.

Summary of Waka Kotahi Advice

11. A summary of our advice to you with respect to KiwiRail's first RNIP is below:
 - The RNIP is of reasonable quality and meets the specific statutory requirements under sections 22C and 22G of the LTMA. KiwiRail is using, adopting, and implementing appropriate processes and methodologies for operating, managing and delivering a resilient and reliable rail network.
 - Waka Kotahi had difficulty fully assessing the efficiency and effectiveness of all the rail activities, particularly the large programme proposed for the freight network.
 - Waka Kotahi consider that KiwiRail is putting in place the right processes and methodologies, however, it will take time to fully implement these. In the meantime, Waka Kotahi remains concerned about KiwiRail's ability to deliver the RNIP and the certainty of rail activity forecast estimates and robustness of the 10-year forecast.
 - It will be important to monitor KiwiRail's progress in implementing appropriate processes and methodologies to build its capability and capacity to deliver the RNIP in a cost-effective manner.
 - We recommend KiwiRail develop a continuous improvement programme to demonstrate how it will make progress in building its capability and capacity.

RNIP Approvals to date

12. On 29 June 2021 you approved KiwiRail's first RNIP after considering advice from Waka Kotahi and consulting with KiwiRail's shareholding Ministers. At that time, you:
 - approved, in accordance with section 22B of the LTMA, the RNIP at a maximum contribution from the NLTF of \$1,351.7 million
 - approved, in accordance with section 22F of the LTMA, funding from the NLTF for eight of the eleven activities in the RNIP that were ready for approval at a total of \$1,270.7 million
 - noted, further planned approvals would be requested during the 2021-24 period, in accordance with section 22F of the LTMA, for activities that were not ready for approval at that time.
13. Subsequently, on 27 January 2022, you approved two further activities under section 22F increasing the total of activities approved to \$1,328.7 million.
14. This leaves a further \$23 million of activities to be approved in the subsequent two years of this RNIP. These approvals are progressing as planned.

A table summarising the approvals to date is included in Appendix A.

Section 3: Annual Report on the delivery of the RNIP 2021/22

15. This section will provide a summary of the delivery of rail activities approved under section 22F and a reconfirmation that the activities continue to contribute to the purposes of the LTMA and are consistent with the GPS 2021.
















In this section we will:



- Provide a summary of the reporting metrics in the RNIP to show how the delivery of activities are contributing to the outcomes sought from the investment
- Provide a summary of overall delivery, and (in an appendix) a commentary on the delivery of the individual activities
- Reconfirm the activities contribution to the LTMA and consistency with the GPS 2021
- Provide an update on the programme level issues we identified in our advice.



Part 1: Summary of the reporting metrics and contribution to outcomes

16. Section 3 of the NZ Rail Plan (Measuring the benefits of investment) outlines a monitoring framework to assist in measuring the achievement of outcomes. The framework identifies seven 'success factors' and several draft indicators below these factors.
17. A reporting framework within the RNIP has been developed that is consistent with, and cascades up to, the seven success factors in the Rail Plan. The framework consists of:
 - Nine outcomes (the seven Rail Plan success factors, plus two additional outcomes)
 - Fourteen indicators (cascading up to the nine outcomes)
 - Thirty-six individual KPIs with targets (cascading up to the fourteen indicators) (plus other additional KPIs which are only measured every three years).
18. The outcomes and indicators cover a wide range of topics across KiwiRail's above and below rail businesses (such as on-time performance for freight and asset condition indexes). We are satisfied that they are consistent with good practice having reviewed them against international equivalents.
19. This annual report contains a summary of the results at the 'Outcome' and "Indicator' level. It is important to note that outcomes are more appropriately measured and monitored over the longer term, as improvements in reliability and resilience across the network will take some time to deliver and there is a likelihood of fluctuation in indicators in the short term. Commentary is provided with a focus on the KPI's that pertain to RNIP delivery that flow up to indicators and outcomes.

Outcomes		Indicators		Summary commentary (as pertaining to RNIP delivery)
Improve the Value of Rail	●	Value of Rail Report	●	Measured tri-annually only to support Rail Plan & GPS development.
More Freight carried by rail	●	Mode share for freight	●	Achieved target noting Freight Net Tonne Kms (NTK) carried slightly below target, however rail mode share (%) increased.
More people travel by rail (passenger mode shift)	●	More people travel by rail	●	Both tourist and commuter passenger journeys were about 50% of target. Border restrictions affected tourist journeys with KiwiRail's scenic trains put on hold for a period. In addition, COVID-19 alert levels and working from home adoption continued to affect metro passengers.

Reduced emissions		Tonnes of greenhouse gases emitted per year		GHG emissions per NTK within 10% of target.
		Tonnes of avoided emissions		Achieved target with an increase from 236k CO2 emissions avoided p.a. to 288k.
Fewer fatalities and incidents		Number of rail safety incidents		Achieved target. Total Recordable Injury Frequency Rate within target (refer KiwiRail wider zero harm reporting in Statement of Corporate Intent and Integrated Annual Report).
		Deaths and serious injuries (include KiwiRail Personnel/ KiwiRail Contractors, excludes non-KiwiRail incidents/suicides etc)		
		Decreasing number of level crossings in service		Achieved target with 5 less level crossings in service.
Rail network is more efficient		Rail freight productivity / utilisation		Reported by MoT as part of Rail Plan reporting.
Rail network is more reliable		Travel time reliability		On time Performance Freight Premier 86% against target of 90%.
		Number of derailments		Achieved target.
		Network condition		Areas where specific KPI's had a red indicator: <ul style="list-style-type: none"> • Rail condition on priority and secondary routes did not meet targets due to impacts of rail shipment delays. • Sleeper condition on secondary routes not achieved due to focus on priority routes (which was fully achieved). • Temporary speed restriction targets for priority routes not achieved. This was largely due to limited availability of tampers (to pack the ballast under tracks to ensure it is durable and level). Availability was impacted by reliability issues, and the scale of KiwiRail's full programme.
Rail network is more resilient		Number of outages		Achieved target with improving trend in unplanned network outages.

Fair access to the network		Track access applications approved		Achieved target with 100% of track access (train timetable) applications approved by KiwiRail.
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Key	
Achieved target	
Within 10% of target	
>10% below target	

21. When reviewing the reporting framework above we note that several of the network condition KPI's that were not achieved are both inter-related and impacted by common challenges (which are further discussed below). For example, the main inter-relationship being the delay in the supply of rail, leading to an accelerated sleeper and ballast programme, leading to issues with tamper availability, leading to requirements for applying temporary speed restrictions. We expand on these issues and common challenges in the next section of this report.

Part 2: Summary and commentary on delivery of activities:

Summary of overall delivery

Notwithstanding the disruptions that have been experienced, progress has been strong in what is the first year of a ten-year programme.

Once supply chain issues had been assessed, targets were amended and KiwiRail delivered well against those targets.

Programme management was agile, and delivery was optimised as things changed.

The flow on effect of delays and the natural growth of the programme has meant some work will now be deferred to the 2024-27 period. This is forecasted to be between \$85 and \$170 million. We are working with KiwiRail on re-timing options and advancing critical plant purchases to make best use of funds in the current period.

We will work with KiwiRail to further understand their productivity initiatives and will encourage them to further develop these initiatives to inform continuous improvements in future RNIP delivery.

22. Our monitoring activity contains four key areas of focus for 2021-24. These are:

- Renewals programme delivery
- Asset Management Continuous Improvement Programme (CIP)
- Metro improvement projects
- Programme level risks and issues.

A summary of overall delivery performance against these four key areas is shown below, and we initially provide summary comments on two common challenges that have affected all areas of delivery.

Disruptions to supply chains have impacted delivery:

23. Disruptions to supply chains have had a significant impact on delivery performance, particularly affecting the renewal programmes. These issues have arisen from both the importing of materials into New Zealand, and through domestic distribution with disruption to ferries and availability of wagons. To mitigate these impacts, works have been rescheduled as much as possible to progress elements of the work bank that can be delivered with existing supply and are not dependent on new supply, and work has been prioritised where supply chain issues have not been as severe. For example: KiwiRail increased quantities of sleeper renewals completed where rail shortages have affected the ability to deliver planned rail renewals. As noted above, the ability to reschedule is limited by the availability of the necessary plant and equipment to complete the work, and at worse, can lead to perverse outcomes (in the short term) where the number of temporary speed restrictions increases (e.g., a temporary speed restriction is applied to a sleeper renewal site until a Tamper is available and able to compact the site). This would be contrary to the desired outcomes in the KPI and measures framework.
24. Where rail has been in short supply, KiwiRail has also prioritised supply to the metro network projects (outside of the RNIP) to facilitate successful blocks of line. Waka Kotahi support this prioritisation.
25. We note KiwiRail has de-risked the programme as much as possible by ordering materials for the remaining two financial years much earlier than usual to assist in mitigating ongoing supply chain risks. This is one good example of the benefits of a multiyear funding arrangement through the NLTP.

Resourcing constraints have also impacted progress

26. The lack of available resources and difficulties recruiting (particularly in specialist roles) have negatively impacted progress across the renewal programme, the metro improvement projects and the CIP.
27. Significant levels of recruitment were required to deliver the RNIP. While a steady intake of front-line staff has been achieved (just over 80% of the planned numbers), the majority of these only commenced in the last quarter of the financial year. However, the noticeable uplift in output in the last quarter can be partly attributed to this recruitment.
28. A more challenging issue has been recruiting engineering and design resources for track work and particularly for signalling design. Only 50% of the planned recruitment in this area has been completed and high calibre resources are in significant demand. Historically, these specific skills (particularly signalling) have often been supplemented by bringing in expertise from overseas, but this has not been possible until very recently. As a result, KiwiRail was only able to deliver 40% of the budgeted signalling work bank in the first year.

Renewal programme:

29. The direction of travel and overall 'run-rate' of the renewals programme is behind plan, largely due to the supply chain issues and resource constraints noted above. The focus of the renewals programme is on track renewal (including sleeper renewal). At the start of the year, KiwiRail had planned 99km of track related renewals. As supply chain issues started to present themselves, we agreed a revised target of 79km. The final delivery of track related renewals was 78km.
30. Throughout the year works were rescheduled as much as possible to progress sections of rail renewal that can re-use materials and are not dependant on new supply from overseas, and where supply of materials was not an issue. Sleeper renewal has also been prioritised where supply chain issues have not been as severe. As such, the variance on delivery metrics (-21% to original, -2% to revised) is smaller than the variance on financial metrics (-35%) as more lower cost work has been delivered by varying the original sequencing.
31. Works not completed as planned have been largely rescheduled to complete in years two and three of the RNIP. However, with the planned increases in renewal volumes in these years,

capacity constraints (labour and plant) mean that some planned work will need to be completed in the 2024-27 period. This is forecast to be between \$85 and \$170 million. We are working with KiwiRail on rephasing and mitigation options and looking at opportunities to advance critical plant purchases planned for RNIP 2024-27 into the current period.

The Asset Management Continuous Improvement Programme (CIP):

- 32. The CIP is progressing, and Waka Kotahi has had some overview and involvement in its scoping. We are satisfied that the initiatives identified in the CIP will go a long way to resolving many of the issues identified in our assessment. We have connected the two lead asset managers from Waka Kotahi and KiwiRail, so they are able to share knowledge and support each other to increase both organisations’ asset management maturity.
- 33. We note there has been significant re-timing of initiatives within the CIP over the three years of the RNIP. This has been driven by the limited availability of new experienced asset management staff and existing internal business resources and has led to a focus on the delivery of the core initiatives with other initiatives deferred to later years.
- 34. While recruitment of several resources has been successful, there are still a number of positions vacant (despite several advertising rounds), particularly within the asset data and information area. KiwiRail is working with their human resources team on a refreshed and more targeted approach for a further advertising round in the next quarter.
- 35. Progress against specific deliverables for 2021/22 are:

Deliverable	Status	Commentary
Asset Management Gap Analysis and Development of Asset Management Improvement Road Map	Complete	Asset Management Gap Analysis and improvement road map complete.
Development of asset class strategies and updated Strategic Asset Management Plan	In progress	Asset class strategies (first draft) have been completed, with Track asset class strategy to a second draft state. Strategic Asset Management Plan (SAMP) (first draft) has been completed and endorsed by KiwiRail’s Executive Capital Committee. These are now proposed to be completed in 2022/23.
Data Quality Gap Analysis and development of data quality improvement road map	Complete	Data quality roadmap and BAU data quality improvements complete.
Updated condition records (currency and completeness) for critical asset classes	In progress	The large volumes of renewal and improvement work being carried out has led to limited availability of experienced engineering and field staff to update condition records for all critical asset classes. As a result, KiwiRail has focused on updating condition records for track assets only and this has seen the average age of track condition records reducing from 6.2 to 2.7 years.

36. Progress against the focus areas and core initiatives (acknowledging that other initiatives have been deferred) is shown below:

Focus Area	Commentary
Asset Management Strategy	Asset Management Policy (final draft) complete and submitted for review. Strategic Asset Management Plan (first draft) complete. Seven Asset Class Strategies completed to various draft status.
Investment Planning & Delivery	Enhance asset planning processes - under development as planned. Enhance Asset Integration / Handover deferred to 2022/23.
Asset Information	Data quality roadmap complete with tranche 1 of data quality improvement projects about to commence The following initiatives deferred until 2022/23: <ul style="list-style-type: none"> • Develop Asset Information & Systems Strategy • Develop Asset Information Management Framework.
Performance & Assurance	No planned core initiatives for 2021/22.
People & Organisation	No planned core initiatives for 2021/22.
Management System	Asset management framework review complete.

37. The Lead Asset Management Advisor from Waka Kotahi has conducted a high-level review of three of the draft asset management documents noted above (Asset Management Policy, Rail Network Strategic Asset Management Plan (SAMP), Track Asset Class Strategy). This review was undertaken against our consideration of an appropriate industry standard and good asset management practice for an asset intensive organisation such as KiwiRail.

38. We have concluded that the documents are aligned with good asset management principles and practices, demonstrate a valuable step along a continued asset management improvement journey, and set a solid platform for challenges of their deployment. We note the following when comparing to good practice:

- Asset Management Policy - indicates appropriate senior management commitment and includes commitment to align with organisational strategic priorities, to drive continual improvement and to satisfy applicable legislative/ regulatory requirements.
- Rail Network SAMP - articulates the setting and alignment of asset management objectives for the rail network and the actions and areas of focus to help realise these objectives. Satisfies the core requirements of the industry standard (ISO 5001) and the asset management system aligns with the principles and practice of the Global Forum on Maintenance and Asset Management (GFMAM).
- Track Asset Class Strategy - partly aligns with the recommended contents of an asset management plan set out in the International Infrastructure Management Manual (IIMM). Contains aspects considered good practice such as defining the services, strategic line-of-

sight, operating environment, how activities are managed, risks/challenges, the assets used, the gaps to be improved on etc.

39. We continue to support KiwiRail in the development of these key documents through iterative feedback and recommendations for further improvements, and on their overall asset management journey. We note the recruitment of final experienced staff is critical.

Metro improvement projects:

40. In general terms the metro improvement projects are slightly behind schedule – again mainly due to the availability of the resources required to scope, procure, and commence the projects.
41. In Auckland, the two most significant projects (the second rail management centre and the Western power feed) are progressing through their detailed design phases. Waka Kotahi is involved in the steering groups, and all the metro projects report through the Auckland Metro Programme Governance Board. Several lower value projects are also behind schedule, and this is largely a result of internal resourcing constraints to initiate and commence the projects and ability to procure technical resources. However, we are satisfied that the expected level of progress can be made within the three years of the RNIP.
42. In Wellington, the most significant project, the Rail Network Resignalling, is behind original plan. This is largely due to the completion of the prior phase taking longer than anticipated, and the availability of signalling resources (with a priority being given to the Wellington Metro Upgrade 6A and 6B (NZ Upgrade projects). Procurement of a systems integrator (which was a condition from Waka Kotahi) has now been completed and we see this is a critical role within a very complex project. Based on the long run nature of the project we are confident the business case development will be completed in the current period, although the piloting elements of the project will now be deferred until the 2024-27 period.
43. The remaining Wellington activity (network capacity improvements business case) was advanced to year one of the programme as requested. This is proceeding through the scoping phase with careful integration of this project and Greater Wellington's Lower North Island Rail Integrated Mobility (LNIRIM) project. KiwiRail is working through the implications of Greater Wellington Regional Council's (GWRC) Lower North Island Rolling Stock business case not yet being funded and are continuing to align infrastructure requirements to GWRC's preferred rolling stock choice.

Programme level risks and issues:

44. KiwiRail has identified several programme level risks and issues and are reporting them to Waka Kotahi as part of its monthly and quarterly reporting. We consider that these capture the relevant issues and have suitable mitigation plans in place. The risks consider the wider KiwiRail works portfolio in their assessment and management. The most significant risks include:
- Unable to deliver specified RNIP works/quantities due to supply chains issues impacting the availability of materials required to complete works (for example rail shipment due to arrive end of February arrived in early May)
 - Cost escalation (materials and labour)
 - Lack of availability of specialised plant to meet the demands of the targets within the RNIP, and to complete all re-scheduled work
 - Unable to deliver specified RNIP quantities due to COVID-19 (isolation requirements and illness), affecting work site delivery (requiring some work to be reprioritized) and additional safety measures that limit efficiency.

We are continuing to work with KiwiRail on mitigations, and ways to maximise the opportunities that the multiyear funding provides.

Commentary on the progress of individual activities

45. Commentary on individual activities is shown in Appendix B.

Part 3: Reconfirming contribution to the LTMA and consistency with the GPS

46. Under section 22C of the LTMA, Waka Kotahi is required to consider whether the RNIP:
- contributes to the purpose of the LTMA (to contribute to a safe, efficient and effective land transport system)
 - is consistent with the Government Policy Statement on land transport.
47. We have completed an updated assessment which reconfirms that the activities contained in the RNIP contribute to an effective, efficient, and safe land transport system in the public interest through restoring the rail network to a resilient and reliable state. We consider that the proposed investments will:
- support mode shift that reduces pressure on the wider land transport network
 - improve the movement of people in our largest metro centres in an efficient and effective way.
48. The GPS 2021 sets out delivery of the Rail Plan as a Government commitment to be met through NLTPs. We consider that the activities included in the RNIP are consistent with the investment priorities set out in Section Two (Strategic priorities for Rail) of the Rail Plan.
49. We consider that by laying the platform for growth in freight and passenger journeys on the rail network in the future, the RNIP is well aligned with the Better Travel Options and Improving Freight Connections strategic priorities in GPS 2021.
50. Our updated assessment can be found in Appendix C.

Part 4: Update on assessment findings

Asset Management practices

51. As noted above, KiwiRail has embarked on an Asset Management CIP. While we have only had limited engagement on the CIP, we remain confident it will go a long way to address the issues identified in our assessment.

Uncertainty around the costs of delivering RNIP activities and robustness of 10-year forecast

52. We noted that the cost estimates contained in the RNIP are based on KiwiRail's experience of historic cost data for similar work, supplemented by local knowledge of site-specific issues. Through the CIP, work is progressing on improving base levels of cost data, and how these flow into future estimates. While not included in the RNIP, we are still experiencing severe cost pressures on transitional rail projects in the metro areas (particularly Wellington), which strengthens the criticality of this work.
53. The impact of COVID-19 on supply chains has made estimating costs more challenging, and it is accepted that material prices are particularly volatile. We are satisfied that KiwiRail is managing this volatility to the best of their ability.
54. We have not yet received any updates to the overall 10-year forecast for the resilient and reliable scenario, but again re-state that we are aware of risks to this forecast cost. KiwiRail has advised us that the first update will be completed by December 2022. We expect this would include any updates based on the increased level of asset condition assessments and forecast cost estimates. Further updates to inform future RNIP's would also include further items such as the additional operational costs of the CRL.

Ability to deliver the programme

55. We noted in our advice to you, the significant quantum of work that KiwiRail is delivering through the RNIP and other funding sources, and how this represents a large stretch for KiwiRail. The risk that KiwiRail will not be able to deliver to the level signalled in the RNIP and progress toward the Government's strategic rail investment priorities remains, and we have noted a slower start to many of the activities in the RNIP.
56. The availability of materials and specialist resources has exacerbated this risk and plays a significant part in the level of progress. We have also noted the pressure of material availability across the metro vs freight network programmes. KiwiRail has made every effort to mitigate these issues as much as possible.

Section 4: Other issues

Rail safety regulator view

57. In addition to working with KiwiRail, Auckland Transport (AT) and GWRC to fund the rail network, we have primary regulatory responsibility for rail safety in New Zealand under the Railways Act 2005. Our role is to provide independent assurance to stakeholders and the public of the effective management of rail safety risks by rail participants.
58. Section 104A of the LTMA creates a Director of Land Transport role within Waka Kotahi, reinforcing the independence of the regulatory functions that we are responsible for.
59. As the independent safety regulator, we are impartial to funding sources but welcome seeing additional funding that will help rail participants contribute to a safer rail system through maintenance, replacement or new infrastructure, works and equipment. This RNIP reaffirms commitments to rejuvenate New Zealand's rail network that has historically suffered from years of under-investment. We look forward to working with KiwiRail as the projects within this investment programme are scoped and delivered.
60. We have an expectation that safety criteria and legislative requirements are considered in the design stage of projects, in order to maximise safety benefits and investment outcomes. Once an asset is built, the safety risks arising from the asset must be managed for the asset's lifetime. The more safety risks that can be engineered out of an asset during its design and construction, the safer the asset will be.
61. Working with the relevant stakeholders, we will continue to develop and implement processes for identifying and managing system risk. Alongside this, we will be ensuring the requirements of the Railways Act 2005 are being met, including that rail participants, and in particular rail licence holders such as KiwiRail, are managing safety risks effectively and meeting the 'so far as is reasonably practicable' test, including during the design and build phase.
62. Our regulatory strategy 2020-2025, Tu Ake Tu Maia, sets out the strategic intent of our regulatory model, and the capability shifts required to be a real-world regulator. This journey is well underway, and we will continue to work with KiwiRail in the spirit of our Te Ao Māori principles in the next phase as they seek to establish a reliable and resilient network.

KiwiRail's procurement procedures

63. KiwiRail advised Waka Kotahi of an update to their procurement manual which included an updated probity policy. The proactive notification of change was appreciated by Waka Kotahi as it goes beyond the requirements of Section 22H of the LTMA.
64. Our procurement team took the opportunity to consider the new policy and concluded that it appears to be a robust example of such a policy.

Other initiatives

65. Other joint initiatives of note include:
- a level crossing programme business case (including considering the funding mechanism and cost share approach), and
 - responding to the recent Deloitte report on the rolling contact fatigue issues in Auckland, a working group (including Te Manatū Waka Ministry of Transport and councils) considering the planning, levels of service and a sustainable funding model for the metro rail networks.

Section 5: Looking Forward to 2022/23

Programme Delivery

66. As mentioned above, the RNIP shows a significant increase in the levels of activity to be carried out in 2022/23, with planned increase in the value of renewal and maintenance work of 17%. This is net of any carry-over from the 2021/22 financial year. We have always considered this to be a challenging increase in activity and will continue to work closely with KiwiRail on any ways we can assist them in delivering this target.
67. As noted, KiwiRail has not simply reprogrammed all deferred work into the 2022/23 financial year but spread it across multiple years to better align with when they expect to have necessary capacity to deliver it. All other significant projects outside of the RNIP continue at similar steady pace in 2022/23 so no additional capacity can be obtained from other projects.

Further Planned Approvals

68. For your information, we expect to provide advice to you during the 2022/23 financial year to support two of the remaining three planned approvals. These are likely to be:

Region	Activity	Phase	Status	Total Cost (\$m) (as per S22B)	Indicative approval date
Auckland	Metro Infill Signalling	Implementation	Not yet approved	14.0	December 2022
Auckland	European Train Control System Upgrade	Business Case	Not yet approved	4.0	June 2023

69. In addition to the above planned approvals, there are two other possible investment decisions:
- As part of the recent Additional Traction Feed (West) funding approval of \$57.0m, we noted that KiwiRail would confirm the final cost, and seek any further funding approval, before proceeding to implementation. The pre-implementation work is progressing well and KiwiRail expects to feedback on the outcome of this stage gate before the end of the calendar year.
 - As requested by KiwiRail you approved \$7.0m for the first two years of the KiwiRail Strategic Planning Funding for Auckland. KiwiRail will continue to monitor the delivery of this activity to determine how much, if any, of the \$5.0m identified for the third year of the programme would be needed. If required, it is expected that a funding request would be made in June 2023.

Appendix A: Summary of RNIP approvals to date











Region	Activity	Phase	Status	Total Cost (\$m) (as per S22F)	Indicative approval date
National	Freight Network Renewals	Implementation	Approved	789.9	789.9
National	Freight Network Maintenance and Operations	Implementation	Approved	361.0	361.0
National	Freight network improvements	Business Case	Approved	49.5	49.5
Auckland	Additional Traction Feed (West)	Business Case	Approved	57.0	57.0
Auckland	European Train Control System Upgrade	Business Case	Not yet approved		4.0
Auckland	Integrated Rail Management Centre	Implementation	Approved	35.7	35.7
Auckland	Metro Infill Signalling	Business Case	Approved	1.0	1.0
		Implementation	Not yet approved		14.0
Auckland	Progressive fencing and security	Business Case / Implementation	Approved	6.0	6.0
Auckland	KiwiRail Strategic Future Planning	Implementation	Approved	7.0	7.0
		Implementation	Not yet approved		5.0
Wellington	Wellington Rail Network Re-signalling Renewal	Business Case	Approved	20.6	20.6
Wellington	Wellington Network Capacity Improvements	Business Case	Approved	1.0	1.0
	TOTAL NLTF			1,328.7	1,351.7

Appendix B: Commentary on the progress of individual activities

Delivery of Continuous Programme – Freight and Tourism Network

Region	Activity	Phase	Delivery metrics			Cost			Commentary and Indicator
			2021/22 Targets (significant metrics only)	2021/22 Actual	2021/22 Variance	2021/22 Funding Approved (\$m)	2021/22 Actual (\$m)	2021/22 Variance (\$m)	Overall outcome at risk, or major variance to plan deferring into RNIP 2024-27 RNIP outcome secure, but risks or delays experienced Proceeding as planned
National	Freight Network Renewals	N/A	Track Renewal: 99km, revised down to 79.1km in Q3 (Rerail, Resleeper & Relay)	77.9km	To original: -21km (-21%) To revised: -1km (-2%)	\$220.6	\$143.9	-\$76.7 (-35%)	<p>The original targets for track related renewals were revised down by agreement in Q3 to reflect the delays of rail supply into New Zealand, and subsequent delays of rail movement around the country due to issues with ferries and wagons. Priority supply has also gone to metro block of line renewals and maintenance which Waka Kotahi support.</p> <p>Rescheduling of works has been successful to optimise re-use of rail where possible to minimise impact, and the revised delivery targets have been achieved.</p> <p>Undelivered works have been rescheduled but not all can be completed in the 21-24 period due to increases in the work bank in years 2 and 3. Some of these works are expected to be deferred outside of 21-24, hence this activity has been given a red rating.</p> <p>Civils and signalling projects are significantly behind.</p> <p>Contracts have now been signed and initial payments accrued for the procurement of additional plant and equipment.</p>
			Turnouts: 50, revised down to 35 in Q3	33	To original: -17 (-34%) To revised: -2 (-6%)				
			117 projects to reach implementation	41 projects in implementation	-76 projects (-65%)				
National	Freight network improvements	N/A	Outstanding Service Requests: 5% reduction	8% reduction	+3%	\$116.5	\$133.1	+\$16.6 (+14%)	<p>Targets have been achieved in relation to this activity.</p> <p>Increased spend (above allocation) due to prepaid Insurance in June for the 22/23 financial year. Excluding the insurance payment, out-turn was \$115.4m (-1%).</p>
			Inspection Hours: 10% increase (to 74,712 hrs)	73,358 hrs	-1,354 hrs (-2%)				
National	Freight network improvements	N/A	Business Cases complete	Business cases in development but behind plan		\$10.8	\$4.8	-\$6.0 (-56%)	<p>A much slower start than anticipated on these activities, although we believe progress can be accelerated in remaining two years of RNIP.</p>

Delivery of Metro Network Improvement Projects

Region	Activity	Phase	Delivery metrics		Cost metrics			Commentary and indicator	
			2021/22 Target	2021/22 Actual	2021/22 Funding Approved (\$m)	2021/22 Actual (\$m)	2021/22 Variance (\$m)		
								Overall outcome at risk, or major variance to plan deferring into RNIP 2024-27 Overall outcome secure, but risks or delays experienced Proceeding as planned	  
Auckland	Additional Traction Feed (West)	Business Case	BC complete and implementation commenced	Behind schedule	\$25.0	\$0.4	-\$24.6	Project remains in detailed design phase. Cost risk remains until design is complete. Stage Gate in place to enable feedback to the Minister and any further funding approval.	
Auckland	Integrated Rail Management Centre	Implementation	Construction commenced	Behind schedule	\$6.5	\$2.5	-\$4.0	A delay in reaching agreement with the developer meant the design works started later than planned deferring activity and some cost into the next financial year. This is not expected to impact the project's critical milestones. Design is now substantially complete. Some budget pressures have been identified but latest estimate shows project delivered within the funding allocated.	
Auckland	Metro Infill Signalling	Business Case	Business Case submitted for approval	Behind schedule	\$1.0	\$0.3	-\$0.7	Project start delayed due to signalling and procurement resource constraints. Progress will likely increase once the business case is completed, and a firmer timeline for implementation will be agreed.	
Auckland	Progressive fencing and security	Business Case	Implementation commenced	Behind schedule	\$2.0	\$0.3	-\$1.7	An overarching business case has been developed using a robust methodology to identify and prioritise locations across the Auckland network that require treatment. In parallel to the business case completion, early win sites have been identified with a desire to commence these works as early in possible, and in parallel to business case approval.	
Auckland	KiwiRail Strategic Future Planning	Implementation	Implementation commenced	Proceeding to plan	\$3.0	\$1.3	-\$1.7	This activity enables KiwiRail to contribute to wider planning and studies being undertaken in Auckland. While actual cost is below estimated cashflow, all works are proceeding as planned.	
Wellington	Wellington Rail Network Re-signalling Renewal	Business Case	Detailed Business Case commenced	Behind schedule	\$5.2	\$0.1	-\$5.1	Completion and approval of the Indicative Business Case took longer than anticipated. Project will now build momentum as resources are freed up however the slower start and signalling ongoing resourcing issues have led to possible delays to the physical works piloting elements of the project. This will now push into RNIP 2024-27.	
Wellington	Wellington Network Capacity Improvements	Business Case	Business Case commenced	Proceeding to plan	\$3.0	\$0.01	-\$0.3	Team established and proceeding along the overall timeline. As noted, progress will be affected by the rescoping of the LNIRIM project which is being led by GWRC.	

Appendix C: Contribution to the LTMA purpose and consistency with the GPS

Title of activity or combination	Overview	Contributes to the LTMA purpose and is consistent with the GPS
Freight network renewals	Continuous programme of renewal work on the national freight network	<p>Activity contributes to the LTMA purpose because investing in rehabilitation of the national rail network will enable it to operate more effectively, efficiently and safely.</p> <p>Activity aligns to the Improving Freight Connections strategic priority in the GPS.</p>
Freight network maintenance and operations	Continuous programme of maintenance work, along with funds to purchase new plant and equipment	<p>Activity contributes to the LTMA purpose because investing in rehabilitation of the national rail network will enable it to operate more effectively, efficiently and safely.</p> <p>Activity aligns to the Improving Freight Connections strategic priority in the GPS.</p>
Freight network improvements	Funding requested mainly to develop business cases for minor improvements to the national freight network, with some constructing beginning in 2023/24	<p>Activity contributes to the LTMA purpose because investing in rehabilitation of the national rail network will enable it to operate more effectively, efficiently and safely.</p> <p>Activity aligns to the Improving Freight Connections strategic priority in the GPS.</p>
Additional Traction Feed (West)	Installation of an additional grid exit point and traction power feed to the Auckland rail network.	<p>Activity contributes to the LTMA purpose by enabling the Auckland rail network to operate more efficiently/effectively.</p> <p>Aligns to the Better Travel Options strategic priority in GPS 21/31.</p>
Auckland Metro Network – ETCS Upgrade	Upgrade of the Auckland metro train control system to Level 2.	<p>Activity contributes to the LTMA purpose by displaying signalling and movement authorities in the train cab, improving safety and optimising train movements on the network.</p> <p>Activity aligns to the Better Travel Options strategic priority in GPS 21/31.</p>
Integrated rail management centre and emergency management systems	Establishing the Integrated Rail Management Centre (IRMC) in Auckland.	<p>Activity contributes to the LTMA purpose by providing for greater resilience in national train control functions. Should an event affect Wellington, the IRMC in Auckland will be able to carry out these functions.</p>

		Activity aligns to the Better Travel Options strategic priority in GPS 21/31.
Auckland Metro Infill Signalling	Installing additional signalling infrastructure on the Auckland metro network	<p>Contributes to the LTMA purpose because adding more signals allows for more efficient operation of the network. Without these additional signals, the 20 trains per hour envisaged as part of the CRL project cannot be realised.</p> <p>Aligns to the Better Travel Options strategic priority in GPS 21/31.</p>
Progressive fencing and security	Fencing across the network does not currently meet requirements and progressive investment to address this is required.	<p>Contributes to the LTMA purpose through increasing the safety and security of rail yards to ensure that the network can operate in an efficient, safe and secure manner – including guarding against track incursions.</p> <p>Aligns to the Better Travel Options strategic priority in GPS 21/31.</p>
KiwiRail Strategic Future Planning	Funds to support KiwiRail to undertake strategic planning for future investments in the Auckland network.	<p>Contributes to a more effective and efficient network by providing funding to ensure that rail projects are considered within the broader transport and land use planning context.</p> <p>For example, this funding will enable KiwiRail to better integrate with ATAP, the Strategic Growth Alliance, the Regional Land Transport Committee and other planning forums in and around Auckland.</p> <p>Aligns to the Better Travel Options strategic priority in GPS 21/31.</p>
Wellington Rail Network Resignalling Renewal	Renewal of the Wellington Metropolitan Rail Network Resignalling and Train Control System to a modern, safer and more operationally flexible system	<p>Activity contributes to the LTMA purpose by enabling the Wellington metro network to operate in a safer and more operationally flexible way.</p> <p>Aligns to the Better Travel Options strategic priority in GPS 21/31.</p>
Wellington network – further capacity improvements	The overall programme considers the replacement of all existing longer-distance rail rolling stock on the Wairarapa and Manawatu lines, with supporting improvements to maintenance facilities, stations and network infrastructure. KiwiRail is responsible for network infrastructure portion.	<p>Activity contributes to the LTMA purpose by enabling the Wellington metro network to operate in a safer and more operationally flexible way.</p> <p>Aligns to the Better Travel Options strategic priority in GPS 21/31.</p>

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