

Asset Management Plan 2021

For decision:

For noting:

Te tūhunga / Recommendation

That the Auckland Transport Board (board):

- a) Approves publication of the Asset Management Plan 2021 and Asset Management Plan Summary 2021 on the Auckland Transport website, subject to an editorial alignment review against the published Regional Land Transport Plan 2021-31.
- b) The published plan and summary to include reference to the challenge of embedded carbon in existing and new assets and some of the initiatives already underway or that AT will explore during the first three years of the plan.

Te whakarāpopototanga matua / Executive summary

1. Auckland Transport (AT) is the regional guardian of \$22 billion of transport infrastructure. AT prepare an Asset Management Plan (AMP) every three years to demonstrate to Auckland Council, Waka Kotahi New Zealand Transport Agency (Waka Kotahi) and the public that we are prudently managing these assets in the interests of present and future customers.
2. The AMP is a financial planning requirement of Auckland Council's Council Controlled Organisation (CCO) Accountability Policy (s90(2)(d) Local Government (Auckland Council) Act 2009 (LGACA)); it is the Programme Business Case submitted to Waka Kotahi to fund AT's asset maintenance and renewals programme and provides part of the evidence used by Audit NZ to assess compliance with the Local Government Act 2002 (LGA).
3. The AMP defines the current condition of AT assets, and undertakes a comprehensive review of AT's asset renewal needs, including the impacts of growth on our network and the need to support the Regional Land Transport Plan 2021-2031 (RLTP) strategic outcomes of increased public transport, walking and cycling. The AMP 2021 recommends an appropriate level of investment of \$3.93 billion for asset renewals and \$2.6 billion for asset operations and maintenance over the 10-year period, for public safety, to reduce the risk of asset failure, and to maintain adequate levels of service.
4. The key recommendations of the draft AMP 2021, including the funding requirements, were included in the RLTP and in the Auckland Transport Alignment Project (ATAP) and were endorsed by Cabinet in March 2021.

5. Waka Kotahi has accepted the draft AMP 2021 as the programme business case for AT's maintenance and renewals programme funding. Its assessment of the AMP states: "*Excellent AMP, strengthening the concept of stewardship and fitness of the assets for future purpose*".
6. Waka Kotahi has published its intention to co-invest in AT's road asset management programme to a level of \$866 million over the next three years, which is 21 percent lower than the AMP 2021 recommendation of \$1,103 million. For the public transport asset management programme, Waka Kotahi intend to co-invest to a level of \$118 million, which is 26 percent lower than the AMP 2021 recommendation of \$159m. Overall, this equates to a shortfall of \$142 million for the first three years of the AMP 2021.
7. Where AT does not address asset deterioration adequately, by maintaining and renewing assets in a timely and efficient way, then safety risks will increase and levels of service will decrease.

Ngā tuhinga ō mua / Previous deliberations

8. The content of the AMP 2021 has been provided to the board throughout the RLTP development process. The AMP 2021 and summary have been updated following feedback from the 20 July 2021 Design and Delivery Committee meeting.
9. The Committee discussed the need to ensure editorial alignment with the RLTP, and the need to account for AT's contribution to climate change, including the embedded carbon impacts of infrastructure. It was noted that work is still underway to understand and quantify climate change impacts.
10. Alignment of the AMP 2021 with the strategic outcomes of the RLTP has now been improved. The influence of asset management decisions on carbon emissions, including the embedded carbon impacts, have been highlighted as an area for improvement in future Asset Management Plans.

Te horopaki me te tīaroaro rautaki / Context and strategic alignment

11. AT is the kaitiaki (guardian) of \$22 billion of transport infrastructure. AT prepare an AMP every three years to demonstrate to Auckland Council, Waka Kotahi and the public that we are prudently managing these assets in the interests of present and future customers.
12. The AMP is a financial planning requirement of Auckland Council's CCO Accountability Policy (s90(2)(d) LGACA); it is the Programme Business Case submitted to Waka Kotahi to fund AT's asset maintenance and renewals programme and provides part of the evidence used by Audit NZ to assess compliance with the LGA.
13. This AMP is a supporting document and aligns with the RLTP. The draft AMP 2021 has been provided to Auckland Council and Waka Kotahi, and key recommendations have been included in the ATAP.
14. The AMP 2021 aligns with the Auckland Plan and the ATAP in making better use of our existing transport network.
15. The AMP 2021 is developed in alignment with the Waka Kotahi One Road Network Classification (ONRC) system.

16. The AMP defines the current condition of AT assets, and forecasts the renewals and maintenance activities required to ensure that these assets continue to deliver an agreed level of service over the coming ten years. The AMP 2021 recommends appropriate investment in asset maintenance and renewals for public safety, to reduce the risk of asset failure, and to maintain adequate levels of service.

Ngā matapakinga me ngā tātaritanga / Discussion and analysis

17. AT continues to mature its asset management practices in alignment with ISO 55001 Asset Management Standards.
18. The asset renewals programme presented in the AMP 2021 is developed based on asset condition assessments and rigorous deterioration modelling. AT has its own Renewal Optimisation Model and uses the internationally recognised dTIMS predictive modelling suite. Critical assets in poor condition, nearing end of life, are prioritised for renewal before they pose a safety risk to the general public.
19. The AMP 2021 considers the following key elements:
- a. Low rates of asset renewals in recent years has created a backlog which requires higher levels of maintenance and additional renewals expenditure to restore the asset portfolio to good health.
 - b. Urban intensification as a result of Kainga Ora and private development together with heavy vehicle construction traffic and introduction of double decker buses has caused increased rates of asset deterioration. In addition, the AT asset portfolio is growing at a rate of 1.5% per annum with new assets vested from 3rd party developers.
 - c. Costs for safety compliance (traffic management) and unit rates for construction materials have significantly increased above rates used in previous 2018 cost modelling.
 - d. Sea level rise and other climate factors are having an increased effect on asset deterioration, maintenance and renewal requirements.
 - e. Initial seismic assessment of several AT structures indicate that seismic strengthening or early renewal will be required.
 - f. There are 93 active slips on the AT road network which need remediation, this number increases after every storm event.
 - g. Improvements in systematic asset condition assessments has identified previously unknown asset defects.
 - h. The AT local road network carries 17 per cent of all vehicle travel in New Zealand.
 - i. Timely maintenance of existing assets is recommended because it is less costly and less risky than deferring maintenance. Maintenance needs increase over time due to the consequential opex associated with AT's growing asset base.
20. Overall, the AMP 2021 was assessed favourably and supported by Waka Kotahi, with the following key comments:
- a. *“Excellent AMP, strengthening the concept of stewardship and fitness of the assets for future purpose”.*

- b. *“The business case aligns completely with Government priorities, particularly with ATAP (The Auckland Transport Alignment Project), which is an agreement between central and local government on investment priorities for the Auckland region. AT’s bid for MO&R funding in NLTP 2021-21 is aligned with the ATAP 10-year forecast, and Arataki.*
- c. *Modelling is used to explore a range of scenarios from ‘Intervene immediately’, to ‘Run to failure’ for road pavements, road surfacing, and other assets. Scope, quantity, and timing of interventions has improved dramatically since previous AMPs. AT has implemented a clear process for approval of renewal interventions, and this includes a robust internal challenge process. AT is currently in a six year ‘renewals holiday’, as they pull back from early intervention and accept more ‘sweating of the asset’ than in previous consultant driven programmes. AT’s ‘recycle’ period for assets renewals is in line with or in some cases even longer than other local government networks.”*
- d. *“Full delivery has never been an issue for AT. On the contrary, Auckland Council has provided top-up funding to enable the delivery of renewals well above the NLTP funded level. In terms of risk, there is little to no risk that either Auckland Council or the NLTP could significantly over-invest in the Auckland network. Affordability constraints, historically in NLTP funding, have meant that if anything there has been under investment. However, given the situation brought about by Covid 19, there is now also a risk that Auckland Council may not be able to invest at previous levels. That being the case, it is more important than ever that the NLTP fully funds a ‘right-sized’ MO&R programme in order to avoid the ‘time bomb’ effect of significant under-investment. A systemic and enduring under-funding situation would lead inevitably to a deteriorating network from which it would be difficult or impossible to recover. This would be a failure of stewardship which would pass the problems to future generations.”*

Ngā tūraru matua / Key risks and mitigations

21. The AMP 2021 defines the current condition of AT assets, and forecasts the renewals and maintenance activities required to ensure that these assets continue to deliver an agreed level of service over the coming ten years. The AMP 2021 recommends appropriate investment in asset maintenance and renewals for public safety, to reduce the risk of asset failure, and to maintain adequate levels of service. Funding provided by Waka Kotahi over the next three years will not, without additional Council funding support, allow the maintenance and renewals in the AMP 2021 to be completed. Discussions with our funders are ongoing.

Ngā ritenga-ā-pūtea me ngā rauemi / Financial and resource impacts

22. The AMP 2021 recommends an investment of \$3.93 billion for asset renewals and \$2.6 billion for asset operations and maintenance over the 10-year period. This is based on a comprehensive review of AT’s asset renewal needs, including the impacts of growth on our network and the need to support the RLTP strategic outcomes of increased public transport, walking and cycling.

23. The recommended asset renewals plan considers funding constraints including the impact of the COVID-19 pandemic on revenue forecasts. The constrained renewals investment plan therefore begins to increase from FY2024/25 to address the renewals backlog and increased asset deterioration due to growth, intensification and climate change.
24. The financial investments recommended in the AMP 2021 were included in the RLTP and in the ATAP and were endorsed by Cabinet on 12 March 2021. At that meeting, Cabinet noted (CAB-21-MIN-0035 point 10) that *“it is expected that the allocation in the 2024 Government Policy Statement for road maintenance, operations and renewals will need to be increased in the context of broader trade-offs and affordability.”*
25. The AMP 2021 was submitted to Waka Kotahi to support the AT bid for co-funding of Maintenance, Operations and Renewals (MOR) for the three-year period from 1 July 2021 to 30 June 2024. Waka Kotahi’s Board considered overall national affordability and published their intention to co-invest in AT’s road asset management programme to a level of \$866 million over the coming three years, which is 21 per cent lower than the AMP 2021 recommendation of \$1,103 million. For the public transport asset management programme, Waka Kotahi intend to co-invest to a level of \$118 million, which is 26 per cent lower than the AMP 2021 recommendation of \$159 million. Overall, this equates to a shortfall of \$142 million for the first three years of the AMP 2021.
26. The table below highlights the difference between the submission to Waka Kotahi and the indicative approval for key elements of MOR:

Work Category	Work Category Name	2021-24 (\$m)		Variance	
		Bid	Indicative approval	\$m	%
Maintenance & Operations					
122	Traffic services maintenance	106.0	100.0	6.0	6%
123	Operational traffic management	51.7	35.0	16.7	32%
Renewals					
211	Unsealed road metalling	6.5	6.0	0.5	8%
212	Sealed road surfacing	239.0	125.5	113.5	47%
214	Sealed road pavement rehabilitation	137.0	105.0	32.0	23%
215	Structures component replacement	53.1	34.5	18.6	35%
222	Traffic services renewals	82.4	61.8	20.6	25%
225	Footpath renewal	73.5	45.0	28.5	39%

Ngā whaiwhakaaro ō te taiao me te panonitanga o te āhuarangi / Environment and climate change considerations

27. The AMP 2021 takes into consideration the impacts of natural hazards and climate change on asset maintenance and renewals.
28. The AMP 2021 does not fully reflect the whole of life climate impact of asset management choices. Quantifying these impacts, and putting in place low carbon construction targets, is highlighted in the document as an area for future improvement.

Ngā reo o mana whenua rātou ko ngā mema pooti, ko ngā roopu kei raro i te maru o te Kaunihera, ko ngā hāpori katoa / Voice of mana whenua, elected members, Council Controlled Organisations, customer and community

29. Key recommendations/conclusions of the AMP 2021 were provided to our partners as part of ATAP and included in the RLTP for public consultation.
30. The draft AMP 2021 was also provided to Auckland Council in November 2020 to support the development of the Long-Term Plan and Infrastructure Strategy.
31. AT has met legal requirements for signoff and public consultation on the AMP 2021 by including key information in the RLTP, however it is recommended that the full AMP 2021 together with a summary document be publicly available on the AT website. This will enable interested parties and the public to understand how asset investment needs have been calculated, and what this means for levels of service and asset risk. The 2012-15, 2015-18 and 2018-21 AMPs and summary documents are all currently available on the AT website.

Ngā whaiwhakaaro haumaruru me ngā whaiwhakaaro hauora / Health, safety and wellbeing considerations

32. The AMP 2021 recommends appropriate investment in asset maintenance and renewals for public safety, to reduce the risk of asset failure, and to maintain adequate levels of service. Critical assets in poor condition, nearing end of life, are prioritised for renewal before they pose a safety risk to the general public.
33. Where AT does not address asset deterioration adequately, by maintaining and renewing assets in a timely and efficient way, then safety risks will increase and levels of service will decrease.



Ā muri ake nei / Next steps

34. Upon board approval and subject to any minor adjustments noted in paragraph 32, both the AMP 2021 and AMP Summary 2021 will be uploaded to AT's website.
35. Ahead of publication of the AMP 2021 and AMP Summary 2021 to AT's website, minor adjustments may need to be made to align valuation and performance information with the 2021 Annual Report.

Ngā whakapiringa / Attachments

Attachment number	Description
1	Asset Management Plan 2021 Summary
2	Presentation to Design & Delivery Committee
3	Transport Asset Management Plan Programme Business Case 2021- 2031

Te pou whenua tuhinga / Document ownership

Submitted by	Murray Burt Chief Engineer	
Recommended by	Mark Lambert Executive General Manager Integrated Networks	
Approved for submission	Shane Ellison Chief Executive	