



Asset Class Management Plan

Transport structures and
public transport

2024



Read me first: what it means that this document has been approved for retention by Auckland Council

Status of this document

On 6 May 2026, the New Zealand Government passed the Local Government (Auckland Council) (Transport Governance) Amendment Act. This legislation changed transport decision-making and responsibility for Auckland.

As part of this legislation, Auckland Council was required to review all transport-related and in-force Auckland Transport policies and plans to decide whether to retain, amend or revoke the policy or plan.

On 21 September 2026, Auckland Council approved the retention and transfer of this document to the council. In accordance with the Act, the document continues in effect until it is reviewed, replaced, or revoked.

This document remains in effect but should be considered alongside Auckland Council's current strategic direction and statutory transport planning requirements.

Alignment with Auckland Council group strategic direction and transport planning requirements

Auckland Council current strategic direction provides the wider context for how this document should now be interpreted and applied. This includes relevant Auckland Council strategies, policies, plans, investment decisions, regulatory settings, and local board direction.

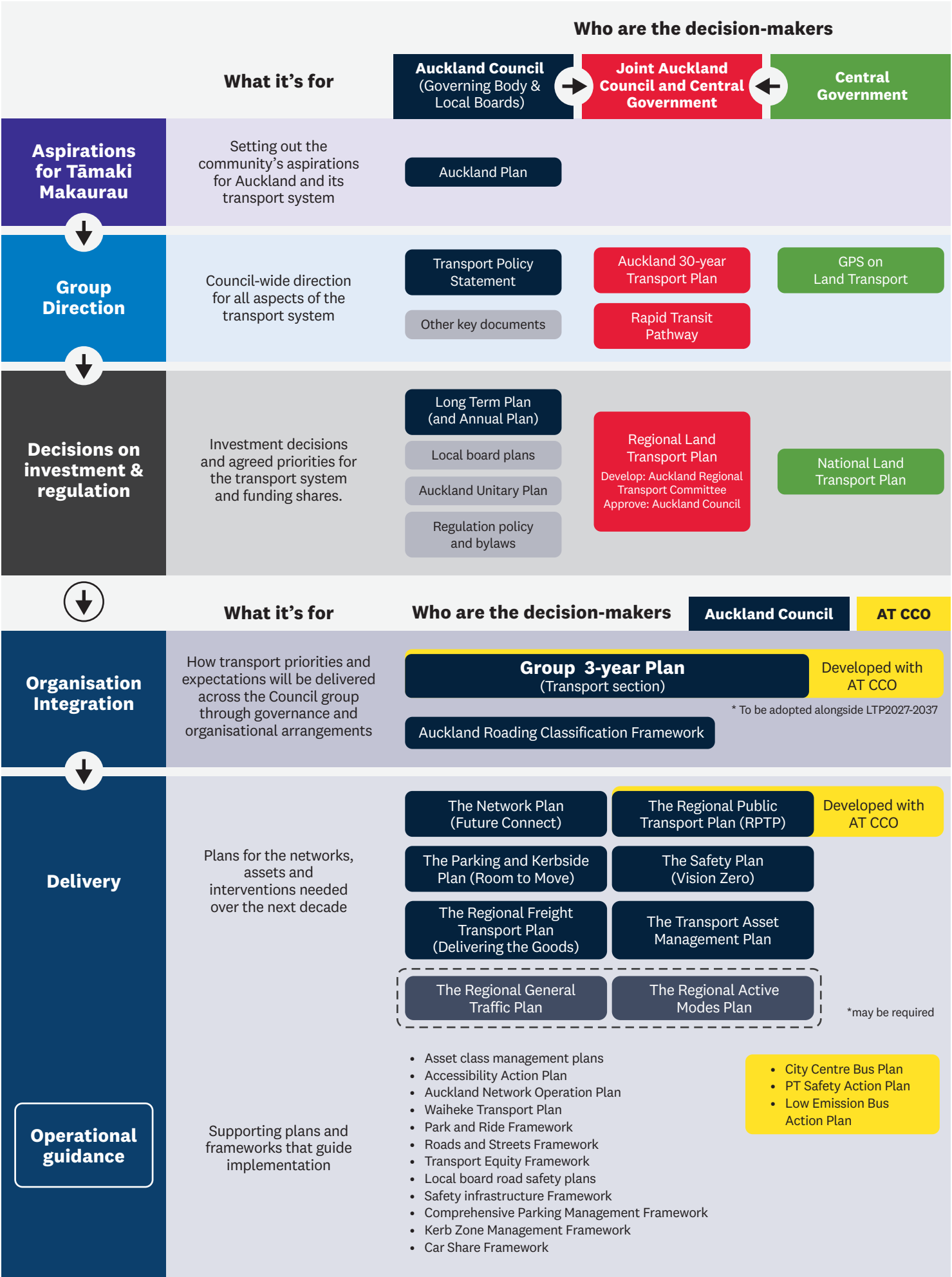
Transport planning is also guided by legislation and related planning documents introduced through the reforms. This includes the Auckland Council Transport Policy Statement, the Auckland Regional Transport Committee, the 30-year Transport Plan for Auckland, the Regional Land Transport Plan, and related transport governance and planning requirements.

The Auckland Council Group Strategic Framework (Transport view), shown below, provides context for how transport-related strategies, plans and frameworks fit together. It is intended as an evolving guide and will continue to be refined as documents are reviewed and updated. The Asset Class Management Plan – Transport structures and public transport was prepared under previous governance arrangements. While it remains in effect, the way it should be interpreted and applied, and its relationship with the broader framework today may differ from how it was originally intended. To ensure accurate interpretation, advice should be sought jointly from Auckland Council's Group Strategy and Transport Policy functions.

Auckland Council Group Strategic Framework

(Transport view)

Simplified view only. Documents often span multiple layers and relationships. Higher-order direction takes precedence. Seek guidance where interpretation is required. Subject to ongoing refinement.



Application within Auckland Council's shared governance model

Auckland Council's shared governance model allocates decision-making responsibilities between the Governing Body and local boards. The transport reform legislation changed how this model applies to transport by assigning additional responsibilities to local boards for local and collector roads, while arterial roads and specific precincts are wholly under the decision-making responsibility of the Governing Body.

The Auckland Roding Classification Framework determines the split in road type and therefore decision making, and shows individual road categories.

By retaining this document, the Governing Body confirmed that it remains part of Auckland Council's approach to transport planning and decision-making. It should be taken into account when Auckland Council plans, funds, regulates, and delivers transport services and infrastructure.

The Allocation of Decision-Making Framework sets out the respective responsibilities of the Governing Body and local boards. Local board decision-making responsibilities for local and collector roads include:

- **Parking and stopping controls:** Such as no stopping restrictions (broken yellow lines), angle parking, time restricted parking, parking zones,
- **Traffic Controls:** Such as community streets (community led play streets), pedestrian crossings, speed humps, speed limits,
- **Road corridor and network access permissions and conditions:** Corridor access approvals for events (excluding Eden Park events that impact arterial roads),
- **Property and landowner (road reserve) decisions:** Such as removal of hazardous encroachments affecting road safety, airspace and subsoil leases,
- **Infrastructure:** Such as footpaths and cycle paths (new or modified), installing monuments, removal of third-party structures.

Where local boards are responsible for decisions covered by this document, they should take it into account when making those decisions. The document does not change or limit local board decision-making powers.

2024 Transport Structures and Public Transport Asset Management Plan

Auckland Transport

Author: Asset Planning and Policy team

Version: September 2024

Document control

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0.1	1 March 2024	Draft Lifecycle Management section	Brett Elston		
0.2	22 March 2024	Draft Risk Management section	Brett Elston		
0.3	5 April 2024	Draft Growth and Demand section	Brett Elston		
0.4	17 May 2024	Draft Levels of Service section	Brett Elston		
0.5	12 August 2024	Draft Executive Summary, Introduction and State of Our Assets sections	Brett Elston		
0.6	9 September 2024	Draft Lifecycle Management section and Financial Summary updates	Brett Elston		
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EXECUTIVE SUMMARY

The Purpose of this Plan

This Asset Management Plan (AMP) supports Auckland Transport's goal to meet the service levels agreed with ratepayers and asset users by managing Transport Structures and Public Transport infrastructural assets cost-effectively for current and future customers.

By detailing Auckland Transport's infrastructural assets and outlining necessary actions, this document aims to support Auckland Transport's goal of providing agreed service levels in a cost-effective manner, while addressing known issues and future risks.

This document inputs and aligns to the Summary AMP, which in turn inputs to Auckland Transport's Regional Land Transport Plan (RLTP) – Auckland Transport's 10-year investment programme which aims to respond to the challenge of a growing population as well as Auckland Council and Central Government transport policy outcomes of being:

- Fast and connected – improvements that make public transport faster, more accessible and more reliable
- Resilience – investments that ensure our network is ready for challenges.
- Productive – projects that support regional growth and productivity.
- Safe – investments that support a network that gets everyone home safely.
- Sustainable – investments that help us reduce our transport emissions

The State of Our Assets

This plan covers the infrastructure assets supporting the provision of AT's transport related services, comprising the following asset portfolios:

- Transport Structures – bridges, major culverts, minor structures, retaining walls and seawalls, tunnels and underpasses, gantries etc.
- Public Transport – bus, rail and ferry networks, parking facilities, airfields and the harbour master.

Collectively these assets have replacement value estimated at \$4.54 billion. The following figure provides a breakdown of the asset classes in Auckland Transport's Transport Structures and Public Transport asset portfolios.

Snapshot of Auckland Transport's Transport Structures and Public Transport infrastructure assets



Rail network

assets worth
\$1.7 billion
40 active rail stations
72 electric trains



Bridges and Major Culverts

assets worth
\$1.4 billion
900 bridges
385 major culverts



Walls

assets worth
\$802 million
4,341 retaining walls,
209 seawalls



Parking

assets worth
\$312 million
250 at-grade carparks
11 parking buildings



Bus network

assets worth
\$192 million
7 bus stations
1,489 bus shelters



Ferry network

assets worth
\$171 million
18 wharves
4 ferry terminals



Airfields

assets worth
\$8.7 million
2 airfields



Gantries

assets worth
\$2 million
20 gantries



Harbourmaster

assets worth
\$2 million
8 boats
Moorings and Nav aids

Transport Structures and Public Transport asset portfolios

\$4.54B

replacement value

Depreciating with time
and use at a rate of

\$94.8M

per year

\$260K

per day

Note: All values are replacement cost as of June 2023, except total asset value which is depreciated replacement cost plus land, corporate and IT assets.

The following figures provide a snapshot each asset portfolio's current age and condition profile.

Figure 1: Condition profile – Transport Structures

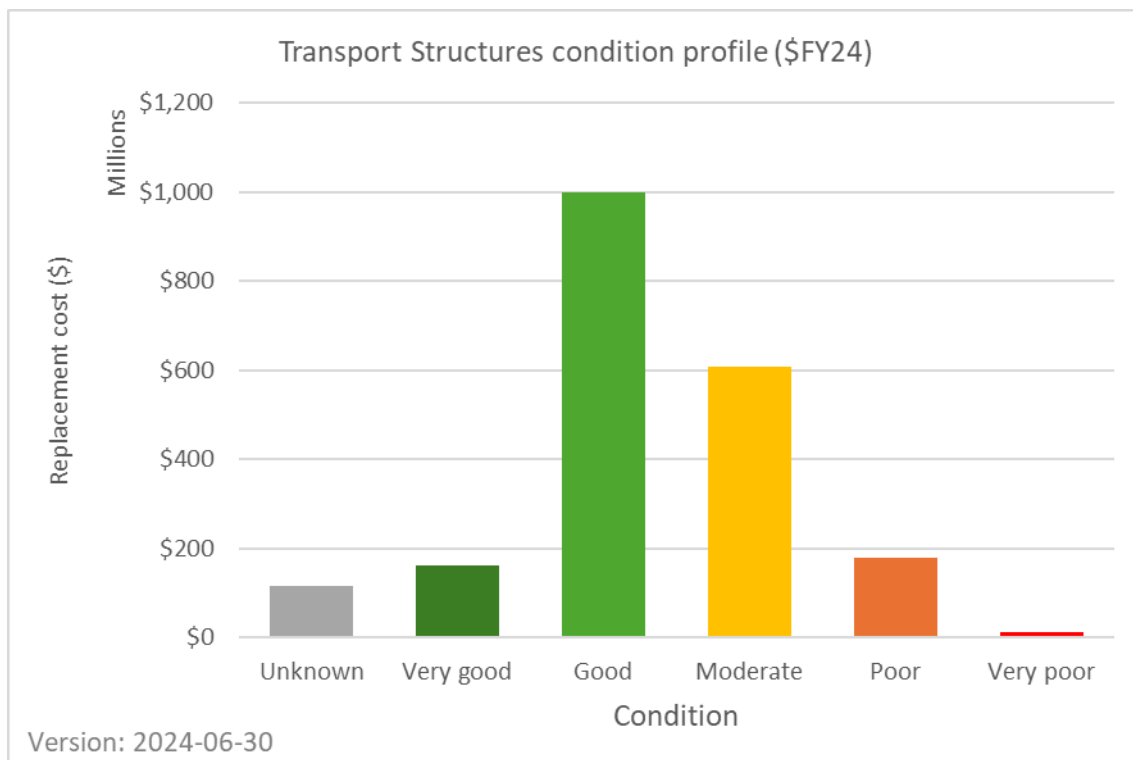


Figure 2: Age profile – Transport Structures

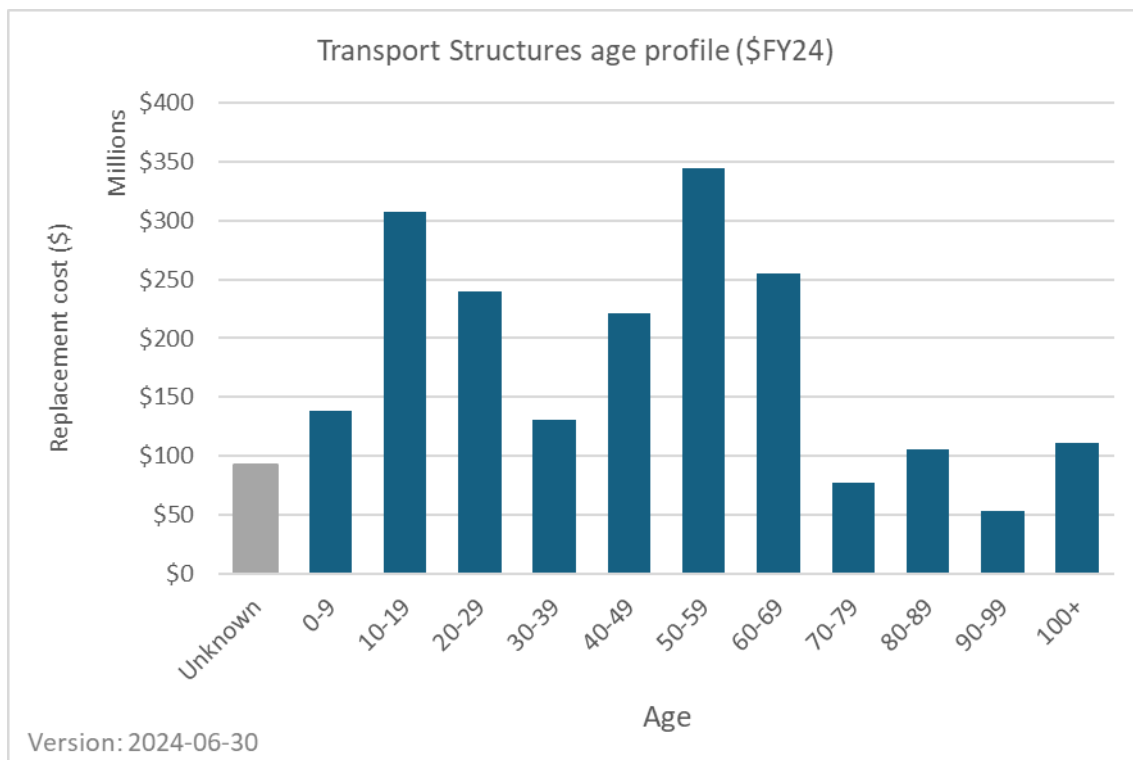


Figure 3: Condition profile – Public Transport

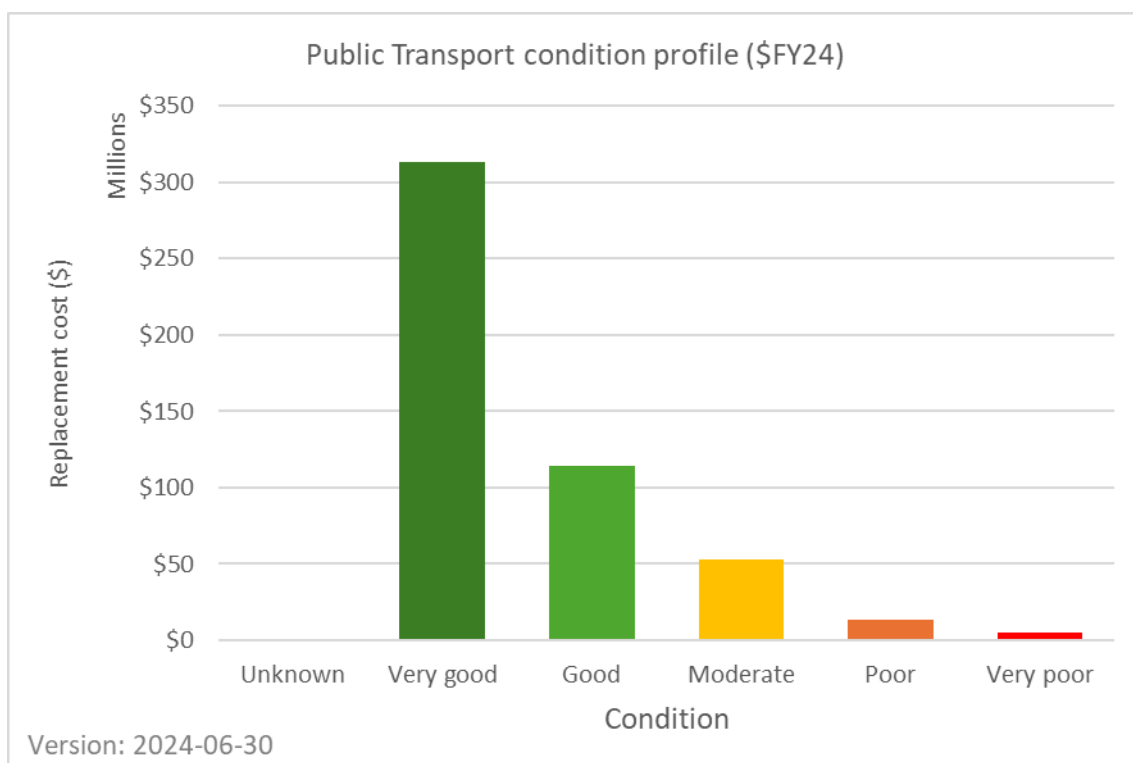
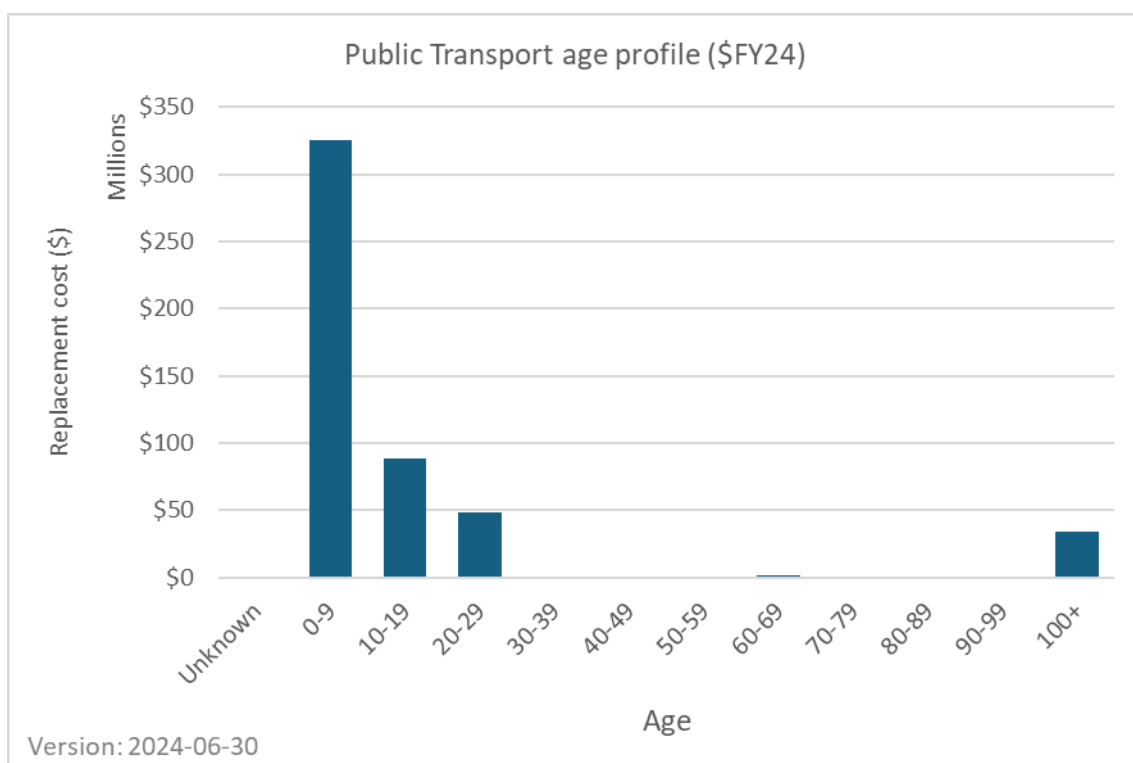


Figure 4: Age profile – Public Transport



Levels of Service

The condition of Auckland Transport's infrastructure directly impacts the service levels experienced by Aucklanders. When infrastructure is taken out of service, for whatever reason, disruptions to daily routines occurs creating frustration and dissatisfaction with those relying on that infrastructure. Service levels that may have once been a point of pride for Auckland Transport now reflect the struggle to maintain aging and deteriorating infrastructure due to insufficient funding.

The likely service level consequences of planned budgets include:

- Deteriorating asset condition that if left unaddressed will significantly increase future financial CAPEX requirements.
- Increased risk of structural failure, for which Auckland Transport's risk appetite is 'low'.
- Direct impact to transport services - Public Transport, freight, business travel - economic productivity, and customer experience.

Future Demand

As Auckland's population continues to grow so does the demand for new and improved transport services. This demand places additional strain on Auckland Transport's existing infrastructure and financial resources.

Urban brownfield developments like Kainga Ora housing intensification programmes and greenfield housing developments such as those in Ramarama (Auckland south) and Kumeu (north Auckland) all expect new and improved services to be provided by Auckland Transport.

Understandably, any new infrastructure will require the funding of downstream operational, maintenance and renewal activities to ensure that new infrastructure is kept in serviceable condition.

As more people and goods use Auckland Transport's Transport Structures and Public Transport infrastructure, the resilience of existing infrastructure will be tested. So, to meeting these growth and demand challenges, funding permitting Auckland Transport aims to utilise a combination of approaches, including:

- additional Renewal activities (CAPEX – Renewal);
- uplifting Maintenance activities (OPEX);
- upgrading existing infrastructure (CAPEX – Service Level Improvement); and
- the provision of new infrastructure (CAPEX – New Works Growth).

Any demand management strategies are best focused on optimising the use of existing assets, reducing pressure on infrastructure, and promoting sustainable usage patterns. The following are example strategies Auckland Transport might consider employing, noting that this is not an exhaustive list of strategies.

For the Transport Structures asset portfolio:

- Load Management and restrictions: Implement weight restrictions on bridges to prevent overloading and extend their lifespan. Enforce height and width restrictions to protect structural integrity.

- Traffic flow optimization: Utilise intelligent traffic management systems to monitor and control traffic flow, reducing congestion and wear on structures. Implement peak-hour restrictions to spread out traffic volumes.
- Maintenance scheduling: Schedule regular maintenance and inspections during off-peak hours to minimise disruptions and extend asset life. Adopt predictive maintenance practices using sensors and data analytics to anticipate and address issues before they become critical.
- Alternative route planning and promotion: Develop and promote alternative routes to divert traffic from heavily used bridges and retaining walls. Use signage and real-time traffic information to guide vehicles to less congested routes.
- Encouraging non-motorised transport: Develop and enhance walking and cycling paths to reduce reliance on vehicular traffic. Promote active transport options through public campaigns and incentives.

For the Public Transport asset portfolio:

- Optimising service frequency and routes: Adjust service frequency based on demand patterns, increasing services during peak times and reducing them during off-peak times. Re-route or modify services to better align with passenger needs and reduce redundancy.
- Promoting off-peak travel: Offer incentives, such as discounted fares, to encourage travel during off-peak hours. Implement flexible working hours policies in collaboration with businesses to spread out travel demand.
- Enhance inter-modal connectivity: Improve connections between different modes of transport (e.g., bus, train, ferry) to create a seamless travel experience. Develop park-and-ride facilities to encourage the use of public transport for part of the journey.
- Real-time information and technology: Provide real-time information on service availability, delays, and alternative options to help passengers make informed decisions. Utilise apps and digital platforms to facilitate trip planning and ticket purchasing.
- Infrastructure improvements: Upgrade and expand infrastructure to accommodate increasing demand, such as adding bus lanes or expanding train platforms. Implement smart infrastructure solutions, like adaptive traffic signals and integrated ticketing systems, to enhance efficiency.
- Public awareness campaigns: Run campaigns to educate the public about the benefits of using public transport and the impact of their travel choices on infrastructure. Promote the environmental and economic advantages of reducing car usage.

General demand management strategies:

- Community engagement and education: Involve the community in planning and decision-making processes to ensure that demand management strategies are well understood and supported. Provide education on sustainable travel behaviours and the importance of maintaining infrastructure.
- Policy and regulation: Develop and enforce policies that support sustainable infrastructure use, such as congestion charges or low-emission zones. Implement land-use planning regulations that promote higher density and mixed-use developments to reduce travel distances and reliance on vehicles.
- Funding and Incentives: Secure funding for infrastructure improvements and demand management initiatives through government grants, public-private partnerships, or other

financing mechanisms. Offer incentives for using alternative transport modes, such as subsidies for electric vehicles or discounts on public transport passes.

By employing demand management strategies like those above, Auckland Transport may effectively manage the usage and longevity of the infrastructure assets under their management, to ensure they better meet current needs while remaining sustainable for future generations.

Managing the Risks

Adding to the complexities around service delivery, meeting demand and building a resilient network of infrastructural assets, Auckland Transport also face further challenges likely to come from the impact of climate change. Extreme weather events and patterns, such as the Auckland Anniversary floods and Cyclone Gabrielle of 2023, will create public safety concerns and cause service disruptions, as happened during those events. This will put further pressure on Auckland Transport's resources – funding and manpower.

To alleviate future risks, it is imperative to uplift Auckland Transport's infrastructure resilience. This not only means uplifting the maintenance and renewals of existing assets, but also fortifying those assets against emerging threats.

Incorporating resilience into Auckland Transport's asset management requires forward-thinking, planning and investment. Bridges and other transport structures may need upgrading to handle increased loads and potential seismic activity. Public Transport networks will need modernising to be more efficient, environmentally friendly, and resistant to extreme weather events. These activities require additional funding and a commitment to long-term asset management planning. The potential future risk consequences being as follows.

For the Transport Structures asset portfolio:

- Climate change and extreme weather events: More frequent and severe storms, flooding, and landslides can lead to accelerated deterioration and potential failures of bridges, retaining walls etc. Coastal infrastructure may face heightened risk from rising sea levels and increased salinity, leading to structural damage and corrosion.
- Aging infrastructure: Many structures are aging and may require significant maintenance or replacement. The risk of structural failures increases if these assets are not adequately maintained. Over time, materials used in older structures may weaken, necessitating more frequent inspections and repairs.
- Earthquake risk: New Zealand's seismic activity poses a constant risk to the integrity of bridges and retaining walls. Earthquake damage can be extensive, requiring robust engineering solutions and emergency response plans.
- Increased traffic loadings: Growing populations and economic activities can increase traffic loads on existing structures, accelerating wear and tear. Without effective load management, bridges and retaining walls could suffer from overloading, leading to structural damage or failure.
- Technological and material advancements: Older structures may become obsolete with the advent of new materials and construction technologies, requiring upgrades or replacements to meet modern standards. The need to integrate with smart infrastructure systems for real-time monitoring and management may pose challenges for older structures.

For the Public Transport asset portfolio:

- Climate change and environmental impacts: Extreme weather events can disrupt public transport services, leading to delays, cancellations, and increased maintenance costs. Flooding and heatwaves can damage public transport infrastructure, such as rail tracks and bus lanes, affecting service reliability.
- Population growth and urbanisation: Rapid urbanisation and population growth can lead to overcrowded public transport systems, reducing service quality and increasing wear and tear on infrastructure. To meet growing demand, significant investment in expanding public transport infrastructure and services will be required, posing financial and logistical challenges.
- Technological advancements: The rise of automated and digital transport solutions may render some existing systems outdated, necessitating costly upgrades. Increasing reliance on digital systems for operations and management introduces cybersecurity risks, which could disrupt services and compromise safety.
- Economic and financial constraints: Limited budgets and competing priorities may lead to underinvestment in public transport infrastructure, impacting service quality and system expansion. Rising costs of materials, labour, and energy could strain financial resources, making it challenging to maintain and upgrade infrastructure.
- Regulatory and policy changes: Evolving safety, environmental, and operational standards may require substantial modifications to existing systems. Shifts in government policy towards sustainability and emissions reductions could impact the planning and funding of public transport projects.
- Societal and behavioural changes: Post-pandemic shifts in work and travel behaviours, such as increased remote working, could alter demand patterns for public transport. Public perception and acceptance of new transport technologies and systems will influence their successful implementation and usage.

Auckland Transport will of course endeavour to manage these risks, within available RLTP budget envelopes. The following actions aim to mitigate, transfer, or accept risks, enhancing the resilience and sustainability of infrastructure assets.

Transport Structures asset portfolio related risk treatment actions may include:

• Climate change and extreme weather events	• Enhanced design standards: Update and enforce design standards to account for more frequent and severe weather events, ensuring structures can withstand extreme conditions. • Climate-resilient materials: Use materials resistant to climate impacts, such as corrosion-resistant metals and high-strength composites. • Flood defences: Implement flood protection measures around critical structures, including levees, floodwalls, and drainage improvements.
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• Aging Infrastructure	• Regular inspections and maintenance: Establish rigorous inspection schedules and preventive maintenance programs to identify and address wear and tear before failures occur.
• Rehabilitation and retrofits	• Invest in the rehabilitation and retrofitting of aging structures to extend their lifespan and improve their resilience to modern demands.
• Seismic activity	• Seismic retrofitting: Retrofit existing structures to meet current seismic standards, enhancing their ability to withstand earthquakes. • Emergency response planning: Develop and regularly update emergency response plans for seismic events, including evacuation routes and rapid assessment protocols.
• Increased traffic loads	• Load management systems: Implement load monitoring and management systems to ensure structures are not overloaded, using technology to detect and mitigate potential risks. • Traffic diversion plans: Create and promote alternative routes to distribute traffic loads more evenly and reduce pressure on heavily used structures.
• Technological and material advancements	• Research and development: Invest in research and development to explore new materials and construction techniques that enhance durability and resilience. • Integration of smart technologies: Incorporate smart sensors and monitoring systems into structures to provide real-time data on their condition and performance.

Public Transport asset portfolio related risk treatment actions may include:

• Climate change and environmental impact	• Resilient infrastructure design: Design public transport infrastructure to withstand extreme weather conditions, such as elevated rail lines and reinforced bus lanes. • Green infrastructure: Integrate green infrastructure, like permeable pavements and green roofs, to manage stormwater and reduce heat effects.
• Population growth and urbanisation	• Capacity expansion: Invest in expanding public transport capacity through additional vehicles, new routes, and increased service frequencies. • Transit-oriented development: Promote transit-oriented development to reduce travel distances and encourage the use of public transport.
• Technological advancements	• Adoption of new technologies: Embrace new technologies, such as electric and autonomous vehicles, to enhance efficiency and reduce environmental impact. • Cybersecurity measures: Implement robust cybersecurity measures to protect digital systems and data from cyber threats.

Economic and financial constraints	- Public-private partnerships: Explore public-private partnerships to leverage private investment for infrastructure projects. - Cost-effective solutions: Prioritise cost-effective solutions, such as phased implementation and modular construction, to manage financial constraints.
Regulatory and policy changes	- Proactive Policy Development: Stay ahead of regulatory changes by developing policies that support sustainable and resilient transport infrastructure. - Compliance and Adaptation: Ensure compliance with new standards and regulations and adapt infrastructure and operations accordingly.
Societal and behavioural changes	- Flexible service models: Develop flexible service models that can adapt to changing travel patterns, such as on-demand public transport services. - Public engagement and education: Engage with the public to understand their needs and preferences and educate them on the benefits of using public transport and sustainable travel behaviours.

By implementing these risk treatment actions, local governments can effectively mitigate the risks associated with structures and public transport, ensuring their infrastructure remains resilient, sustainable, and capable of meeting future demands.

Lifecycle Investment Needs

The forecasted asset management lifecycle investment needed (Investment Needs) to provide the Transport Structures and Public Transport services covered by this plan includes:

- Operational costs (OPEX), power costs, graffiti removal, cleaning etc.;
- Maintenance costs (OPEX), proactive and reactive maintenance works;
- Renewal costs (CAPEX), also known as major upgrades; and
- the downstream consequential costs to maintain any new assets vested to Auckland Transport.

The forecasting of New Works Growth (CAPEX) and Service Level Improvements (CAPEX) is determined by Auckland Transport's Strategy, RLTP and Corporate Finance teams, where:

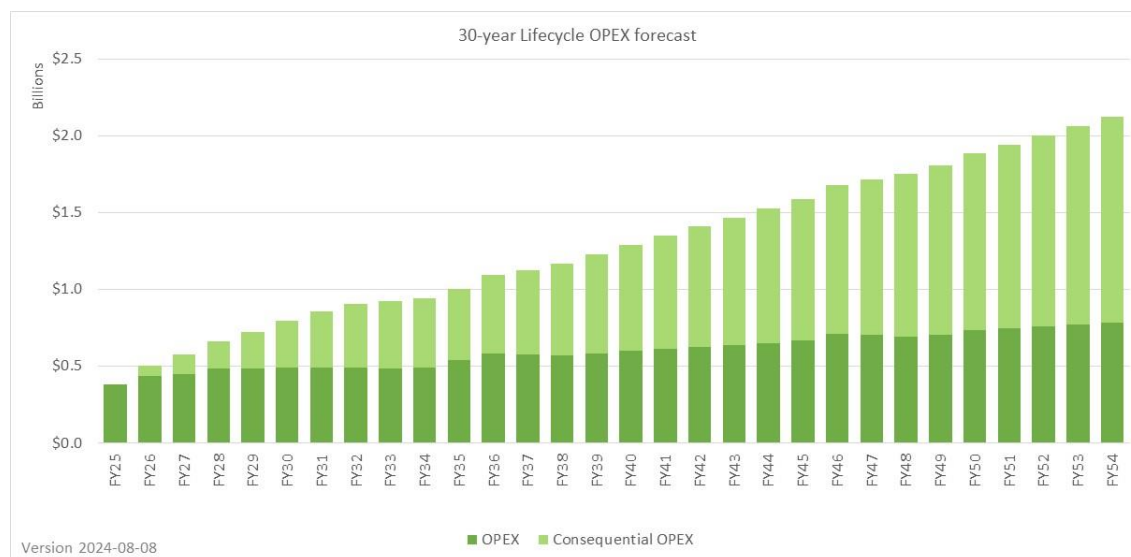
- New Works Growth capital works encapsulates the programmes and projects that add new assets, in delivering potentially new services, to Auckland Transport's fixed asset register. Examples include new bus interchanges and bus lanes, new ferry terminals, new bridges or structures etc.
- Service Level Improvement capital works are focused on uplifting the quality and performance of current service levels being provided by Auckland Transport. Examples include uplifting the resilience of Auckland Transport's infrastructure to cope with climate change impacts.

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Lifecycle Maintenance and Operations (OPEX) 30-year Investment Needs

Based on Auckland Transport's historical OPEX costs, the following graph presents current financial modelling and forecasting of lifecycle maintenance and operational costs for the Transport Structures and Public Transport asset portfolios.

Figure 5: 30-year Lifecycle OPEX Investment Needs



The following table details the total OPEX lifecycle Investment Needs for each funding period. This forecast is based on Auckland Transport's RLTP budgets and has been inflated (by Auckland Transport's RLTP team).

Table 1: OPEX Investment Needs

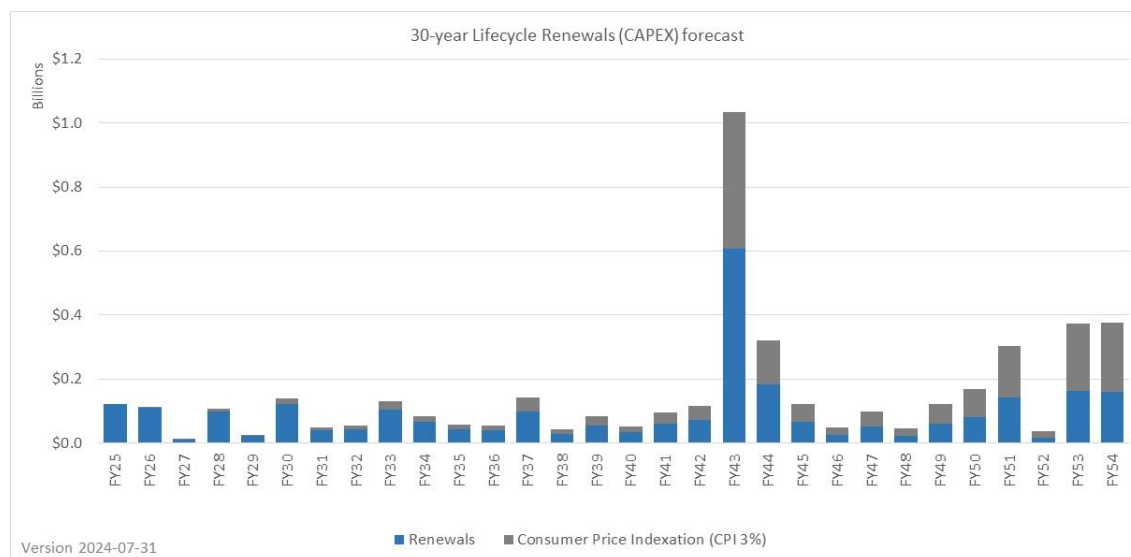
Funding period	Financial years	Total Investment Needs (\$FY24)
First 3 years of AT's RLTP	FY25-FY27	\$248 million
1 st decade	FY25-FY34	\$838 million
2 nd decade	FY35-FY44	\$2.00 billion
3 rd decade	FY45-FY54	\$1.69 billion

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Lifecycle Renewal (CAPEX) 30-year Investment Needs

Based on current condition and age asset data, the following graph presents the current financial modelling and forecasting of lifecycle renewals for the Transport Structures and Public Transport asset portfolios.

Figure 6: 30-year Lifecycle Renewal (CAPEX) Investment Needs



The following table details the total Lifecycle Renewals (CAPEX) Investment Needs for each funding period. This forecast is based on today's dollars (\$FY24) and inflated using Auckland Council's inflationary indices (CPI), currently estimated at 3% per year.

Table 2: Renewal (CAPEX) Investment Needs

Funding period	Financial years	Total Investment Needs (\$FY24)
First 3 years of AT's RLTP	FY25-FY27	\$247 million
1 st decade	FY25-FY34	\$838 million
2 nd decade	FY35-FY44	\$2.00 billion
3 rd decade	FY45-FY54	\$1.69 billion

Modelling data confidence

The following reflects the data confidence, on a five-point scale – 1 = Very High to 5 = Very Low confidence – held regarding the data and analytics presented above. This assessment is qualitative, based on professional judgement, as detailed below.

Table 3: Investment Needs data confidence

Data set	Confidence level	Founding data source	Comments
Valuation	High	SAP – Fixed Asset Register	SAP is Auckland Transport’s corporate financial system
Depreciation modelling	High	Corporate Finance Depreciation modelling	SAP is Auckland Transport’s corporate financial system
Historical, actual expenditure	High	SAP	SAP is Auckland Transport’s corporate financial system
Asset condition data	High	RAMM – Transport Structures	
Asset age data	High	RAMM – Transport Structures	
Investment Needs modelling/ forecasting	High	RAMM – Transport Structures	Simple age and condition-based modelling are best appropriate practice
Asset condition data	Moderate	SPM – Public Transport	
Asset age data	Moderate	SPM – Public Transport	
Investment Needs modelling/ forecasting	Moderate	SPM – Public Transport	SPM modelling is based on best practice

Each of the above data sources have been qualitative rated as follows:

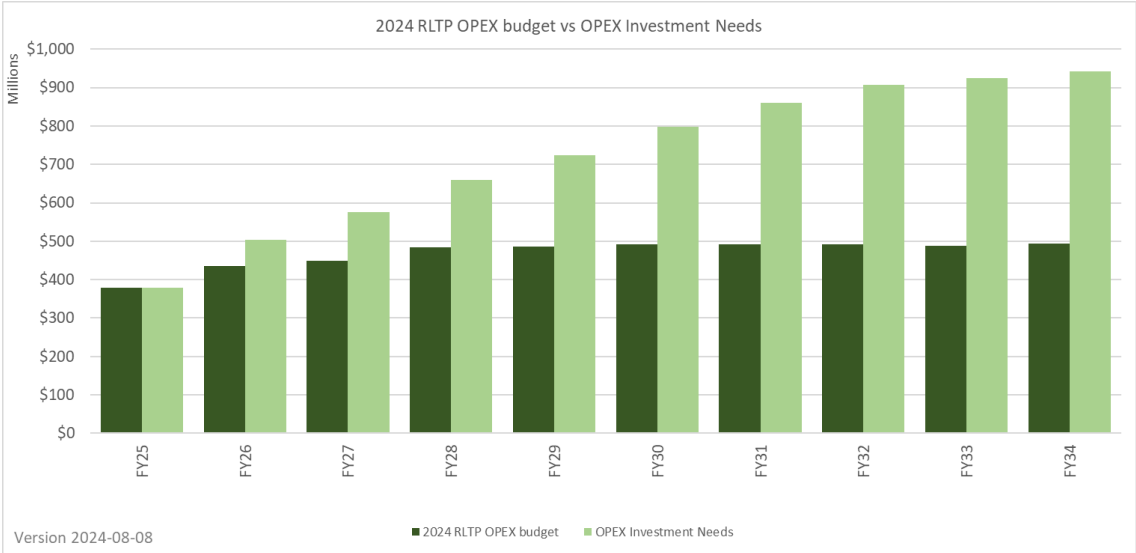
- Very high – qualitatively assessed as >80% data confidence
- High – qualitatively assessed as between 60-80% data confidence
- Moderate – qualitatively assessed as between 40-60% data confidence
- Low data – qualitatively assessed as between 20-40% confidence
- Very low – qualitatively assessed as <20% data confidence

Financial Summary

Approved 2024 RLTP funding

The following graph presents the approved RLTP OPEX budget vs OPEX Investment Needs for the Transport Structures and Public Transport asset portfolios.

Figure 4: 2024 RLTP OPEX budget vs OPEX Investment Needs



The financial impact of this level of OPEX funding is presented in the following table.

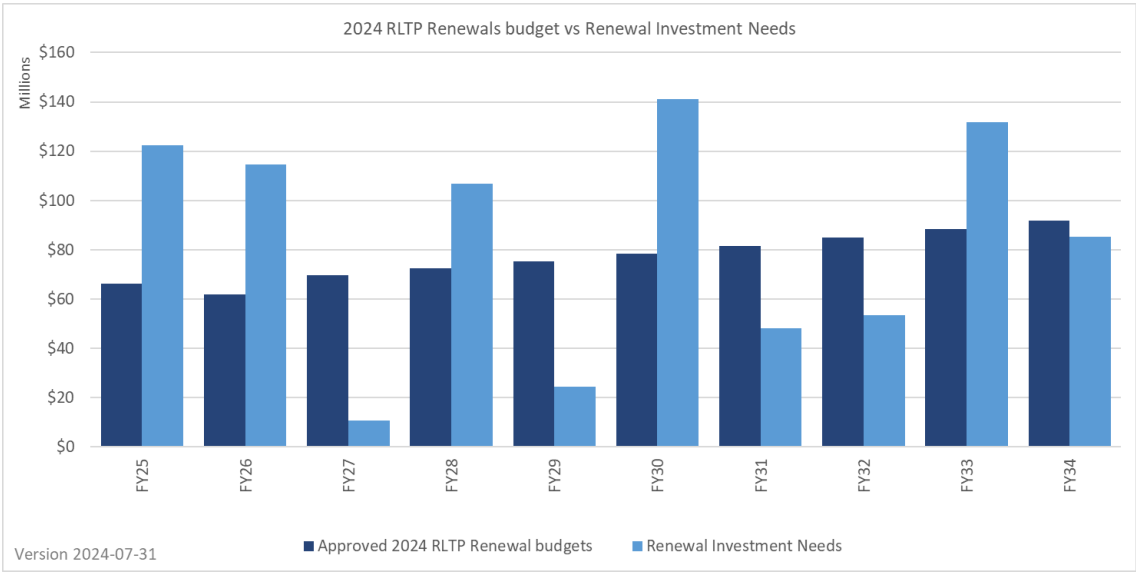
Table 5: Approved RLTP OPEX funding vs. Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
Approved RLTP funding	\$1.26 billion	\$4.69 billion
Investment Needs	\$1.46 billion	\$7.28 billion
Funding consequence	\$195 million [shortfall]	\$2.59 billion [shortfall]

Much of that shortfall relates to the consequential OPEX – maintenance and operational expenditure – required to maintain and operate new assets going into service over the given period.

Regarding Renewals (CAPEX) for Transport Structures and Public Transport asset portfolios, following graph presents the approved RLTP Renewal funding vs Renewal Investment Needs.

Table 6: 2024 RLTP Renewal (CAPEX) budget vs Renewal Investment Needs



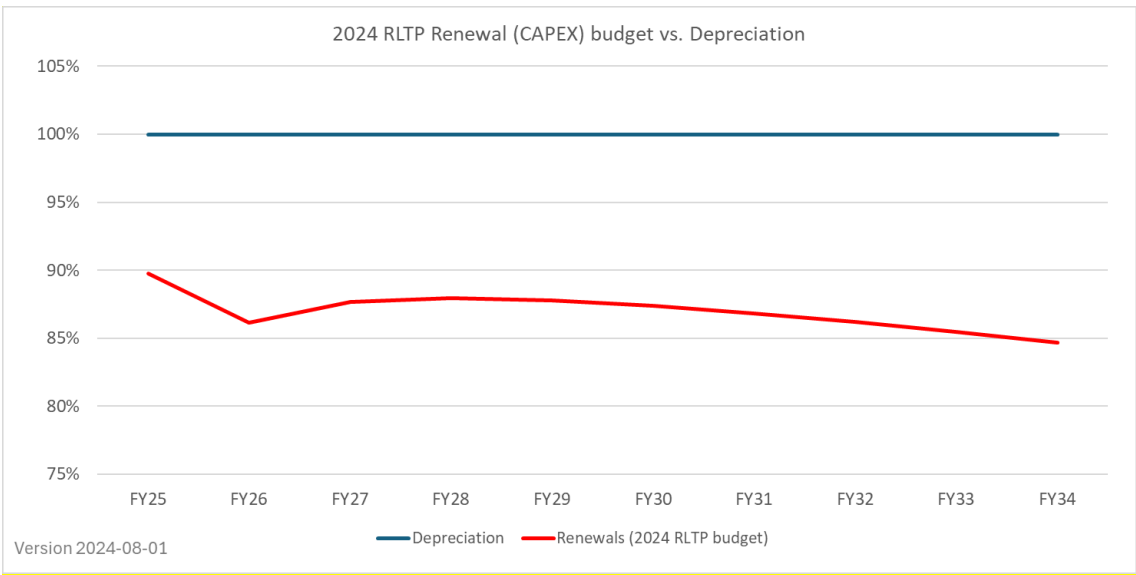
The following table shows the financial impact of this level of Renewals funding.

Table 7: Approved RLTP Renewal (CAPEX) funding vs. Investment Needs

	3-year totals FY25-FY27	10-year totals FY25-FY34
Approved RLTP funding	\$197.58 million	\$770.11 million
Investment Needs	\$247.66 million	\$838.41 million
Funding consequence	\$50.08 million [shortfall]	\$68.30 million [shortfall]

The following graph presents the estimated unfunded renewals gap – 2024 RLTP Renewal budget vs. forecasted Depreciation – for all three Asset Portfolios.

Figure 7: 2024 RLTP Renewal budget vs forecasted Depreciation



As the above graph indicates, Auckland Transport Renewals (CAPEX) will not match forecasted Depreciation within the current RLTP funding period.

Funding consequences

The appropriate level of whole-of-life infrastructure asset management funding ensures the integrity and longevity of the infrastructure under Auckland Transport's guardianship. Associated with this, Auckland Transport will therefore be well placed to deliver Service Levels ratepayers and asset users value and have agreed to. Therefore, by investing in regular proactive asset management, including maintenance (OPEX) and renewals (CAPEX) activities, Auckland Transport will:

- Prevent infrastructure integrity issues escalating.
- Better support a high level of service delivery to ratepayers and asset users.
- Be cost efficient and effective, for current and future generations.
- Ensure a reduced level of risk is being carried by the organisation.

Given the approved RLTP funding levels for OPEX and Renewals (CAPEX) activities, for the foreseeable future Auckland Transport can expect to carry a low level of risk in relation to the Transport Structures and Public Transport asset portfolios under its stewardship. Indicators of this will be such things as:

- The number of infrastructure faults continuing to increase, with more urgent repairs.
- Emergency asset repairs taking longer to resolve.
- An increasing number of customer complaints.
- An overall decline in customer satisfaction.

INTRODUCTION

Background

This plan communicates the requirements for the sustainable delivery of services through management of assets, compliance with regulatory requirements, and required funding to provide the appropriate levels of service over a 30-year planning horizon.

This plan is best read in consideration of other key Auckland Transport planning documents, including, but not limited to:

- Regional Land Transport Plan
- Regional Public Transport Plan
- Asset Management Policy
- Strategic Asset Management Plan
- Asset Risk Management Plan
- Climate Change Adaptation Policy

Asset management maturity in Auckland Transport is assessed using the Commerce Commissions Asset Management Maturity Assessment Tool (AMMAT). In 2024, Auckland Transport were assessed to have achieved a score of 2.4 out of a possible 4. Auckland Transport have a target of achieving a score of 3 overall.

Key stakeholders in the preparation and implementation of this plan are shown in the following table.

Table 8: Key stakeholders in this plan

Key stakeholder	Role in relation to this plan
Auckland Council, Waka Kotahi NZTA, and Local Boards	Representing the needs of community, ratepayers and asset users. The allocation of funding to meet objectives in providing sustainable Auckland Transport services while managing risks.
Auckland Transport Board and Executive Leadership team	Endorse the development and publication of this plan.
General Manager, Chief Engineer and Asset Management lead	Allocate the resources to drive the development of this key planning document.
Corporate Finance, Financial Reporting and RLTP team	Enabling financial integrity between the Fixed Asset Register, asset valuations, depreciation forecasts, RLTP budgets, Annual Plan budgets and Annual Reports.
Asset Managers	Develop 3-year Forward Work Programmes (FWP) for delivery based on the asset lifecycle analysis and guided by long-term financial plans. Ensure assets are regularly inspected and condition assessed.
Maintenance delivery teams	The deliver of renewal and maintenance FWP (YO) to agreed budgets.

Goals and Objectives of Asset Ownership

Our goal for managing infrastructure assets is to meet the agreed level of service in the most cost-effective manner for present and future consumers. The key elements of infrastructure asset management are:

- Defined level of services and the monitoring performance
- Managing the impact of growth
- Taking an asset management lifecycle approach
- Identifying, assessing and appropriately controlling perceived risks
- Ensuring financial integrity (asset valuations, RLTP, Annual Plan and Annual Reports)

Key elements of a best practice Asset Planning framework include:

- Understanding the service levels to be delivered
- Assessing the growth and future demand impacts
- Assessing and managing the risks
- Utilising best practice asset lifecycle management
- Financial planning
- Asset management process monitoring and improvement

Key references used in the development of this plan include:

- The International Infrastructure Management Manual (IIMM), published by the Institute of Public Works Engineering Australasia (IPWEA)
- ISO 55000 suite as the international standard for Asset Management
- The NAMS+ tool, developed by IPWEA

THE STATE OF OUR ASSETS

The assets covered by this plan are shown below.



Bridges and Major Culverts

assets worth
\$1.4 billion

900 bridges
385 major culverts



Walls

assets worth
\$802 million

4,341 retaining walls,
209 seawalls



Gantries

assets worth
\$2 million

20 gantries

*All values are replacement cost as at June 2023.

Transport Structures asset portfolio

\$2.20B

replacement value

Depreciating with time and use at a rate of

\$23.4M

per year

\$65K

per day



Rail network

assets worth
\$1.7 billion

40 active rail stations
72 electric trains



Parking

assets worth
\$312 million

250 at-grade carparks
11 parking buildings



Bus network

assets worth
\$192 million

7 bus stations
1,489 bus shelters



Ferry network

assets worth
\$171 million

18 wharves
4 ferry terminals



Airfields

assets worth
\$8.7 million

2 airfields



Harbourmaster

assets worth
\$2 million

8 boats
Mooring and Navais

*All values are replacement cost as at June 2023.

Public Transport asset portfolio

\$2.39B

replacement value

Depreciating with time and use at a rate of

\$71.4M

per year

\$195K

per day

For this plan the collection of assets above are currently managed in two Asset portfolios, as tabled below.

Table 9: Auckland Transport’s asset portfolios and asset classes

Asset Portfolio	Asset Classes
Transport Structures	Bridges, major culverts, minor structures, retaining walls and seawalls, tunnels and underpasses, gantries etc.
Public Transport	Airfields, Bus Network, Rail Network, Ferry Network, PT/ ITS systems, Harbourmaster, parking etc.

These Asset Portfolios/ Classes form the basis of reporting within this plan and provides a framework for structuring asset data in Auckland Transport’s asset-related information systems to assist in collection of data, reporting information and making decisions.

Physical parameters

The current age profiles for each asset portfolio are shown as follows.

Figure 10: Transport Structures age profile

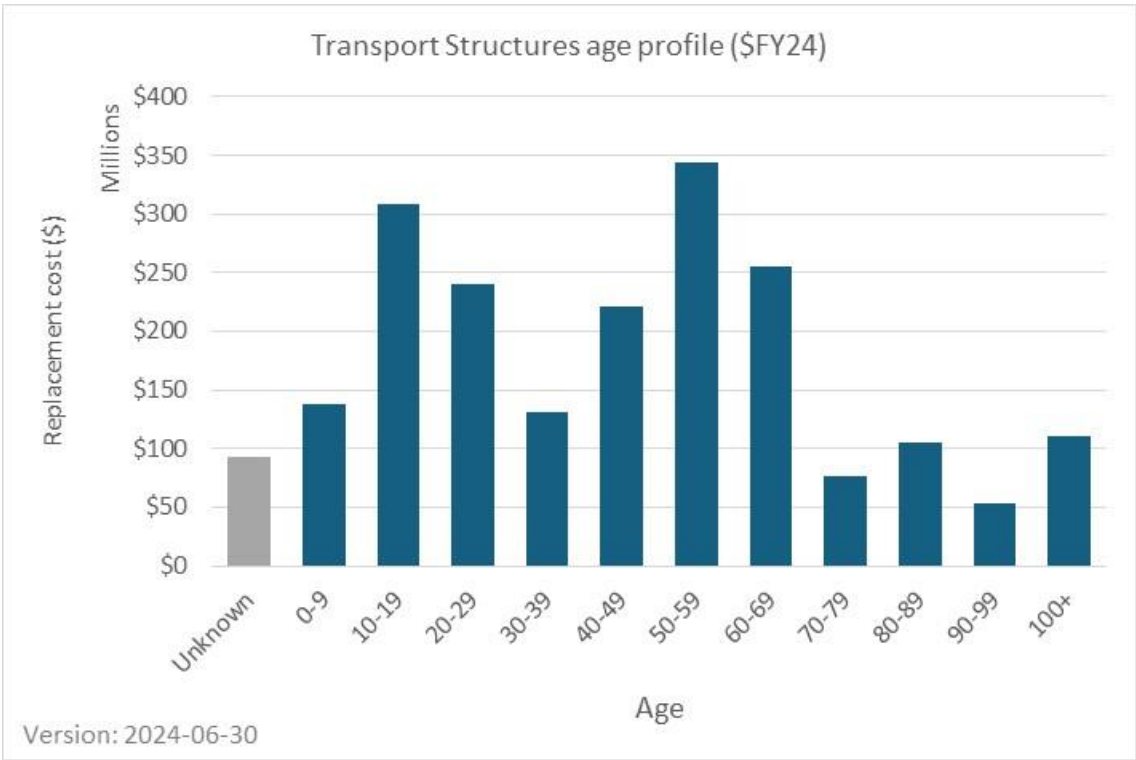
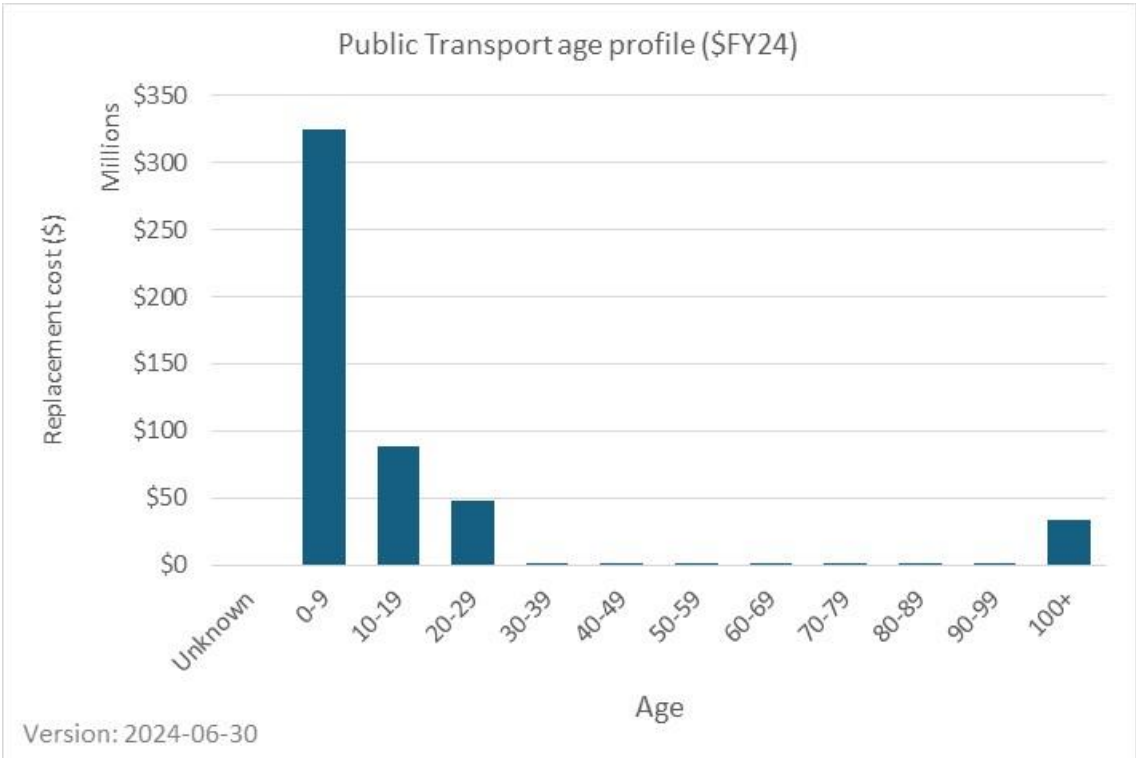


Figure 11: Public Transport age profile



The age of Auckland Transport’s infrastructure, as can be seen, generally follows the historical development of the Auckland region.

Asset condition profiles

The condition of Auckland Transport’s infrastructure is regularly monitored and checked. The measurement of condition is done using the 1 to 5 grading system as define by the International Infrastructure Management Manual (IIMM). In using this best practice system Auckland Transport can:

- Monitor the integrity of its infrastructure, to ensure asset can support the delivery of Auckland Transport’s services
- Model and forecast Renewal (CAPEX) Investment Needs.
- Use this consistent approach in the support of Auckland Transport’s long-term asset management decision-making.

The IIMM condition rating system is described as follows:

Condition grade	Description
Very Good [1]	In very good condition
Good [2]	Minor defects only
Moderate [3]	Maintenance required
Poor [4]	Consider renewal
Very Poor [5]	Approaching unserviceable

The current condition profiles for each asset portfolio are shown as follows.

Figure 12: Transport Structures condition profile

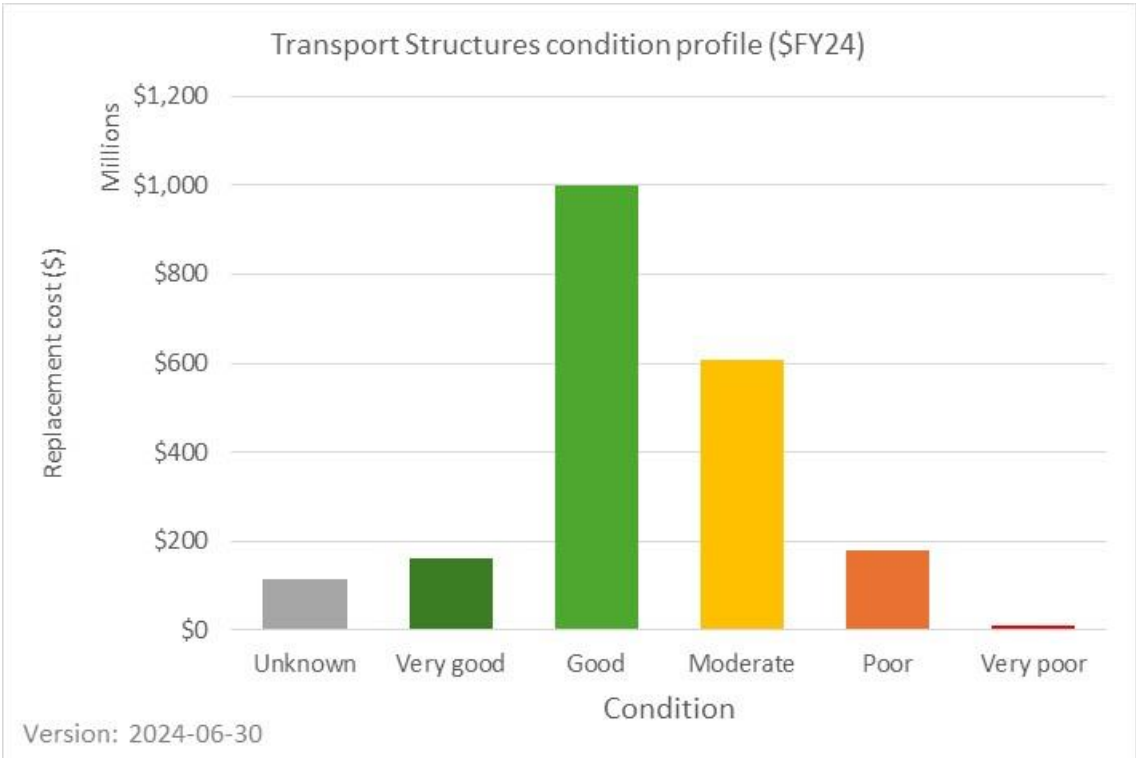
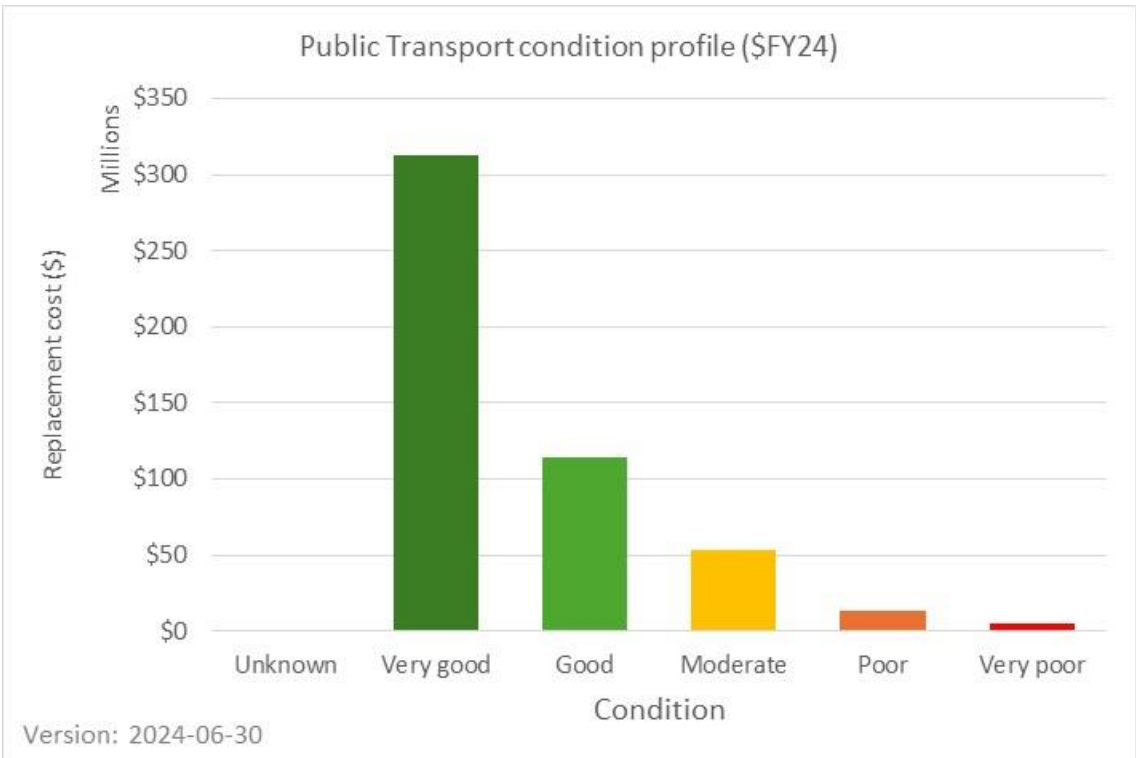


Figure 13: Public Transport condition profile



Generally, asset considered to be in “Acceptable” condition are those in Very Good, Good and Moderate condition. The integrity of these asset’s is such they can support the delivery of Auckland Transport’s services.

Those in Poor or Very Poor condition are said to be in “Unacceptable” condition and it is these assets that need renewing to uplift their integrity so they may continue to support the delivery of services. The following table presents a snapshot of Auckland Transport’s assets considered to be in Unacceptable condition.

Table 14: Assets in Unacceptable condition (replacement cost, \$FY24)

Asset Portfolio	Unacceptable condition (\$FY24)	% of total
Transport Structures	\$191 million	9%
Public Transport	\$18 million	4%
Total	\$209 million	8%

Regarding those assets in ‘Unknown’ condition, this rating is classically updated at the asset’s next inspection or condition assessment.

Key asset portfolio deficiencies

Assets are generally provided to meet design standards where these are available. However, there is insufficient resources to address all known deficiencies. Locations where deficiencies in service performance are known and detailed as followed.

Asset Portfolio	Known deficiencies
Transport Structures	- Bridges: Several bridges have had to be de-restricted. - Structures in general: Following the extreme weather events of 2023, including Cyclone Gabrielle, several structures are now having to be monitored.
Public Transport	Consequential maintenance and renewal funding: Much of the Auckland Transport Public Transport assets are new – refer the age profile. The funding of maintenance and renewal activities on those assets needs to be available long-term to ensure the integrity of these asset will be maintained so they can support the delivery of Auckland Transport’s services.

LEVELS OF SERVICE

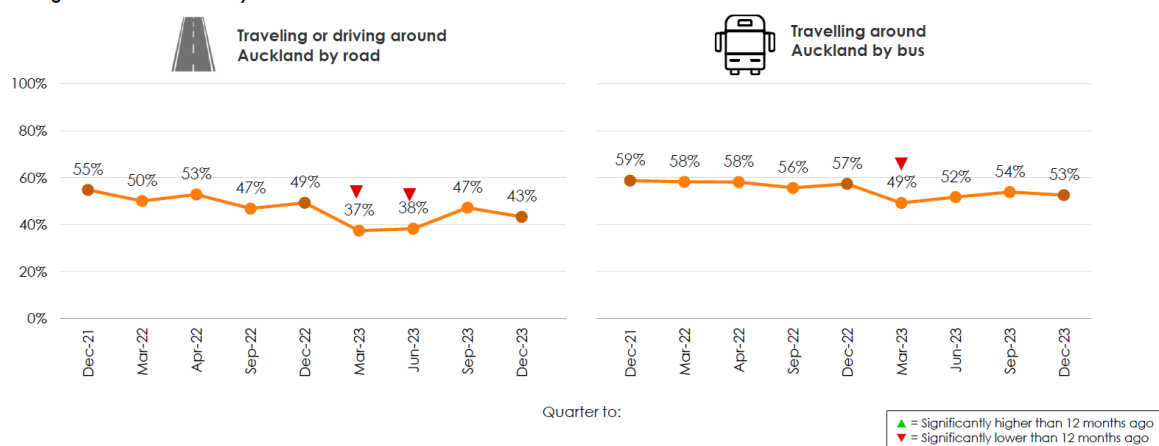
Customer Surveys and Feedback

Auckland Transport gathers customer feedback quarterly, on both its road network (including Transport Structures) and Public Transport services.

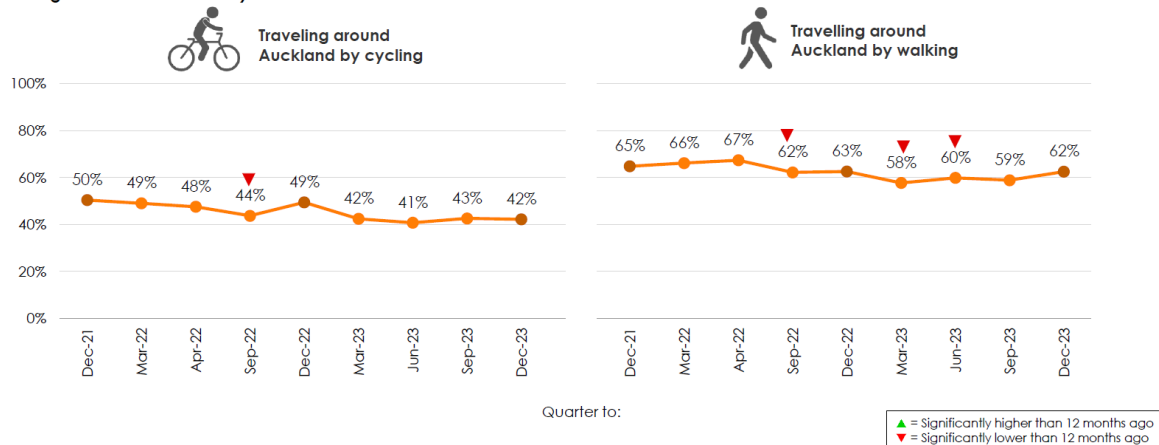
For the road network this consists of an on-line survey of 2000 Aucklanders a year (500 per quarter), with representative samples in terms of age, gender, ethnicity, and area (ward). Satisfaction measures encompass region wide and at a local level, and individual arterial routes. The following presenting a high-level snapshot of results from December 2023 surveys.

Figure 15: Current customer feedback

Satisfaction with the overall experience of travelling around Auckland by...
(QTR among all Auckland residents)⁽¹⁾



Satisfaction with the overall experience of travelling around Auckland by...
(QTR among all Auckland residents)⁽¹⁾

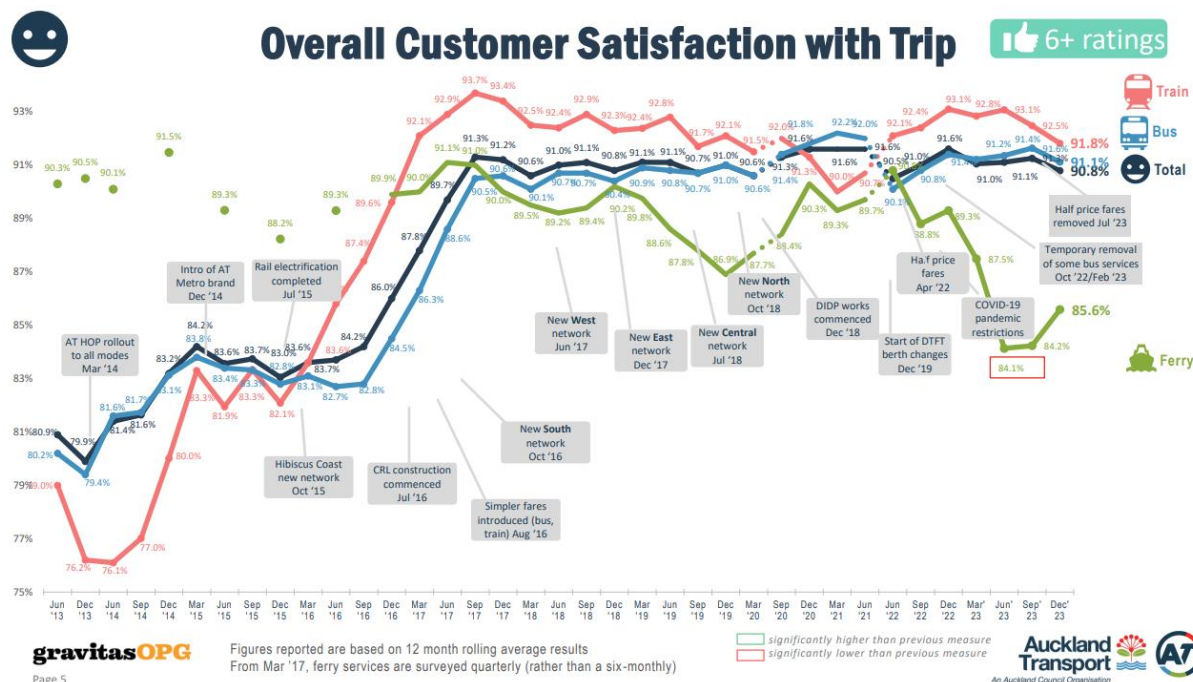


Whilst not specifically transport structures related customer feedback, key structures are crucial to Auckland Transport's delivery of general transportation, cycling and walking services.

2024 Transport Structures and Public Transport Asset Management Plan Auckland Transport

For Auckland Transport's public transport, customer satisfaction surveys have been undertaken quarterly since August 2014. The trends presented below are based on 12-month rolling averages from the four most recent quarterly surveys. It should be noted that no surveying was undertaken during June 2020, December 2021, and March 2022, and only partial data was collected for September 2021 round due the COVID lockdown. The following graphs the trends on overall customer satisfaction by Public Transport mode.

Figure 16: Current customer feedback on public transport services



Strategic and Corporate Goals

This plan is prepared under the direction of Auckland Transport current purpose, vision, and mission, as follows:

- Purpose: Easy Journeys, Connecting people and communities.
- Vision: An Auckland that is Accessible, Well-connected, Safe, and Sustainable.
- Missions:
 - Accessible: Less congested transport network, with faster and more predictable travel times.
 - Well-connected: Easier access for people to places of employment, education, shopping, business, recreation, and other activities through the transport network.
 - Safe: Fewer deaths and serious injuries on the transport network.
 - Sustainable: More environmentally friendly transport network with reduced greenhouse gas emissions.

Strategic goals have been set by Auckland Transport. The relevant goals and objectives and how these are addressed in this plan are summarised in the table below.

2024 Transport Structures and Public Transport Asset Management Plan Auckland Transport

Funding the management of Auckland Transport's assets is done in collaboration with the Auckland Council and Waka Kotahi, in consultation with the Auckland's rate payers and transport network users.

This document is one of a set of documents that supports how Auckland Transport's assets will be managed, including:

- [Government Policy Statement on Land Transport](#) (2024 draft)
- [Transport Outcomes Framework](#), developed by the Ministry of Transport
- [Auckland Plan 2050](#), developed by Auckland Council
- [Arataki](#), Waka Kotahi's long-term strategic plan for the land transport system.
- [One Network Framework](#) (ONF), a tool developed by [Te Ringa Maimoa](#) that is used to classify transport networks in terms of movement and place function.

And two key funding documents that have a direct impact on this document are:

- Waka Kotahi NZTA's 10-year [National Land Transport Plan](#) (NLTP); and
- Auckland Transport's 10-year [Regional Land Transport Plan](#) (RLTP).

Auckland Transport has developed a set of objectives, with input from Auckland Council, Waka Kotahi, the Ministry of Transport and KiwiRail, to summarise the agreed strategic direction for Auckland's transport networks over the coming years. These objectives, as detailed below, guide Auckland Transport's Regional Land Transport Plan and companion documents.

Table 17: Regional Land Transport Plan objectives

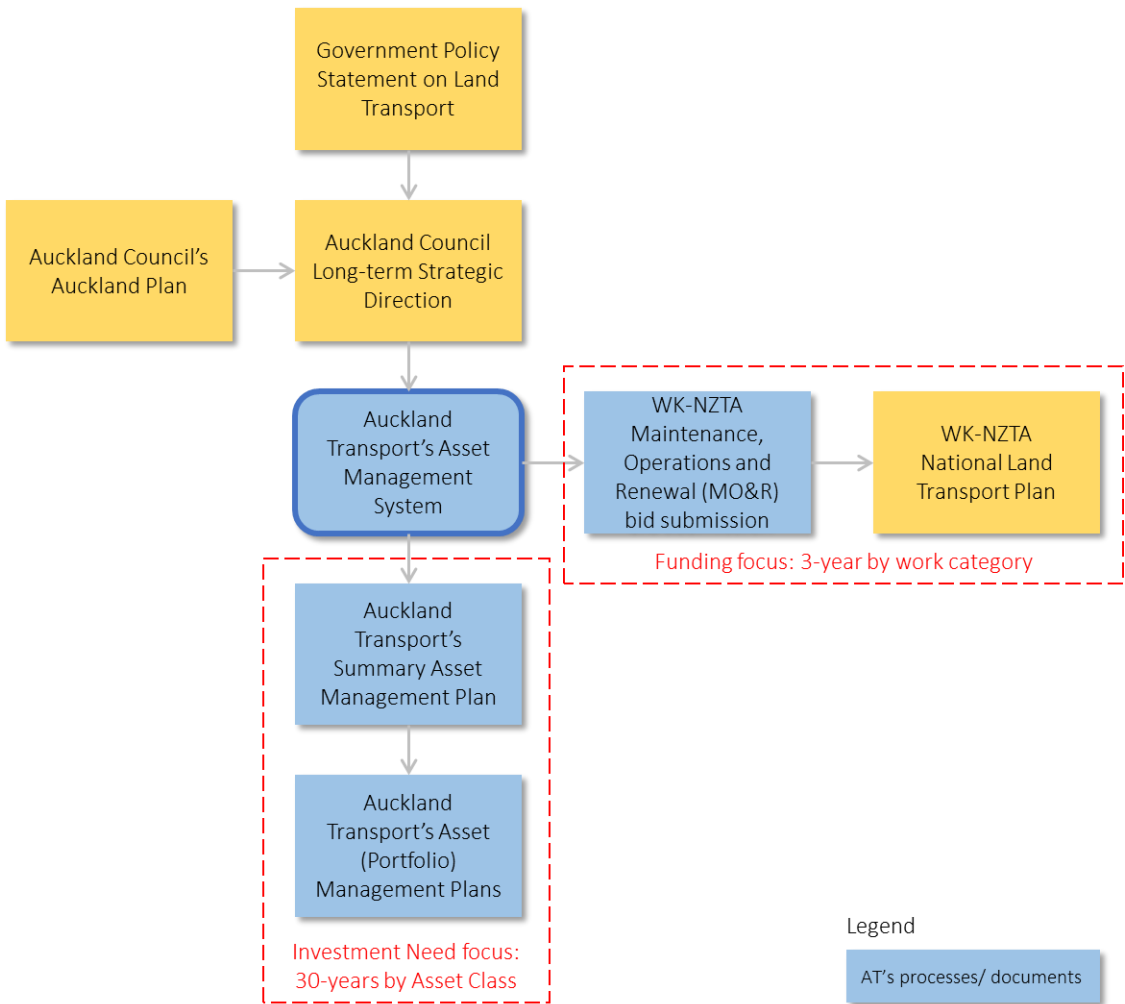
Regional Land Transport Plan objectives	How Asset Management supports this
<u>Safety</u> : Make the transport system safe by eliminating harm to people.	By ensuring assets are kept in good condition through lifecycle maintenance and renewal of assets.
<u>Travel choices</u> : Accelerate better travel choices for Aucklanders.	Through the programmed and coordinated changes in the form and utilisation of assets.
<u>Access and connectivity</u> : Better connecting people, places, goods, and services.	Through the programmed and coordinated changes in the form and utilization of assets.
<u>Growth</u> : Enabling Auckland's growth through a focus on intensification in brownfield areas, with some managed expansion into emerging greenfield areas.	By ensuring: • Existing assets are kept in good condition through lifecycle maintenance and renewal of assets. • New assets can be maintained and renewed when they become operational.
<u>Climate change and the environment</u> : Improving the resilience and sustainability of the transport system, and significantly reducing the greenhouse emissions it generates.	Through the programmed and coordinated uplift in existing asset resilience. Also, by assessing and reporting the amount of embodied carbon in the programme we can include emissions as part of our evaluation.

<u>Value for money:</u> Ensuring value for money across Auckland’s transport system through well-targeted investment choices.	Through best practice asset management – the lifecycle maintenance, operation, and renewal of existing assets – will support ensuring value for money for Auckland Transport’s rate payers and customers.
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Auckland Council’s infrastructure investment direction

The Council Group Asset Management Policy and ISO55001 require that asset management plans are aligned to and consistent with organisational objectives. The Local Government Act 2002 also requires that local government decision-making considers the long-term, taking account of current and future communities¹. Strategic alignment of asset management plans is essential as these plans provide the evidence basis for Auckland Council’s investment plans and demonstrate how the council’s long-term assets will deliver long-term outcomes for Tāmaki Makaurau.

Figure 18: Strategic alignment



¹ Local Government Act 2002, sections 10 and 14

Strategic direction for asset management comes from Auckland Council, central government and legislation. This note relates to the council direction provided through the Auckland Plan and other Auckland Council strategy.

The Auckland Plan provides the long-term strategic direction, and basis for alignment for Council’s key strategies and policies. Region-wide strategies articulate the Auckland Plan’s strategic intent and outline priorities for implementation. Region-wide strategies include Te Tāruke ā Tāwhiri: Auckland’s Climate Plan, The Water Strategy, Ngā Hapori Momoho: Thriving Communities Strategy, The Transport Emission Reduction Plan, and Tāmaki – Whenua Taurikura: Auckland Future Development Strategy 2023-2053.

Auckland Council Group’s Strategic Investment Framework for Infrastructure provides the framework for demonstrating alignment of infrastructure investment with Council’s long-term regional strategic direction. In accordance with this framework below provides a summary of how the investment programme set out in this Asset Management Plan is aligned to Auckland Council direction.

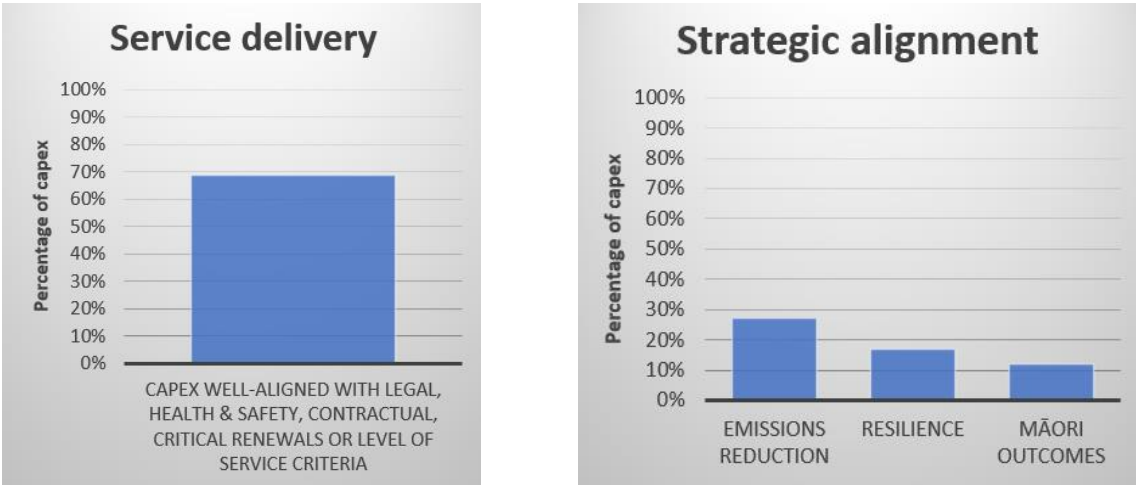
Strategic alignment of this document with Auckland Council direction

The table below presents the alignment of this 30-year Asset Management Plan and reports on the investment programme with the council’s strategic direction. When considering current alignment, Auckland Council recognises that Auckland Transport’s asset management systems and tools are on a journey of increasing maturity. It is anticipated that Auckland Transport’s ability to demonstrate alignment will grow as asset management maturity improves Council-wide, thereby uplifting long-term planning and reporting capacity.

The proportion of aligned investment identified in the following table (below, column four) draws on the Investment Impact Assessment (IIA) carried out by Auckland Council for the 2024 Long-term Plan (LTP). The IIA framework provides Auckland Council a consistent assessment of planned investments against a set of criteria, including criteria that reflect council’s strategic direction. Capital expenditure (CAPEX) over the 10 years of the LTP is included in the table below and is assessed at the level of major programmes and projects. Each line item was scored against the criteria by representatives of the portfolio including asset managers. Following the completion of the assessment, moderation of the data was completed centrally by Auckland Council staff, together with asset managers for each criterion on each project or programme to ensure consistency in assessment across the group.

This is the first time Auckland Council’s IIA has been presented in asset management plans and so it should be read as a baseline, indicator, or current state, rather than a detailed assessment of Asset Management Plan alignment. Operational expenditure (OPEX) was also included in the 2024 IIA, but has not been included in the table below reporting as OPEX data does not yet have sufficient detail for this purpose.

Figure 19: Key areas of alignment demonstrated through Auckland Council’s LTP 2024 Investment Impact Assessment (provided by Auckland Council)



The IIA demonstrates that there is significant alignment of the investment programme with ‘non-strategic’ service delivery criteria. This is a key driver for the AT portfolio, with 69% of capital expenditure either well, or extremely well aligned with one or more of the service delivery criteria. Key areas of strategic alignment within the 10-year investment plan are emissions reduction, resilience, and Māori outcomes.

The high level of service delivery-driven investment in this portfolio, presents an opportunity for greater levels of strategic alignment in the future. Service delivery-driven investment may be refocused to also delivery strategic outcomes.

Table 20: Alignment to Auckland Council's strategic direction

AC Strategic Direction	Reporting requirement	Alignment of 30-year investment needs	Proportion of 10-year investment aligned with direction ²
Māori Outcomes	Identify investment that has been developed in partnership with Māori, or Māori participation and delivers on outcomes described in Kia Ora Tāmaki Makaurau.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	10-19% of capital expenditure (CAPEX) is well-aligned and delivering towards Māori outcomes
Emissions – reduction targets	Identify projects and programmes that are in line with the emissions reduction commitments under Te Tāruke-ā-Tāwhiri Auckland's Climate Plan and avoiding or minimising embodied and operational emissions as much as practicable.	Refer this Levels of Service section – Public Transport related emissions customer values.	20-29 % of CAPEX is well-aligned and delivering towards reducing emissions
Resilience – Deliver flexible, adaptable, infrastructure	Identify projects and programmes that increase the resilience of the surrounding existing community and/or ecosystems to natural hazards and climate change in the long-term (30+ years).	Refer this Levels of Service section – Structures related resilience customer values.	10-19% of CAPEX is well aligned and delivering towards climate adaptation and resilience
Equity – Focus on communities of greatest need	Identify projects and programmes are targeted to address disparities and serve the wellbeing of communities of greatest need.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	10-19% of CAPEX is well aligned and delivering towards equity.
Equity – Community -led	Identify projects and programmes and where communities (whānau, hapū, iwi, people) are involved and enabled to lead and/or respond to the investment	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	

² Measured using the Investment Impact Assessment undertaken to inform the 2024-33 LTP. For more information on the criteria and methodology see Attachment C here: [Staff Advice to support the Mayoral Proposal \(aucklandcouncil.govt.nz\)](https://aucklandcouncil.govt.nz/staff-advice-to-support-the-mayoral-proposal).

2024 Transport Structures and Public Transport Asset Management Plan
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AC Strategic Direction	Reporting requirement	Alignment of 30-year investment needs	Proportion of 10-year investment aligned with direction ²
Environment – Regenerate natural systems, and Te Mauri o te Wai – regenerative and mauri enhancing infrastructure.	Identify projects and programmes that are investments in green infrastructure.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	20-29% of CAPEX programmes include projects identified as nature-based solutions or urban green space ³
Environment – Reduce Waste	Once established, report waste baselines and propose 2030 targets.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	Unknown at time of writing.
Te Mauri o Te Wai: The life-sustaining capacity of water is protected and enhanced.	Identify investment that recognises the impact on Mauri (through working with Mana Whenua) and delivers improvements to Te Mauri o Te Wai.	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	0% of CAPEX towards Water Strategy Outcomes
Impactful Procurement: success is dependent on how well Auckland's prosper.	Deliver Auckland Council, or your organisation's Sustainable Procurement objectives.	Auckland Transport plans to support this through sustainable procurement.	Unknown at time of writing.
Growth - Growth Assumptions	Adoption of growth approach and assumptions as basis for AMPs. Identify growth-driven projects/programmes spatially with a catchment of benefit.	Ensuring consequential renewal (CAPEX) and maintenance (OPEX) is available to manage newly vested assets from within Auckland's areas of growth and change.	0-9% of CAPEX is aligned spatially to the spatial priority areas (in the Future Development Strategy).

³ Note that we have committed to raising most of our debt through sustainable finance mechanisms (Auckland Council's Sustainable Finance Framework). A pipeline of green infrastructure is increasingly important to access capital as financial markets become more restrictive and expensive.

2024 Transport Structures and Public Transport Asset Management Plan
Auckland Transport

AC Strategic Direction	Reporting requirement	Alignment of 30-year investment needs	Proportion of 10-year investment aligned with direction ²
Growth - Quality compact growth	Identify projects and programmes providing infrastructure that supports development planned in Spatial Priority Areas in the next 10 years or is of regional benefit (servicing live-zoned land).	Ensuring consequential renewal (CAPEX) and maintenance (OPEX) is available to manage newly vested assets from within Auckland's areas of growth and change.	
Community - Delivery of multiple outcomes/well-beings	Identify projects and programmes that support community wellbeing: • community connection and resilience • physical and mental health • affordability of access to services for all Aucklanders • skills for the future (workforce transition) • business transformation for resilience and growth • nature in the city (e.g. urban forest, parks that are locally accessible to communities).	Indirectly supported by this Asset Management Plan by keeping asset in good condition through regular renewal (CAPEX) and maintenance (OPEX).	0-9% of CAPEX is well aligned and delivering for community wellbeing
Consider non-built solutions first (investment hierarchy)	Preference (in order) for investment in: • Effective planning • Managing demand • Best use of existing system • Careful new investment	Unsure how this Asset Management Plan supports this at time of writing.	70-79 % of CAPEX delivers on the first three levels of the investment hierarchy (effective planning, managing demand, and best use of existing system).

Legislative Requirements

There are many legislative requirements relating to the management of assets. Legislative requirements that impact the delivery of road network and public transport services are outlined in the following table.

Table 21: Legislative requirements

Legislation	Requirement
Local Government (Auckland Council) Act 2009	• Governance and accountability: Auckland Transport must operate in accordance with the governance, accountability, and transparency requirements for CCOs outlined in Part 5 of the Local Government Act 2002, as applied by the Local Government (Auckland Council) Act 2009. This includes requirements around the appointment of directors, meetings, consultation, and reporting obligations to Auckland Council. • Decision-making processes: Auckland Transport must establish processes to enable Māori to contribute to its decision-making, as required under sections 76-83A, 87 and 89 of the Local Government Act 2002. It must follow principles of consultation and consider views of affected parties when making decisions, as per the Local Government Act 2002 provisions applied by the 2009 Act. • Functions and powers: The 2009 Act sets out Auckland Transport's core functions and powers related to managing Auckland's transport system under sections 46 and 47. This includes acting as a local authority or statutory body for transport purposes, and exercising requiring authority powers under the Resource Management Act. • Directions from Auckland Council: Auckland Council can lawfully direct Auckland Transport to perform or delegate additional transport functions to it under section 46(1)(d) and (e) of the 2009 Act. • Restrictions: Auckland Transport cannot pay dividends and must have regard for public safety, as stipulated in section 50 of the 2009 Act.

Legislation	Requirement
Local Government Act 2002	• Section 59 sets out the principal objectives for Council Controlled Organisations like Auckland Transport, including operating efficiently with a view to making a profit, being a good employer, and exhibiting social and environmental responsibility. • Part 5 of the Act applies to Auckland Transport with some modifications, setting out requirements around governance, accountability, and transparency. • Sections 76-83A, 87 and 89 specifically apply to Auckland Transport, covering matters like the appointment of directors, meetings, consultation requirements, and reporting obligations. • Auckland Transport must have regard for public safety in relation to its structures and operations. • Auckland Transport is exempt from the requirement under section 68(b) to pay dividends to Auckland Council.
Land Transport Act 1998	• Enforcing road user rules and regulations: Auckland Transport has the authority to issue infringement notices for offences related to road user behaviour, such as speeding, failing to stop at red lights, illegal parking, and other traffic violations, as outlined in the Act and associated regulations. • Licensing transport service operators: The Act requires operators of certain transport services, like passenger services and goods services, to hold the appropriate licenses. Auckland Transport is responsible for ensuring compliance with these licensing requirements within Auckland. • Promoting road safety: A key purpose of the Act is to promote safe road user behaviour and vehicle safety. Auckland Transport undertakes various initiatives, campaigns, and infrastructure improvements to enhance road safety in line with this objective. • Implementing traffic management measures: The Act empowers road controlling authorities like Auckland Transport to install and maintain traffic control devices, establish special vehicle lanes, and implement other traffic management measures to ensure the safe and efficient movement of traffic. • Enforcing vehicle standards: Auckland Transport has the authority to inspect vehicles and issue notices for non-compliance with vehicle standards and requirements set out in the Act and associated regulations, such as those related to vehicle dimensions, weights, and equipment.

Customer Values

Service levels are defined in three ways, customer values, customer levels of service and technical levels of service.

Auckland Transport's customer values indicate the following is important to its customers:

- Transport Structures (bridges, retaining wall etc.): Asset condition and resilience.
- Public Transport: Reliability, punctuality, accessibility, and emissions reduction.

Table 22: Customer values

Customer values	Customer satisfaction measure	Current achievement	Anticipated trend based on planned budget
Structures (bridges, retaining wall etc.)			
Resilience	Ensure structures can withstand extreme weather events and natural disasters.	A new measure, on the back of the extreme weather events suffered by Auckland February 2023.	CAPEX budgets (service level improvements) are anticipated to increase.
Public transport			
Reliability	Ensure public transport services run according to published timetables.	94.7% of public transport services ran according to published timetables, narrowly missing the 95% target.	Budgets are anticipated to increase.
Punctuality	Ensure public transport services start and end on time.	84.1% of public transport services started and ended on time, below the 87% target.	Budgets are anticipated to be maintained.
Accessibility	Increase public transport passenger boardings.	86.6 million total public transport boardings are forecast for FY24, exceeding the 83.4 million target.	Budgets are anticipated to be maintained.
Emission reduction	Reduce greenhouse gas emissions from public transport operations.	Public transport emissions are on track for a 5% reduction from the 2020/21 baseline.	Budgets are anticipated to be maintained.

Customer Levels of Service

The Customer Levels of Service, related to assets, are considered in terms of the following service measures:

- Asset Condition – Does the asset support the provision of a valued customer service? What is the condition or quality of the asset?
- Function – Is it suitable for its intended purpose? Is it the right service?
- Capacity/ use – Is the asset over or under used? Do we need more or less of these assets?

The following table summarises the current performance, and the expected performance based on the current budget allocation, for each of the above customer service measures.

These are measures relate to service delivery outcome (e.g. number of occasions when service is not available or proportion of replacement value by condition %'s) aim to provide a balance in comparison to the customer perception that may be more subjective.

Table 23: Customer Level of Service Measures

Type of measure	Level of Service	Performance measure	Current performance	Anticipated trend based on planned budget
Asset Condition Confidence level: HIGH	Assets are kept in acceptable condition.	Asset condition assessments.	\$209 million of assets are currently in Unacceptable* condition.	Renewal (CAPEX) and maintenance (OPEX) budgets are anticipated to increase.
Function Confidence level: MEDIUM	Assets are fit for purpose.	Customer feedback on current services.	A decreasing trend in customer satisfaction since 2021.	CAPEX budgets (service level improvements) are anticipated to increase.
Capacity/ use Confidence level: MEDIUM	The quantum of assets is appropriate.	Customer feedback on current services.	Current capacity is on target.	CAPEX budgets (new works growth) are anticipated to be maintained.

* Unacceptable condition = assets in Poor and Very Poor condition.

The confidence levels for each measure are defined as follows:

- High – Professional judgement supported by extensive data analysis.
- Medium – Professional judgement supported by data sampling.
- Low – Professional Judgement with no data evidence.

Condition assessments and surveys are carried out in accordance with our professional services contracts and road maintenance contracts. The road maintenance contract, Volume 5 technical specification, set out the agreed customer response times for emergency, reactive and programmed maintenance works. The relevant specifications are listed:

- Road Corridor Maintenance, Volume 5 Technical Specification
- Transport Structures Asset Management contract and specification
- Public Transport Asset Management contract and specification

Technical Levels of Service

To deliver to customer values and achieve customer levels of service, more operationally focused technical measures (technical levels of service) are required. These technical measures relate to the activities and allocation of resources (budgets and staff) to best achieve the desired customer outcomes and demonstrate effective performance.

Technical service measures are linked to the activities and annual budgets covering:

- Acquisition: New works growth (CAPEX) – To provide new infrastructure assets or increase the capacity of existing assets to cater for growth in demand for services from a growing population or economic development.
- Acquisition: Service level improvements (CAPEX) – To upgrade or enhance existing infrastructure assets to improve level of service provided to the community, in line with statutory obligations and community consultation requirements.
- Renewal (CAPEX) – To replace existing infrastructure assets that have reached the end of their useful life with new assets of the same service potential, to maintain the ability to deliver the required level of service.
- Maintenance (OPEX) – To undertake regular servicing, repairs, and preventative maintenance activities on existing infrastructure assets to ensure they remain operational and able to deliver the required level of service over their expected useful life.
- Operations (OPEX) – To manage and operate the infrastructure assets on a day-to-day basis, including activities like monitoring, inspections, and managing service requests, to ensure the continued delivery of the required level of service.

Service and asset managers plan, implement and manage these technical service levels to enable Auckland Transport's service delivery outcomes.

The following table summarises the asset-related activities anticipated under current proposed budget allocations, along with the forecasted activity investment needs being recommended.

Table 24: Technical Levels of Service

Lifecycle activity	Activity measure	Recommended performance (Investment Needs)*	Planned performance (RLTP budget)**
Acquisition: New works growth (CAPEX)	Capacity increases	As defined in the RLTP.	As defined and agreed by Auckland Transport's strategy and RLTP teams.
Acquisition: Service level improvement (CAPEX)	Improvements in services	As defined in the RLTP.	As defined and agreed by Auckland Transport's strategy and RLTP teams.
	10-year forecasts		\$4.15 billion
Renewal (CAPEX)	Proactive renewals	Proactive renewals is occurring (funded by Depreciation).	Some proactive renewals
	10-year forecasts	\$838.41 million	\$770.11 million
OPEX – maintenance and operations	Proactive maintenance. Proactive asset inspections. Proactive asset condition assessments.	Proactive maintenance, for both existing and new assets coming on-stream, is funded. Proactive asset inspections are funded. Proactive asset condition assessments are funded.	Mostly focused on proactive maintenance. Some reactive maintenance will likely be required. Most asset inspections and condition assessment can occur.
	10-year forecasts	\$7.28 billion	\$4.69 billion

Notes:

* Current activities related to planned RLTP budget.

** Expected performance related to forecasted Investment Needs lifecycle costs.

It is important to monitor the service levels regularly as circumstances can and do change. Current performance is based on current resource provision (financial and personnel), work efficiencies, and deliverability. It is acknowledged changing circumstances such as technology and customer priorities will change over time.

GROWTH AND DEMAND

Auckland's growth

As of 2023, Auckland's population was estimated at 1.71 million according to Auckland Council's medium projection. The region's population is growing and changing, with these recent growth forecasts indicating Auckland is anticipated to grow by 17,000+ people each year to reach an estimated population of 2.23 million by 2053.

The following graph presents Auckland Council's most recent population projections.

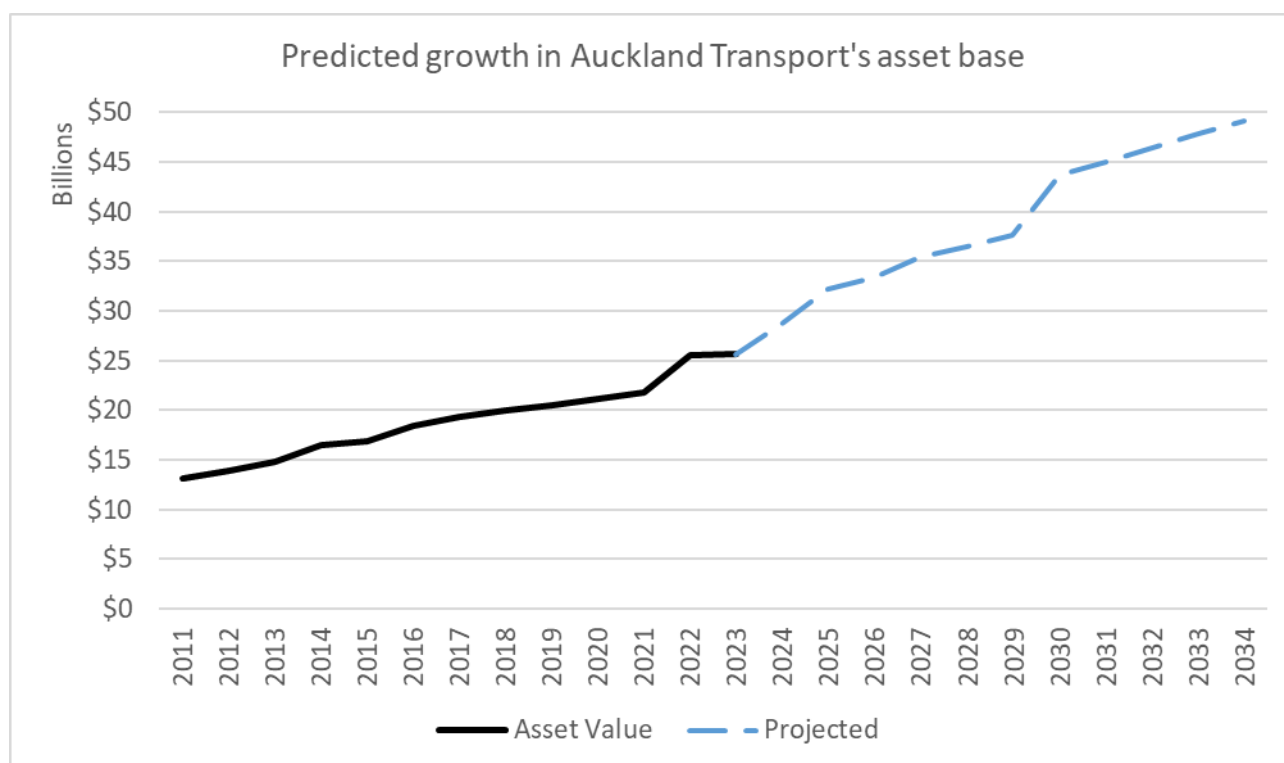


To support this growth, Auckland Transport and private developers invest in the installation of new assets, particularly in key growth areas, that will ultimately be vested to Auckland Transport to manage and maintain.

Based on recent year actuals, the forecast annual growth in Auckland Transport's asset base is:

- Additional stormwater drainage, street lighting and road structures in proportion to the annual sealed road growth (+1.1%).
- Additional public transport facilities to support a growing role for public transport in connecting people and places.

New assets require additional maintenance, operations, and renewal activities and therefore funding. The following graph presents the actual and projected uplift in Auckland Transport's physical asset ownership that will require on-going maintenance, operation, and renewal. Since 2013, there has been an average annual increase in the asset base value of 6.4%, resulting in a near-doubling of the value of the asset base over the period.



Demand Drivers

Drivers affecting demand include things such as:

- Growth and intensification: Expanding or intensifying the urban area.
- Change in asset utilisation: Change in asset use to provide increased or other services.
- The current state of assets: Deteriorating and aging infrastructure.
- Extreme weather events: The requirement for climate change adaptation.
- Cost increases: Inflation, material, and personnel cost increases etc.
- The current backlog of renewal/ maintenance: The existing asset maintenance/ renewal needs.
- Funding: The appropriate level of funding to enable judicious asset management.

Demand Impact and Management Plan

The impact of demand drivers that may affect future service delivery and use of assets are shown in the following table.

Demand for new services will be managed through a combination of managing existing assets, upgrading of existing assets and providing new assets to meet demand and demand management. Demand management practices can include non-asset solutions, insuring against risks and managing failures.

Opportunities identified to date for demand management are shown in the table below. Further opportunities will be developed in future revisions of this plan.

Table 25: Demand Management Plan

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Growth and intensification: Expanding or intensifying the urban area.	Housing growth and intensification requires increased truck volume, weight and turning movements on assets that may not be designed to cater for those volumes and loadings. This exerts significant stress and pressure on assets resulting in accelerated asset deterioration, manifesting in increased faults such as pavement rutting, cracking, and potholes, along with broken footpaths, and kerb and channels.	Auckland will continue to grow – expand and intensify. Population growth will continue requiring new and improved services, along with the supporting infrastructure.	Services will need to change over time to cater for the anticipated uplift in customer expectations.	Through the provision of the appropriate infrastructure – right time, right place.
Change in asset utilisation: Change in asset use to provide increased or other services.	The change in the use of an asset, for example, to cater for higher loadings, volumes etc. will exert significant stress and pressure on assets resulting in accelerated asset deterioration, manifesting in increased faults such as pavement rutting, cracking, and potholes, along with broken footpaths, and kerb and channels. This requires additional investment, over and above programmed renewals, to ensure these assets can cater for this change in asset utilisation.	Auckland Transport's infrastructure will need to continue to change to cater for the change in utilisation.	Services will need to change over time to cater for the anticipated uplift in customer expectations.	Through the provision of the appropriate infrastructure – right time, right place.

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Demand driver	Current position	Projection	Impact on services	Demand Management Plan
The current state of assets: Deteriorating and aging infrastructure.	The condition of Auckland Transport's infrastructure is deteriorating or reaching/ exceeded their expected lifespan. This will require increased maintenance costs, higher renewal costs, and potential obsolescence. Renewing or retrofitting deteriorating or aging infrastructure is costly and classically logistically challenging.	The deterioration in Auckland Transport's existing infrastructure is managed and not allowed to get worse.	Current services can be maintained and even improved.	Through appropriate asset maintenance and renewal strategies.
Extreme weather events: The requirement for climate change adaptation.	The recent storms and flooding events have damaged infrastructure, disrupt services, and increase the need for urgent maintenance and renewals.	The evidence indicates continued and increased extreme weather events.	Services will continue to be impacted by sudden extreme weather events.	Infrastructure related climate change adaptation strategies.
Cost increases: Inflation, material, and personnel cost increases etc.	Over the latest funding period cost increases, up to 25%, have meant reduced maintenance and renewal works can be achieved within the available budget. This has exacerbated the backlog in maintenance and renewal works.	Costs are expected to continue to rise.	Auckland Transport may not be able to maintain current service levels.	Ensure funding is available.
The current backlog of renewal/ maintenance: The existing asset maintenance/ renewal needs.	The accumulation of maintenance and renewal works to be done to maintain an asset's integrity will negatively impact an asset's ability to enable sustainable customer services and create a greater financial burden on future generations.	An increased strain on financial resources.	Auckland Transport may not be able to maintain current service levels.	Ensure funding is available.

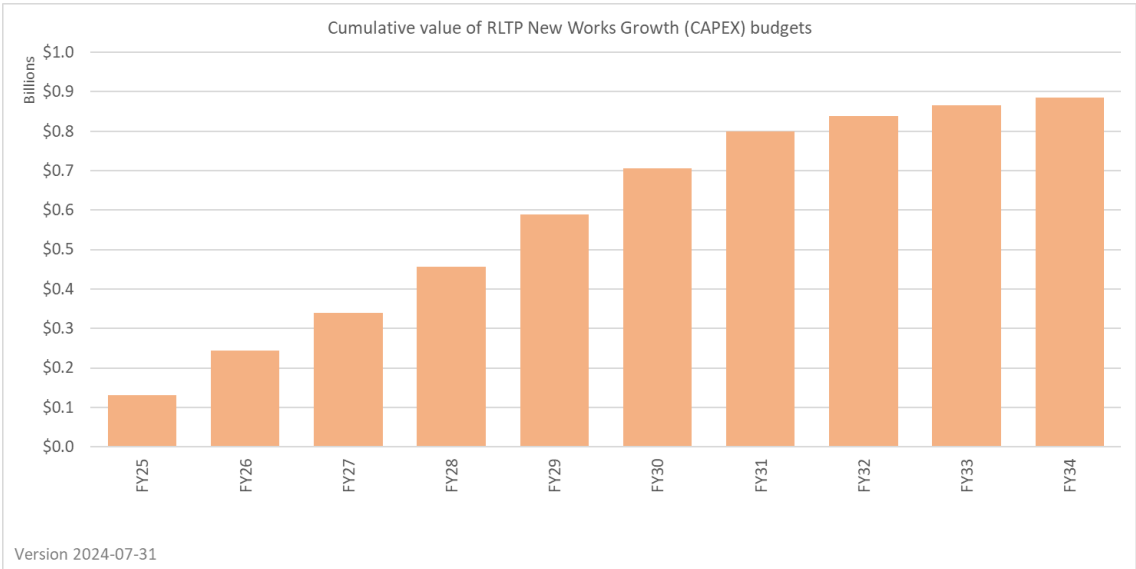
2024 Transport Structures and Public Transport Asset Management Plan
Auckland Transport

Demand driver	Current position	Projection	Impact on services	Demand Management Plan
Funding: The appropriate level of funding to enable judicious asset management.	Limited financial resources hinder infrastructure maintenance efforts, leading to deferred maintenance and renewals, increased vulnerability of sudden or catastrophic infrastructure failures and reduced ability to deliver agreed services.	Auckland Transport will continue to operate within constrained Maintenance (OPEX) and Renewals (CAPEX) envelopes.	Auckland Transport may not be able to maintain current service levels.	Ensure funding is available.

Meeting Demand

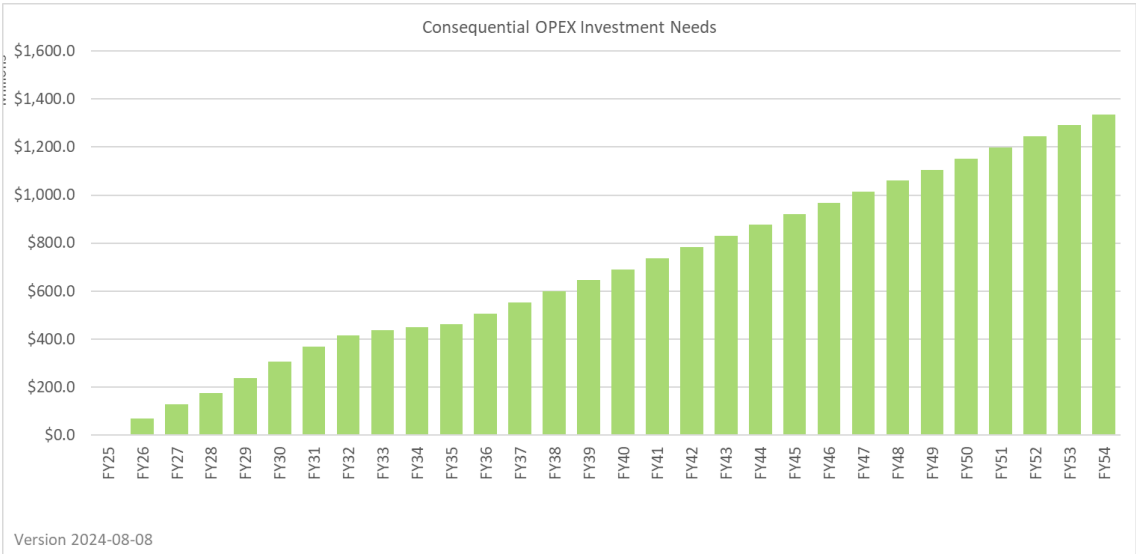
The new assets required to meet demand are either acquired or constructed by Auckland Transport or vested to Auckland Transport from private developers. The following graphs presented the New Works Growth (CAPEX) budgets, agreed by the RLTP team, to help meet that ratepayer and asset user demand.

Figure 26: 2024 RLTP New Works Growth (CAPEX) budgets – Transport Structures and Public Transport



Any new asset will commit Auckland Transport to ongoing operations and maintenance funding for the period that the service provided from the assets is required. These future consequential costs (Consequential OPEX) have been modelled and included in the long-term Asset Management Investment Needs – refer the following graph.

Figure 27: Consequential OPEX Investment Needs – Transport Structures and Public Transport



Climate Change Adaptation

The impacts of climate change may have a significant impact on the assets we manage and the services they provide. In the context of the Asset Planning process climate change can be considered as both a future demand and a risk.

How climate change impacts on assets will vary depending on the location and the type of services provided, as will the way in which we respond and manage those impacts. As a minimum we consider how to manage our existing assets given potential climate change impacts for our region.

Risk and opportunities identified to date are shown in the following table.

Table 28: Managing the Impact of Climate Change on Assets and Services

Climate Change Description	Projected change	Potential Impact on Assets and Services	Management
Landslips – under slips/ over slips	Increase in extreme and consecutive rainfall are likely to increase the occurrence of landslips.	Risk to Auckland Transport's roading and structures infrastructure and services.	Adapt existing infrastructure to uplift its resilience to extreme weather events. Increase frequency of proactive maintenance and monitoring. Revegetation to help manage run-off.
Coastal hazards (erosion, instability, inundation)	Rising sea level puts coastal communities and infrastructure at risk from inundation and erosion. Under RCP 8.5, 1m sea level rise is projected by the end of this century. Other coastal hazards will be exacerbated because of sea level rise.	Risk to Auckland Transport's infrastructure and services within coastal areas.	Coastal protection. Adapt existing infrastructure to uplift its resilience coastal hazards.
Sea level/groundwater rise.	Under RCP 8.5, 1m sea level rise is projected by the end of this century.	Elevated groundwater levels cause damage to the road formation.	Adapt existing asset to 100-year sea level rise predictions. Employ realignment and/ or retreat strategies.
Rainfall and flooding	More extreme rainfall and flooding events are expected. Seasonal distribution of rainfall is projected to change with wetter autumns and drier springs.	Risk to Auckland Transport's infrastructure, in particular roading, structures and stormwater assets and services.	Adapt existing infrastructure to uplift its resilience to extreme weather events. Increase frequency of proactive maintenance and monitoring. Enable stormwater retention/ detention.

Climate Change Description	Projected change	Potential Impact on Assets and Services	Management
Winds	The intensity of tropical cyclones is expected to increase.	Risk structural infrastructure and high-sided vehicles.	Adapt existing infrastructure to uplift its resilience to extreme wind events. Design assets to withstand a 1 in 100-year storm event.
Temperature	Increasing in extreme temperatures – significantly hotter days with frost to become rarer.	Risk to roading infrastructure and services.	Increased vegetation – shade protection. Proactive pavement maintenance.
Drought	Droughts are expected to become more common.	Risk to road infrastructure and services due to drought.	Proactive pavement maintenance. Adapt existing infrastructure to uplift its resilience to drought events.
Wildfire	The possibility of wildfires is projected to increase.	Risk to Auckland Transport’s infrastructure and services.	Adapt existing infrastructure to uplift its resilience to wildfire events.

Additionally, the way in which we construct new assets should recognise that there is opportunity to build in resilience to climate change impacts. Building resilience can have the following benefits:

- Assets will withstand the impacts of climate change.
- Service levels can be sustained.
- Infrastructure that can endure may potentially lower the lifecycle cost and reduce their carbon footprint.

The following table summarises some asset-related climate change resilience and adaptation opportunities.

Table 29: Building in Asset Resilience to Climate Change

New assets (portfolio)	Impact on these assets.	Build resilience in new works
Public Transport	Climate change related events will impact the delivery of services that rely on public transport assets – flooding, high winds, high temperatures etc.	Ensure new Public Transport infrastructure has a high level of resilience to, for example, flooding, high winds, and high temperatures.
Transport Structures	Climate change related events will impact the delivery of services that rely on structural assets – coastal hazards, groundwater/ sea level rise, extreme rainfall and flooding, high winds etc.	Ensure new Transport Structures infrastructure has a high level of resilience to, for example, coastal hazards, groundwater/ sea level rise, extreme rainfall and flooding, and high winds.

The impact of climate change on assets is a new and complex discussion and further opportunities will be developed in future revisions of this plan.

MANAGING THE RISKS

Auckland Transport's risk management processes aim to manage future risks through the identification, assessment and treatment of risks associated with providing services from infrastructure. Where appropriate these processes align to the International Standard ISO 31000:2018 Risk management.

Through this process the Auckland Transport's Board has defined the organisation's Critical and Non-critical infrastructural assets and have put in place process managed by Risk Services team to identify, assess, prioritise, and treat risks within a structured risk management framework.

Whilst Auckland Transport may not be able to eliminate risks altogether, informed decisions around the anticipated events are able to be made, along with how the likelihood impact of risks can be reduced to an acceptable level.

Asset Management Risks

The following trends and future risks are currently applicable to the management of Auckland Transport's infrastructural assets.

- **Insufficient funding:** Limited financial resources hinder infrastructure maintenance efforts, leading to deferred maintenance and renewals, increased vulnerability of sudden or catastrophic infrastructure failures and reduced ability to deliver agreed services.
- **Deteriorating and aging infrastructure:** The condition of Auckland Transport's infrastructure is deteriorating or reaching/ exceeded their expected lifespan. This will require increased maintenance costs, higher renewal costs, and potential obsolescence. Renewing or retrofitting deteriorating or aging infrastructure is costly and classically logistically challenging.
- **Extreme weather events:** Recent storms and flooding events have damaged infrastructure, disrupt services, and increase the need for urgent maintenance and renewals.
- **Cost increases:** Over the latest funding period cost increases, up to 25%, have meant reduced maintenance and renewal works can be achieved within the available budget. This has exacerbated the backlog in maintenance and renewal works.
- **Growing backlog of maintenance requirements:** The accumulation of maintenance and renewal works to be done to maintain an asset's integrity will negatively impact an asset's ability to enable sustainable customer services and create a greater financial burden on future generations.
- **The impact of growth and intensification:** Housing growth and intensification requires increased truck volume, weight and turning movements on assets that may not be designed to cater for those volumes and loadings. This exerts significant stress and pressure on assets resulting in accelerated asset deterioration, manifesting in increased faults such as pavement rutting, cracking, and potholes, along with broken footpaths, and kerb and channels.
- **The impact of change in asset utilisation:** The change in the use of an asset, for example, to cater for higher loadings, volumes etc. will exert significant stress and pressure on assets resulting in accelerated asset deterioration, manifesting in increased faults such as pavement rutting, cracking, and potholes, along with broken footpaths, and kerb and channels. This requires additional investment, over and above programmed renewals, to ensure these assets can cater for this change in asset utilisation.

- **Environmental and sustainability:** Maintaining public infrastructure while minimising environmental impact is a concern. Balancing the need for infrastructure maintenance and renewals with sustainability goals, reducing carbon emissions, and adopting eco-friendly practices is complex and requires careful planning and investment.
- **Workforce shortage and skills gap:** There is a shortage of technically competent personnel in both Local Government and Maintenance Contractor sectors. The ability of our maintenance contractors to delivery is severely constrained currently. The lack of qualified professionals is hampering maintenance and renewal efforts.
- **Maintenance contractor productivity:** The ability for Maintenance Contractors to undertake maintenance and renewal works is reduced due to concerns around such things as noise and pollution.

Critical Assets

Of Auckland Transport's \$4.54 billion worth of infrastructure assets, \$3.34 billion worth of Transport Structures and Public Transport asset are considered 'Critical' to Auckland Transport's delivery of transport services to rate payers and asset users. These assets are defined as those which have a high consequence of failure causing significant loss or reduction of service.

The following table presents those critical assets, along with their typical failure mode, and likely impact on service delivery.

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Table 30: Transport Structures and Public Transport Critical Assets

Critical asset	Value (\$FY24)	Key failure mode	Impact
Structures portfolio	\$1.97 billion		
Bridges	\$1.01 billion	Structural deterioration due to inadequate maintenance.	• Safety risk to individuals. • Damage to property and vehicles. • Disruption to available access.
Retaining Walls	\$402.9 million	Structural collapse due to inadequate maintenance.	• Safety risk to individuals – potential injuries or fatalities. • Property damage.
Major Culverts	\$291.4 million	Blockages and collapses due to inadequate maintenance.	Flooding leading to property and road damage.
Sea Walls	\$263.8 million	Structural degradation due to wave action, tidal forces, and weathering.	Increased vulnerability to storm surges and sea level rise.
Gantries	\$2 million	Structural deterioration due to inadequate maintenance.	• Safety risk to individuals. • Property and vehicle damage.
Public Transport portfolio	\$1.37 billion		
Train Stations	\$922.8 million	Insufficient passenger capacity.	• Overcrowding safety risk • Service delays. • Lack of confidence in Public Transport services.
Wharves	\$171 million*	Structural deterioration due to inadequate maintenance.	• Safety risk to individuals. • Damage to property, vessels, and vehicles.
Ferry Terminals	*Included	Insufficient passenger or vehicle capacity.	• Overcrowding safety risk • Service delays. • Lack of confidence in Public Transport services.
Car Park Buildings	\$188.2 million	Structural deterioration due to inadequate maintenance.	• Safety risk to individuals. • Damage to property and vehicles.
Bus Stations	\$82.4 million	Insufficient passenger capacity.	• Overcrowding (safety) • Service delays. • Lack of confidence in Public Transport services (reputational).

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Critical asset	Value (\$FY24)	Key failure mode	Impact
Airfields	\$6.12 million	Inadequate maintenance of the runway and navigation aids.	Inability to use the airfield.
Total Critical Assets	\$3.34 billion		

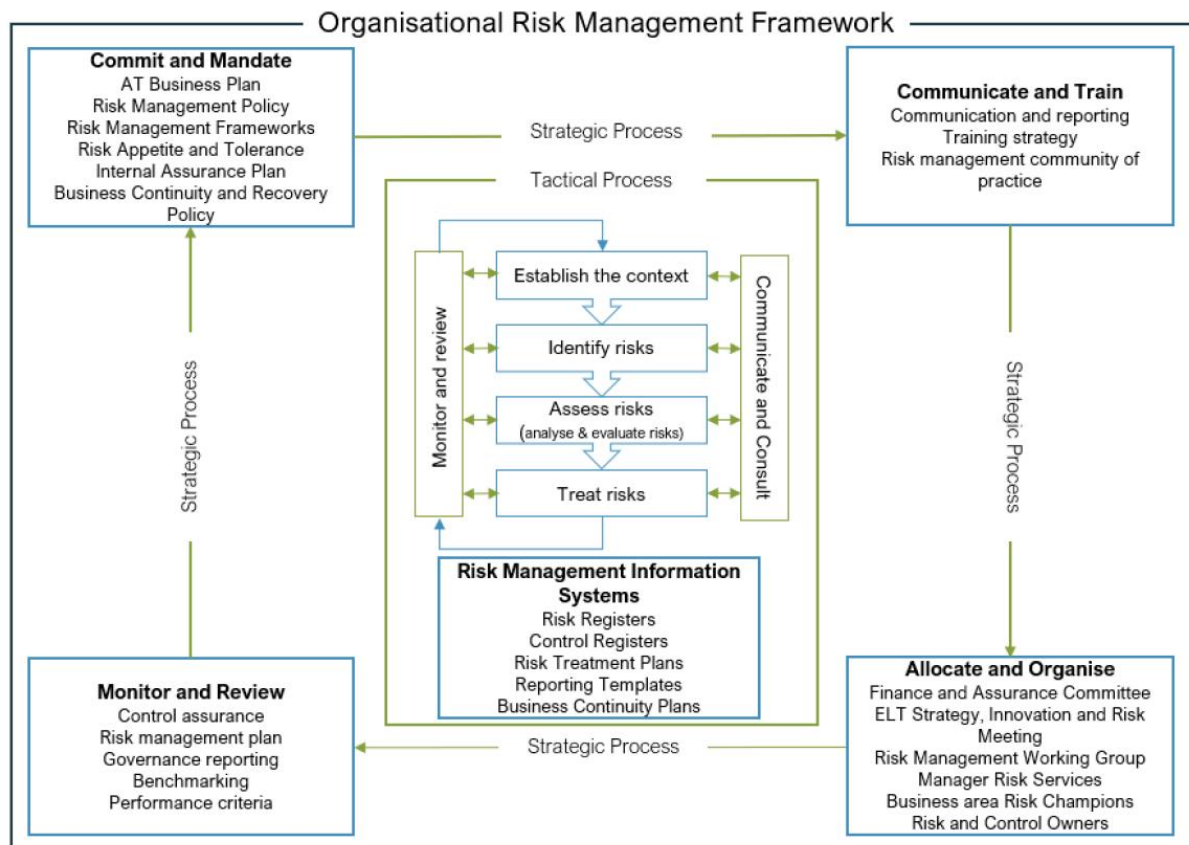
Through the identification of these Critical assets and failure modes Auckland Transport can ensure that infrastructural asset inspections, condition assessments and maintenance programmes are implemented appropriately.

Risk Assessment

Auckland Transport's Risk Services team supports the business in the identification, assessment, prioritisation, and treatment within a structured risk management framework – enterprise risk management processes and business continuity planning. This is monitored and reported through to Auckland Transport's Finance and Assurance Committee encapsulating strategic, operational, financial, and external risks.

Auckland Transport's risk management process is shown in the following figure.

Figure 31: Auckland Transport's Organisational Risk Management process



The Active Risk Manager (ARM) system is the technical enabler utilised by Auckland Transport in support of the organisation's end-to-end risk management process. ARM's functionality enables the recording, assessment and support the mitigation of organisation risks identified. Its use aligns to Auckland Transport's:

- Organisational Risk Management Framework (ORMF), which is aligned to the fundamentals of International Standards, ISO 31000:2018 – Risk Management.
- Project Risk Management guide which supports project management and programmes of work.

ARM provides reporting functionality to internal Risk Managers, the Executive Leadership Team (ELT), Auckland Transport's Board of Directors and our business partners.

The risk assessment process identifies credible risks, the likelihood of the risk event occurring, the consequences should the event occur, development of a risk rating, evaluation of the risk and development of a risk treatment plan for non-acceptable risks.

An assessment of risks associated with service delivery will identify risks that will result in loss or reduction in service, personal injury, environmental impacts, a 'financial shock', reputational impacts, or other consequences.

Critical risks are those assessed with 'Very High' (requiring immediate corrective action) and 'High' (requiring corrective action) risk ratings identified in the Infrastructure Risk Management Plan. The residual risk and treatment costs of implementing the selected treatment plan is shown in Table 6.2. It is essential that these critical risks and costs are reported to management and the Auckland Transport.

Table 32: Risks and treatment plans

Future risk	What can happen	Impacted service/ asset portfolio	Risk rating (Very high, High)	Treatment	Residual risk*
Insufficient funding	Limited financial resources hinder infrastructure maintenance efforts, leading to deferred maintenance and renewals, increased vulnerability of sudden or catastrophic infrastructure failures and reduced ability to deliver agreed services.	Public Transport. Transport Structures. Transport Networks.	Very high	• Long-term planning: Develop a sustainable financial plan that accounts for long-term infrastructure needs. This includes forecasting future funding requirements. • Diversify funding sources: Seek additional funding from various channels, such as grants, public-private partnerships, or community contributions. • Budget reallocation: Allocate funds strategically based on priority areas. Consider reallocating funds from non-essential projects to critical infrastructure needs.	• Deferred maintenance: Even with mitigation efforts, there may still be deferred maintenance due to limited resources. • Partial service disruption: Inadequate funding could lead to partial service disruptions or reduced service quality. • Emergency failures: Sudden infrastructure failures may occur if critical components are not adequately maintained.
Deteriorating and aging assets	The condition of Auckland Transport's infrastructure is deteriorating or reaching/ exceeded their expected lifespan. This will require increased maintenance costs, higher renewal costs, and potential obsolescence. Renewing or retrofitting deteriorating or aging infrastructure is costly and classically logistically challenging.	Public Transport. Transport Structures. Transport Networks.	Very high	• Uplift the asset inspection/ condition assessment program: Ensure the assessment of the current state of assets, understanding their risk as they age, and collecting relevant data is able to done. Prioritise rehabilitation, repair, or replacement strategies based on this assessment. • Uplift predictive maintenance: Implement predictive maintenance techniques. Monitor asset health using sensors, historical data, and predictive models. Address issues before they escalate. • Uplift lifecycle cost analysis: Evaluate the minimum life-cycle costs for each asset. Consider not only initial costs but also ongoing maintenance, energy consumption, and replacement expenses. • Uplift renewal planning: Prioritise assets based on their criticality and expected lifespan. Allocate funds strategically for timely renewal.	• Unexpected failures: Aging infrastructure may experience sudden failures, leading to service disruptions or safety hazards. • Budget constraints: Limited funding could hinder timely renewal efforts, resulting in prolonged use of deteriorating assets. • Obsolescence: Technological advancements may render certain assets obsolete, requiring costly upgrades or replacements.
Extreme weather events	Recent storms and flooding events have damaged infrastructure, disrupt services, and increase the need for urgent maintenance and renewals.	Public Transport. Transport Structures. Transport Networks.	High	• Preparedness and early warning systems: Invest in robust early warning systems to predict extreme weather events. • Infrastructure resilience: Design and construct infrastructure to withstand extreme conditions (e.g., reinforced bridges, flood-resistant buildings). Elevate critical infrastructure above flood levels. Implement green infrastructure (e.g., permeable pavements, rain gardens) to manage excess water.	• Infrastructure damage: Even with preparedness, extreme events can cause damage. • Service disruptions: Interruptions in services (transport, utilities) may occur during and after extreme weather. • Resource constraints: Limited resources may hinder emergency maintenance and repair efforts.
Cost increases	Over the latest funding period cost increases, up to 25%, have meant reduced maintenance and renewal works can be achieved within the available budget. This has exacerbated the backlog in maintenance and renewal works.	Public Transport. Transport Structures. Transport Networks.	High	• Alternative funding sources: Explore additional funding options. • Cost control measures: Regularly review project/ maintenance budgets and expenses. Implement cost-saving strategies, such as competitive bidding, and efficient resource allocation. • Prioritisation: Prioritise critical maintenance and renewal works based on safety, functionality, and impact. Allocate funds to critical services/ assets first. • Risk contingency planning: Develop contingency plans for unexpected cost increases. Set aside reserves or emergency funds to address unforeseen expenses.	• Deferred major maintenance works: Limited budgets may result in postponed maintenance and renewal works. • Quality compromises: Reduced funding will lead to compromises in work quality. • Backlog accumulation: The existing backlog may worsen if cost constraints persist.

Future risk	What can happen	Impacted service/ asset portfolio	Risk rating (Very high, High)	Treatment	Residual risk*
Growing backlog of maintenance requirements	The accumulation of maintenance and renewal works to be done to maintain an asset's integrity will negatively impact an asset's ability to enable sustainable customer services and create a greater financial burden on future generations.	Public Transport. Transport Structures. Transport Networks.	High	• Clear communication channels: Ensure effective communication channels for reporting and addressing backlog items. • Prioritisation: Evaluating the existing backlog and prioritise maintenance based on safety, regulatory compliance, and impact on services. • Technology and automation: Implement a robust Computerized Maintenance Management System (CMMS) to track and manage maintenance tasks efficiently. • Predictive maintenance tools: Use sensors and data analytics to predict asset failures and schedule maintenance proactively.	• Service disruptions: Backlogged major maintenance will lead to service interruptions or reduced quality. • Safety concerns: Critical safety-related tasks may be delayed. • Financial strain: The backlog will likely continue to strain financial resources.
The impact of growth and intensification	Housing growth and intensification requires increased truck volume, weight and turning movements on assets that may not be designed to cater for those volumes and loadings. This exerts significant stress and pressure on assets resulting in accelerated asset deterioration, manifesting in increased faults such as pavement rutting, cracking, and potholes, along with broken footpaths, and kerb and channels.	Transport Structures. Transport Networks.	High	• Infrastructure assessment and design: Evaluate existing infrastructure (roads, footpaths, kerbs) to determine their load-bearing capacity. Strengthen existing assets where needed to accommodate increased truck volume and weight. Design critical areas to withstand heavier loads. • Maintenance and repairs: Conduct frequent inspections to identify signs of deterioration (rutting, cracking, potholes). Address faults promptly to prevent further damage. Apply appropriate surface treatments (e.g., resurfacing, patching) to extend asset life. • Traffic management: Optimize truck movements to minimise stress on vulnerable assets. Implement weight restrictions where necessary. Utilise speed bumps or traffic islands to reduce heavy vehicle speeds.	• Rapid deterioration: Intensification may still lead to increased asset deterioration rates. • Budget constraints: Funding limitations will continue to impact timely repairs. • Safety concerns: Faults like broken footpaths and kerbs pose safety risks.
The impact of change in asset utilisation	The change in the use of an asset, for example, to cater for higher loadings, volumes etc. will exert significant stress and pressure on assets resulting in accelerated asset deterioration, manifesting in increased faults such as pavement rutting, cracking, and potholes, along with broken footpaths, and kerb and channels. This requires additional investment, over and above programmed renewals, to ensure these assets can cater for this change in asset utilisation.	Transport Structures. Transport Networks.	High	• Increased asset monitoring: Conduct frequent inspections to identify signs of deterioration (rutting, cracking, potholes). Where possible, utilise sensors and data analytics to monitor asset condition continuously. • Asset maintenance: Address maintenance issues proactively before they escalate. • Adaptive design and retrofitting: Retrofit assets to handle increased loads (e.g., reinforcing bridges, pavements). Plan for adaptability and design assets with flexibility to accommodate changing needs. • Load testing: Assess the capacity of existing assets to handle higher loads.	• Unforeseen failures: Assets may still experience sudden failures due to increased stress. • Service disruptions: Asset deterioration could lead to service interruptions. • Budget constraints: Additional investment may strain available resources.

Future risk	What can happen	Impacted service/ asset portfolio	Risk rating (Very high, High)	Treatment	Residual risk*
Environmental and sustainability	Maintaining public infrastructure while minimising environmental impact is a concern. Balancing the need for infrastructure maintenance and renewals with sustainability goals, reducing carbon emissions, and adopting eco-friendly practices is complex and requires careful planning and investment.	Transport Structures. Transport Networks.	High	• Project assessments: Conduct a comprehensive asset whole-of-lifecycle assessment of all infrastructure projects. Consider environmental impacts from construction to decommissioning. Utilise materials and designs with lower environmental footprints. • Promote green infrastructure: Integrate green solutions (e.g., green roofs, permeable pavements) into infrastructure design. Enhance biodiversity and reduce stormwater runoff. Prioritize nature-based solutions. • Endorse energy efficiency: Retrofit existing assets for energy efficiency (e.g., LED lighting, efficient HVAC systems). Invest in renewable energy sources (solar, wind) for infrastructure operations. • Sponsor recycling practices: Promote reuse, recycling, and repurposing of materials. Design infrastructure with disassembly and recycling in mind.	• Budget constraints: Sustainable practices will require additional investment. • Trade-offs: Balancing sustainability with operational needs will be challenging. • Unforeseen environmental impacts: Unexpected consequences may arise during the asset lifecycle.
Workforce shortage and skills gap	There is a shortage of technically competent personnel in both Local Government and Maintenance Contractor sectors. The ability of our maintenance contractors to delivery is severely constrained currently. The lack of qualified professionals is hampering maintenance and renewal efforts.	Public Transport. Transport Structures. Transport Networks.	High	• Knowledge transfer and succession planning: Pair experienced employees with newcomers. Capture institutional knowledge for future use. Identify potential leaders and groom them for critical roles. • Reskilling and upskilling: Develop training programs to enhance existing employees' skills. Enable employees to learn new skills related to their roles. Encourage employees to pursue relevant certifications. • Talent acquisition: Recruit skilled professionals actively seeking employment. • Collaboration with educational institutions: Partner with schools, colleges, and technical institutes to offer practical training. Collaborate on curriculum development and skill-building initiatives.	• High turnover: Retaining skilled employees may be challenging. • Delayed projects: Skill shortages could lead to project delays. • Quality compromises: Inexperienced staff may impact work quality.
Maintenance contractor productivity	The ability for Maintenance Contractors to undertake maintenance and renewal works is reduced due to concerns around such things as noise and pollution.	Public Transport. Transport Structures. Transport Networks.	High	• Noise mitigation: Plan maintenance activities during non-peak hours to minimise noise disruption. Erect barriers or soundproof enclosures around work areas. Utilise quieter machinery and tools where possible. • Pollution control: Ensure contractors comply with emission standards for vehicles and equipment. Properly manage waste generated during maintenance. Encourage sustainable practices (e.g., using eco-friendly materials) by contractors.	• Contractor productivity: Balancing productivity with noise/ pollution constraints will be challenging and likely costly. • Regulatory compliance: Ensuring ongoing compliance with environmental regulations.

Note * The residual risk is the risk remaining after the selected risk treatment plan is implemented.

Infrastructure Resilience Approach

The resilience of Auckland Transport’s infrastructure is vital to the ongoing provision of transportation services to rate payers and asset users. To adapt to changing conditions Auckland Transport needs to understand the capacity of the infrastructure under its asset management to ‘withstand a given level of stress or demand’, and to respond to possible disruptions to ensure continuity of service.

Auckland Transport’s current measure of resilience is summarised in the following table which includes the type of threats and hazards and the current measures that the organisation takes to ensure service delivery resilience.

Table 33: Resilience assessment

Threat/ hazard	Assessment method	Current approach
Natural events – extreme weather events, tsunamis, earthquakes, volcanoes, floods, and king tides.	Auckland Council’s Emergency Management group’s “4 Rs” process – Reduction, Readiness, Response, and Recovery	High confidence
Failure of ‘Lifeline Utilities’ – energy, water, telecommunications, and transportation	Auckland Council’s Emergency Management group’s “4 Rs” process – Reduction, Readiness, Response, and Recovery	High confidence
Climate change.	Under development	Low confidence
The resilience of Auckland Transport’s existing infrastructure to support the delivery of future transportation services.	Under development	Low confidence

Service and Risk Trade-offs

The decisions made in adopting this plan are based on the objective to achieve the optimum benefits from the available funding and resources.

What we cannot do

Given Auckland Transport relies on maintenance contractors and consultants to undertake key asset management task, the current funding levels will clearly impact Auckland Transport’s ability to deliver certain Asset Management activities, including:

- Lifecycle renewal and maintenance activities.
- Renewals cannot keep pace with the rate of asset depreciation.

Service trade-offs

If there is forecasted and programmed asset management works – operations, maintenance, renewal, acquisition, or disposal – that cannot be undertaken due to available funding this will result in service consequences for users including:

- **Safety concerns:** Aging infrastructure may experience sudden failures, leading to service disruptions or safety hazards. Critical safety-related tasks may be delayed. Faults like broken footpaths and kerbs will pose safety risks.
- **Service disruption:** Inadequate funding will lead to service disruptions or reduced service quality.

Risk trade-offs

The operations and maintenance activities and capital projects that cannot be undertaken may sustain or create risk consequences. These risk consequences include:

- **Deferred maintenance works:** Funding limitations will continue to impact timely repairs and maintenance, resulting in prolonged use of deteriorating assets.
- **Emergency failures:** Sudden infrastructure failures may occur if critical components are not adequately maintained.
- **Quality compromises:** Reduced funding will lead to compromises in work quality.
- **Backlog accumulation:** The existing backlog may worsen if cost constraints persist.
- **Continued asset deterioration:** Asset deterioration rates will increase.

ASSET LIFECYCLE MANAGEMENT PLAN

The lifecycle management plan details how Auckland Transport might operate, maintain and renew assets to ensure an asset integrity in its support of delivering service levels to ratepayers and asset users.

Most of these asset-related lifecycle management activities are undertaken by Auckland Transport through various contractual agreements with maintenance contractors and consultants. Examples of these activities are tabled as follows.

Table 34: Operations and Maintenance (OPEX) asset lifecycle management activities

Asset portfolio/ class	Asset lifecycle management activities
Transport Structures	
All asset classes	Routine asset inspections and condition monitoring.
Bridges	Routine inspections and monitoring, cleaning drainage systems and expansion joints, painting and corrosion protection for steel components, repairing minor cracks in concrete or asphalt, lubricating bearings and joints, debris removal from piers and abutments, repairing or replacing damaged guardrails or barriers etc.
Retaining walls	Weed and vegetation control, inspection and minor repairs of wall surfaces (e.g., filling cracks), cleaning drainage holes and weep holes, repairing minor erosion at the base, repointing mortar joints in masonry walls, reinforcing exposed areas with additional protective coatings etc.
Seawalls	Inspection for erosion and wave damage, replacing or repairing dislodged stones or blocks, cleaning and clearing debris, applying protective coatings to reduce saltwater corrosion, reinforcing areas showing signs of wear, maintaining and repairing drainage features etc.
Gantry structures	Inspection and tightening of bolts and connections, repainting or re-coating for rust prevention, checking and repairing lighting or signage attached to gantries, routine cleaning to remove dirt and grime, repairing minor structural damage, lubrication of moving parts (if applicable) etc.
Public Transport	
All asset classes	Routine asset inspections and condition monitoring.
Bus Network	Routine bus stop cleaning and maintenance (e.g., shelters, seating), signage and timetable updates, maintenance of bus lanes and road markings, regular inspections and minor repairs of bus depots, clearing debris from bus lanes, maintenance of ticketing machines and validation equipment etc.
Rail Network	Track inspections and minor repairs (e.g., welding, replacing bolts), routine maintenance of signals and control systems, cleaning and upkeep of stations and platforms, lubrication and maintenance of switches and crossings, routine maintenance of rolling stock (e.g., cleaning, minor mechanical repairs), regular inspections and maintenance of overhead lines or electrification systems etc.

Asset portfolio/ class	Asset lifecycle management activities
Ferry Network	Routine inspections and cleaning of ferry terminals, maintenance of docking facilities (e.g., piers, fenders), regular servicing and minor repairs of ferries, upkeep of ticketing and boarding systems, maintaining navigational aids and buoys, debris removal from ferry routes etc.
Airfields	Runway inspections and minor repairs (e.g., crack sealing), maintenance of runway lighting and signage, routine servicing of airfield vehicles and equipment, regular cleaning and maintenance of terminals, upkeep of air traffic control systems, grass mowing and vegetation control around runways etc.
Parking Facilities	Cleaning and maintenance of parking lots and structures, line marking refresh and signage updates, routine inspections and minor repairs (e.g., filling potholes, sealing cracks), maintenance of payment machines and barriers, lighting maintenance and replacement, snow and ice removal in colder climates etc.

Table 35: Renewal (CAPEX) asset lifecycle management activities

Asset portfolio/ class	Asset lifecycle management activities
Transport Structures	
Bridges	Full deck resurfacing or replacement, reconstruction of bridge piers or abutments, replacement of expansion joints and bearings, complete repainting or recoating of steel structures, upgrading to new materials or design standards, replacing entire bridge sections or components (e.g., girders, beams) etc.
Retaining Walls	Rebuilding sections of the wall that have failed or are at risk of failure, replacing outdated materials with more durable alternatives, upgrading drainage systems behind the wall, reconstruction to improve structural stability, installing additional reinforcement (e.g., geogrids, anchors) etc.
Seawalls	Rebuilding sections of the seawall that have been significantly damaged, upgrading materials to withstand higher wave forces or sea levels, reconstructing foundations or base structures, installing new protective layers or barriers, reconfiguring the seawall to improve performance and longevity etc.
Gantry Structures	Replacing entire gantry structures due to corrosion or structural failure, upgrading to new, more resilient materials (e.g., weather-resistant steel), rebuilding foundations or supports, installing new gantry systems for increased load capacity, complete overhaul of associated electrical or mechanical systems etc.
Public Transport	
Bus Network	Replacement of old bus shelters with new designs, upgrading bus lanes (e.g., resurfacing, widening), reconstruction or upgrading of bus depots, installation of new bus stops and associated infrastructure, replacement of ticketing systems with updated technology, upgrading signage and information systems across the network etc.

Asset portfolio/ class	Asset lifecycle management activities
Rail Network	Replacement of worn tracks and rail components, upgrading or replacing signalling systems, reconstruction of platforms and station infrastructure, replacement of rolling stock (e.g., trains, carriages), installation of new overhead lines or electrification upgrades, rebuilding or replacing bridges and tunnels on the network etc.
Ferry Network	Replacement of aging ferries with newer vessels, rebuilding or upgrading ferry terminals, installation of new docking facilities or upgrading existing ones, upgrading navigational aids and safety equipment, construction of new ferry routes or expansion of existing ones, renewal of ticketing and boarding systems with modern technology etc.
Airfields	Resurfacing or reconstructing runways and taxiways, replacement or upgrading of runway lighting and navigation systems, building new or expanded terminal facilities, upgrading air traffic control systems and technology, replacement of airfield vehicles and equipment, installing new security systems or fencing around the airfield etc.
Parking Facilities	Rebuilding or expanding parking structures, upgrading to smart parking systems (e.g., sensors, automated payment), resurfacing or reconstructing parking lots, installation of electric vehicle charging stations, replacement of lighting systems with energy-efficient options, upgrading or replacing payment systems and barriers etc.

Operations and Maintenance (OPEX) Lifecycle Investment Needs

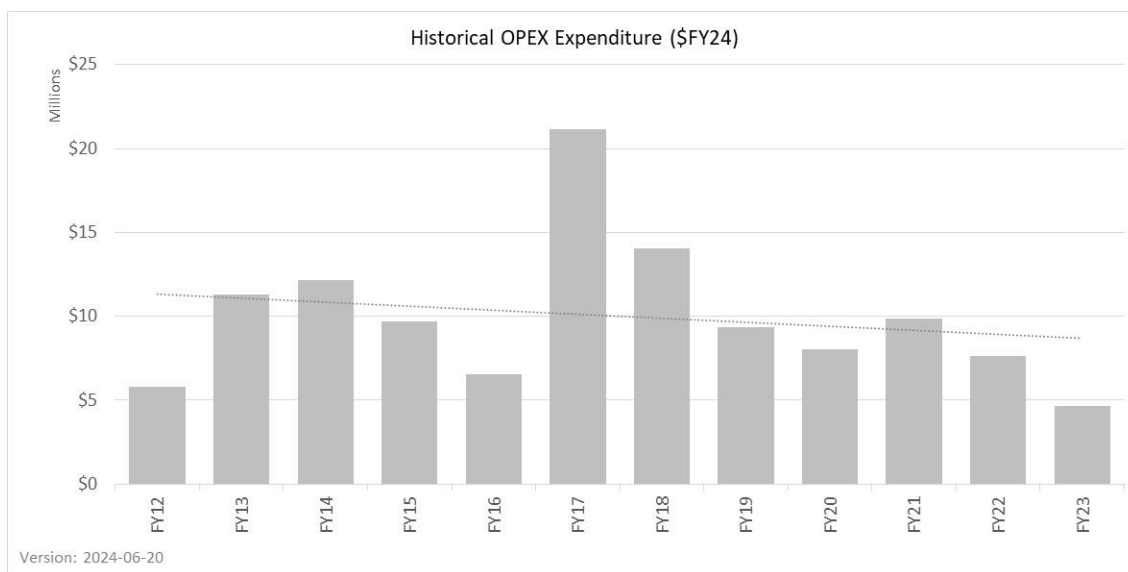
The modelling and forecasting of OPEX Investment Needs is primarily based on historical, actual expenditure, financial information held in Auckland Transport corporate financial system (SAP). Also included, where appropriate, is the Consequential OPEX required to operate and maintain new assets predicted to come into services through the 30-year planning horizon.

2024 Transport Structures and Public Transport Asset Management Plan Auckland Transport

Transport Structures

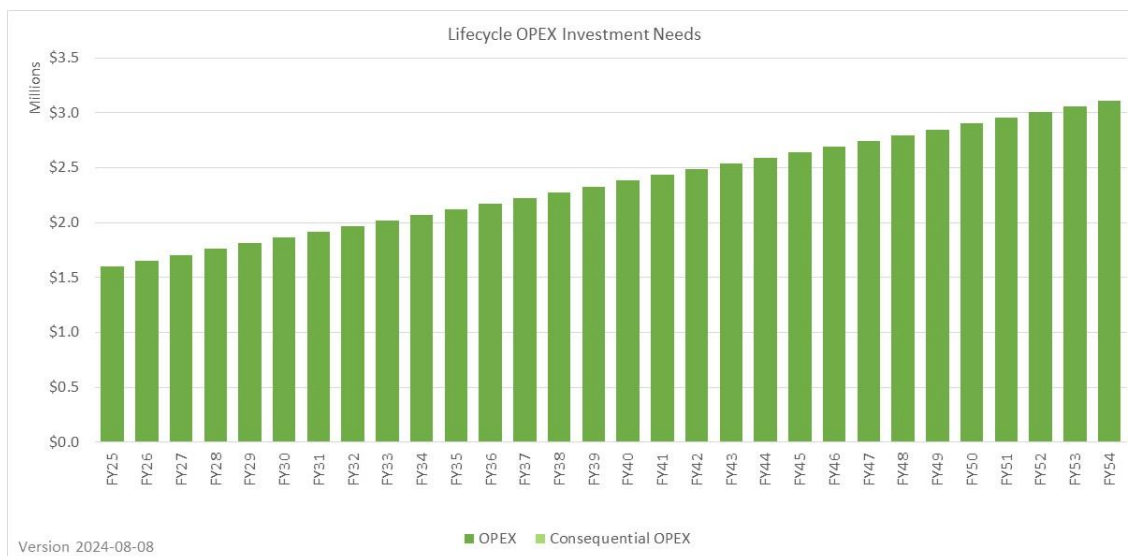
The current trend in historical OPEX budgets is shown below.

Figure 36: Historical OPEX expenditure



The forecasted OPEX Lifecycle Investment Needs are shown as follows.

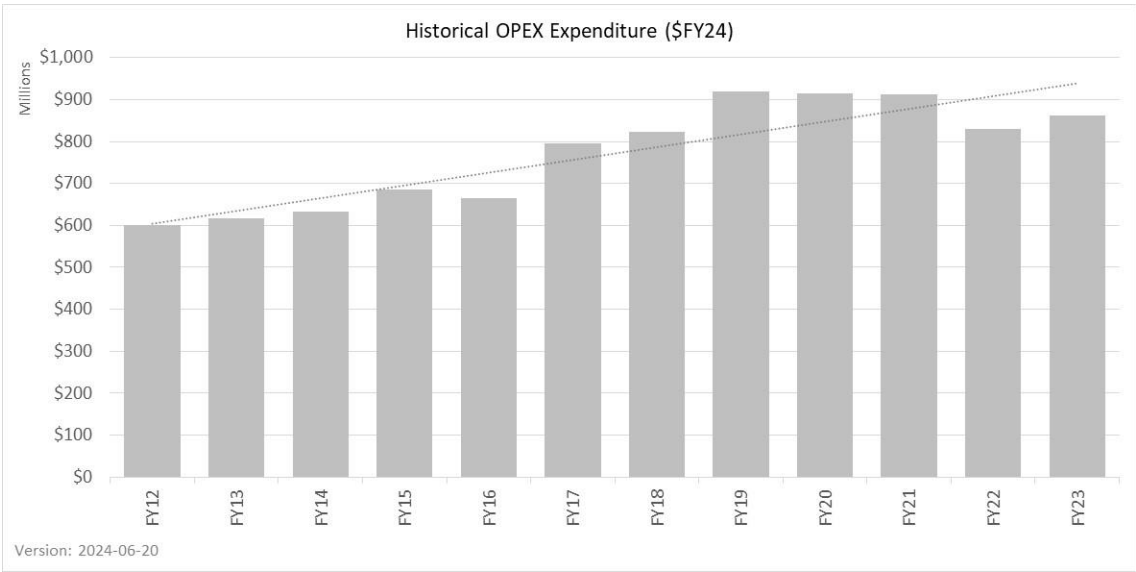
Figure 37: Transport Structures OPEX Lifecycle Investment Needs



Public Transport

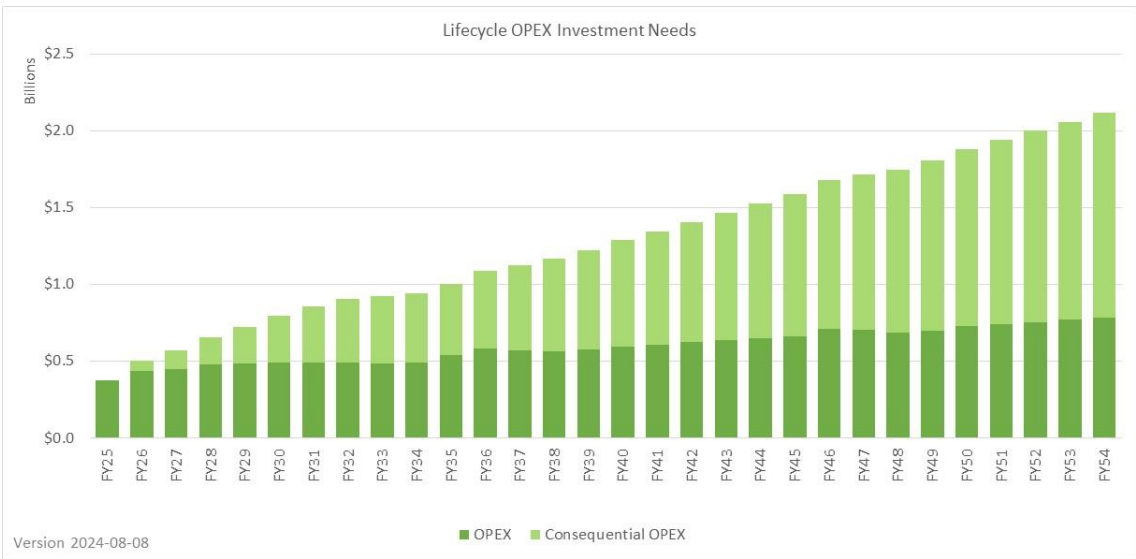
The current trend in historical OPEX budgets are shown below.

Figure 38: Historical OPEX expenditure



The forecasted OPEX Lifecycle Investment Needs are shown as follows.

Figure 39: Public Transport OPEX Lifecycle Investment Needs



Forecast operations and maintenance costs are expected to vary in relation to the total value of the asset stock. If additional assets are acquired, the future operations and maintenance costs are forecast to increase. If assets are disposed of the forecast operation and maintenance costs are expected to decrease. The following figure shows the forecasted OPEX Investment Need costs relative to the agreed 2024 RLTP OPEX budget.

Renewal (CAPEX) Lifecycle Investment Needs

Three standard approaches were employed in the modelling and forecasting of Renewal (CAPEX) Investment Needs. These are, in order of preference:

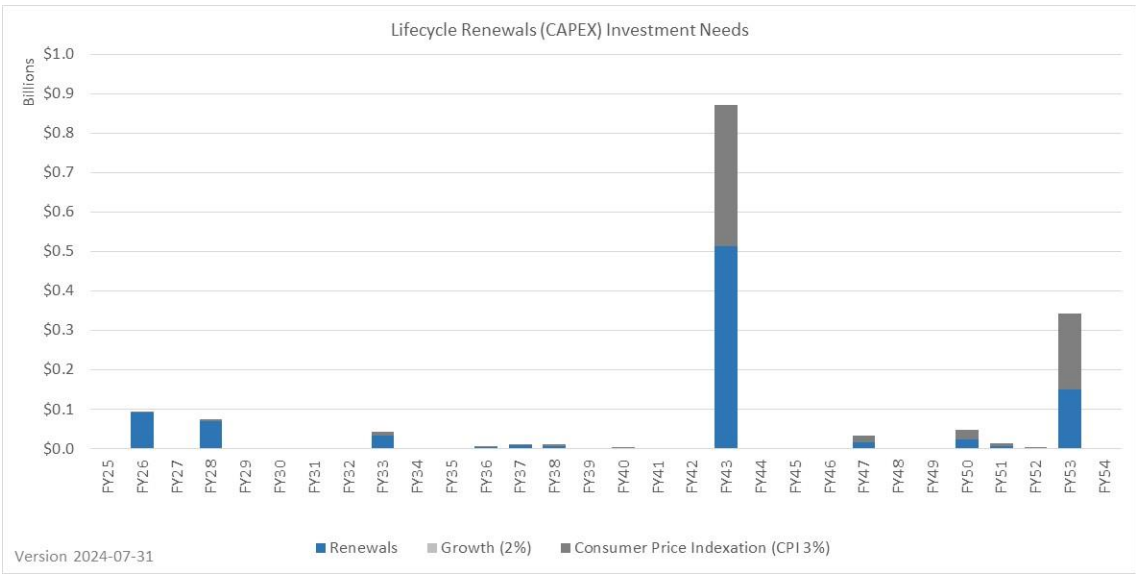
- 1. Condition-based modelling, based on asset data held in Auckland Transport’s physical asset registers.
- 2. Age-based modelling, again, based on asset data held in Auckland Transport’s physical asset registers.
- 3. Modelling based on historical actual expenditure held in Auckland Transport corporate financial system (SAP).

The quality of the modelling data used was a governing factor in selecting a particular forecast, for a particular asset class. In line with best practice, asset condition-base modelling is Auckland Transport’s preferred approach, closely followed by age-based modelling, and finally historical actual expenditure.

Transport Structures

The forecasted Renewal (CAPEX) Lifecycle Investment Needs for Transport Structures are shown as follows.

Figure 40: Transport Structures Renewal (CAPEX) Lifecycle Investment Needs

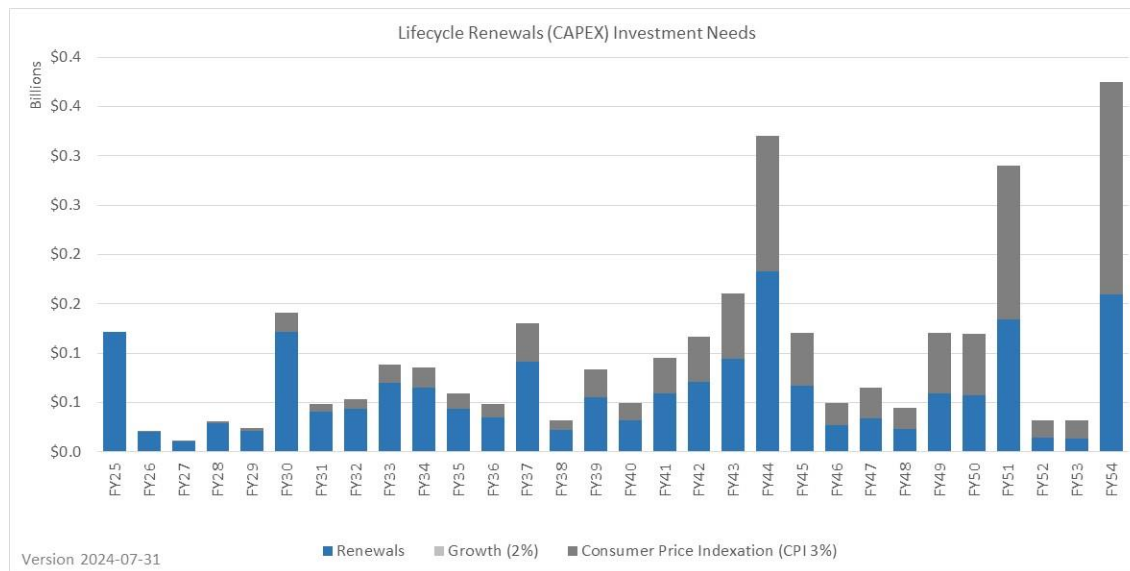


2024 Transport Structures and Public Transport Asset Management Plan Auckland Transport

Public Transport

The forecasted Renewal (CAPEX) Lifecycle Investment Needs for Public Transport are shown as follows.

Figure 41: Public Transport Renewal (CAPEX) Lifecycle Investment Needs



FINANCIAL SUMMARY

Through Auckland Transport’s Regional Land Transport Planning (RLTP) process, the organisation’s Budgets are set for the next three years, and broadly fixed for 10-years. This process is done with collaboration with Auckland Council, to ensure alignment with the Council’s Long-Term Plan (LTP).

In setting these RLTP Budgets it is assumed the Auckland Transport’s RLTP team and Corporate Finance teams take into consideration the asset management related lifecycle Investment Needs and the organisation’s ability to deliver the CAPEX and OPEX work going forward.

The asset management lifecycle Investment Needs forecasts what is needed to ensure the integrity of Auckland Transport’s infrastructure is maintain, so those assets can best support the delivery of service levels to ratepayers and asset users.

Transport Structures

Operations and Maintenance (OPEX) Budgets

The following graph and table compare the 2024 RLTP OPEX budgets for Auckland Transport’s Transport Structures, to the asset portfolio’s asset lifecycle Investment Needs.

Figure 42: Transport Networks 2024 RLTP OPEX budget vs Lifecycle Investment Needs

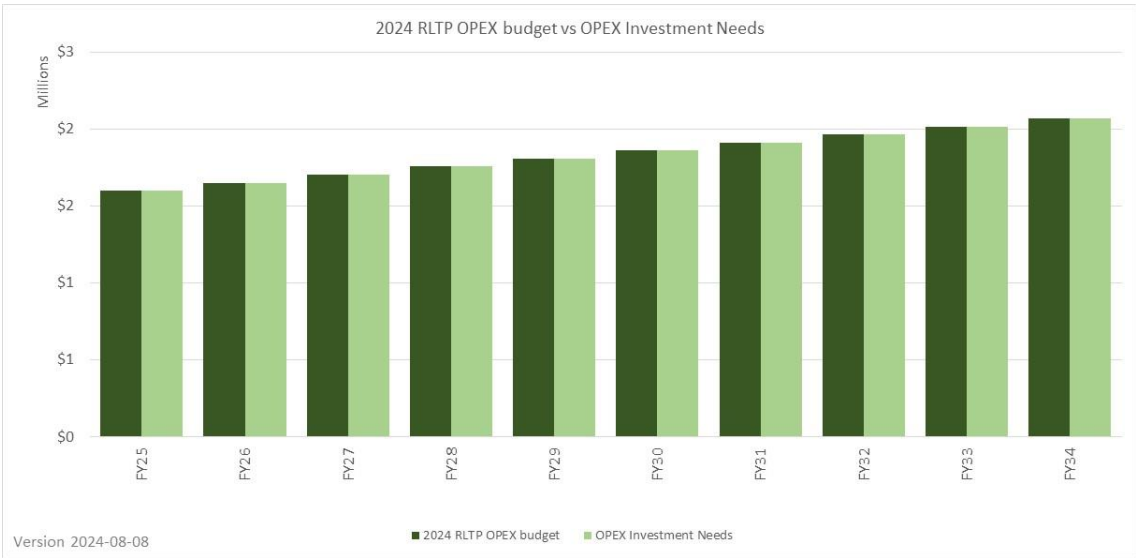


Table 43: 2024 RLTP OPEX budgets vs Lifecycle Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
2024 RLTP budget	\$4.96 million	\$18.35 million
Lifecycle Investment Needs	\$4.96 million	\$18.35 million
Funding consequence	\$0 million [sufficient]	\$0 million [sufficient]

The current RLTP OPEX budget is sufficient to meet Investment Needs and therefore current service levels are likely to be maintained.

Renewal (CAPEX) Budgets

The following graph and table compare 2024 RLTP Renewal (CAPEX) budgets to these Investment Needs.

Figure 44: 2024 RLTP (CAPEX) Renewal budget vs Lifecycle Investment Needs

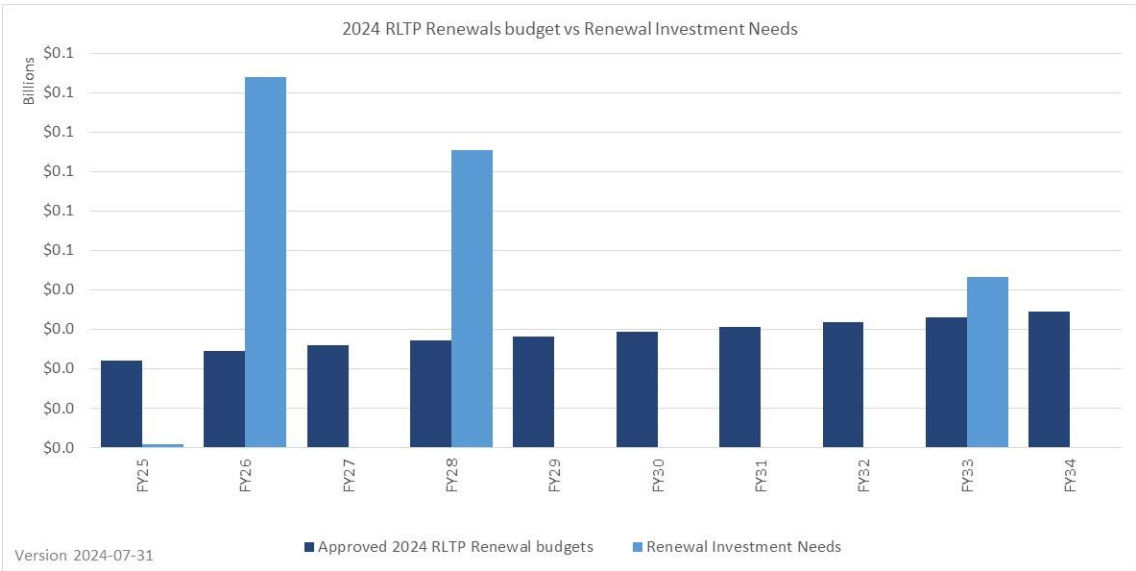


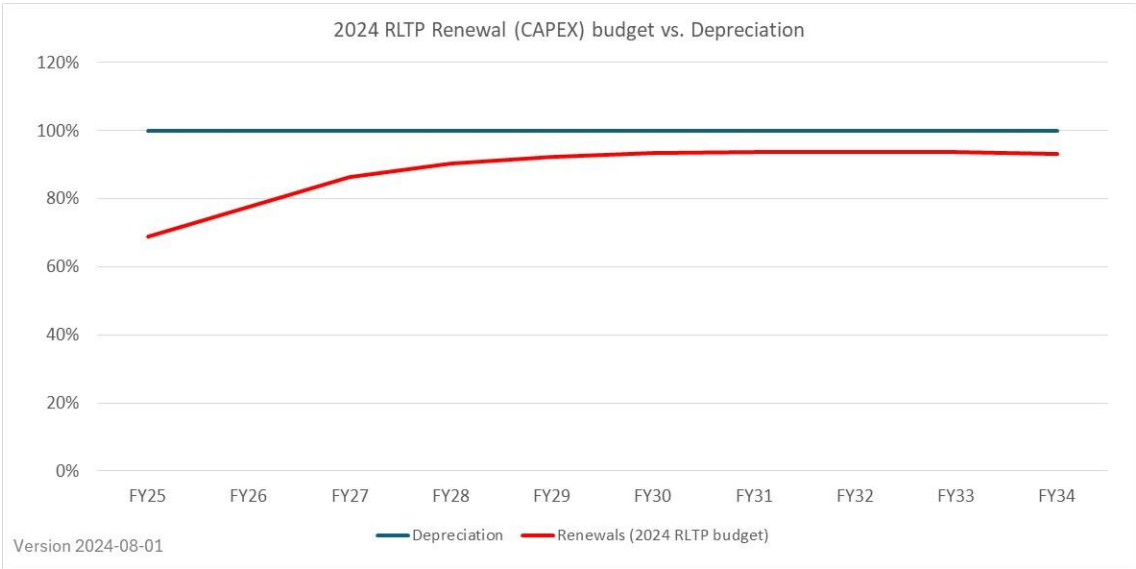
Table 45: 2024 RLTP Renewal (CAPEX) budgets vs. Lifecycle Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
2024 RLTP budget	\$72.61 million	\$287.31 million
Lifecycle Investment Needs	\$94.85 million	\$213.84 million
Funding consequence	-\$22.24 million [shortfall]	\$73.47 million [surplus]

Should the projected 10-year surplus be achieved, these additional funds will be utilised to effectively maintain the integrity of Auckland Transport’s structures scheduled for renewal in the following decade (FY35-FY44), addressing the forecasted \$2.0 billion investment need.

Depreciation is calculated and collected via property rates, primarily to fund asset lifecycle Renewal activities. The following graph presents the current 2024 RLTP Renewal budget to Depreciation comparison for the Transport Structures asset portfolio.

Figure 46: 2024 RLTP Renewal (CAPEX) budget vs Depreciation



The current RLTP Renewal (CAPEX) budget is insufficient to meet Investment Needs over the next three years – FY25-FY27 – which may impact the integrity of Auckland Transport’s infrastructure and likely current service levels in the short-term. Over the 10-years of the current RLTP budget period are such that the integrity of Auckland Transport’s Transport Structures will be maintained and therefore service levels will more likely be preserved.

Public Transport

Operations and Maintenance (OPEX) Budgets

The following graph and table compare the 2024 RLTP OPEX budgets for Auckland Transport’s Public Transport, to the asset portfolio’s asset lifecycle Investment Needs.

Figure 47: 2024 RLTP OPEX budget vs Lifecycle Investment Needs

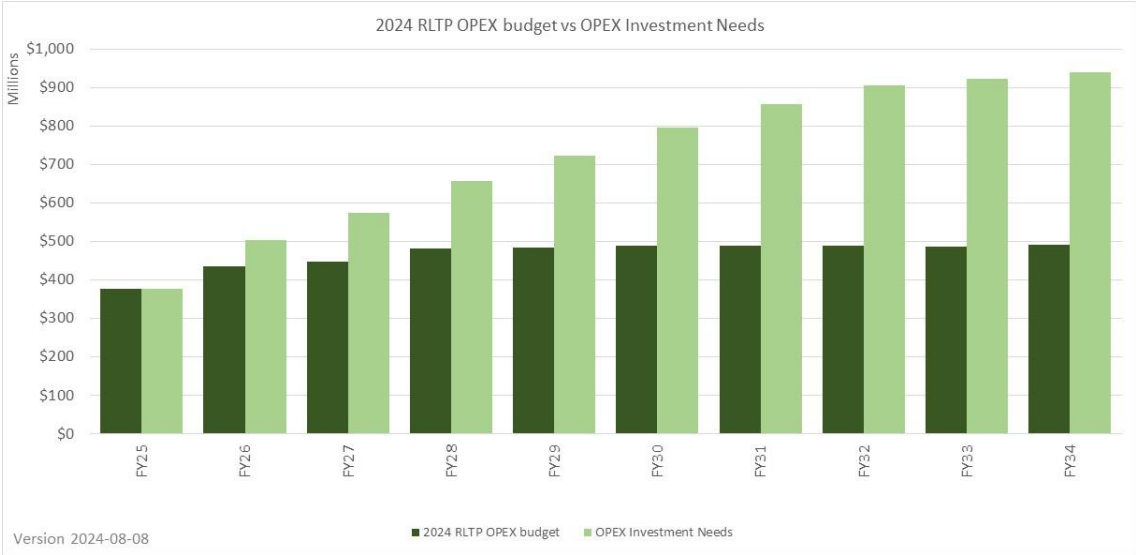


Table 48: 2024 RLTP OPEX budgets vs. Lifecycle Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
2024 RLTP budget	\$1.26 billion	\$4.67 billion
Lifecycle Investment Needs	\$1.45 billion	\$7.26 billion
Funding consequence	-\$195.08 million [shortfall]	-\$2.59 billion [shortfall]

The current RLTP OPEX budget is insufficient to meet Investment Needs, which may therefore impact current service levels. Where current budget allocations result in lesser service levels, the service consequences and risks have been identified and are highlighted in this plan, as considered in the Infrastructure Risk Management Plan.

Renewal (CAPEX) Budgets

The following graph and table compare 2024 RLTP Renewal (CAPEX) budgets to these Investment Needs.

Figure 49: 2024 RLTP (CAPEX) Renewal budget vs Lifecycle Investment Needs

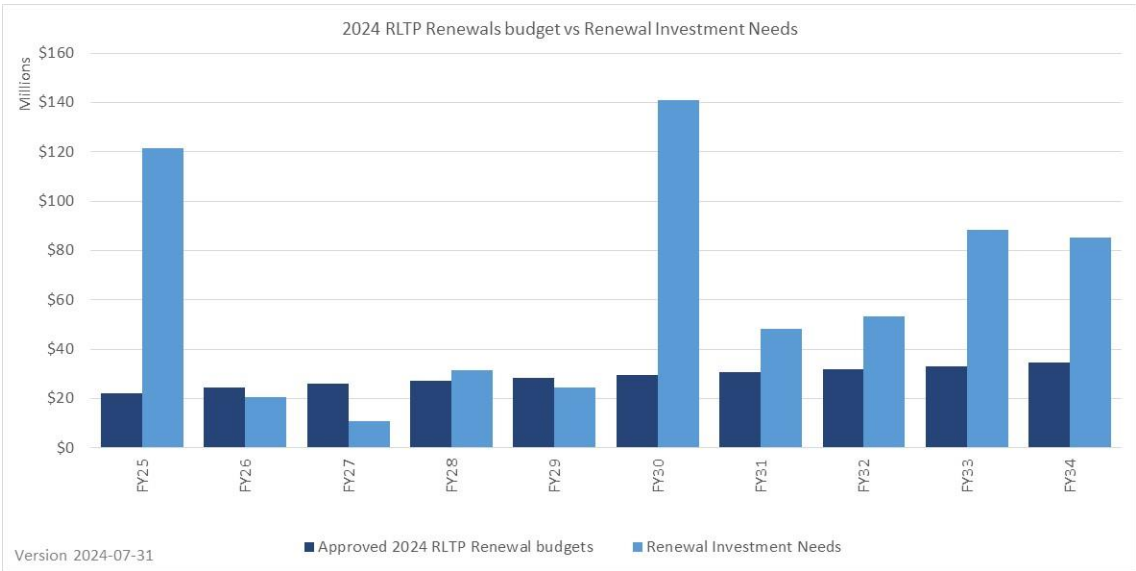
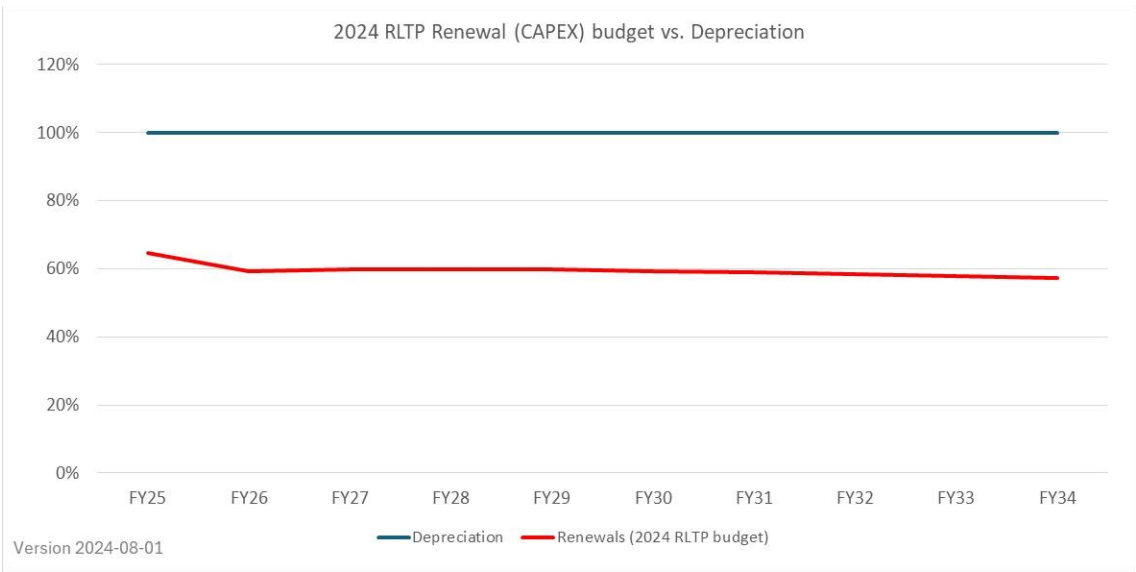


Table 50: 2024 RLTP Renewal (CAPEX) budgets vs. Lifecycle Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
2024 RLTP budget	\$124.96 million	\$482.79 million
Lifecycle Investment Needs	\$152.81 million	\$624.57 million
Funding consequence	-\$27.85 million [shortfall]	-\$141.78 million [shortfall]

Depreciation is calculated and collected via Auckland Council’s property rates, primarily to fund asset lifecycle Renewal activities. The following graph presents the current 2024 RLTP Renewal Budget to Depreciation comparison for the Public Transport asset portfolio.

Figure 51: 2024 RLTP Renewal (CAPEX) budget vs Depreciation



The current RLTP Renewal (CAPEX) budget is insufficient to meet Investment Needs, which may therefore impact the integrity of Auckland Transport’s infrastructure and likely current service levels. Where current budget allocations result in lesser service levels, the service consequences and risks have been identified and are highlighted in this plan, as considered in the Infrastructure Risk Management Plan.

Financial Summary

Operations and Maintenance (OPEX) Budgets

The following graph and table compare the 2024 RLTP OPEX budgets, to asset management lifecycle Investment Needs.

Figure 52: 2024 RLTP OPEX budget vs Lifecycle Investment Needs

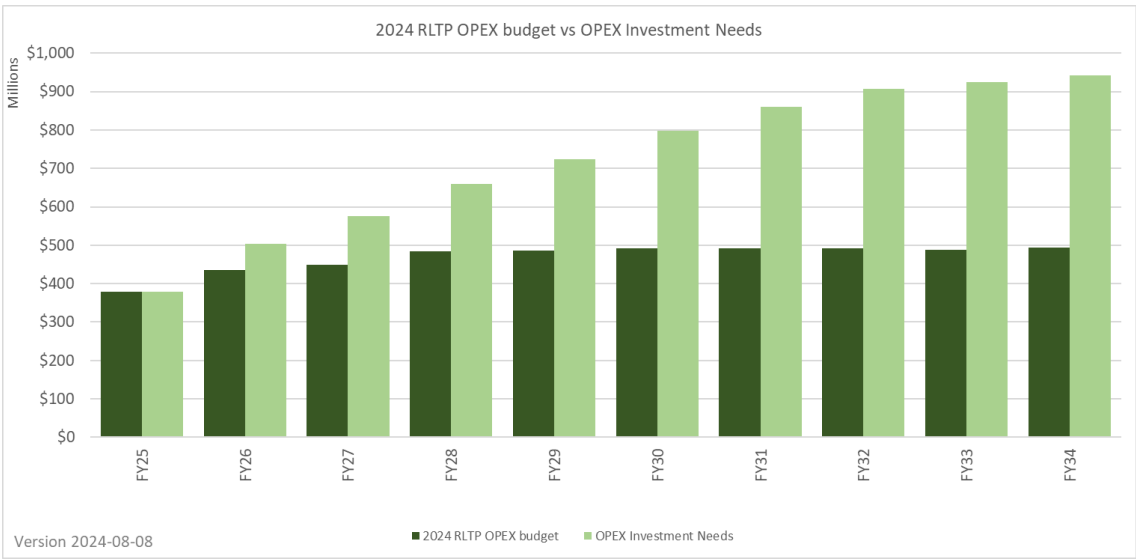


Table 53: 2024 RLTP OPEX budgets vs. Lifecycle Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
2024 RLTP budget	\$1.26 billion	\$4.69 billion
Lifecycle Investment Needs	\$1.46 billion	\$7.28 billion
Funding consequence	\$195.08 million [shortfall]	\$2.59 billion [shortfall]

The current total RLTP OPEX budget, for the Transport Structures and Public Transport asset portfolios, is insufficient to meet Investment Needs, which may therefore impact current service levels. Where current budget allocations result in lesser service levels, the service consequences and risks have been identified and are highlighted in this plan, as considered in the Infrastructure Risk Management Plan.

Renewal (CAPEX) Budgets

The following graph and table compare 2024 RLTP Renewal (CAPEX) budgets to these Investment Needs.

Figure 54: 2024 RLTP (CAPEX) Renewal budget vs Lifecycle Investment Needs

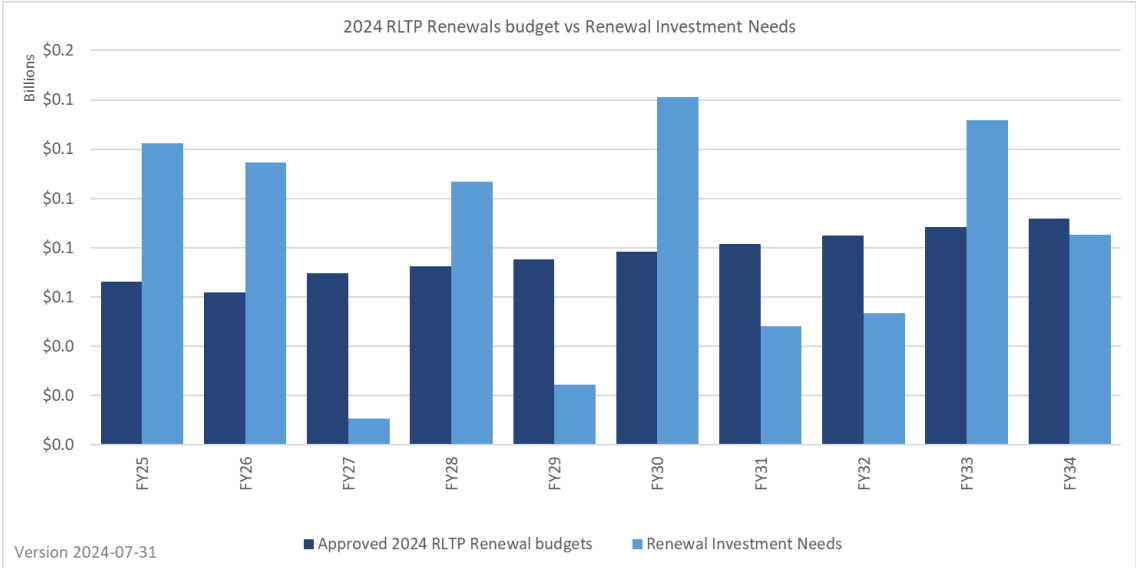
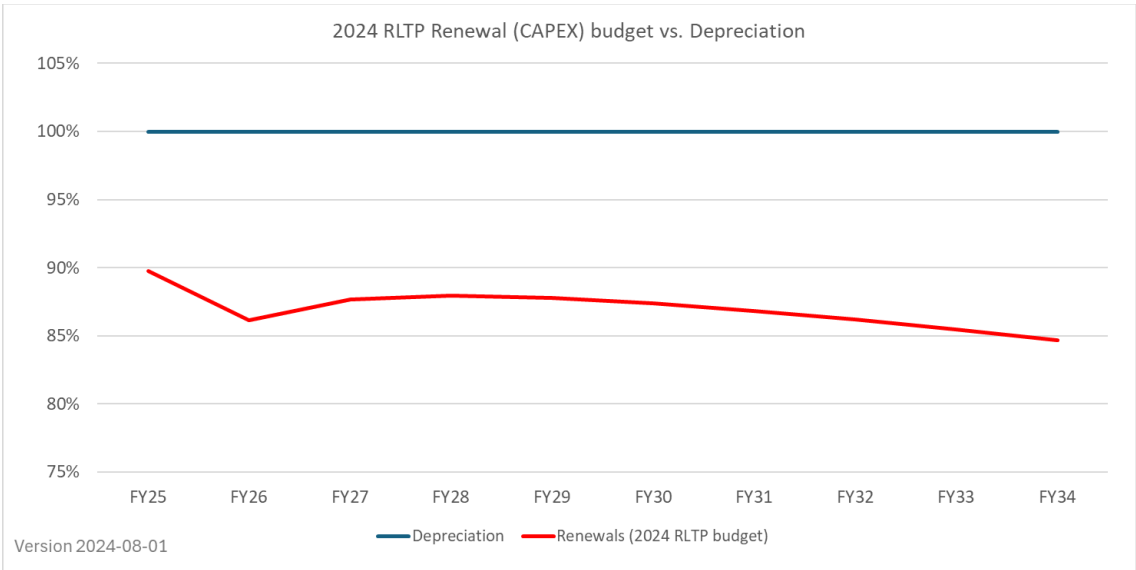


Table 55: 2024 RLTP Renewal (CAPEX) budgets vs. Lifecycle Investment Needs

	3-year period (FY25-FY27)	10-year period (FY25-FY34)
2024 RLTP budget	\$197.58 million	\$770.11 million
Lifecycle Investment Needs	\$247.66 million	\$838.41 million
Funding consequence	\$50.08 million [shortfall]	\$68.30 million [shortfall]

Depreciation is calculated and collected via property rates, primarily to fund asset lifecycle Renewal activities. The following graph presents the current 2024 RLTP Renewal Budget to Depreciation comparison for all of Auckland Transport’s asset portfolios.

Figure 56: 2024 RLTP Renewal (CAPEX) budget vs Depreciation



There are several risks of not funding depreciation, including:

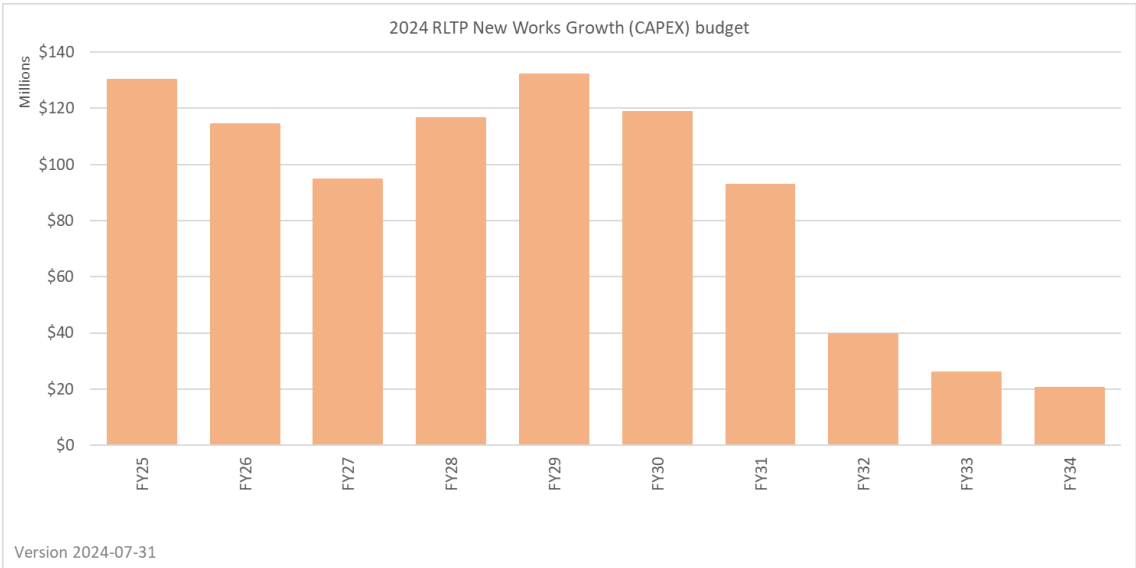
- **Underfunded asset replacement:** Without funding depreciation, Auckland Transport may not accumulate sufficient reserves to replace or renew infrastructure assets as they age. This can lead to the deterioration of critical assets, ultimately resulting in higher maintenance costs and the potential for asset failures.
- **Service disruption:** If essential assets are not replaced or maintained due to a lack of funds, there can be significant service level disruptions. For example, failing roads in disrepair could lead to public safety issues and reduced quality of life for residents.
- **Loss of credibility and trust:** Ratepayers and asset users expect Auckland Transport to manage assets responsibly. If failing to plan for asset replacement through funding depreciation, this can erode public trust and confidence in Auckland Transport's financial management and long-term planning abilities.
- **Budgeting challenges:** Without a depreciation funding mechanism, Auckland Transport may face unpredictable financial demands, making it difficult to manage budgets effectively. This lack of financial planning can lead to fiscal instability, where organisations struggle to allocate resources efficiently and may have to make reactive rather than proactive decisions.
- **Increased borrowing and debt:** When it comes time to replace or renew assets, Auckland Transport may need to rely heavily on borrowing if depreciation has not been funded. This can increase debt levels, leading to higher interest costs and financial strain on future budgets. Ratepayers could face sudden and significant rate increases to cover these costs.
- **Intergenerational inequity:** Not funding depreciation shifts the financial burden of asset replacement onto future generations. Today's ratepayers benefit from the use of the assets but do not contribute to their eventual replacement, leaving future ratepayers to cover the costs. This creates an imbalance where future generations are unfairly burdened with paying for assets they did not fully benefit from.

The current RLTP Renewal (CAPEX) budget, for the Transport Structures and Public Transport asset portfolios, is insufficient to meet Investment Needs, which may therefore impact the integrity of Auckland Transport's infrastructure and likely current service levels. Where current budget allocations result in lesser service levels, the service consequences and risks have been identified and are highlighted in this plan, as considered in the Infrastructure Risk Management Plan.

New Works Growth (CAPEX) budgets

Auckland Transport’s RLTP team, in collaboration with Corporate Finance, have agreed the following New Works Growth budgets. Given the underlying Capital projects and programmes will be installing new infrastructure, Auckland Transport must be prepared to fund the future operations and maintenance costs, as well as accounting for the future depreciation when reviewing long-term sustainability.

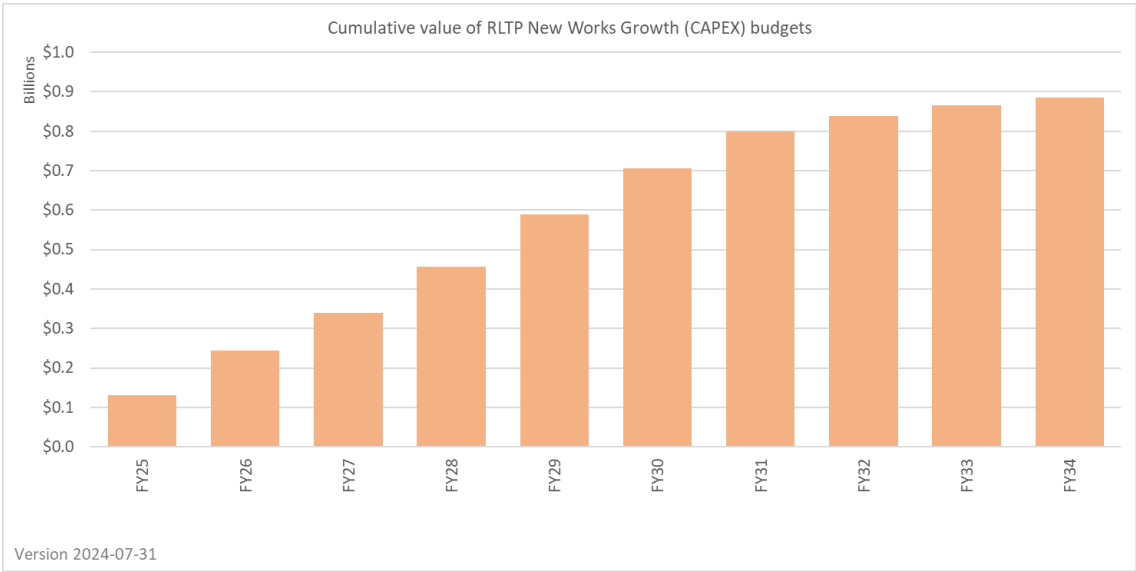
Table 57: 2024 RLTP New Works (CAPEX) budget



The important asset management aspect of these budgets is having visibility of the quantum of new assets going into service so those consequential costs can be modelled and forecasted. The Consequential OPEX forecasts have been based on these figures.

In committing to new assets, when reviewing the long-term impacts of asset acquisition, it is useful to consider the cumulative value of the acquired assets being taken on by Auckland Transport. The cumulative value of all New Works Growth acquisition works, including assets that are constructed and contributed are as follows.

Figure 58: Cumulative value of RLTP New Works Growth budgets



Service Level Improvement (CAPEX) budgets

Another aspect of the RLTP CAPEX budgets this Service Level Improvements. The underlying Capital projects and programmes within this budget are focused on working on Auckland Transport’s existing asset portfolios to uplift the service levels being provided. A real example here is uplifting an asset’s integrity to cater for predicted climate change impacts.

Again, Auckland Transport’s RLTP team have agreed this budget in collaboration with Corporate Finance.

Figure 59: 2024 RLTP Service Level Improvement (CAPEX) budget

