



Climate Change Adaptation Policy

1. Purpose

Auckland Transport (AT) recognises that changing climatic conditions will significantly impact the transport system of Auckland including AT controlled operations, services, and assets.

The purpose of this policy is to assist the organisation to mitigate, prepare for and adapt to climate related risks, issues and impacts across all aspects of AT's business including:

- demonstrating commitment to well-informed climate related decision making.
- supporting early and systemic identification, analysis and assessment of climate related risks and impacts.
- supporting the development of **strategies**, plans, standards, and activities for controlling, mitigating, and adapting to climate related risks and impacts.
- highlighting key roles and responsibilities for the management of climate related risk and impacts.

The policy aligns with the National Adaptation Plan infrastructure objectives:

- reduce the vulnerability of assets exposed to climate change.
- ensure all new infrastructure is fit for a changing climate.
- use renewal programmes to improve adaptive capacity.

This policy also supports or contributes towards the delivery of **central government, Auckland Council and AT's climate, environment and sustainability related strategic goals, objectives including to:**

- restore and protect the wellbeing of Auckland's living systems,
- accelerate Auckland's transition to our low-emissions, climate resilient future; and
- provide inclusive access to social and economic opportunities.

This policy is intended to support national targets including:

- **Reduce net GHG emissions to 50 per cent below gross 2005 levels by 2030.**
- **Net zero emissions of all greenhouse gas (GHG) emissions other than biogenic methane by 2050.**

2. Scope

This policy applies to:

All AT employees (including fixed and temporary employees).

All AT representatives, including contractors, **suppliers**, consultants, secondees, agency temporary workers and volunteers.

All AT Directors



3. Policy Principles

The AT approach to climate change is applied in accordance with the following principles:

<p>Manage minimise the impacts of climate change Reduce the vulnerability of assets exposed to climate change and prioritise the risk management of assets so that transport services can continue if disruption occurs.</p>	<p>Minimise environmental and biodiversity impacts AT adopts a precautionary approach towards proposed activities with effects on the environment and indigenous biodiversity that are uncertain, unknown, or little understood but potentially significant.</p>
<p>Our response is equitable Climate adaptation considers economic, social, and environmental issues equitably, and balances the needs of present and future generations.</p>	<p>Our response is integrated Our response to the changing climate is a dynamic and iterative process that is an integral part of all AT's organisational activities, and is part of the organisation's purpose, governance, leadership and commitment, strategy, objectives, and operations.</p>
<p>Prioritise activities Understand where infrastructure assets and their services are exposed and vulnerable to climate impacts and consider the capacities and opportunities of AT, suppliers, and the community to act. Maximise the renewal programmes to improve adaptive capacity.</p>	<p>Our decision making is robust Consider long-term climate impacts when we design and invest in infrastructure, so the right infrastructure is in the right places. Manage risk by making decisions despite uncertainty, using the right tools, guidance, and methodologies to manage climate risks. Allow for uncertainty when planning for future risk.</p>

4. Biodiversity, and the Environment

Auckland Transport's *Hikina te Wero: Environmental Action Plan 2020 – 2030* sets targets for a range of environmental outcomes, and actions to achieve them.

Auckland Transport acknowledges the complexity of assessing the emissions profile and biodiversity/environmental impacts of products and activities. In some cases, a product or activity may reduce emissions but adversely impacts biodiversity or the environment.

Proposed actions to reduce emissions, including product choices, should consider the impact on biodiversity and the environment as well as reductions in emissions.

Where new activities or products are proposed for the purpose of reducing emissions, the Environmental Team or the Design & Standards Team are available to assist in the assessment of overall benefit.

5. Assets

This section may be updated with Policy Owner approval. Changes will be tracked in Appendix 1.

The planning, design and construction of new assets and renewals must ~~consider~~ **demonstrate** adaptation to the physical impacts of the changing climate as forecast to be experienced over the lifespan of the asset, using either:

1. the Shared Socio-Economic Pathways scenarios given in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment as recommended by the Ministry for the Environment in their guidance document [Interim guidance on the use of new sea-level rise projections](#); or
2. A Dynamic Adaptation Planning Pathway (DAPP) approach.



Technical Information by Development or Activity Type		
Development or Activity Type	Risk Appetite adopted by AT Board ²	Must demonstrate adaptation to the physical impacts of the changing climate as forecast below, over the lifespan of the asset ³
Greenfields development/ major new infrastructure ¹	Cautious	Avoid hazard risk using the SSP5 - 8.5H+ trajectory.
Redevelopment (intensification) and existing development and infrastructure ¹	Cautious	SSP5 - 8.5M or DAPP. Adapt to hazards by conducting a risk assessment using SSP5 - 8.5M or using the DAPP approach. A SSP3 – 7.0M climate trajectory may be considered upon completion of a sensitivity assessment, based on criticality and location of assets.
Relocatable activities / developments / short-lived assets ¹	Cautious	SSP3 – 7.0M or DAPP. Adapt to hazards by conducting a risk assessment using RCP 6M or using the DAPP approach. A SSP2 - 4.5M climate trajectory may be considered upon completion of a sensitivity assessment, based on criticality and location of assets.
Trials of activities or assets investigating reductions in environmental impacts, emissions, or climate risks.	N/A	Require an approved project plan or business case demonstrating a balance between a high likelihood of successful delivery and a high degree of reward and value for money.

Notes:

1 – For projects in delivery at the time of policy adoption or amendment, changes to design may be implemented on a case-by-case basis as recommended by the Chief Engineer and approved by the Executive General Manager, Integrated Networks.

2 – Risk appetite is related to the risks to assets from forecast changes in climatic conditions.

3 – SSP[number of scenario] - [RCP trajectory] e.g., SSP5 – 8.5 = SSP scenario 5 – RCP8.5. (H+ means considerations are based on the upper end of the range. M means considerations are based on the median of the range.)

Forecast conditions under each trajectory:

When implementing this policy, use the **most recent** IPCC **fifth** assessment report, as well as the following forecast information for New Zealand conditions from the Ministry for the Environment and National Institute of Water and Atmospheric Research (NIWA) (see table below):

Forecasts for	Use these reference documents
Global forecasts	Fifth Assessment Report — IPCC Sixth Assessment Report - IPCC
Sea level (NZ) & Vertical Land Movement (VLM)	Interim guidance on the use of new sea-level rise projections: (www.mfe.govt.nz)



Forecasts for	Use these reference documents
Temperature	NIWA: Projected regional climate change hazards: Zone 1: Regional snapshot of projected climate changes and hazards https://niwa.co.nz/adaptationtoolbox/regionalprojections/zone1
Coastal instability & erosion	Auckland Council Technical Report, TR2017/030-3 - Auckland Region climate change projections and impacts (knowledgeauckland.org.nz) (September 2020) with associated GIS (Global Information Security) layers: Areas Susceptible to Coastal Instability and Erosion GIS map (Auckland Council)
Rainfall intensity	NIWA: 2018 High Intensity Rainfall Design System. Version 4 Prepared for Envirolink. HIRDS is a simple online tool that can estimate the magnitude and frequency of high intensity rainfall at any point in New Zealand. https://niwa.co.nz/information-services/hirds

Note: See Appendix 1 for a list of previous reference documents (if any).

6. Organisational climate related risk appetite

This section may be updated with Policy Owner approval following any change to the climate related risk appetite endorsed by the Finance and Assurance Committee. Changes will be tracked in Appendix 1.

The overall climate related risk (the "failure to appropriately respond to or prepare for the impacts of climate change including lack of planning for network resilience") is a 'cautious' risk appetite.

Auckland Transport has three subcategories of climate related risk:

Subcategory 1 - Mitigation: reducing greenhouse gases from users of the transport system and from AT's operations.	Risk appetite: averse Avoidance of risk and uncertainty in achievement of key deliverables or initiatives is paramount. Activities undertaken will only be those considered to carry virtually no residual risk.
Subcategory 2 - Adaptation: adapting AT's assets to the physical impacts of climate change, as discussed earlier in this section	Risk appetite: cautious Activities undertaken in the achievement of key deliverables or initiatives will only be taken where they have a low degree of residual risk. The associated potential for reward / pursuit of opportunity is not a key driver in selecting activities.
Subcategory 3 - Transition: responding to the non-physical impacts of climate change during the transition to a low-carbon and climate-resilient future.	Risk appetite: neutral Willing to accept / tolerate a degree of risk in selecting which activities to undertake to achieve key deliverables or initiatives, where we have identified scope to achieve significant reward and/or realise an opportunity. Activities undertaken may carry a high degree of residual risk that is deemed controllable to a large extent

The overall climate related risk appetite and subcategory risk appetites must be considered during planning, design and construction of new assets and renewals, procurement, and any other Auckland Transport activities.



7. Climate Change Mitigation

This section may be updated with policy owner approval following any change to standards or protocols. Changes will be tracked in Appendix 2.

AT supports the national and regional target of reaching net zero by 2050 and will act to reduce greenhouse gas emissions by:

- a. setting emissions reduction targets based on robust information from or endorsed by respected sources¹;
- b. using a system-based approach for whole-of-life emissions including embodied, operational, enabled and end-of-use in infrastructure development; and including whole-of-life emissions assessment requirements in decision making for each stage of infrastructure project development including business case/optioneering.
- c. continuously improving energy-efficiency, and reduce operational emissions and expenses by:
 - i. implementing energy efficiency, electrification and distributed renewable generation and
 - ii. use an energy management system, with monitoring and targeting, to manage energy effectively; and
 - iii. closely monitor areas of business and activities aiming for continual improvement of energy-efficiency.

AT's GHG emissions inventory will be verified annually in alignment with ISO 14064-3 and meet the principles and requirements of the [GHG Protocol Corporate Standard](#), ISO 14064-1 standard, [GHG Protocol Scope 2 Guidance](#), and [GHG Protocol Corporate Value Chain \(Scope 3\) Accounting and Reporting Standard](#).

Schedule -1 sets out further guidance on AT's approach including inventory base year, base year reset, consolidation approach, significant threshold, emissions factor source and cut-off dates.

8. Definitions

Term	Definition
Dynamic adaptation policy planning (DAPP)	Dynamic adaptive policy pathways, which anticipates pathways of adaptation options or actions, working with the widening uncertainties in sea-level rise projections and being responsive (dynamic) to the ensuing changes.
Greenhouse Gas Protocol materiality threshold	<p>The Greenhouse Gas Protocol accounting and reporting standards are a global standardised framework to measure and manage greenhouse gas (GHG) emissions from operations, value chains and mitigation actions.</p> <p>The materiality threshold is a concept employed in the process of verification. It is often used to determine whether an error or omission is a material discrepancy or not.</p>
Physical risks	Risks that are directly related to the physical impact of a climate hazard.

¹ Respected sources refers organisations such as the International Panel on Climate Change (IPCC), the Ministry for the Environment (MfE), the National Institute of Water and Atmospheric Research (NIWA) and SeaChange.



Term	Definition
Representative Concentration Pathways (RCP)	e.g., RCP4.5, RCP6, RCP8.5 Representative concentration pathways, comprising radiative forcing scenarios for deriving climate-related projections in the Fifth Assessment Report by IPCC on climate change (published 2013–14) and combined with SSPs in the Sixth Assessment Report by IPCC on climate change (published 2021–22).
Risk	The effect of uncertainty on objectives (from ISO (International Standards Organisation) 31000).
Risk appetite	The amount and type of risk AT is prepared to pursue or retain (from ISO 73).
Risk management	Coordinated activities to direct and control AT with regard to risk. The planned and systematic approach to the identification, evaluation and control of risks which threaten the achievement of AT’s objectives (from ISO 31000).
Shared Socio-economic Pathway (SSP)	Shared socio-economic pathways, comprising socio-economic assumptions driving emissions, used in the Sixth Assessment Report by IPCC on climate change (published 2021–22) to complement RCPs, to produce climate-related projections.

9. Roles and Responsibilities

Role	Responsibility
Approval Authority: Auckland Transport Board (Board)	<ul style="list-style-type: none"> Review and endorse an appropriate governance structure for climate change management, including, where appropriate, board and executive level committees and delegated authorities. Approve AT’s climate risk appetite levels. Monitor the organisation’s management of climate related risks through review of regular risk reporting by management. Approves new and significantly amended Climate Change Adaptation Policy.
Finance & Assurance Committee (FAC)	<ul style="list-style-type: none"> Review climate risk appetite levels for approval by the Board. Monitor the organisation’s management of climate related risks through review of regular risk reporting by management. Review new and significantly amended Climate Change Adaptation Policy for approval by the Board.
Executive Leadership Team (ELT)	<ul style="list-style-type: none"> Understand the organisational climate related risk appetite. Actively lead and promote implementation of this policy across the organisation. Accountable for the implementation of this policy across the business areas under their control. Resolve conflicting objectives that may arise from mitigation of or adaptation to changing climatic conditions. Ensure the organisation has the structures, processes, and accountability to support climate-related decision-making. Provide information to allow the Board of Directors to understand changing climatic conditions may have material impacts on the organisation’s objectives, and the effectiveness of current controls.



Role	Responsibility
Policy Owner: Chief Scientist	<ul style="list-style-type: none"> • Approves Climate Change Adaptation Policy updates to reference documents, materiality thresholds, or Board endorsed targets or climate related risk appetites as per delegations stated in the policy. • Reviews significantly amended Climate Change Policy for approval by the Board. • Ensure policy is up-to-date and is based on the best available information to meet its Purpose and Principles. • Ensures adaptation activities are led by senior management across all departments, to ensure that risk management and resilience is embedded within the organisation in a manner that corresponds directly to the key risk areas identified in Climate Risk Assessments.
Policy Contact: Science & Sustainability Division	<ul style="list-style-type: none"> • The subject matter experts in this policy area. • Works with other staff to ensure strategy, policies, processes, business practices, guidelines, approvals, governance, and oversight to enable effective implementation of this policy. • Leads work on climate adaptation, environmental assessment, and GHG emissions.
Chief Engineer	<ul style="list-style-type: none"> • Recommends changes to designs on a case-by-case basis, where a design was approved prior to a change in this policy but has not yet been implemented.
Director Infrastructure & Place	<ul style="list-style-type: none"> • Holds delegated financial authority for approving changes to designs as recommended by the Chief Engineer.
All employees and AT representatives	<ul style="list-style-type: none"> • Understand and comply with this policy. • Understand the climate risks and impacts relevant to their area of responsibility and follow the associated policy and procedures.
All People Managers	<ul style="list-style-type: none"> • Understand the organisational climate related risk appetite. • Actively lead and promote the implementation of the Climate Change Policy within their business areas and groups. • Responsible for embedding a culture of proactive emissions reduction and climate adaptation in their area/s of responsibility. • Report on climate change related performance to appropriate Director or Thought Leader Executive General Manager (EGM).



10. Supporting Information

Legislative compliance	This Policy supports Auckland Transport’s compliance with the following legislation: <ul style="list-style-type: none"> • Financial Sector (Climate-related Disclosures and Other Matters) Amendment Act 2021 • Local Government (Auckland Council) Act 2009
Supporting documents	<ul style="list-style-type: none"> • Auckland Transport Risk Management Policy • Asset Management Plans (where relevant) • Adaptation Plans (where relevant)
Supporting Tools	<ul style="list-style-type: none"> • Auckland Transport Risk Management Framework • Project Emissions Estimation Tool (PEET)
Related documents	<ul style="list-style-type: none"> • AT Sustainability Strategy • Hikina te Wero: Environment Action Plan

11. Non-Compliance

Climate risk and impact management supports compliance to multiple governance, legal, regulatory, government and shareholder requirements. Non-compliance perceived or otherwise, with those requirements can lead to increased scrutiny, investigations and reviews, penalties and in extreme circumstances prosecution and fines.

12. Approval & Review

AT recognises the need for ~~regular~~ **annual** review of this policy as:

- the data and methodologies used to measure, attribute, or forecast climate related risk and impact are not yet mature; and
- there are a wide range of uncertain outcomes of when climate risks will impact assets.

Policy Owner:

Director Infrastructure & Place

Policy Contact:

Chief Scientist

Endorsed by:

~~Interim~~ Chief Executive

Approved by:

Auckland Transport Board

Effective date: 27 February 2024

Next review: February 2025

AT reserves the right to review, amend or add to this policy at any time upon reasonable notice to employees and representatives.



[Note: Previous appendix 1 removed – this appendix presented quick reference tables and graphics that are otherwise available via reference documents listed in this policy. Removed as not needed]

Appendix 1: Tracking Changes to Policy

Reference documents in this policy may be changed at any time with approval from the policy owners (jointly or severally).

As decisions may be based on the reference documents provided by this policy at a point in time (such as design and cost estimates) a record must be kept of what reference documents have previously been in use and the time periods they were applicable.

Significant changes to the policy (version changes e.g., V1 to V2)) require Board endorsement. These changes will be tracked in the Table below:

Date of Board endorsement	Version	Changes
01/12/2022 - Initial Board endorsement	V1	-
27/02/2024 – 2023/24 policy review	V2	<ul style="list-style-type: none"> Amended name of policy from “Climate Change Adaptation Policy” to “Climate Change Policy”. Added section on carbon calculations & emissions inventory (as requested by AuditNZ) and a Schedule 2 with additional information. Updated roles and responsibilities and made minor clarifications to text. Removed original appendix 1 (quick reference tables and graphics) as they have been included within the policy

Changes or updates to reference documents (subversion changes), materiality thresholds, targets or climate related risk appetites that are approved by the Policy Owner will be tracked in the table below:

Updated item description or heading, approval by & date	Detail of retired reference documents, materiality thresholds, targets, or climate related risk appetites	Period reference document was in use
Transition risk appetite Policy update approved by Board via risk appetite endorsement on 31 January 2022.	Inclusion of neutral risk appetite for transition risk sub-category in S6, following risk appetite endorsement by the Board.	n/a



Appendix 2: Emissions Calculations

This schedule is intended to provide additional guidance on GHG emission calculation methodology. It does not form part of the policy and may be changed or updated at any time with Policy Owner approval.

Consolidation Approach	AT uses an operational control consolidation approach to account for the GHG emissions. Refer to the GHG Protocol Corporate Value Chain Standard for comprehensive guidance on this approach.
Inventory Reporting Period	AT reports its annual GHG Emissions Inventory based on the Financial Year (July to June).
Inventory Category Reporting	Auckland Transport categorises activities, including the emissions inventory, by activity type covering both Categories 1-6 under ISO 14064-1:2018 and Scopes 1-3 under GHG Protocol.
Base Year	<ul style="list-style-type: none"> • AT GHG Emissions Inventory: Financial Year 2021/22 • AT Embodied Emissions: Financial Year 2021/22.
Base Year GHG emissions recalculation process	<p>AT ensures the representativeness of the base year GHG Emissions Inventory by following the base-year recalculation policy guidance from ISO 14064-2018 and aligning with the GHG Protocol Corporate Accounting and Reporting Standard requirements.</p> <p>As per these standards, certain situations may trigger a recalculation of the base-year for the GHG Emissions Inventory including:</p> <ol style="list-style-type: none"> 1. Structural changes to organisational boundaries (i.e., acquisitions, divestitures or mergers of businesses or facilities) 2. Adjustment of specific emissions Key Performance Indicators/s (KPIs) boundaries 3. Changes to regulatory or shareholder-defined obligations or responsibilities. 4. Changes in calculation methodology, improvements in the accuracy of emission factors and other assumptions or data monitoring, noting the cut-off dates set out in the 'Emissions factor source and use' section below. 5. Discovery of significant errors or several cumulative errors that are collectively significant. <p>Base-year recalculations will not occur for:</p> <ul style="list-style-type: none"> • growth/decline of AT services, facilities, or assets, such as commissioning or de-commissioning of PT (Public Transport) bus or ferry services routes or assets. • acquisitions or divestment of operations that did not exist in the base year. <p>AT documents recalculations of base-year and other historical years in subsequent GHG Emission Inventory reports.</p>
Emissions factor source and use	<p>AT's annual GHG Emissions Inventory uses the most recently released GHG emissions factors guidance document from the Ministry for the Environment (MfE) as at the last day of the Financial Year (30 June). This also applies to base year and historical year recalculations, and significant thresholds.</p> <p>Any emissions guidance released by MFE after 30 June shall be considered in the subsequent year's GHG emissions inventory.</p>



If a specific emissions factor aligning with the Financial Year reporting period (July-June) is not available in the MfE guidance of the current years GHG Emissions Inventory, AT may apply a more recent set of factors published by MfE.

If a MfE endorsed emissions factor is not available for an activity, AT may source an emissions factor:

- based on the advice of an inventory verifier/verifier organisation or
- based on a Life Cycle Assessment carried out by an accredited organisation or
- based on AT's own activities subject to emissions verifier acceptance.

AT uses the emissions factors that align best with the appropriate reporting year period for any calculation or recalculation of the historical emissions inventory. For example, the electricity emissions factor of a previous calendar year is used for July to December period of the base year, and the emissions factor of the succeeding calendar year is used for January to June period of the base year.

Significant threshold

AT recalculates base-year emissions of the whole inventory:

- if the cumulative effect of any of the situations set out above equal or exceeds a significance threshold of 5% of base-year emissions.
- at AT's discretion, where changes represent less than 5% of base-year emissions.

AT assesses the impact of the changes on the successive year's historical emissions and updates them, accordingly, noting the cut-off dates set out in the 'Emissions factor source and use' section above.

Emissions inventory alignment with KPI's

AT updates and maintains individual GHG emissions reduction Key Performance Indicator's base year emissions (including KPI's historical years' emissions) in alignment with the whole emissions inventory according to the respective activities and boundaries. Emissions recalculation is tested at whole inventory level not at individual KPI level. However, AT should apply the materiality of the emissions KPI in comparative disclosure.

Annual emissions inventory publication

AT intends to publish its verified annual GHG emissions inventory of a Fiscal Year by the end of August of succeeding Fiscal Year.