

Whakatū Nelson Climate Action Plan



**CLIMATE
ACTION
NELSON**



Nelson City Council
Te Kaunihera o Whakatū



Section 1 - Introduction

Purpose of the Climate Action Plan

The Climate Action Plan is our pathway to meeting our climate goals and targets as set in the first section of the Strategy. The purpose of this Action Plan is to reduce Nelson's greenhouse gas emissions and prepare the community to adapt to the impacts of a changing climate.

This Action Plan outlines key projects underway that will aid in the implementation of the Climate Change Strategy. As a community-focused Strategy that promotes a collective response, the Action Plan aims to highlight key projects led by Council and other players.

This Action Plan will support the Strategy's implementation by enabling us to assess where the gaps are and where further action is required to meet our goals. The Action Plan also seeks to be an enabler of ongoing change by:

- supporting connections between people and projects, aiding collaboration and partnerships
- facilitating more effective implementation of climate actions through sharing information

- enabling resources to be shared, increasing the cost effectiveness of climate action.

Council plays a pivotal role in Whakatū Nelson and holds some important levers to address climate change, such as funding, transport and plan-making. However, it is directly accountable for only 2 per cent of Nelson's emissions.

The Action Plan encompasses both existing and new initiatives that Council will implement, in addition to iwi led initiatives. New Council project suggestions received during community engagement will be considered through the development of the Long Term Plan 2027-2037. Council's actions alone are insufficient to fulfil the Strategy's ambitions. That is why we sought community input to tell us about substantive community and business projects, which will be regularly added to the Action Plan as they are advised to Council.



How this Plan relates to the 2021 Climate Action Plan

Council published a Climate Action Plan in 2021 that summarised climate change-related projects funded through the Long Term Plan 2021-31.

The Action Plan in this Strategy is broader in scope and is focused on achieving the goals and targets of the Strategy. It includes actions from other players, as well as Council. We will continue to engage with the community, research sector and businesses to collect information on their climate actions and commitments. This will inform future updates to the Action Plan by others.

While the actions of the Council are crucial, they are not sufficient to meet our emission reduction targets. Climate change is a collective issue that requires collaborative action. This is why we need to support community action and behaviour change, encourage businesses to adopt sustainable practices, and urge the government to implement effective climate policies.

Content of this Action Plan

This Action Plan is set out as follows:

- **Section 2** summarises key projects that Council is committed to delivering
- **Section 3** summarises iwi climate-related projects
- **Section 4** summarises community, business and research sector projects that will have a major impact in supporting us to meet our climate change goals. This section will be updated with substantive new projects as they are advised to Council.

There are two appendices:

- **Appendix 1** provides a stocktake on how we are tracking in terms of reducing emissions and adapting to climate change risks.
- **Appendix 2** provides an overview of the ranking system used to assess the adaptation actions outlined in Section 2.

Actions from central government will also be critical in helping us to implement the Climate Change Strategy. Central government initiatives are summarised in the National Adaptation Plan and the second Emissions Reduction Plan. These documents are available on the Ministry for the Environment's website.

Section 2 - Action Plan 2024

This section summarises key climate actions that Council has committed to delivering. It is divided into the eight pillars outlined in the Climate Change Strategy. The table included under each pillar outlines the Council projects that reduce greenhouse gas emissions and/or impact adaptation efforts. This includes new actions confirmed in the Long Term Plan 2024-34, as well as ongoing projects from the 2021 Climate Action Plan. The Climate Action Plan does not currently deliver on the goals and targets outlined in the first part of this Strategy but the Action Plan will be updated periodically to close the gap between where we are now and what is needed to meet those goals and targets.

Key

Degree to which action will reduce greenhouse gas emissions (mitigation)



Major potential: The action will have a direct emissions reduction or sequestration capacity of over 0.5% of total emissions from either Council or the community.



Minor potential: The action will have an indirect emission reduction from either Council or the community and it will lead to future initiatives that will reduce emissions.

Degree to which action will address climate risks (adaptation)¹



Transformative potential: Actions offering substantial long-term benefits with significant co-benefits.



Significant potential: Actions providing significant benefits, primarily in the medium to long-term.



Incremental potential: Actions offering short to medium-term improvements (i.e., temporary benefits), or actions addressing specific issues.



Minimal potential: Actions providing minimal benefits or addressing minor issues.

¹ See appendix 2 for additional information on definitions and characteristics for ranking criteria.



Enabler to reduce greenhouse gas emissions or address climate risks



The action does not directly contribute to reducing emissions or addressing climate change, but it will enable action, for example by removing a barrier to action or establishing a partnership between organisations to collaborate on climate projects.

Budget allocation



The budget column indicates the Council funding allocated to the action. Some projects won't require funding but will require input from Council staff. This is indicated by the symbol shown.

Pillars



Partnerships and community empowerment



Learning and knowledge sharing



Regenerative economy



Low emissions transport system



Zero waste society



Thriving biodiversity and nature



Sustainable and resilient food system



Resilient built environment

Partnerships and Community Empowerment

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Council works with Nelson businesses and community groups to address climate risks and reduce emissions	Elected members and staff actively participate in the Nelson Tasman Climate Forum and Council continues to provide funding and support for the Forum.	Nelson Tasman Climate Forum (lead) NCC TDC lwi	
	Maintain a relationship with Businesses for Climate Action/Mission Zero and support the group with information and connections.	NCC Private sector	
Use the 10 Step Adaptation Cycle to progress adaptation planning to reduce climate-related risks and increase community resilience	Finalise step 4 of the adaptation decision cycle through the development of the Nelson Tasman Regional Risk Assessment Tool. Identify and fill knowledge gaps on climate change risks over time.	NCC TDC Private sector	n/a
	Develop adaptation options and pathways (step 5) for areas most at risk from climate change, especially risks from sea-level rise and inundation.	NCC Communities Private sector lwi	n/a
	Evaluate the adaptation options and pathways identified in step 5 (step 6) and develop an implementation strategy that includes signals and triggers for action (step 7).	NCC Communities Private sector lwi	n/a
Increase resilience through partnership with rural landowners	Support planting projects on private land to increase slope stability and reduce flood effects. Action achieved by working with landowners to support climate change resilience in the rural sector through the Sustainable Land Management programme.	NCC Private landowners	

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$1,204,478	2024-2034	Partnerships Community Leadership Social Cohesion Community-Led Action	
	Council provides funding support for specific projects and programmes		Community Leadership Partnerships Social Cohesion Local Economy Training and Upskilling	  
	\$80,000	2025	Partnerships Strategic Alignment Emergency Management Community-Led Action Climate Impacts, Risks and Implications	
	\$180,000 across two years	2025	Community-Led Action Partnerships Infrastructure and Building Resilience Infrastructure and Utilities Land Use Planning Mātauranga Māori and Western Science	 
	\$65,000	2026	Partnerships Social Cohesion Making Decision under Uncertainty Land Use Planning	
	\$1,263,725 ²	Ongoing	Community-Led Action Partnerships Nature-Based Solutions Rivers and Streams	

² This is the value of the total programme budget which supports a variety of other land management projects.

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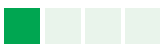
Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Build community resilience to climate change impacts	Promote resilient communities that support each other in times of crisis and emergency.	Neighbourhood Support New Zealand Dept of Internal Affairs TDC Civil Defence Emergency Management NCC	n/a
	Support community organisations with capability and capacity development so they can work even more effectively to build stronger, more resilient communities.	Te Taihū Community Development Agency Dept of Internal Affairs TDC NCC Nelson Tasman Climate Forum Tasman Environmental Trust	n/a
Enhance the effectiveness of climate change resilience efforts through the Kotahitanga mō te Taiao Alliance	Facilitate alignment on environmental issues that do not recognise regional boundaries, including climate change. This alliance supports a wide range of partnerships and fosters community leadership to address regional environmental issues.	Top of the South Councils Ngā Iwi o Te Taihū Dept of Conservation	

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$1,730,000 ³	2024-2028	Social Cohesion Community Leadership Emergency Management Partnerships Climate Impacts, Risks and Implications	
	\$22,000/year		Community Leadership Partnerships Social Cohesion Training and Upskilling	
	\$441,348	2024-2034	Strategic Alignment Partnerships Community Leadership Mātauranga Māori and Western Science Climate Impacts, Risks and Implications	

³ This funding supports a wide range of social issues, not just those linked with community resilience.

Learning and Knowledge Sharing

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Support youth engagement in climate change	Support educating children and rangatahi to make better choices to reduce their climate impact through the Enviroschools programme.		 
	Fund a climate change learning programme to be run within participating schools in 2024 and 2025.		
	Provide leadership opportunities and representation for youth via the Nelson Youth Council. A climate change sub-group has been created amongst the Youth Councillors to consider and incorporate climate change in the projects they undertake.	NCC	
Identify areas that are exposed to natural hazards risks including future climate impacts	Make available mapping and assessment reports for flood risk and coastal hazards via online web maps to inform the public of present day and future natural hazards risks associated with climate impacts.	NCC	n/a
Manage fresh water use and demand	Continue community engagement programmes to encourage the community to conserve water, particularly during the drier months. This includes education on responsible tap use.	NCC	
	Investigate using Bell Island treated wastewater for irrigation at Saxton Field.	NCC	
Undertake environmental monitoring	Undertake State of Environment monitoring and reporting. This integrates Mātauranga Māori and cultural values into the catchment monitoring programme to inform and contribute to the Freshwater Management Unit action plan development and implementation. Freshwater management is important for building resilience to floods and drought.	NCC lwi	n/a
Encourage behaviour change	Encourage behaviour change amongst Council staff through creation of a Green Team. This is intended to improve internal Council climate-related sustainability as well as educate staff on lifestyle shifts they can make to reduce their climate impact.	NCC	

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$1,376,030	2024-2034	Climate Impacts, Risks and Implications Climate Change Awareness Emissions Reduction Projects	
 	\$80,000	2024-2025	Community Leadership	
		Ongoing	Climate Change Awareness Community Leadership Partnerships Community-Led Action	
		2025-2026	Climate Impacts, Risks and Implications Infrastructure and Building Resilience Resilient Infrastructure and Utilities	
		Ongoing	Climate Impacts, Risks and Implications Resilient Infrastructure and Utilities Rivers and Streams	 
	\$171,975	2024-2027	Resilient Infrastructure and Utilities Rivers and Streams	 
		2024-2026	Mātauranga Māori and Western Science Rivers and Streams Strategic Alignment Partnerships	 
		Ongoing	Climate Change Awareness Emissions Reduction Projects	   

Regenerative Economy

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Improve energy efficiency and electrification of Council owned facilities	Investigate the feasibility of transitioning from a college-maintained boiler system to a self-sufficient, sustainable heating solution at Nayland Pool.	NCC	
	Upgrade the heating and air handling systems at Riverside Pool.	NCC	
	Install photovoltaic solar panels at: - Trafalgar Pavilion - Greenmeadows Centre - Trafalgar Street Hall	NCC	
	Replace the existing diesel fuel cremator with a low carbon cremator.	NCC	
	Convert conventional lighting to more energy efficient lighting technology in parks, buildings and sportsgrounds.	NCC	
	Implement an Energy Management Programme based on ISO 50001 to improve energy use.	NCC	
	Design and implement a scheme where savings from energy efficiency initiatives can be shared between NCC (as landlord) and tenants, to incentivise implementation of initiatives in leased out facilities.	NCC	
Improve energy efficiency and electrification of Council controlled organisations	Council will support the search for external funding for Tasman Bays Heritage Trust (Nelson Museum), the Suter and Nelson Centre of Musical Arts (NCMA) to implement the initiatives identified in their energy audits.	NCC	
Reduce embodied emissions in infrastructure projects	Investigate the use of low-carbon construction materials for infrastructure projects through software that measures these types of emissions.	NCC	
Monitor methane production patterns at the Nelson Wastewater Treatment Plant (NWWTP)	Develop a model to understand the methane production patterns at the NWWTP. The model will be informed by data collected through an aqueous sensor in the oxidation ponds at NWWTP.	NCC	
Monitor data to identify improvements	Monitor and analyse data from buildings management systems (energy meters and utility bills) to identify further energy savings.	NCC	

	Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	   	\$817,600	2025/2026	Research and Innovation Building and Infrastructure Emissions	
	   	\$797,918	2024/2025	Energy Systems Building and Infrastructure Emissions	
	   	\$228,034 \$311,803 \$121,738	2029/2030 2028/2029 2027/2028	Energy Systems Homes and Buildings	
	   	\$1,094,200	2028/2029	Energy Systems Building and Infrastructure Emissions	
	   	\$792,224	2024-2033	Energy Systems Building and Infrastructure Emissions	
	   		2024/2025	Energy Systems	
	n/a			Energy Systems Homes and Buildings	
	n/a		Ongoing	Energy Systems Homes and Buildings Emissions Reduction Projects	 
	n/a	\$30,000	2029/2030	Research and Innovation Emissions Reduction Projects Building and Infrastructure Emissions	 
	n/a	\$133,425	2024-2027	Research and Innovation Emissions Reduction Projects	
	   		Ongoing	Energy Systems	

Low Emission Transport System

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Improve cycling and walking infrastructure to encourage active travel	Develop the East West cycle connection.	NCC	
	Improve existing cycle facilities, such as those on St Vincent Street.	NCC NZTA	
	Implement speed limit changes at schools and in Cable Bay.	NCC NZTA	
	Undertake physical works to reinforce slow speed environments, including improvement of pedestrian and cycle facilities where required.	NCC NZTA	
	Enhance the Bridge Street Linear Active Transport Corridor by installing a new road layout between Rutherford and Collingwood Streets to promote safe mixed use for people and different modes of transport.	NCC	
	Improve intersections to improve cycle and pedestrian safety and crossing opportunities.	NCC NZTA	
	Encourage walking, cycling and e-mobility to and within the city centre. Improve access for families to play within the city centre and engage with other people and the natural environment.	NCC NZTA	
	Complete Toi Toi Street/St Vincent Street speed tables to slow traffic and improve pedestrian and cycle safety.	NCC NZTA	
Provide efficient public transport options	Review the e-bus service to ensure it is meeting community needs.	NCC TDC NZTA	
Reduce the number of single-occupancy vehicles	Implement the car share operation policy within the city centre.	NCC	

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$3.3 million	2025-28 assuming NZTA cost sharing	Active Transport Resilient Infrastructure and Utilities	
	\$20,000		Active Transport Resilient Infrastructure and Utilities	
	\$400,000	2024-2026	Active transport	
	Up to \$500,000	2028/2029	Active transport	
	\$1 million		Active Transport Resilient Infrastructure and Utilities	
		Ongoing assuming NZTA cost sharing	Active transport Resilient Infrastructure and Utilities	
	\$660,000	2027-2028	Active Transport Resilient Infrastructure and Utilities	
	\$1.3 million	Complete	Active Transport Resilient Infrastructure and Utilities	
		Complete	Public Transport Increased Transport Options	
		Ongoing	Increased Transport Options Local Economy	

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Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Increase the number of electric vehicle and bike chargers available within the city	Investigate opportunities for additional public EV chargers.	NCC	
	Explore implementing an EV Charging Cable Loan Programme.	NCC	
	Investigate installing e-bike chargers in street light poles.	NCC	
	Investigate using abandoned gas pipes in the city center as conduits for cabling for new EV charging locations.	NCC	
Provide residential options in the city centre to reduce commuter emissions	Enable higher density housing and inner city living to reduce traffic and congestion, therefore reducing commuter emissions.		
E Tū Whakatū⁴	Continue implementing and contributing to outcomes outlined in the E Tū Whakatū – Nelson's Active Travel Strategy.	NCC	

The following strategic areas have no or very few projects to support their implementation. We will look to fill these gaps in future iterations of the Climate Action Plan.

- Maritime, Aviation, and Freight
- Increased Transport Options

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	Internal resources and EECA funding for implementation of public EV chargers	Ongoing	Low Emission Vehicles Energy Systems	
		Complete	Low Emission Vehicles	
		2024-2025	Low Emission Vehicles	
		2024-2025	Low Emission Vehicles Building and Infrastructure Emissions	
		Ongoing	Active Transport Urban Design and Greening Land Use Planning	
				

4 E Tū Whakatū - Nelson's Active Travel Strategy: https://www.nelson.govt.nz/assets/Our-council/Downloads/Plans-strategies-policies/2022/E_tu_Whakatu_NCC_Active_Travel_Strategy_2031-2032.pdf

Zero-Waste Society

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Implement the Rethink Waste Whakaarohia waste minimisation programme	Provide community-wide support to avoid, reduce, reuse and repair, including grants and education programmes and activities such as event waste minimisation and campaigns to foster reuse.	NCC	
Focused waste stream: Food waste	Support the reduction and diversion of food waste through education programmes and activities, such as increasing home composting and supporting campaigns to avoid food waste.	NCC	
Improve resource recovery	Provide education to increase kerbside recycling recovery and diversion of batteries, and other materials as appropriate.	NCC	
Council walking the talk	Support waste minimisation in the delivery of council projects, for example encouraging deconstruction over demolition, supporting the inclusion of waste minimisation in procurement criteria, and supporting waste minimisation at Council events and facilities.	NCC	
	Collaborate with Tasman District Council to deliver the objectives and actions in the Joint Waste Management and Minimisation Plan 2019 (JWMMP).	NCC TDC	
Focused waste stream: Reduce construction and demolition waste	Collaborate with the construction sector to reduce and divert construction and demolition waste through programmes and activities such as builders' breakfasts, working group meetings etc.	NCC Local builders Nelson Environment Centre	
	Divert construction and demolition waste through the Reconstruct partnership with Nelson Environment Centre.		
Review the JWMMP to support the delivery of the above and future actions	Review the Joint Waste Management and Minimisation Plan 2019 ⁶ with Tasman District Council, alongside the community and iwi, for adoption in 2025.	NCC TDC Community Iwi	

Addresses Climate Risks (Adaptation)	Budget ⁵	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$310,000 per year	2024-2034	Avoiding and Reducing Waste Reducing Organic Waste Better Use of Resources Local Economy Training and Upskilling Community Leadership	 
			Reducing Organic Waste Food Security Sustainable Land Management	
			Avoiding and Reducing Waste Better Use of Resources	
			Construction and Demolition Waste Avoiding and Reducing Waste Local Economy	  
			Building and Infrastructure Emissions	
	\$65,000	2024/2025	Avoiding and Reducing Waste Construction and Demolition Waste	
			Local Economy Partnerships Building and Infrastructure Emissions	  

⁵ All Solid Waste activities operate in a 'closed account' with all revenue streams and costs retained within solid waste. This makes all solid waste activities financially independent of Council rates. Solid Waste projects are funded from three sources. 1) The Waste Disposal Levy (WDL), which is a levy set by central government on each tonne of waste entering landfill, and which is partially distributed to the region for waste minimisation activities. 2) The gate revenue (our charges to the customer) at the Nelson Waste Recovery Centre (NWRC), and 3) the Local Disposal Levy (LDL) which is paid to Nelson and Tasman solid waste departments from the Nelson Tasman Regional Landfill Business Unit (NTRLBU) from York valley landfill.

⁶ JWMMP 2019: <https://www.nelson.govt.nz/assets/Our-council/Downloads/Plans-strategies-policies/2019/Nelson-Tasman-Joint-Waste-Management-and-Minimisation-Plan-Council-approved-19sep2019.pdf>

Thriving Biodiversity and Nature

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Build the resilience of Nelson's indigenous biodiversity, habitats, and ecosystems	Coastal Habitats Programme: Develop and implement Ecological Restoration Plans for Council coastal reserves, including Oyster and Haulashore Islands, Wakapuaka sandflats and Paremata Flats.	Iwi NCC TDC Forest and Bird Dept of Conservation Adopt-a-Spot volunteers	
	Coastal Habitats Programme: Protect and enhance coastal ecosystems on public and private land through support from the environmental grants programme.	Iwi NCC Dept of Conservation Private landowners	
	Increase numbers of native birds and wildlife through the Nelson Halo and Ecological Connectivity projects by creating food abundant and pest-reduced wildlife corridors between the city and the hinterland.	NCC Iwi Community groups Dept of Conservation Private landowners	
	Protect and enhance high value biodiversity sites on private land by working with landowners to protect and manage significant natural areas.	NCC Private landowners	
	Undertake a climate change risk assessment around the Waimea Inlet and engage in adaptation planning for at-risk coastal habitats and their species.	NCC TDC Iwi Tasman Environmental Trust Dept of Conservation Fish and Game Waimea Inlet Forum Working Group	n/a
	Coastal Habitats Programme: Support wetland development at Glenduan Reserve to protect and restore biodiversity and provide stormwater treatment.	NCC Iwi	n/a

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$7,628,144	2024-2034	Rivers and Streams	  
			Coastal Habitats	
			Partnerships	
			Invasive Species	
	\$7,628,144	2024-2034	Climate Impacts on Nature	 
			Mātauranga Māori and Western Science	
			Resilient Infrastructure and Utilities	
			Partnerships	
	\$7,628,144	2024-2034	Climate Impacts on Nature	 
			Invasive Species	
			Mātauranga Māori and Western Science	
			Partnerships	
	\$7,628,144	2024-2034	Climate Impacts on Nature	
			Invasive Species	
			Partnerships	
			Climate Impacts, Risks and Implications	
		2024-2026	Mātauranga Māori and Western Science	 
			Partnerships	
			Coastal Habitats	
			Making Decisions under Uncertainty	
	\$247,989	2024/2025	Rivers and Streams	 
			Nature-Based Solutions	
			Mātauranga Māori and Western Science	
			Partnerships	

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Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Monitor the health of our marine environment	Assess and monitor the health of our marine environment through mapping seabed and habitats, understanding what affects sediments and nutrients transport into estuaries, and capturing changes in estuary health.	NCC TDC Dept of Conservation Land Information New Zealand Ngāti Tama NIWA	n/a
	Undertake seagrass and saltmarsh research, mapping, monitoring and enhancement to support marine carbon sequestration. Carbon sink values will be maintained and enhanced by mapping and restoring existing estuarine habitat values.	NCC TDC Cawthron Institute The Nature Conservancy Salt Ecology	
Reduce flood risk through land management and restoration	Work with urban and rural catchment communities through the Integrated Catchments Programme to identify issues and solutions for their waterways and support sustainable land management to mitigate flood risk.	NCC Community	n/a
	Develop a hydrodynamic model for the Wakapuaka through the Nature Based Solutions Programme and identify areas where nature-based solutions can reduce the effects of flooding.	NCC Iwi Community	n/a

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	Support in kind. Initial \$100,00 invested for LINZ multibeam survey in 2022.	2024/2025	Rivers and Streams Coastal Habitats Partnerships Mātauranga Māori and Western Science Research and Innovation	
	~\$50,000 annually as part of State of the Environment estuary broadscale monitoring	Ongoing, 5-yearly for each estuary.	Rivers and Streams Coastal Habitats Research and Innovation Partnerships	
		Ongoing	Rivers and Streams Climate Impacts on Nature Nature-Based Solutions Partnerships Community-Led Action Resilient Infrastructure and Utilities	
	Ministry for the Environment funding - \$300,000 NCC - \$50,000	June 2025	Nature-Based Solutions Partnerships Resilient Infrastructure and Utilities	

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Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Increase carbon capture potential	Work with landowners to develop planting plans and reduce hill slope erosion through the hill country erosion fund.	NCC Private landowners	
	Develop planting plans for the right tree right place forestry transition work. Prevention of invasive species incursion will protect our forested ecosystems from dieback and will improve carbon sequestration and storage.	NCC Community groups Iwi Forestry transition experts	
Manage existing marine, freshwater and terrestrial biosecurity risks	Identify, manage and respond to biosecurity risks identified as part of the emerging pest programme. This includes those risks which may increase due to a changing climate.	NCC Dept of Conservation TDC MDC Ministry for Primary Industries Iwi Private sector	

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$605,550 ⁷	2024-2027	Climate Impacts on Nature Rivers and Stream Afforestation Partnerships	
	The estimated costs of transitioning away from commercial forestry is \$9.8 million across the 10 years of the Plan ⁸ The estimated cost for transitioning the remaining forestry over the longer term is between \$4.6 to \$29.2 million, some of which could be offset by income.		Climate Impacts on Nature Afforestation	
	\$473,414	2024-2034	Invasive Species Climate Impacts on Nature Coastal Habitats Partnerships Climate Impacts, Risks and Implications	

⁷ Funding for the hill country erosion fund provided by the Ministry for Primary Industries

⁸ This is over and above the standard yearly forestry activity costs.

Sustainable and Resilient Food System

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Kai security coordination	Support community organisations to deliver front-line services.	Ngā Ringa Toha o Te Tau Ihu	
	Help coordinate an inter-agency approach to ensure access to healthy food for everyone.	Kaiwhakatairanga Hauora • NCC • TDC • Dept of Internal Affairs • Ministry of Social Development • Te Whatu Ora • Te Kotahi o Te Tauihu	
Support soil health and retention	Support soil retention and health through reducing erosion and supporting sustainable land use under Council's Sustainable Land Management programme.	NCC	
	Contribute to the creation of a digital soil map to understand how our soils will respond to climate change.	NCC Manaaki Whenua Landcare Research	

The following strategic areas have no or very few projects to support their implementation. We will look to fill these gaps in future iterations of the Climate Action Plan.

- Mahinga Kai
- Food Security

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
		Ongoing	Food Security	
		Ongoing	Partnerships	
			Social Cohesion	
			Community-Led Action	
	\$1,263,725 ⁹	2024-2034	Sustainable Land Management	
			Climate Impacts on Nature	
			Rivers and Streams	
			Coastal Habitats	
	\$40,000	June 2025	Sustainable Land Management	  
			Rivers and Streams	
			Partnerships	
			Climate Impacts, Risks and Implications	

⁹ This is the value of the total programme budget which supports a variety of other land management projects.

Resilient Built Environment

Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Improve urban design within the city centre	Update the city centre tree planting standards to boost canopy coverage and resilience. This includes consideration for water-sensitive urban design and tree selection.	NCC	
Develop stormwater network models across all Nelson urban areas	The models aim to: - Better estimate the likely impact on the community of flood events associated with intense rainfall over urban catchments; - Identify how the performance of the stormwater network can best be optimised in the context of climate change, including prioritisation of the upgrade projects needed to achieve this; - Inform network resilience analysis, including blockage and sea level rise scenarios.	NCC lwi	n/a
	Map secondary flow paths and stormwater pipe levels of service to better manage stormwater during heavy storms for present day and future climates. This will inform land use planning and stormwater strategies.		n/a
	Implement stormwater network monitoring to progressively build datasets for stormwater quantity and quality, that can be used to support model calibration and contaminant modelling, as well as provide a baseline to assess future trends.		n/a
Targeted asset construction in at-risk areas	Target asset construction to that necessary to support growth and intensification enabled by the Nelson Resource Management Plan/Plan Change 29, and mitigate known flood and erosion issues in at risk areas until the outcome of the adaptation options work is known.	NCC	n/a
Build resilience within the stormwater network	Undertake stormwater intake upgrades and stormwater network improvements for York Terrace, Bridge Street, Washington Road, Murphy Street and Emano Street.	NCC	n/a
	Use resilient materials in the stormwater network and incorporate adaptable design for new assets, such as flexible pipes in areas of slope instability to reduce the risk of damage to the network in the event of landslips.	NCC	
	Undertake staged upgrades to the Tāhunanui Slump to improve stormwater management and increase resilience to heavy rainfall events.	NCC	n/a

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$30,000 per year	2025-2028	Urban Design and Greening Nature-Based Solutions	
	\$400,000	2027/2028	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications Rivers and Streams	
	Included in cost of stormwater network models.	2026/2027	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications	
	\$800,000	2029/2030	Resilient Infrastructure and Utilities	
	n/a		Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications Climate Change Awareness	
	\$17 million	2030/2031	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Rivers and Streams	
	\$650k and also integrated into project budgets	2024/2025	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience	
	\$9 million	2030/2031	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications	

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Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Undertake major flood protection projects to reduce the impact of future rainfall events	Continue current rivers and streams flood recovery activities such as: • gravel removal, • stream bank erosion, • river streams improvement, • grade control structures, • constructed channel renewals.	NCC lwi	
	Implement the flood recovery resilience works for Atawhai and Hillwood Stream catchments including: • Oldham Creek catchment • Todds Valley Stream, • Hillwood Stream catchment, including Hillwood Stream floodway and Seafeld Terrace drainage improvements. Rebuild infrastructure that was damaged in the August 2022 weather event with future resilience in mind, ensuring they are more robust against future extreme weather events.	NCC	n/a
	Implement Stage 1 of the Maitai Flood Management project including: • Cleveland Terrace intake upgrade • Queens Gardens Drainage Upgrade • Nile Street East flood wall and drainage diversion • Hanby Park – Clouston Terrace stopbank upgrade	NCC Nelson residents lwi	n/a
	Jenkins Creek / Poorman Valley Stream Flood Protection: Flood protection upgrades to increase channel capacity and / or reduce storm flows. Works may include stopbank upgrades, building new stopbanks, culvert upgrades, providing flood detention.	NCC	n/a
Implement a flood warning system for the Nelson Region	Establish a flood warning system for the Maitai River and Brook Stream catchments. This requires development of a catchment flood model that can simulate events in real time using event rainfall data and forecasts. The network is operated by NCC and the flood warning service is provided by TDC Hydrology.	NCC TDC	n/a
Coastal Flood Protection Projects	Projects to be identified based on the outcomes of the adaptation options work. It is anticipated that projects under the LTP 2024-2034 will provide short to medium-term protection in some areas.	NCC	n/a
Increase the resilience of the transport network	Increase the resilience of the transport network as affected by the August 2022 weather event.	NCC	
	Increase the resilience of critical access roads like Cable Bay Road and Little Todd by improving water drainage to reduce the impacts of extreme rainfall events.	NCC	n/a

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$5 million	2027/28	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications Rivers and Streams	
	\$6 million ¹⁰	2027/28	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications Rivers and Streams Nature-Based Solutions	
	\$9 million ¹¹	2027/28	Resilient Infrastructure and Utilities Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications Rivers and Streams	
	\$6.5 million	2033/2034	Infrastructure and Buildings Resilience Climate Impacts, Risks and Implications Rivers and Streams	
	\$200,000	2026/2027	Climate Impacts, Risks and Implications Rivers and Streams Making Decisions under Uncertainty	
	\$2.8 million	2031/2034 (and ongoing thereafter)	Resilient Infrastructure and Utilities Climate Impacts, Risks and Implications	
	\$14 million	2022-2025	Resilient Infrastructure and Utilities Infrastructure and Building Resilience	
	Cable Bay Road - \$2,211,300	2028-2030	Resilient Infrastructure and Utilities	
	Little Todd Road - \$320,698	2026-2028	Resilient Transport Network	

¹⁰ This project includes 60% co-financing from the Regional Infrastructure Fund

¹¹ This project includes 60% co-financing from the Regional Infrastructure Fund

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Action	Action Description	Key Partners	Emissions Reduction (Mitigation)
Upgrade water supply infrastructure to enhance resilience against floods and droughts	Test and evaluate the resilience of the Maitai Dam to ensure it can withstand more frequent and severe flood events.	NCC	n/a
	Upgrade water intake structures to handle higher sediment volumes caused by increased storm intensity.	NCC	n/a
	Explore alternative water sources to reduce dependency on single sources during times of scarcity or disruption, such as assessing the feasibility of using water from the Waimea Aquifer.	NCC	n/a
Avoid and mitigate risks to the NWWTP	Identify future options to avoid and mitigate climate-related risks to the NWWTP.	NCC	
	Consider and avoid risk to assets as part of any decision-making processes associated with the site. Due to the nature of the network, Council's bigger and more expensive assets are located at the end of gravity systems and are therefore low-lying and vulnerable to sea-level rise and coastal inundation.	NCC	n/a
Renewal of aging wastewater pipelines	Renew ageing wastewater pipelines. Funding has been allocated to renew pipelines that have reached the end of their service life or are in a condition that impacts the levels of service provided. Continual monitoring and investigating of inflow and infiltration can also find issues that need fixing.	NCC	n/a
Support the Warmer Healthier Homes project	Contribute towards, directly promote and market the Warmer Healthier Homes Nelson Tasman Marlborough project to support reductions in energy use and reduce vulnerabilities of residents living in high deprivation areas.	NCC	
Implement infrastructure strategies to support delivery of the above actions	Stormwater Strategies: Develop stormwater strategies for all urban areas to identify and prioritise network upgrades. These strategies will consider level of service across the network for present day and future climate (2090), and utilise the stormwater network models to assess flood risks and optimise inlet and pipe capacity. The network models consider land use and available stormwater detention capacity. Options for servicing areas of growth and intensification will be assessed.		
	Council's Future Development Strategy ¹² was adopted for 2022-2052 to manage urban growth in Nelson over the next 30 years. Update and implement the Implementation Plan 2024 as part of the Future Development Strategy.		

Addresses Climate Risks (Adaptation)	Budget	Budget Period	Relevant Strategic Areas	Relevant Pillars
	\$100,000	2024-2027	Resilient Infrastructure and Utilities	
	\$500,000	2032-2034	Infrastructure and Building Resilience Resilient Infrastructure and Utilities Rivers and Streams	 
	\$180,000	2030-2031	Resilient Infrastructure and Utilities Climate Impacts, Risks and Implications	
	\$631,365	2024-2034	Resilient Infrastructure and Utilities Rivers and Streams	
 		Ongoing	Resilient Infrastructure and Utilities	
	Approx \$1.5 million increasing annually to over \$10 million	2024/25 2043/44	Resilient Infrastructure and Utilities	
 		Ongoing	Homes and Buildings	
	\$400,000	2031/2032	Resilient Infrastructure and Utilities Climate Impacts, Risks and Implications	
				

Section 3 - Ngā Iwi o Te Taihū Actions

This section summarises iwi climate change projects. This information was provided to Council from Te Taihū iwi and includes projects for wider Te Taihū. It will be added to through further conversations with iwi.

The development of the Ngāti Kuia Mauri Assessment and Monitoring Tool represents a significant advancement in Ngāti Kuia's environmental stewardship efforts. Developed with support from Our Land and Water, this tool uniquely integrates mātauranga Māori with scientific methods such as eDNA testing. It provides a comprehensive assessment of the mauri of ecosystems, ensuring restoration efforts are culturally appropriate and scientifically robust. This tool helps monitor key cultural values, including mauri, mahinga kai, and wāhi tapu, combining biophysical models with indigenous knowledge to ensure habitats are protected and enhanced. The Ngāti Kuia Mauri Assessment and Monitoring Tool will enable several key advancements moving forward: holistic environmental monitoring, empowerment of kaitiaki, enhanced restoration and management, long-term sustainability, and knowledge transmission.

Kānuka Processing and Tea Drying Facility: Located in Titiraukawa, the processing and tea drying facility marked a significant stride in Ngāti Kuia efforts to blend innovation and tradition. This facility enables the transformation of kānuka into high-value, organic-certified products such as tea, oils, and floral water, supporting economic development while respecting Ngāti Kuia's cultural heritage. Collaborations with AgResearch aimed to explore the unique properties of local kānuka, enhancing product quality and value and further research projects will be investigated. This project exemplifies how sustainable practices can simultaneously drive the greater community resilience, reflecting Ngāti Kuia's commitment to building a regenerative economy.

Training Programmes in Primary Industry Skills, Horticulture, and Bee Keeping: The success of Ngāti Kuia's taura in completing training programmes in primary industry skills, horticulture, and bee keeping is a testament to Ngāti Kuia's dedication to community empowerment and sustainable and resilient development. These programmes equip participants with essential skills for managing natural resources sustainably, contributing to the tribal economy, and fostering a future where our people are both economically and environmentally resilient.

Native Nursery: The semi-automated native nursery at Titiraukawa stands as a beacon of Ngāti Kuia's commitment to environmental stewardship and community resilience. This initiative, supported by Jobs for Nature as part of the Te Hoiere Project, nurtures native plants to restore places of deep significance to Ngāti Kuia. The nursery also provides invaluable hands-on training for taura in horticulture. By combining traditional knowledge with Western scientific techniques, this nursery fosters biodiversity and sustainability, developing a regenerative tribal economy where Ngāti Kuia's people and land thrive together.

Conservation Work on Te Pākeka Island: Ngāti Kuia's conservation efforts on Te Pākeka are a testament to their unwavering commitment to preserving their natural heritage. In collaboration with the Department of Conservation and Birds New Zealand, they actively monitor and manage Pākaha (Fluttering Shearwater) populations and other taonga species. This work involves extensive ecological monitoring, habitat restoration, and species protection, ensuring that the island remains a vibrant sanctuary for native flora and fauna. Ngāti Kuia's approach fosters a healthy and resilient ecosystem on Te Pākeka, safeguarding biodiversity and honouring the ancestral connection to the land. This holistic approach ensures that the island's natural environment continues to thrive, supporting a diverse range of species and maintaining the ecological balance.

Maintaining, Protecting, and Enhancing Te Mana o te Wai: Guided by the principles of Te Mana o te Wai, Ngāti Kuia is deeply committed to the health and well-being of their freshwater resources. This foundational concept prioritises the life-supporting capacity of water, ensuring that the health of water bodies is safeguarded above all else. Ngāti Kuia's proactive approach includes co-designing implementation plans with Councils and other iwi and advocating for freshwater values, which highlights their leadership in environmental management. Te Mana o te Wai framework informs actions to protect and restore wetlands, ensure fish passage, and improve farming practices, vital efforts in building resilience against climate change. These actions not only enhance the ecological health of waterways but also strengthen the cultural and social fabric of the community, ensuring that future generations can thrive.



Ungulate control: Ngāti Koata and the Council work together to control the number of deer, pigs, and goats (ungulates) in backcountry reserves and make use of the valuable resource; the last cull provided food for more than 50 whānau. Since the annual cull programme started in 2018, the number of animals culled each year has been declining while the land area covered has continued to expand, indicating a lower density of animals in the reserves.

Ngāti Koata Trust is one of **the Mahitahi Project** partners, collaborating with Kotahitanga mō te Taiao, Te Rūnanga o Ngāti Rārua, Ngāti Kuia, Te Atiawa Manawhenua Ki Te Tau Ihu Trust, and Nelson City Council to restore the vitality of the Maitai / Mahitahi Valley. The project involved restoring the mauri of Peneamine wetland and strengthening biodiversity in the Mahitahi Catchment. The project entailed extensive landscaping which included clearing scrub, planting and translocating pā harakeke. In 2023, almost 8,000 trees were planted. Work is also underway to identify a new location for rongōa, weaving, dye and kai resources plant species that were washed away during the 2022 floods.

Ngāti Koata Trust is involved in several key **conservation initiatives** to protect and restore endangered species. They are collaborating with the Brook Waimārama Sanctuary to ensure the safe roaming of Tuatara from Takapourewa. They are also translocating endangered Powelliphanta snails to the sanctuary to shield them from predators. Ngāti Koata Trust has also launched a three-year project, supported by the Department of Conservation Community Fund, to enhance the habitat of the endangered Takapourewa frogs. This project focuses on creating protected environments and exploring adaptation options and pathways to address the pressing issue of climate change which poses a significant threat to the Takapourewa frogs and their fragile ecosystem.

Te Mana o Te Wai collaboration for freshwater management: The protection, and enhancement of the mauri (life force) of freshwater is one of the highest priorities for all Te Taihū iwi, and now mana whenua have seats on the boards with councils to manage freshwater under a collective ropu Te Mana o Te Wai. Recommendations that have been made to council include funding to resource the capacity and capability of iwi to support councils in implementing Te Mana o Te Wai; assurance that iwi are provided

with the time and resources to apply mātauranga (knowledge) to freshwater management; and that iwi and councils develop and implement collaborative decision-making models that reflect te ao Māori.

Restorative efforts continue at Lake Moawhitu. Since 2006, the land has been under the management of the Department of Conservation as part of the D'Urville Island Reserve. Ngāti Koata volunteers have been actively involved in annual tree planting (8400 trees planted in 2023) to restore the lake's ecosystem, leading to notable improvements across the wetland and lake system. Ngāti Koata have also been collecting seeds, maintaining plants, and controlling pests. This ongoing investment allows for the expansion of indigenous vegetation corridors that are critical to enabling indigenous species to thrive across the region. It also supports the improvement of freshwater quality within the catchment, ensuring the wellbeing of current and future generations.

Ngāti Apa ki te Rā Tō have completed a **carbon emissions inventory** and identified their emission-reduction initiatives. The first report covered the 2021/2022 financial year and provided a baseline against which they can track future reductions in carbon emissions. One of the initiatives to reducing their emissions was installing solar panels in the Wairau office. Ngāti Apa ki te Rā Tō also replaced one of their office vehicles with a hybrid vehicle to reduce fuel consumptions as they move around the rohe.

Ngāti Apa ki te Rā Tō are actively involved in ensuring they are accountable and responsible kaitiaki of our Taiao. They provide the **Rotomairewhenua Taiao Scholarship** to invest in the future taiao interests of the iwi. This scholarship was created in 2021 and is open to registered iwi members studying towards a tertiary qualification majoring in an environmental field.

Communication to boost resilience: The eight iwi collective, Te Kotahi o Te Taihū Charitable Trust, was integral to responding to the ongoing needs of iwi during the August 2022 Flood Event and providing assistance on the ground with Nelson Tasman Civil Defence and Marlborough Civil Defence. Ngāti Tama ki Te Waipounamu Trust has created an app that allows iwi members to make contact digitally which allows them to get clear messages and key information out during times of need.

Section 4 - Community, Business & Research Sector Engagement

The following projects were provided to us through engagement on the Climate Change Strategy. We intend to add additional business and community projects to this section through the next significant Climate Action Plan update following the adoption of the next Long Term Plan 2027-2037.

Current actions being undertaken by Nelson-based organisations	
Nelson Tasman Climate Forum	Urban gardening to increase household resilience in situations of threat to food supply lines. Swap One is a project aiming to have drivers of single occupancy vehicles swap one of their five weekly commuting journeys, and substitute active, public or shared transport. This project is being undertaken in partnership with Mission Zero. Healthy School Travel. This project aims to inspire students to use public and active transport to get to and from school, rather than be driven or drive. This project is being undertaken in partnership with Enviroschools and Public Health. Take the Jump. This campaign aims to cut consumption of car use and aviation, meat and dairy, clothing, appliances, to plant trees and act to change systems which adversely affect the biosphere. Repair Cafes in Nelson, Motueka and Mohua, another being planned in Wakefield. This project encourages a culture of repair, cutting material and energy consumption and reducing waste. It also supports the learning of new skills, passed from repairer to customer. Encouraging the Prime Minister and Minister of Climate Change to play a more active and visible role in climate action and policy. This highlights that leadership is a very important element in social transformation. Continual learning and knowledge sharing through the Climate Action Festival, Climate Forum newsletter, the monthly webinars or public talks and the Fresh FM radio shows, EcoPostcards and Climate Matters. Advocacy to local and central government on measures to enhance opportunities for emissions reduction and adaptation. Entertainment events designed to increase people's awareness of nature-connection. Restoration of Snowdon's Bush. Membership and participation in Tax Justice Aotearoa as a route to strengthen equity and community cohesion. Membership of Te Tau Ihu Community Development, expressing a partnership with community organisations pursuing social justice. This will become particularly important when the need for 'just transition' becomes more apparent. Earthminds: A programme training 20-30 high school students in team problem solving, tackling real life problems of climate and nature. This project is run by Sam Ng and is not a project of the Nelson Tasman Climate Forum, however, the Forum supports the programme.

Current actions being undertaken by Nelson-based organisations

Forest & Bird

Advocacy: Forest & Bird will continue to be a strong advocacy voice regionally and nationally in support of ambitious climate action, including:

- Prioritising gross emissions reductions
- Securing investment in nature for climate resilience and biodiversity uplift
- Promoting nature-based solutions that provide climate resilience, protect communities and enhance biodiversity
- Advocacy for sustainable resource use
- Supporting legislation and plans that protect the environment for now and for future generations
- Championing community input into decision making
- Affirming the role of iwi/Māori as kaitiaki.

Collaboration: Forest & Bird will continue to participate in and support regional and national efforts focused on emissions reductions, climate adaptation, and nature protection, including regional forums like the Nelson Tasman Climate Forum, Kotahitanga mō Te Taiao Strategy, Nelson & Tasman biodiversity strategies, Waimea Inlet Forum.

Environmental Education: Forest & Bird plays a role in environmental education through the Kiwi Conservation Club | Hakuturi Toa (for children), Forest & Bird Youth (for young adults), and through national publications, helping to foster climate literacy and a conservation ethic.

Hands on efforts: Nelson/Tasman branch members will continue practical, on-the- ground conservation efforts, such as coastal habitat restoration at Paremata Flats Reserve and work within the Waimea Inlet, contributing directly to nature-based solutions and biodiversity goals.

What can businesses do?

We are keen to hear what businesses are doing or could implement to support us in meeting our climate change goals. Some suggestions for business action include signing up to the Climate Leaders Coalition, or joining the Sustainable Business Network or Chapter Zero NZ.

What can individuals do?

Explore new ways to further reduce your climate impact by signing up to one or more of the Take the Jump¹³ campaign's seven shifts.



Appendix 1

How we are tracking

This section summarises how we are tracking in Whakatū Nelson in reducing greenhouse gas emissions and adapting to the impacts of climate change. A summary of progress towards implementing the Strategy will be provided in each annual climate change report to Council.

Whakatū Nelson community emissions

Council has produced a Community-Scale Greenhouse Gas Emission Inventory for the Nelson region, verified for the financial years 2018/19 and 2019/20¹⁴. This inventory shows that Nelson emitted 367,257 tonnes of carbon dioxide equivalent (tCO₂e) during 2018/2019, which dropped approximately 10% to 330,980 tCO₂e during 2019/20. The Transport sector's emissions were the largest contributor to the inventory for Nelson in 2018/2019, followed by Waste. In 2019/2020, with Waste emissions reduced, Stationary Energy was second to Transport. Further data on Nelson's emissions will be available on an annual basis with a maximum of one year time lag.

Nelson City Council's emissions

In May 2018 Council committed to reducing its emissions from waste, electricity, diesel, petrol, air travel, LPG, paper use, fertilizer use, accommodation, taxi, refrigerants, staff commuting, staff working from home, and emissions from the wastewater treatment plant.

Council's emissions fell by 88.5% from 2017/2018 (base year) to 2023/2024. This was primarily due to the capture of landfill methane that has been flared off, and produced carbon dioxide as a result, which is a much weaker greenhouse gas than methane. Some of the captured gas is used for heating in Nelson's hospital. Significant work is still needed to reduce Council's remaining carbon emissions.

Adaptation to climate change in Whakatū Nelson

Council is following the Ministry for the Environment's *Coastal Hazards and Climate Change Guidance for Local Government*¹⁵, using the 10 Step Adaptation Cycle (figure right) to develop and implement a long-term strategy for areas that may be affected by the impacts of climate change, such as sea-level rise. This Cycle for adaptation is structured around five key questions, as shown in the diagram on the next page.



¹⁴ Community-Scale Greenhouse Gas Emission Inventory for the Nelson region: <https://www.nelson.govt.nz/assets/climate-change/2024/GHG-community-emissions-Nelson-online-version.pdf>

¹⁵ Ministry for the Environment's Coastal Hazards and Climate Change Guidance for Local Government: <https://environment.govt.nz/assets/publications/Coastal-hazards-and-climate-change-guidance-2024-ME-1805.pdf>



Source: Adapted from Max Oulton (University of Waikato) and UN-Habitat (2014)

Since 2021, Council has conducted an assessment of coastal hazards (steps 1 and 2 in the diagram), met with communities to determine values and objectives (step 3), and is currently working with Tasman District Council to develop a Regional Climate Change Risk Assessment (step 4) and preparing for step 5 - creating adaptation plans.

Council approved the selection of The Wood as the first area in Nelson to take part in detailed climate adaptation planning (step 5) in June 2025. The Wood presents a valuable opportunity to build a foundation for wider adaptation across Nelson. Location-specific options for other areas in Whakatū Nelson will be developed in the future. Council will engage with the community throughout the process, so that adaptation options are informed by the community's views.

Council is initially prioritising coastal adaptation (including the lower Maitai River), however, other rivers, streams and climate change risks will also be assessed and form part of the long-term approach to preparing for and adapting to the impacts of climate change.

The New Zealand government is creating a Climate Change Adaptation Framework to help councils and communities prepare for and respond to long-term climate impacts. This framework will determine how the costs of adaptation will be shared, offer support to those affected by climate change impacts, and enhance information sharing for better decision-making. Its goal is to provide clear guidelines and support to strengthen the country's resilience to climate change.

Appendix 2

Assessing adaptation actions

To better understand and communicate the impact of our adaptation actions, we've developed an assessment framework that considers four key factors:

- The benefits of each action,
- Its cost-effectiveness,
- The time it takes to see results, and
- Does this action allow for future flexibility?

By integrating these factors, we can provide a clearer picture of how each action helps our community become more resilient. This straightforward approach makes it easier for everyone to see the value and impact of our efforts, ensuring we understand the value of each action.

Assessment Label	Definition	Characteristics
Transformative	Actions offering substantial long-term benefits with significant co-benefits. Highly cost-effective, with a long-term impact and adaptability to future changes.	Co-benefits: Extensive (economic, social, environmental) Cost-to-Benefit Ratio: High benefits relative to costs Time Frame: Long-term Path Dependency: High flexibility; adaptable to changes
Significant	Actions providing significant benefits, primarily in the medium to long-term. Moderately cost-effective, with some co-benefits and reasonable flexibility.	Co-benefits: Significant but less extensive Cost-to-Benefit Ratio: Good balance of costs and benefits Time Frame: Medium to long-term Path Dependency: Moderate flexibility; some scope for adjustments
Incremental	Actions offering short to medium-term improvements (i.e., temporary benefits), or actions addressing specific issues. Cost-effective for specific purposes, with limited co-benefits and flexibility.	Co-benefits: Some, sector-specific Cost-to-Benefit Ratio: Moderate, justified by specific benefits Time Frame: Short to medium-term Path Dependency: Low to moderate flexibility; limited change scope
Minimal	Actions providing minimal benefits or addressing minor issues. Less cost-effective, with few co-benefits and limited long-term impact or flexibility.	Co-benefits: Minimal or none Cost-to-Benefit Ratio: Low, benefits may not outweigh costs Time Frame: Short-term Path Dependency: Low flexibility; actions are fixed

