

Whakatū Nelson Climate Change Strategy



CLIMATE
ACTION
NELSON



Nelson City Council
Te Kaunihera o Whakatū





Contents Ngā Rāranga

Executive Summary Kupu Whakataki	4
Aims of the Strategy	5
The Action Plan	5
Introduction Kupu Arataki	6
Overview of the Strategy and Action Plan	7
Context	9
Our Strategy Tō Tātou Rautaki	14
Vision	14
Values and Principles	14
Climate Change Goals	16
Emissions Reduction Targets	17
Community Emissions Reduction Targets	18
We all have a Part to Play	23
Pillars Pou Kōrero	24
Partnerships and Community Empowerment Kia Mahitahi	24
Learning and Knowledge Sharing Taku mai, taku atu	26
Regenerative Economy Whakarauora	27
Low Emission Transport System Ikiiki Tukuwaro-iti	28
Zero Waste Society Parakore	29
Thriving Biodiversity and Nature Rauropi Tōnui	30
Sustainable and Resilient Food System Kai Toitū	31
Resilient Built Environment	32
Monitoring, Reporting and Funding Tātari Kōrero	33
Emissions Monitoring	33
Adaptation Monitoring	33
How we Fund the Strategy	34
Acknowledgements Hei Mihi	35



Executive Summary

Kupu Whakataki

Global efforts to address climate change and reduce greenhouse gas emissions are falling short. The impacts of a changing climate are evident in Whakatū Nelson, with increased frequency of storms, eroding coastlines, and more variable and extreme rainfall and temperatures.

Although Whakatū Nelson contributes only a small fraction of global emissions, it is crucial that we do our part. To tackle the climate crisis requires every nation, every city and every community to do their share. We must rapidly reduce emissions and simultaneously adapt to the changing climate by making our infrastructure and economy more resilient, enhancing our natural environment and supporting the most vulnerable in our society.

The encouraging news is that options are available for addressing climate change and that businesses and households are already adopting some of these measures. This will generate significant benefits over time and ultimately will make Whakatū Nelson a better place to live and work. But we need to do more. By uniting our efforts, we can achieve our goals.

Aims of the Strategy

This Strategy is intended to guide the response of Nelson City Council and the wider community to the twin challenges of climate change: reducing greenhouse gas emissions and adapting to the effects of climate change.

This Strategy sets three goals focused on supporting a regenerative economy, fostering communities that are resilient to climate impacts and maintaining a healthy natural environment. The Strategy includes a target for reducing Whakatū Nelson's community emissions for the period 2025-2035. In terms of its own emissions, having already met its previous target, the Council has set a new, more ambitious target for itself.

To achieve these goals, the Strategy identifies eight pillars to guide climate action, each containing several 'strategic areas' for action.

No one can achieve this target alone and coordinated action is needed. While Council holds some levers (such as plan-making, bylaws and funding), Council's control and influence is limited. The support of everyone will be needed to deliver this Strategy.

The full costs of implementing this Strategy are not yet known, but it is clear that a significant increase in funding for climate initiatives will be necessary. Investment from all stakeholders, especially central and local government and the private sector, will be required. We also know that the cost of business as usual will be significant.

The Action Plan

The Action Plan outlines key climate-related projects that align with the Strategy's objectives. The Plan includes existing and new initiatives that Council will implement, as well as iwi initiatives. Recognising that this is a community Strategy aimed at encouraging a whole-of-community response, the Action Plan will be updated over time to also include actions by others, such as community groups and businesses.

We know there is a significant gap between what we are doing now and what we need to do to rapidly reduce emissions. The community emissions reduction target and the Council target are ambitious but reflect the changes needed to avoid the worst effects of climate change. Getting there will require major additional investment and support from the whole community.

In terms of its own emissions, Council is well underway with climate action having already achieved an 89 per cent reduction of total emissions since the base year of 2017/18. We have reduced methane emissions from our landfill, introduced a new eBus service and improved cycleways. Additionally, investments have been made to enhance Whakatū Nelson's infrastructure, increasing its resilience against future weather events. Our iwi partners are progressing with initiatives to enhance indigenous biodiversity, sequester carbon, and safeguard our coasts and waterways from storm impacts.

Learning as we go

We understand that significant effort is still required to achieve the goals outlined in the Strategy. Council will report annually on progress so we can all see what is and isn't working and where more work is needed. The Action Plan will be updated following the adoption of the next Long Term Plan (and every three years after that) to include new projects that help close the gap between where we are and where we need to be to meet the goals and targets in the Strategy.





Ngā Iwi o Te Taihū

This Strategy acknowledges the longstanding kaitiakitanga (guardianship) of tangata whenua to Whakatū that spans generations. Many iwi have migrated to Te Taihū o Te Waka a Māui, with eight iwi holding tribal interests within the Whakatū Nelson region: Ngāti Kuia, Rangitāne, Ngāti Apa ki te Rā Tō, Ngāti Koata, Ngāti Rārua, Ngāti Toa Rangatira, Ngāti Tama and Te Ātiawa.

Ngā Iwi o Te Taihū (Ngā Iwi) have a reciprocal relationship with te taiao (the environment). The distinctive rights and responsibilities of Māori are inherent through whakapapa. These obligations are intrinsic to the wellbeing of hapū and whānau, guided by the sustainable use of resources and the protection of te ao tūroa (the natural world).

This Strategy recognises the right of iwi to exercise rangatiratanga (chieftainship), mana motuhake (self-determination) and kaitiakitanga (guardianship), empowering them to respond to climate challenges through self-determined approaches that go beyond stakeholder or community interests. Te Tiriti o Waitangi affirms these rights and protections, which can be realised in a contemporary, local context through active participation and partnership with the Council.

Just as iwi have a unique role in responding to climate change, so too does mātauranga Māori. For generations, tangata whenua have adapted tikanga and practices to changes in the natural world. Meaningful partnerships and the sharing of mātauranga will enable iwi-led climate change responses. Through the sharing of customary knowledge, we can ensure the active protection of natural resources (ngā taonga tuku iho) in the face of inevitable change, while supporting our communities to adapt to a changing world.

Introduction Kupu Arataki

Our planet is in trouble.

Current global efforts to reduce emissions will result in a 3°C increase in warming by the end of the century.¹ This level of warming would lead to catastrophic consequences, including displacement of over a billion people worldwide, devastating climatic events and widespread biodiversity loss.

In Whakatū Nelson, the impacts of climate have been recognised for decades. The community is already experiencing some of these effects, including more frequent storms, droughts and greater variability in temperature fluctuations. Climate change will continue to directly impact fishing, farming and cultural practices including the gathering and harvesting of kaimoana. Rising sea levels will displace communities from their land. Critical infrastructure and land are at risk from climate change. These disruptions will extend beyond local communities, impacting global supply chains and driving up food prices, hitting our most vulnerable populations hardest.

What we do now is crucial for determining our future.

Although Whakatū Nelson's emissions are a small fraction of global emissions, we play must play our part in contributing to global efforts to limit temperature rise to 1.5°C², to mitigate the most serious effects of climate change. At the same time, we must act now to prepare for climate disruption.

Tackling global greenhouse gas emissions will require coordination at an unprecedented scale – every community, city and country needs to do their part. To avoid catastrophic impacts of climate change requires rapid and unprecedented changes in many aspects of the economy and society. Although Whakatū Nelson's greenhouse gas emissions are small in the global context, what we do in our city matters.

As the effects of climate change are increasingly being felt in Whakatū Nelson, it is also crucial that we take action now to reduce the damage caused by climate change.

Faced with a challenge of this magnitude, it can be easy to feel overwhelmed. What can one person, one group or even one city do to make an impact?

¹ United Nations Environment Programme, Emissions Gap Report 2023, <https://www.unep.org/resources/emissions-gap-report-2023>

² The Intergovernmental Panel on Climate Change, an international body that provides policymakers with regular scientific assessments on climate change, its implications and potential future risk, has advised that global temperature rise must be limited to 1.5°C to avoid the worst effects of climate change. New Zealand has committed under the Climate Change Response Act 2002 to "contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels".

We're all in this together.

The good news is that when it comes to the climate, we're all on the same team. Whether you're a local business owner, a researcher, a student, or a resident making changes in their own life, you play a crucial role in this Strategy. We all share the responsibility of getting it right for future generations.

Many of us are already contributing – if you cycle to work a couple of times a week or choose to travel locally – your actions are making a difference. Together, our efforts multiply, turning individual actions into collective momentum.

Whakatū Nelson already has the raw ingredients of success – we're home to the largest independent scientific institution in the country and many smart, connected businesses and individuals.

Climate action is also big news for the economy. By becoming a climate leader, we can position ourselves to benefit from the global shift towards low-emissions activities and sustainable trade. In doing so, we can become more prosperous and resilient.

Climate change is not an isolated challenge. It's intrinsically linked to other issues such as biodiversity decline, public health, the rising cost of living, international security, and poverty. Responding to climate change presents opportunities to address these crises in a holistic way, radically improving our wellbeing, health and productivity.

This Strategy is our pathway forward.

This Strategy outlines the roles each of us can play in addressing climate change – Council, businesses, landowners, community groups, iwi and whānau. It is our collective roadmap to reduce emissions and prepare for unavoidable changes ahead. It prioritises action over words and effort over blame urging us to meet today's needs without compromising tomorrow's future.

Responding to climate change requires strong leadership and direction at all levels – from central government, local government to iwi, businesses and individuals. This Strategy will guide Council's initiatives while galvanising broader efforts towards its goals.

To succeed we must draw upon our shared values – whanaungatanga, manaakitanga, rangatiratanga, mana taurite, pono, auahatanga and ngā taonga tuku iho (see section on values and principles) – to ensure nobody is left behind.

This is our community. This is our challenge. It starts with us, right here, right now.

Overview of the Strategy

The purpose of this Strategy is to provide clear direction and guide decisions and actions in the short, medium and long term. It was developed in collaboration with Ngā iwi o Te Taihū and an advisory group of community members and climate change experts, with oversight from a taskforce of Council's elected members.

This Strategy is designed to guide climate action for the entire Whakatū Nelson community. 'We' and 'us' in this document refer to the collective community of Whakatū Nelson. It focusses on actions directly relevant to the region: reducing emissions linked to Whakatū Nelson³ and adapting to climate impacts felt and expected and expected locally.

This Strategy has a long-term outlook – it aims to guide climate action through to 2050 and beyond, recognising that actions before 2030, starting today, are critical for reducing emissions.

The Strategy is structured around eight pillars and supported by key strategic areas where local action is needed to achieve our goals and targets. Transport and businesses produce most of Whakatū Nelson's emissions. Reducing emissions in these sectors will be a priority.

Given that not all levers for change are within our local control, effective regulation, funding from central government and support from the private sector are essential to meeting our objectives. We will advocate to central government on these issues.

Addressing climate change requires action across all sectors of the economy and aspects of our lives. Climate change is interconnected with many issues that we face. Therefore, this Strategy should guide all Council decisions and those made by others in the community.

This Strategy includes a Climate Action Plan, which outlines current and planned actions to mitigate and adapt to climate change. The Action Plan will be updated periodically to close the gap between where we are now and what is needed to meet the goals and targets in the Strategy.



³ As defined in the *Global Protocol for Community-Scale Greenhouse Gas Emission Inventories*.



Context

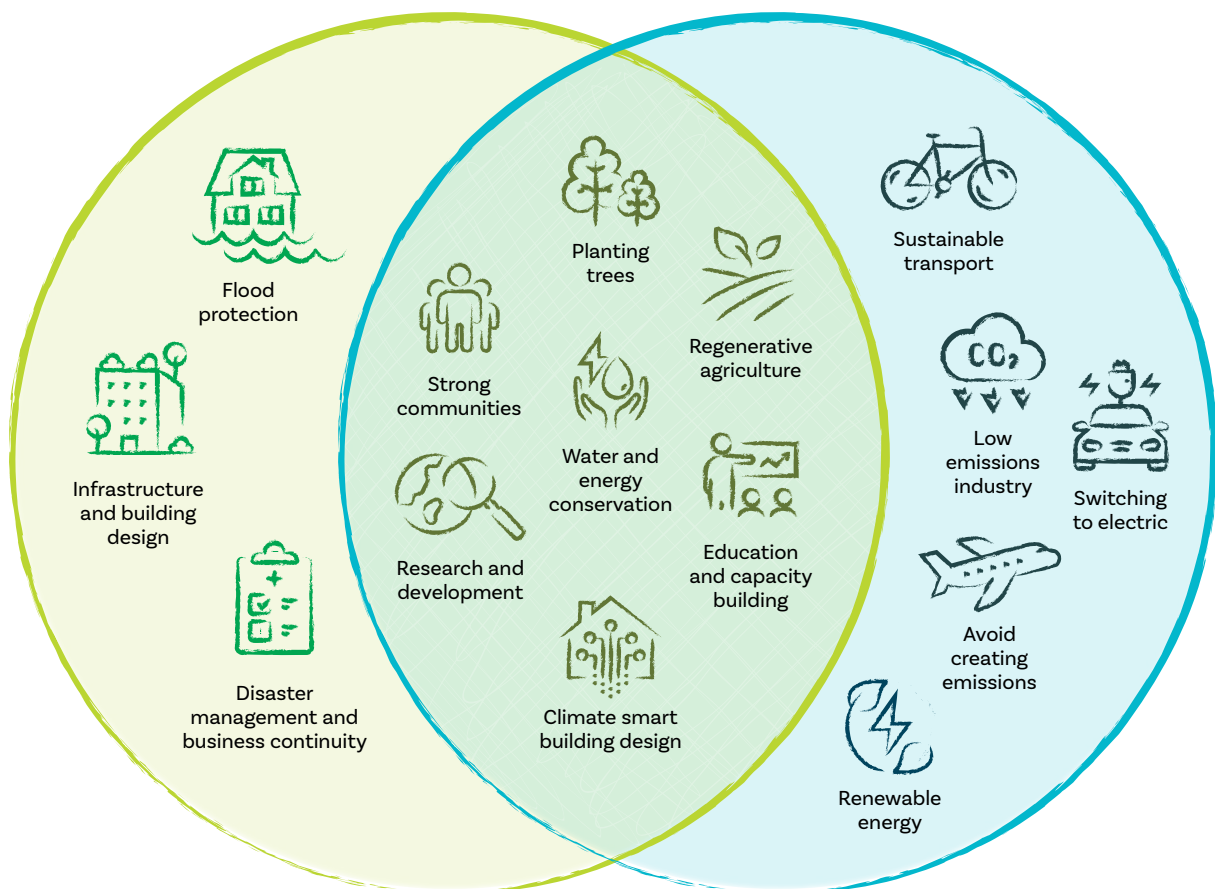
What is Adaptation and Mitigation?

Adaptation

Actions to manage the impacts of climate change

Mitigation

Actions to reduce emissions that cause climate change



Emissions Trends

In 2022, Aotearoa New Zealand's gross emissions were 78.4 million tonnes of carbon dioxide equivalent (Mt CO₂-e). This is a 14 per cent increase from emissions in 1990. Global gross emissions were 57.4 Gt CO₂-e. Carbon dioxide emissions have increased by more than 60 percent since 1990 and are now at their highest ever levels.

2024 for was the hottest year on record, with temperatures reaching 1.5°C above pre-industrial levels.

The latest available data shows Whakatū Nelson's emissions were 330,980 tCO₂-e in 2019/20 and Council's emissions were 7,892 tCO₂-e in 2022/23. Whakatū Nelson's emissions have recently peaked and have started to decline. Council's emissions have declined by 89% since baseline reporting in 2017/18.

Sources of Greenhouse Gas Emissions

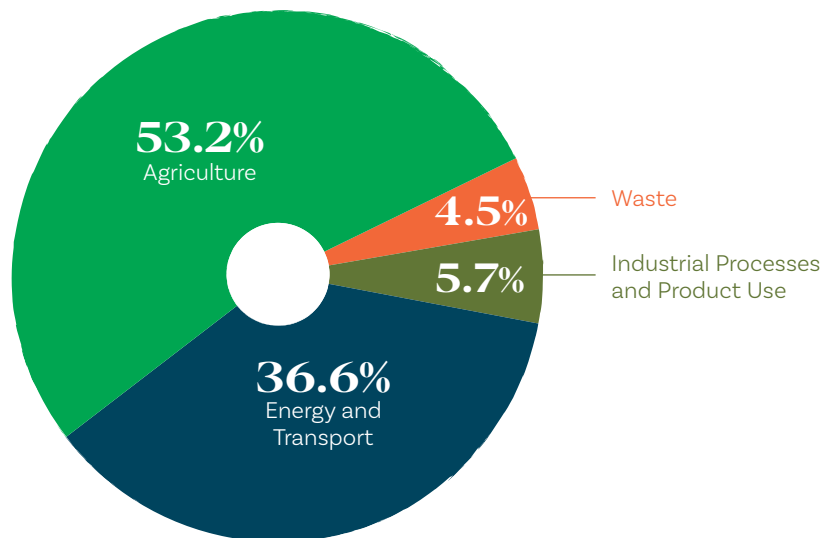
The following graphic shows the key sources of greenhouse gas emissions for New Zealand, Whakatū Nelson and Council.

New Zealand gross emissions

Total emissions: 78.4 million (Mt CO₂-e)

2022

(source: Ministry for the Environment)

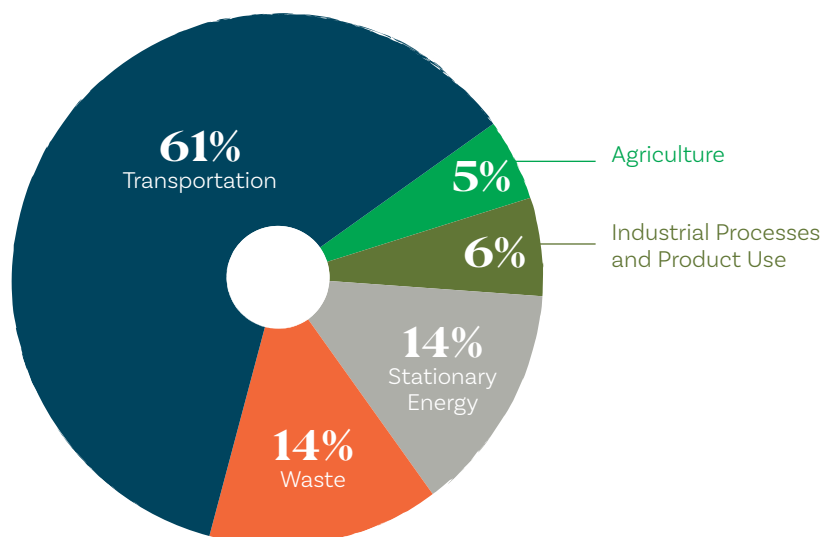


Whakatū Nelson region's gross emissions by sector

Total emissions: 330,980 tCO₂-e

Financial Year 2019/2020

(source: Nelson City Council)

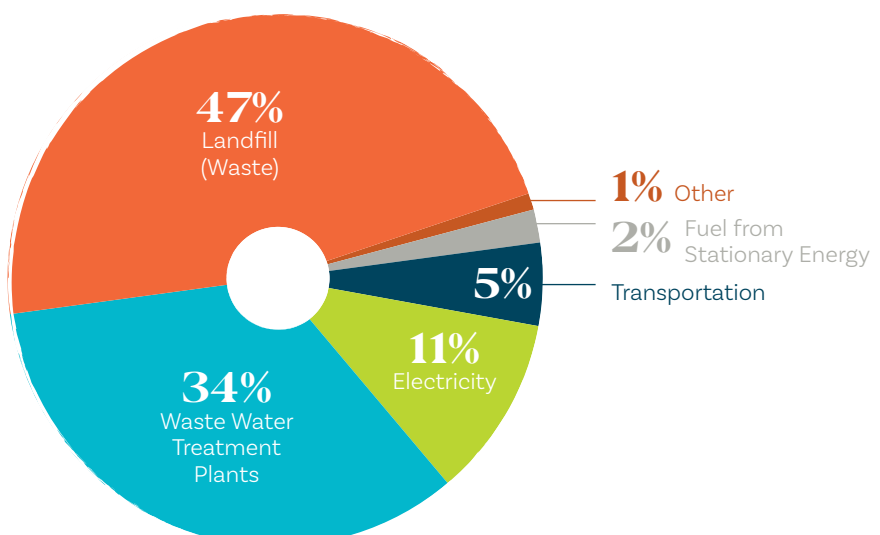


Top 5 sources of emissions for Council Operational emissions

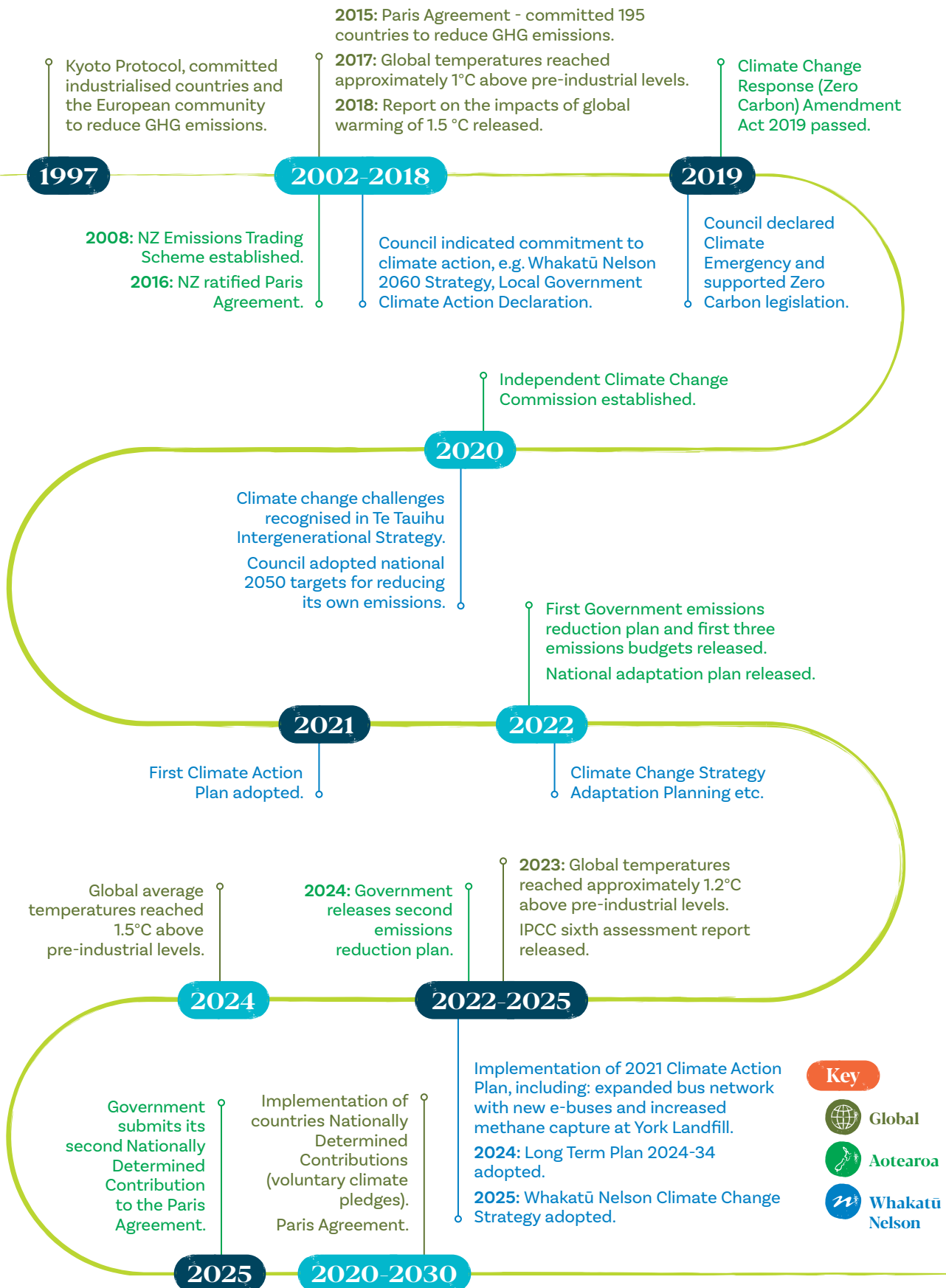
Total emissions: 7,892 tCO₂-e

Financial Year 2022/2023

(source: Nelson City Council)



Timeline of Global, New Zealand and Whakatū Nelson Action on Climate Change



Projected Climate Impacts for Whakatū Nelson

Increased greenhouse gas concentrations are warming the climate



Rising temperatures



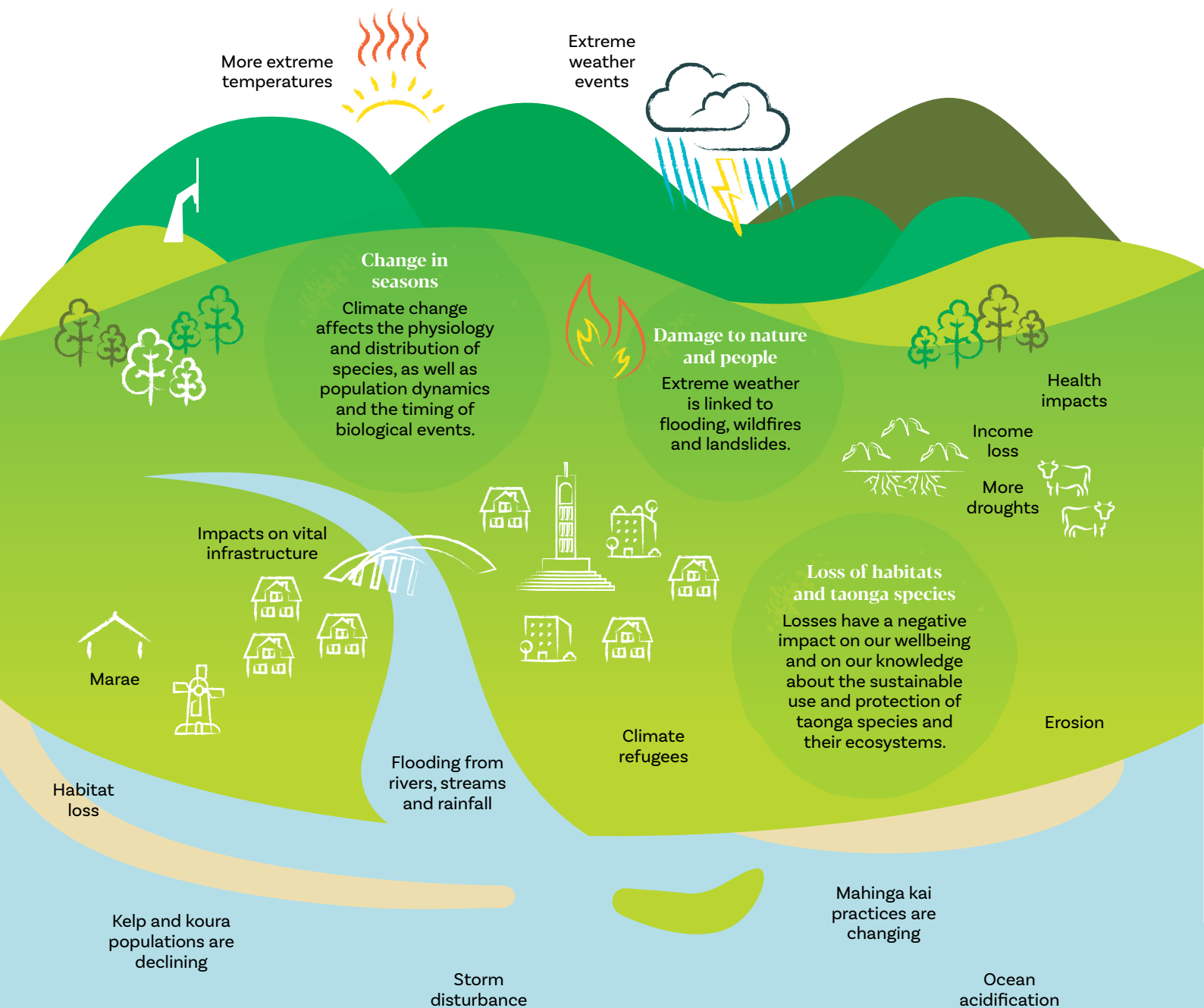
Changes in rainfall



Rising sea levels



Warming sea







Our Strategy

Vision

In 2050, Whakatū Nelson is a beacon of climate resilience, thanks to the bold actions undertaken to transform our city. Our unwavering commitment to climate action has resulted in enhanced environmental, social, cultural, and economic outcomes, benefiting everyone and creating a sustainable future for generations to come.

The vision for Whakatū Nelson's climate future is embedded in our shared values and principles, which have been carefully developed through consultation and collaboration.

Values and Principles

These values and principles, informed by the Te Taihū Intergenerational Strategy and the perspectives of our community, iwi, and stakeholders, guide our collective journey toward climate resilience. They reflect the importance of working together in a way that honours both our cultural heritage and the sustainable future we aspire to create. These principles are woven into the fabric of this Strategy, shaping the way we approach and implement actions in every step of the process. They set the foundation for how we will work together to achieve our climate goals, ensuring our actions align with the core values that drive us forward.

Values

Whanaungatanga

We value relationships, we will all work together.

Manaakitanga

We care for and support one another.

Rangatiratanga

We aspire to excel in everything that we do.

Mana Taurite

We are inclusive and strive for equity and equality.

Pono

We are honest and accountable.

Auahatanga

We are innovative and passionate about what we do.

Ngā Taonga Tuku Iho

We honour and respect our taonga, our legacy.



Principles

Collective Effort

This Strategy belongs to the Whakatū Nelson community and is a collective endeavour. Everyone can see themselves reflected in the Strategy and see their role in implementing it.

We Act with Determination

We act courageously, demonstrating leadership and unwavering commitment to climate action, contributing more than our fair share and learning as we go.

Holistic Approach

We acknowledge that climate change is one of many symptoms of the broader issue of human activity surpassing nature's limits. Our approach to climate action will be interdisciplinary, integrating both Mātauranga Māori and Western scientific knowledge. Through this response, we aim to enhance the social, cultural, economic, and environmental wellbeing of our community.

Honouring the Principles of Te Tiriti o Waitangi

Te Tiriti o Waitangi is the founding document of our nation. By prioritising a Te Tiriti approach, we promote the genuine participation of iwi in the strategic direction of our region.

Affordability

The costs and benefits (including intergenerational costs) are fully considered in identifying the most effective actions to take to deliver the Strategy, while also acknowledging the costs of inaction.

Just Transition

A fair and inclusive transition that leaves no one behind and fosters opportunities that enable people to flourish.

Honesty

Through transparency, we cultivate trust. We commit to open dialogue, ensuring our community understands and actively shapes our shared future.

Flourishing Natural Environment

Working in harmony with te Taiao. This includes promoting nature-based solutions, which can sequester carbon while building resilience to climate change impacts and supporting indigenous biodiversity.

Climate Change Goals

Goal 1

A low emissions regenerative economy

Our economy is heavily dependent on fossil fuels and the extraction of resources, which are used to make products which are commonly thrown away. To reduce our reliance on fossil fuels and extractive industries, significant changes to how we generate income and wealth are necessary.

Climate change is already affecting our economy in many ways, and these impacts will continue to worsen. For instance, the severe weather event in Whakatū Nelson in August 2022 resulted in an estimated repair cost of \$87.2 million for Council. The economic consequences of climate change are far-reaching, including disruptions to supply chains, increased expenses for storm damage repairs, and agricultural losses due to droughts and storms.

This Strategy supports the use of technology, innovation and change to regenerate, restore and revitalise natural systems. Its goal is to promote an economic model that is resilient and works in harmony with our environment.

Achieving this goal will require:

- Phasing out fossil fuel use and promoting the growth of low-emission alternatives
- Building a self-sustaining, resilient local economy with a focus on renewable energy and materials
- Using natural resources wisely and reducing waste
- Ensuring industries are resilient to climate impacts, supporting business continuity
- Aligning employment and training opportunities with this goal.

Goal 2

An informed and empowered community

Responding to climate change requires action at all levels – central government, local government, iwi and communities. Our experience with recent weather events – such as the Cyclone Fehi coastal storm in 2018 and the severe weather event in August 2022 – has highlighted gaps in our capacity to respond and prevent damage.

For communities to effectively contribute delivering this Strategy, we need to:

- Equip communities with the necessary knowledge and skills
- Cultivate leadership, and support communities to take coordinated action
- Build enduring partnerships
- Develop systems to support vulnerable populations
- Engage directly with communities in areas at high risk of severe impacts
- Collaborate with central government to determine how adaptation costs will be shared (for example, the costs of relocating homes and businesses).

Emissions Reduction Targets

Goal 3

A healthy natural environment

Climate change is severely impacting the natural environment, disrupting habitats and threatening species. Rising sea-levels, for instance, are threatening coastal habitats, contributing to the decline of indigenous biodiversity and the loss of species. Our communities rely on the environment for livelihoods, food and freshwater, and recreation.

Yet, nature also offers solutions to mitigate climate change. Native habitats play a crucial role in removing and storing carbon, enhancing our resilience to climate impacts, and supporting the wellbeing of both indigenous biodiversity and our community.

For example, urban planting of trees and vegetation can help reduce flooding, cool our streets, and sequester carbon, contributing to a healthier, more sustainable environment.

To do this, we need to:

- Restore and protect habitats to increase their resilience to negative impacts of climate change
- Adopt climate responses that work in harmony with nature
- Limit the spread of invasive species into habitats.

Whakatū Nelson's greenhouse gas emissions are a very small portion of global emissions, and Council's emissions are an even smaller portion. However, it is critical that we play our part by contributing to reducing global emissions. The success of the Paris Agreement's goal to limit global temperature rise to 1.5°C depends on every nation, every city and every community doing their share.

Aotearoa New Zealand has set 2050 domestic emissions reduction targets (net zero for all emissions excluding biogenic methane and 24-47% reduction in biogenic methane) and emissions budgets, which act as five-yearly 'stepping stones' towards the 2050 target.

The Intergovernmental Panel on Climate Change (IPCC) has recommended that to limit temperature rise to 1.5°C above pre-industrial levels, emissions should be cut by at least 43% by 2030, relative to 2019 levels.⁴ The IPCC considers 1.5°C to be a "safe" level of warming – beyond this a number of environmental tipping points are likely to be reached, causing far more severe climate change impacts.

Many countries, cities and organisations have set targets that are consistent with limiting warming to 1.5°C. For example, the Climate Leaders Coalition, a group of businesses which collectively represent 32% of New Zealand's GDP, has committed to this goal.

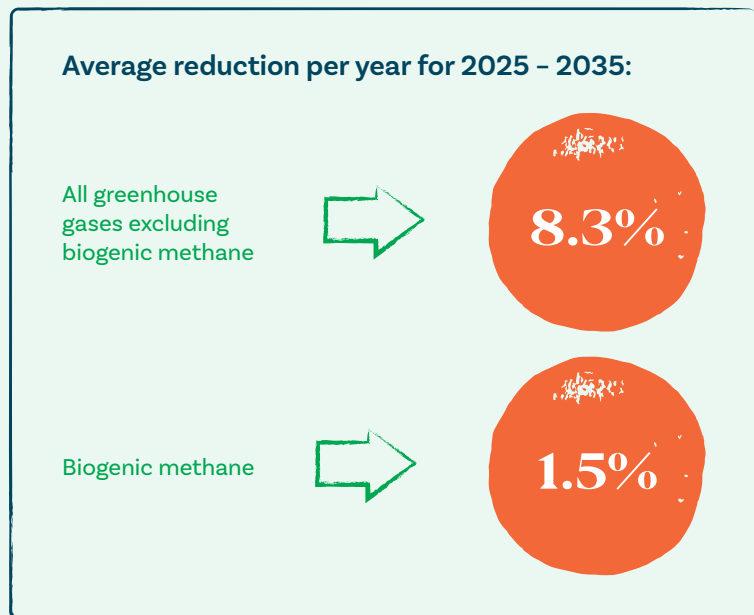


⁴ IPCC, 2023, Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change.

Community Emissions Reduction Targets

Whakatū Nelson's community emissions reduction targets for the period 2025 – 2035 (from the base year 2024/25) are:

- a. **Gross reduction of all emissions excluding biogenic methane by 58 per cent, equivalent to an average reduction of 8.3 per cent per year; and**
- b. **Gross reduction in biogenic methane by an average of 1.5 per cent per year.**



These targets broadly align with the IPCC's recommended emissions reduction pathway, but there are some key differences:

- **Timeframe:** The target covers the period 2025–2035, whereas the IPCC pathway focuses on reductions by 2030.
- **Gross emissions:** These are gross emissions targets, meaning they refer to total emissions without accounting for carbon removals by forestry. In contrast, the IPCC target is a net target (total emissions minus forestry removals). Focusing on gross emissions encourages direct reductions at the source rather than relying on variable forestry removals, which can fluctuate due to economic conditions and harvest cycles. It also avoids risks of double-counting or double-claiming offsets.
- **Split gas:** A separate target is set for biogenic methane, consistent with the national 'split gas' targets under the Climate Change Response Act 2002. This recognises methane's different warming impact compared to gases like carbon dioxide and the specific challenges of reducing methane emissions, particularly in the agriculture sector.

An average annual reduction rate of 8.3% (excluding biogenic methane) is specified to encourage immediate action rather than delaying reductions.

Although a gross emissions target is preferred, Council will still consider the benefits of carbon sequestration (e.g., from tree planting or pest control) in making decisions.



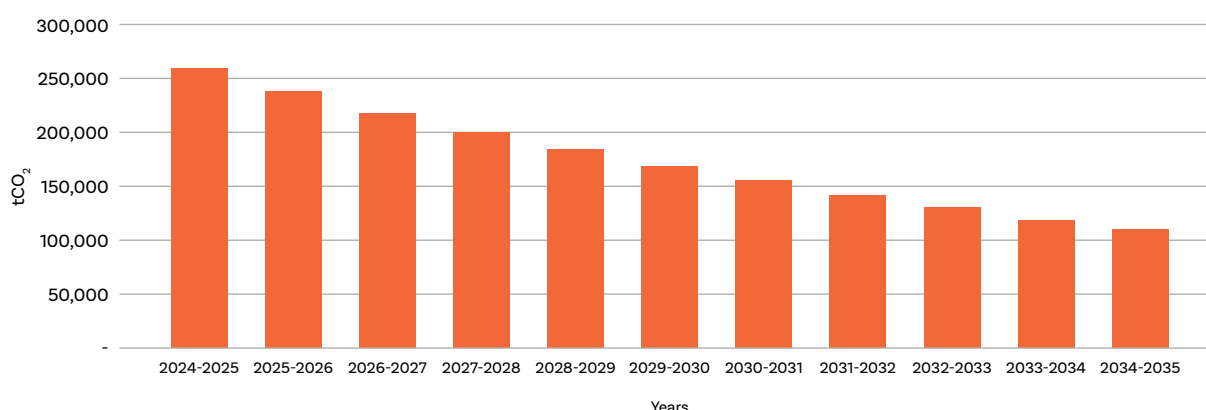
Costs of meeting the targets

The targets will require significant additional investment from all players, including central and local government and the private sector, to meet the targets. Many projects that reduce emissions will have significant co-benefits or may be initiated for other reasons (e.g. biodiversity gains, improved resilience). Many will result in cost savings over time, such as installing solar panels, which have an average payback period of 5 - 10 years.

We do not yet know the full costs of meeting these targets. However, a range of emissions reduction initiatives and their costs are listed as examples:

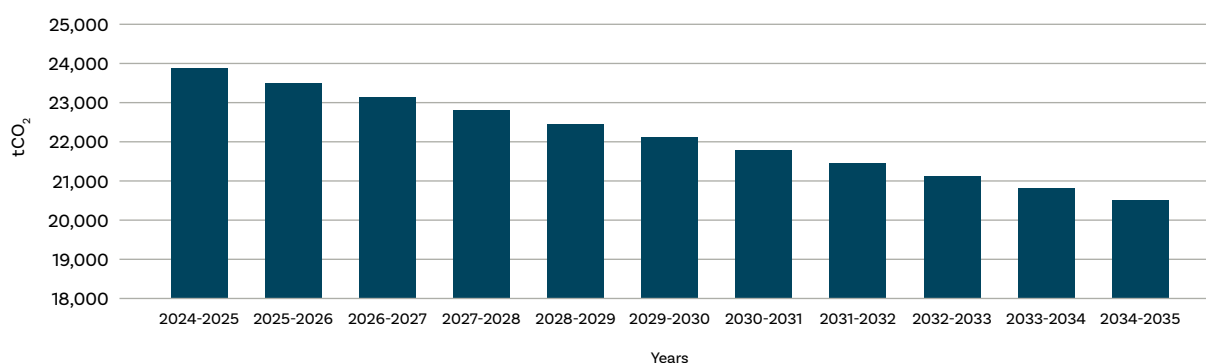
Initiative (examples)	Cost	Tonnes CO ₂ reduction per annum	Status of project
Upgrade of Nelson Tasman bus network, including the shift to electric buses	\$8.1 million (costs shared between TDC, NCC and NZTA)	933	Implemented in 2023
Replace diesel at Crematorium	\$1.1 million (estimate)	100	Included in Long Term Plan 2024-34
Solar at Greenmeadows Centre	\$387,500 (estimate)	18.1	Included in Long Term Plan 2024-34

Emissions pathway for all greenhouse gases excluding biogenic methane



Note: This graph demonstrates a linear pathway from 2025 - 2035. Different pathways to achieving the target are also possible.

Emissions pathway for biogenic methane



Note: This graph demonstrates a linear pathway from 2025 - 2035. Different pathways to achieving the target are also possible.

Examples of Actions that would Enable us to Meet the Targets

Note the figures below are not targets - this is one example of the possible pathway for achieving the targets. Achieving the targets would require all of the initiatives listed to be carried out. The cost of achieving each initiative has not been estimated as Council does not have the modelling capability to provide an accurate assessment of costs.

Initiative, to be achieved by 2030 (and a consistent reduction trend continued to 2035)

Transport		Improve industrial process efficiency including refrigerant leaks and aerosol usage	20% improvement in efficiency
		Reduce travel demand through changes such as carpooling and remote working (2023 baseline: Average of 20 km/day travelled per vehicle)	10.5km/day travelled per vehicle
		Increase in mode share of trips to work and education by bike (2023 baseline: 9% share of all trips)	35%
		Increase in mode share of trips to work and education by walking (2023 baseline: 11% share of all trips)	22%
		Increase in mode share of trips to work and education by public transport (2023 baseline: 2% share of all trips)	30%
		Increase proportion of light vehicle fleet made up of electric vehicles (battery electric vehicles and plug-in hybrid electric vehicles) (2024 baseline: 6.7%)	80%
		Improve fuel efficiency of diesel and petrol vehicles	45% improvement in efficiency
Energy		Upgrade all lighting and appliances to LED with additional improvements to appliance efficiency	
		Widespread adoption of higher insulation standards including lifting current housing stock to minimum standards	
		Electrification of space heating, such as through uptake of heat pumps (baseline unknown)	75%
		Increased renewable energy share in the electricity grid (2023 baseline: 88%)	100%
		Increase in number of households with solar panels (2022 baseline: 3.3% of households) (2024 baseline: 5% of households)	50%
		Increase number of new 100kW solar panels installed on commercial and industrial roof areas in Nelson baseline? 2022 baseline: 3 businesses with over 100kW solar capacity 2024 baseline: 5 businesses with over 100kW solar capacity	400 businesses

Council emissions reduction target

The largest sources of Council's emissions are landfill waste (47 per cent) and wastewater treatment plants (34 per cent). 19 per cent comes from transport and energy.

While Council's emissions are only a fraction (around 2%) of Nelson's total community emissions, it is important for the Council to set a positive example by establishing ambitious reduction targets.

Previously, Council had adopted the 2050 national target and emissions budgets as targets for its own emission reductions. However, Council has since an 89 per cent reduction in total GHG emissions since achieved the baseline reporting year of 2017/18. This significant decrease is largely due to improvements made in landfill operations to capture methane effectively on-site. Despite this progress, there is still considerable work to be done in reducing other types of emissions, specifically those that are not biogenic methane.

Council Operational Greenhouse Gas Emissions



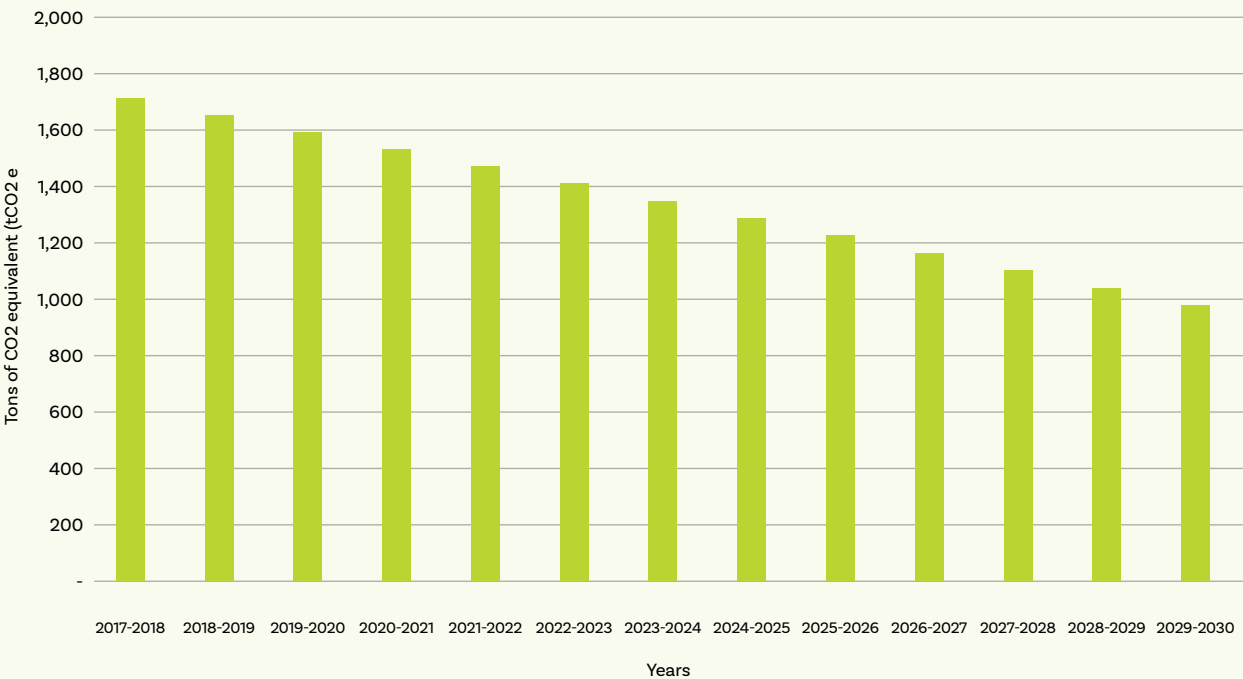
To ensure Council's target is both ambitious and evidence-based, we have set specific targets for reductions from different sectors (i.e. waste, transport and energy emissions). This is so that Council focuses on reducing energy and transport emissions – two sectors where significant further work is needed.

New Council emissions reduction targets

Transport and energy

Council’s new target for operational emissions from transport and energy is: 43 per cent reduction in gross emissions from 2017/18 levels by 2030. This equates to an average of 4.8 per cent reduction each year. It is slightly more ambitious than the IPCC’s recommended emissions reductions by 2030 as it is a gross (rather than net) target. Although a gross emissions target is recommended, Council will still consider the benefits of carbon sequestration (e.g., from tree planting or pest control) in making decisions.

New Council emissions reduction target for transport and energy



Note: This graph demonstrates a linear pathway from 2025 - 2035. Different pathways to achieving the targets are also possible.

Waste

The Nelson Tasman Joint Waste Management and Minimisation Plan (JWMMP) sets targets for waste generation, waste disposal and waste emissions. Council has already made significant progress in reducing waste emissions by improving methane gas capture at landfills. The focus will now be on reducing the volume of waste going into landfill and to find further users for landfill gas collected.

Wastewater

Council has investigated the feasibility of reducing emissions from wastewater treatment plants. There are no currently viable and affordable solutions for reducing these emissions. If solutions become available, Council will consider setting a target for reducing wastewater emissions.

Carbon sequestration

Council will seek out opportunities to increase carbon sequestration in areas under its authority (including forests, parks, reserves, estuaries, and riparian margins) through planting, pest control and other initiatives to improve ecosystem health.

We all have a Part to Play

Climate change will require significant changes at every level – central government, local government, iwi, businesses, communities and individuals. We all have a part to play. By working together we can take collective and complementary action.

Ngā iwi o Te Taihū

See role of iwi at page 6.

Iwi play a vital role in climate change response as tangata whenua (home people) and kaitiaki (guardians) with ancestral ties to the land that is fundamental to climate action and iwi-led climate responses grounded in mātauranga Māori and Te Tiriti o Waitangi rights and responsibilities. The sharing of mātauranga Māori strengthens community efforts in addressing climate change responses and protecting natural resources.

Central government

Central government can provide leadership and direction on climate change by creating laws and policies, setting international commitments, administering the New Zealand Emissions Trading Scheme, providing resources and financial incentives, and supporting research and innovation.

Government sets five-yearly emissions budgets following recommendations from the Climate Change Commission, serving as milestones towards our 2050 goals in the Climate Change Response Act 2002. The Emissions Reduction and National Adaptation Plans provide direction on government plans and policies.

Effective and stable policies, along with funding for climate initiatives, are critical for the successful implementation of Whakatū Nelson's Strategy.

Local government

In Whakatū Nelson, Council is responsible for promoting the social, economic, environmental, and cultural well-being of their communities. Council has legislative responsibilities for the management of natural hazards.

Council can reduce greenhouse gas emissions and enhance resilience to climate impacts through a range of tools, such as policies, planning and bylaws, infrastructure development, direct investment and community funding, advocacy and public awareness campaigns. In this Strategy, Council's role is to set the strategic direction, facilitate and support input by others and to deliver climate initiatives aligned with the goals and targets in the Strategy.

Private sector

Private sector (including businesses of all sizes) leadership and action is vital for the successful implementation of this Strategy. The private sector has many levers for change, including investment, innovation and ability to influence and inform. This sector can drive innovation in climate-resilient and low-carbon technologies, reduce greenhouse gas emissions within its operations, and develop products and services that enable broader societal responses to climate change.

Science and education

The science and research sector includes researchers and scientists from diverse fields, from both Western science and mātauranga Māori. This community advances our understanding of climate change, informs policy-making through evidence-based insights, and develops technological innovations for sustainable and resilient solutions.

Schools and tertiary institutes play an important role in educating future generations on climate change and provide information and knowledge to support the delivery of this Strategy.

Communities and individuals

Communities and individuals, including non-governmental organisations and community groups, are vital for mobilising local action, raising awareness on climate issues, and implementing community-based responses. They play a critical role in advocating for policy changes and fostering cultural shifts. Local government can support communities in this role by providing funding and information.

Individuals can make a big difference through, for example, by walking and cycling, advocacy for climate action, replacing a petrol vehicle with an electric vehicle, buying second hand products, tree planting and supporting each other at times of emergency.

Pillars Pou Kōrero

This section outlines eight pillars, areas where action at a local level is needed to achieve the goals of the Strategy. Each of the pillars is supported by ‘strategic areas’, which identify more specific types of actions.

The ‘success indicators’ in this section are broad indicators of progress towards meeting the Strategy’s goals (rather than being specific, timebound goals). We do not have evidence to monitor all the indicators right now, but we will build up the data needed over time so that we can better evaluate progress towards implementing the Strategy. See the Monitoring, Reporting and Funding section for more detail.



**Partnerships
and
Community
Empowerment**



**Learning and
Knowledge
Sharing**



**Regenerative
Economy**



**Low
Emission
Transport
System**



**Zero
Waste
Society**



**Thriving
Biodiversity
and Nature**



**Sustainable
and Resilient
Food System**



**Resilient
Built
Environment**

Partnerships and Community Empowerment Kai Mahitahi

This pillar aims to foster partnerships and empower communities to take proactive steps in reducing emissions and building resilience against the impacts of a changing climate. It emphasises the importance of whanaungatanga (collective effort) and manaakitanga (caring for each other) to achieve shared goals. The aim is to nurture local leadership and strengthen community connections.

Strategic Areas

Iwi-local government relationship

Climate change impacts Māori in unique ways, intensifying the effects of colonisation, threatening cultural structures, resources, practices, and taonga species, and disrupting the transmission of mātauranga Māori and cultural processes like manaakitanga, whanaungatanga, and kaitiakitanga.

Under Te Tiriti o Waitangi, the Crown is obligated to protect Māori taonga and uphold the partnership principles—partnership, governance, reciprocity, active protection, good faith and consultation — which are important for climate adaptation and mitigation decision-making.

The *Kia Kotahi Te Tauihu Partnership Agreement*, signed by Ngā Iwi and the three Te Tauihu councils, will guide collaboration on climate change. This partnership supports open dialogue, helps address historical grievances, respects the mana and tino rangatiratanga of Ngā Iwi o Te Tauihu, and fosters shared responsibility.

Council will also look for opportunities to collaborate with Māori entities and businesses, recognising their important role in addressing climate change.

Success indicator: Ngā Iwi works in partnership with Council on climate change projects.

Partnerships

Effective partnerships facilitate the sharing of knowledge, resources, and innovation strengthening our collective response to climate challenges. By working together, we can enhance the impact of our actions and foster a unified approach. Partnerships with the private sector will be especially important, as they are responsible for most of Whakatū Nelson's emissions.

Success indicator: An increased number of collaborative projects between local government, central government, businesses, community groups.

Community leadership

There is significant potential to harness local knowledge and innovation to develop and grow climate initiatives. By investing in established and budding leaders, we will mobilise and empower the wider community and support a network of dedicated individuals.

Success indicator: Increased engagement in and action by local leaders and volunteers in climate initiatives.

Strategic alignment

Addressing climate change requires us to align goals and actions across organisations from communities to institutions, and across scales from local to international. This Strategy aligns with relevant strategies, legislation, plans, and agreements to ensure an efficient, effective and collaborative approach to climate change. This Strategy will inform all of Council's work, and guide work of others in Whakatū Nelson.

Success indicator: Improved integration of climate action efforts with other strategic initiatives, maximising resource efficiency and policy coherence.

Social cohesion

Encouraging social cohesion – the extent to which people in a society get along and support each other – is key to promoting collective action, resilience, and equitable solutions. We will support initiatives that foster mana taurite (equity), bring communities together, embrace diversity and support vulnerable members of the community.

Success indicator: Increased diversity of and numbers of community members participating in climate-related initiatives.

Community-led action

We will explore opportunities for participatory democracy by engaging citizens directly in decision-making processes. This approach can enable more inclusive, democratic, and effective approaches to tackling climate change.

We will take a community-led approach to climate change adaptation to ensure that responses are tailored to local needs, drawing upon each community's unique knowledge and strengths.

Success indicator: Increase in community-led climate projects and adaptation planning and involvement of citizens in decision-making processes.

Emergency management

Effective emergency plans are needed to manage increasingly unpredictable weather events. We will focus on the 'four Rs': Reduce risks, stay Ready, Respond effectively, and Recover quickly through community collaboration and awareness. We will utilise nature-based solutions where possible.

Success indicator: Increased community input into emergency response strategies.

Learning and Knowledge Sharing Tuku mai, Tuku atu

Our ability to learn and share knowledge is critical to navigating the uncharted territory of climate change. It will enable the community to innovate, adopt best practice and make informed decisions. This pillar involves continuously generating, making sense of, and communicating information about climate change, available responses, and the effectiveness of those responses. We aim to draw upon the latest information, science developed internationally, nationally and locally, and Mātauranga Māori.

Mātauranga Māori is about a Māori way of being and engaging in the world – in its simplest form, it uses kawa (cultural practices) and tikanga (cultural principles) to critique, examine, analyse and understand the world. Mātauranga is held at many levels, within iwi, hapū and whanau.

Strategic Areas

Mātauranga Māori and western science

Indigenous and scientific knowledge bring a wealth of diverse and complementary understanding and practices. We will embrace both approaches to enrich our understanding of and response to climate change. This includes the development and appropriate use of environmental health indicators and monitoring approaches which are embedded in Te Ao Māori.

Success indicator: Working in partnership with iwi, hapū and whanau, Mātauranga Māori is being applied to understand the impacts of a changing climate on the natural environment and how to respond to those impacts.

Climate impacts, risks and implications

As the impacts of climate change on Whakatū Nelson become more pronounced, we will continue to gather and analyse information to anticipate future changes and inform priorities for action. We will continue to increase our understanding of climate change risks and effectively communicate the wide-ranging implications of climate change on economic, environmental, health and social outcomes.

Success indicator: Comprehensive and up-to-date information on climate change risks and implications is publicly available.

Ngā iwi-led solutions

With hundreds of years of observations of te taiao (the environment) passed down generations and a spiritual connection to the whenua, Ngā iwi are

well positioned to lead climate responses. We will support Ngā iwi to exercise mana motuhake and rangatiratanga, and provide resources and support with capability building (where appropriate) to enable Ngā iwi-led climate responses. This is especially crucial for preparing for climate disruption in areas of significance to Ngā iwi, such as the marae and wāhi tapu.

Success indicator: Increased number of Ngā iwi-led climate change initiatives.

Climate change awareness

Levels of understanding about climate change are highly variable amongst community members. We aim to increase awareness and understanding of climate change, including understanding of actions to reduce emissions and climate change impacts, through effective communication and education. This will include supporting schools in integrating climate change into their curriculum and individual behaviour change campaigns.

Success indicator: There is increased understanding of and awareness of climate change in the community.

Emissions reduction projects

Identifying, assessing and implementing initiatives to reduce greenhouse gas emissions can be technically complex. We will find opportunities for sharing technical knowledge to support others' initiatives to reduce emissions.

Success indicator: Increased availability of tools to assess emissions reduction potential and support for emissions reduction initiatives.

Making decisions under uncertainty

Rigorous and relevant monitoring of our progress will be essential to achieving our objectives. It will allow us to respond to the pace of global climate efforts and adapt to changes both locally and globally.

We will also need to remain flexible and prepare for a wide range of potential future scenarios is critical. We will use appropriate decision-making tools that create flexible and robust strategies.

Success indicator: Increased frequency of proactive adaptation measures being implemented ahead of anticipated climate impacts.

Regenerative Economy Whakarauora

Current approaches to production and consumption of goods and services generate greenhouse gas emissions and degrade our natural environment. Our economy must become regenerative – (i.e., restorative of the environment and adaptive) – rather than depleting and degrading the environment. A thriving regenerative economy will ensure the local economy is resilient to disruptions, including natural disasters.

Strategic Areas

Research and innovation

We will support and promote climate-related research and innovation that enhances the natural environment. Research will focus on developing new methods and technologies that are regenerative.

Success indicator: Whakatū Nelson is recognised as a leader in climate research and innovation supporting a regenerative economy.

Energy systems

We will work towards removing fossil fuels from our energy systems to reduce emissions, and at the same time diversify our energy sources with an emphasis on enhancing resilience to external shocks.

Success indicator: Increased investment in local renewable energy initiatives supporting greater energy security.

Local economy

We will support and promote sustainable local businesses and practices that enhance overall environmental health.

Success indicator: Increased consumer support for sustainable local businesses and a shift toward sustainable and low-emission activities.

Training and upskilling

Transitioning to a low emissions and resilient future will require significant changes to our workforce. We will work with key partners such as Nelson Marlborough Institute of Technology and Cawthron Institute to identify skills and training gaps and opportunities for filling these gaps.

Success indicator: An increased number of training programmes have modules focussed on decarbonisation and climate resilient activities included.



Low Emission Transport System Ikiiki Tukuwaro-iti

Transport is the most significant contributor to Whakatū Nelson's greenhouse gas emissions – accounting for around 60 per cent of total emissions. The region currently relies primarily on fossil fuels for transport. Transitioning to low carbon forms of transport – such as electric vehicles, active transport and public transport – will reduce dependence on fossil fuels. Adopting low emissions transport options have significant co-benefits including reducing costs, decreased congestion and improving health outcomes.

Strategic Areas

Active transport

We will increase the uptake of active transport (walking, cycling and other forms of physical modes of travel) as set out in E Tū Whakatū Nelson's Active Travel Strategy 2022 – 2032. This will be achieved through improved walking and cycling infrastructure, lowering vehicle speeds, increasing integration with public transport and supporting behaviour change programmes.

Success indicator: Significant increase in the use of active transport modes.

Public transport

We will continue to upgrade the public transport bus service with increased frequency, longer service hours, better routes, better cycle storage facilities at bus stops.

Success indicator: Increased number of journeys taken by bus.

Low emission vehicles

We will support the uptake of electric vehicles, including electric buses, through decarbonising business vehicle fleets, increasing the availability of charging stations and supporting initiatives and incentives that promote electric vehicles uptake.

Success indicator: Increased proportion of electric vehicles in Whakatū Nelson.

Transport options

We will support initiatives that increase the accessibility and availability of low emissions transport options, for example community ride share and carpooling initiatives.

Success indicator: Increase in the rate of vehicle occupancy. Increased range of low emissions transport options.

Maritime, aviation and freight

Marine, aviation and freight emissions make up around 14 per cent of Whakatū Nelson's total emissions (1, 8 and 5 per cent, respectively). We will work with key organisations such as Port Nelson and the Nelson Airport to support initiatives to reduce emissions in these sectors.

Success indicator: Emissions from freight, maritime and aviation transport are reducing.



Zero Waste Society Parakore

Our current ways of producing and consuming are wasteful. We extract natural resources, make products, use them and then often throw them away after a single use. Greenhouse gas emissions are generated at all stages of a product's lifecycle. Methane from organic waste (waste from plant and animal materials) going into landfills makes up the majority of emissions from the waste sector.⁵

To reduce emissions from waste requires collaboration across the whole community, supporting a regenerative economy which allows us to reduce, reuse, and design out waste. Systemic changes will need to be made through changes in policy, led by central and local government. We also need to work towards improving diversion of waste from landfill.

Working towards a waste free society will help reduce our emissions and reduce our reliance on natural resources. We will generate less greenhouse gas emissions by avoiding, reducing, reusing and repairing.

Targets for Council and community to reduce waste are set through the regional Joint Waste Management and Minimisation Plan.

Strategic Areas

Avoiding and reducing waste

We will support and promote activities which reduce and avoid waste, such as supporting reuse over single use and activities that repair goods. We will support behaviour change programmes to reduce consumption and reduce the generation of waste. We will advocate for product stewardship and other policies that reduce the generation of waste and ensure producers take responsibility for their products and packaging.

Success indicators:

- Increase in engagement activities and programmes to enable our community to reduce emissions associated with waste.
- Investment is growing, both private and government funded, in the infrastructure needed to support the reuse economy.

- The repair economy is growing, supported by the commercial sector expanding their services and the public using and demanding more services.

Reducing organic waste

We will reduce the creation of organic waste at source, such as food waste and timber waste. Remaining organic waste will be used to feed our soils and the methane from organic waste will be captured at all landfills in the region. We will prioritise uses for methane gas which displace use of fossil fuels (for example, the gas is used to power buildings, replacing diesel generated energy).

Success indicator: Reduced emissions from landfill through the diversion of organic waste, including domestic and industrial food waste, construction waste and fibre.

Better use of resources

We will support, promote and invest in initiatives to improve the recovery of reusable and recyclable resources, including through education programmes.

We will support the sustainable use and conservation of resources, including energy and water.

Success indicator: Increased recovery of recyclable materials.

Construction and demolition waste

We will encourage the refurbishment of buildings, rather than buildings being demolished. We will encourage buildings to be built to Greenstar and Homestar standards. We will support initiatives that enable reuse of construction and demolition waste.

Success indicator: Improved building design which results in less waste being generated through all construction activities, leading to a reduction in construction and demolition waste going to landfill.

⁵ Nelson City Council, Community Greenhouse Gas Emission Inventories for Nelson, New Zealand <https://www.nelson.govt.nz/climate-change/what-climate-action-can-our-community-take/>

Thriving Biodiversity and Nature Rauropi Tonui

The biodiversity of Whakatū Nelson is essential to our culture, identity and wellbeing. Thriving biodiversity and healthy habitats provide natural defences to climate impacts such as flooding and heatwaves and sequester carbon. Increased temperatures, spread of invasive species, drought and variability of rainfall is degrading the mauri of habitats and putting pressure on wāhi taonga. We need to recognise the interconnectedness of natural and human systems and act now to reverse the decline of our taonga species.

Strategic Areas

Climate change impacts on nature

There is limited information available about how local habitats and species are likely to respond to climate impacts. We will build up our understanding of these climate impacts, to inform decisions about how we protect and enhance the natural environment.

Success indicator: Species and habitats under threat from climate changes are identified and measures put in place to strengthen their resilience.

Rivers and streams

Our rivers and streams are under increasing pressure from climate-related impacts, such as sedimentation, vegetation loss and pollution. We will protect and restore our waterways, such as expanding floodplains and riparian planting, to increase the resilience of river habitats.

Success indicator: Increased riparian planting on rivers and streams and improved river health.

Coastal habitats

Healthy coastal habitats act as natural barriers to coastal storms and act as a carbon sink. Coastal areas have ecological, recreational, historical and cultural significance and are important sites for mahinga kai (food gathering). The health of our coasts is under threat from ocean acidification, increased sea temperatures, storms and sea-level rise, as well as contaminants and sedimentation. We will protect and enhance coastal habitats by reducing sedimentation and human disturbance, nutrient run-off and plastic pollution.

Success indicator: Coastal wetlands, such as salt marsh and seagrass and other coastal ecosystems are improving in health and size and becoming more resilient to changes in climate.

Nature-based solutions

Nature-based solutions are actions that work with and enhance the environment to help people adapt to climate change. We will prioritise using nature-based solutions for climate responses and integrate ecological design principles into planning, urban design and infrastructure development.

Success indicators: Nature-based solutions are integrated into planning, urban design and infrastructure development.

Invasive species

We will monitor the spread of invasive species and take action to keep species out, eradicate invasive introduced species or limit their spread.

Success indicator: Effective systems are in place to monitor and reduce the spread of invasive species.

Afforestation

Afforestation is a key part of our climate change response because healthy forests provide for biodiversity, flood control, slope stability and carbon capture. We will increase the scale of planting across Whakatū Nelson and invest in improving the health of existing forests. We will prioritise areas for planting where there are significant environmental co-benefits, such as riparian planting to protect river health and planting on steep hillsides to improve slope stability and reduce erosion. On Council-owned land we will transition from commercial exotic forests to continuous canopy forests of mixed species. Importantly, the climate change targets in this Strategy will be met by actual reductions in emissions rather than offsetting by planting trees.

Success indicator: Increased area of Whakatū Nelson covered in trees and plants, mainly indigenous species.

Sustainable and Resilient Food System Kai Toitū

A well-functioning food system is essential to community wellbeing, cultural identity, and the local economy. However, the food system we currently depend on continues to generate high quantities of greenhouse gases and is highly vulnerable to the impacts of a changing climate. To change this, we need to look at how we produce, consume and dispose of food.

Supporting a sustainable and resilient food system will help us to significantly reduce Whakatū Nelson's food-related greenhouse gas emissions while also increasing the health and climate-resilience of our natural environment, community, and local economy.

Sustainable land management

The health of our land underpins our lives and our livelihoods and impacts the health of our water. For Māori, connection to whenua is through whakapapa, placing people in a special relationship as part of nature. Supporting sustainable land management will help to reduce emissions from this sector. We will improve the health of our land, for example by reducing the use of nitrogen fertilisers, reducing effluent run off and returning organic waste to soil, to support a resilient and healthy food supply.

Success indicator: Soil health and water quality are improving.

Food security

Ensuring the resilience and stability of food systems against climate-related disruptions and changing weather patterns is vital for community wellbeing. We will support and promote sustainable agriculture practices, local food production and diversity of food sources to ensure the continuous supply of affordable and nutritious food.

Success indicator: Our food supply network is better able to withstand climate-related disruptions locally and nationally as demonstrated by consistent food availability even during adverse weather events.

Mahinga kai

Climate change is disrupting customary practices like mahinga kai, including fishing, hunting, and foraging. This provides for food security and enables a deeper connection with our environment and one another. We are committed to protecting and restoring traditional gathering sites for food and medicine.

Success indicator: Increased abundance of food for mahinga kai.

Biogenic methane

Agriculture, landfill waste, and wastewater are the main sources of biogenic methane emissions in Whakatū Nelson. We will reduce these emissions, for example through improving resource recovery and exploring ways to reduce wastewater emissions.

Success indicator: Biogenic methane emission reduction target is met.



Low Carbon and Resilient Built Environment

Our built environment currently generates significant greenhouse gas emissions and is increasingly at risk from the impacts of climate change and energy constraints. More frequent and severe extreme events involving rainfall, temperature, drought and ongoing sea-level rise are impacting our infrastructure, buildings and utilities. Using innovative urban design, investing strategically in infrastructure, and modifying our buildings will help us to adapt the built environment as sustainably as possible, so it can withstand these challenges while still providing the services we need with fewer emissions.

Strategic Areas

Infrastructure and utilities

Whakatū Nelson's infrastructure is vulnerable to climate impacts. For example, many critical roads are located on the coast, by rivers or on a slope and are exposed to flooding or landslides. Investing in and adapting infrastructure and utilities will ensure that critical systems like water, electricity and transport are robust against extreme weather events, to minimise damage and disruptions.

Success indicator: Through proactive adaptation, infrastructure and utilities become less vulnerable to a changing climate, avoiding preventable damage costs.

Urban design and greening

Creating a compact city and limiting urban sprawl can reduce emissions by shortening travel distances and more efficiently using resources.

Good urban design also supports climate resilience and better environmental outcomes. For example, trees and vegetation in cities can help absorb carbon, reduce flooding, and lessen the impact of heatwaves. Water-sensitive design features—like rain gardens and permeable pavements—help manage heavy rainfall and improve water quality.

Success indicator: There is an increase in canopy cover across the urban areas of Whakatū Nelson.

Success indicator: There is an increase in urban density in Whakatū Nelson.

Homes and buildings

Many buildings, homes and culturally significant sites will be exposed to sea-level rise, landslides and river flooding in future. We will anticipate climate change risks and impacts and adopt adaptation strategies to minimise damage. This includes avoiding

further development in highly exposed locations, accommodating climate risks for example through raising floor or ground levels, protecting high value assets and in some cases shifting people and property out of harm's way.

We will also support initiatives to improve energy efficiency of buildings through improved insulation, energy-efficient heating and cooling systems and other green technologies.

Success indicators: Our buildings, culturally significant sites, infrastructure and utilities become less vulnerable to a changing climate, avoiding preventable damage costs.

Building and infrastructure emissions

Infrastructure and buildings are significant sources of emissions. Emissions are generated as part of the production and transport of materials and as part of heating and cooling needs. We will support innovation in the construction industry and promote low-emissions building design and materials in commercial and residential buildings.

Success indicator: Commercial and residential building energy efficiency improves.

Success indicator: Embodied emissions are factored into the design of commercial buildings and infrastructure.

Land use planning

Land use planning and strategic investment plays a key role in reducing emissions and shaping the resilience of our communities against the impacts of climate change. We will think strategically about where to build and where not to build as climate change impacts worsen and it becomes necessary to consider managed relocation.

Success Indicator: Council engages in land use planning that measurably decrease emissions and decreases the vulnerability of people, assets and the local economy to a changing climate.

Sedimentation

Soil erosion degrades rivers, coasts, and marine ecosystems that store carbon. It's being worsened by climate change and land use changes like vegetation removal, road building and housing development. We aim to reduce erosion from major sources such as forestry and construction.

Success Indicator: Reduced sediment in rivers and coastal and marine areas.

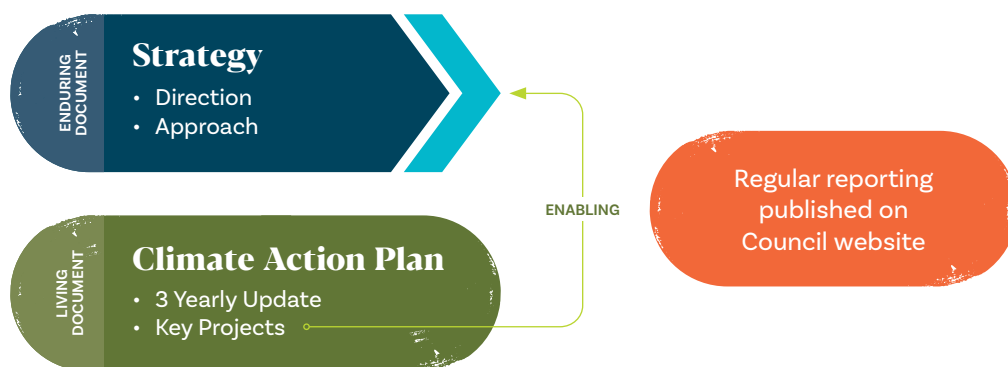
Monitoring, Reporting and Funding Tātari Kōrero

Council will actively monitor and report on progress in implementing this Strategy.

Council will receive regular reporting on progress with implementation of the Strategy and progress reporting will also be available on the Council website. This will uphold the principle of pono (honesty and accountability), give positive reinforcement where progress has been good and help to identify where more effort is needed. Ngā Iwi and the Nelson Tasman Climate Forum will be invited to provide an annual assessment of Council's progress with implementing the Strategy.

The Climate Action Plan will be updated every three years, following the adoption of the Long Term Plan, to capture key projects, led by Council and others, that will enable us to achieve the goals in the Strategy.

Where data is available, Council will also release data to assist with monitoring progress towards our goals on a regular basis (e.g. monthly or quarterly). This could include, for example, data on fuel sales or numbers of bus passengers.



Emissions monitoring

The annual climate change report will include:

- An update on reductions in Whakatū Nelson emissions and progress towards the community emissions reduction targets, drawing upon available evidence such as fossil fuel sales, volume of waste going into landfill and numbers of passengers using the public bus system.
- An update on reductions in Council emissions and progress towards Council emissions reduction targets, drawing upon available evidence such as emissions from Council vehicle use, methane flaring at landfill and employee commuting.
- Analysis of the gap between measured emissions and targets/goals.
- Commentary on the effectiveness of current actions and on additional actions needed to meet targets and goals.

Adaptation monitoring

While emissions reduction monitoring has clear quantitative indicators for progress (levels of greenhouse gas emissions reduced), monitoring progress on adaptation is more complex. To monitor progress on adaptation, we will draw upon qualitative and quantitative sources of data where available. Quantitative indicators may include: the number of buildings and extent of infrastructure exposed to climate change risks and the costs of repairs resulting from severe weather events in the previous year. Qualitative indicators may include: data and evidence on climate change risks and risk exposure, observed risk reduction, specific funding for adaptation, planning tools being utilised and local-led actions to address climate risks.

How we Fund the Strategy

The successful delivery of our climate goals depends on ensuring available funding and finance to deliver the strategic areas in the Strategy. A significant increase in funding for climate initiatives will be needed. Investment will be required from all players, in particular central and local government and the private sector. A range of funding and finance options need to be considered, such as crowd funding, New Zealand Local Government Funding Agency sustainably-linked loans, green bonds and blended finance combining public and private investment.

For Council, this means ensuring that the primary funding mechanisms and approaches outlined within our Long Term Plans and Annual Plans are aligned with the strategic areas in the Strategy and Council-led actions in the Climate Action Plan.

Because many Council actions to respond to climate change will require funding, the review process needs to be coordinated with Council's Annual Plan and Long Term Plan processes. The following cycle will be used each year to inform the Annual Plan.

July - October	Council and community together develop proposals for action, based on learnings from monitoring, latest data on emissions and other information
October	Staff report to Council and community on progress on Strategy
November-February	Council elected members and staff consider which proposals for Council or community action can be implemented immediately using existing budgets, and which require new funding and therefore need to be included in the Draft Annual Plan/Long Term Plan to ensure the proposals are funded
March/April	Engagement with the community on the Annual Plan/Long Term Plan
June	Council adopts Annual Plan/Long Term Plan





Acknowledgements

Hei Mihi

This Strategy was developed by Council with support from the Climate Change Advisory Group, a group of six community members and climate change experts with knowledge related to science, biodiversity, education, transport, and zero waste management. The Advisory Group was made up of: Debs Martin (Chair) (The Nature Conservancy), Astrid Sayer, David Ayre, Karen Driver, Clare Scott, Jim Sinner and Anna Berthelsen (Cawthron Institute). It was supported by the Nelson Tasman Climate Forum.

This Strategy was developed in collaboration with Ngā Iwi o Te Taihū.

Council would like to thank Ngā Iwi, the Advisory Group and the Nelson Tasman Climate Forum for their input and support.

