

Draft Queenstown Lakes Climate and Biodiversity Plan 2022 - 2025



MARCH 2022

 Climate
Action



QUEENSTOWN
LAKES DISTRICT
COUNCIL

1 Message from Mayor

Since Council adopted its first Climate Action Plan in 2020, and declared a climate and ecological emergency, we have seen a significant shift in weather patterns nationally and globally. We have also witnessed and experienced first-hand the effects on these swiftly changing conditions to our environment and on our lives. Extreme flooding events have wreaked havoc on homes and businesses and irrevocably changed the landscape around us. Storms of increasing frequency and magnitude have overturned lives. Lengthening summers and higher temperatures bring long drought conditions that affect agriculture, livestock, and unbalance delicate ecosystems.

Although we have made strong progress in delivering on that first plan, now is undeniably time for us to step up a gear. It is clear that the changes we make now and in the next few years are fundamental in reducing the impacts of climate change. And it is a collective change that needs to be made. This is not something that Council can or should address alone. It needs all of us to play our part and embrace the principles of kaitiakitaka and the principles of Vision Beyond 2050.

I am heartened and somewhat reassured by the passion and commitment that I see every day within our community and from Council officers. There is so

much good work across our district that I cannot begin to acknowledge everyone or the projects underway, but their work can be seen through initiatives such as the 2021 WAO Summit and the successful recipients of the annual QLDC Waste Minimisation Community Fund which aim to reduce and divert waste from landfill. These influencers, innovators and educators are essential to our collective success in this vital issue and I thank each and every one of them personally and on behalf of this Council.

I do, however, want to specifically thank and acknowledge the Queenstown Lakes Climate Reference Group which was established in late 2020. This advisory body has provided valuable insight helping Council turn ideas into action. They have brought an expert climate and biodiversity lens to many Council matters and continue to inform future developments with their guidance.

As we approach this next iteration of the plan, now the Climate & Biodiversity Plan to reflect the significance of biodiversity in maintaining healthy ecosystems, I encourage you all to take your thinking to the next level. To envisage our communities and businesses not compromised but thriving through climate action. To aspire to our local flora and fauna flourishing thanks to vital interventions and ambitious, authentic leadership. These are things I hope to see enhancing the lives of everyone in our district – now and into the future.

We need to hear from you about this draft plan, about what we can all be doing differently or what more we can be doing as a community. What legacy do you want to leave for future generations and the kind of Aotearoa New Zealand they will live in?

Aku mihi nui ki a koutou



JIM BOULT
Mayor, Queenstown Lakes District Council



2 Message from the Chair of the Queenstown Lakes Climate Reference Group

Kia ora koutou

The Climate Reference group (CRG) was established to be an independent, multidisciplinary, and regionally representative team to offer expert advice and support to Council on the Climate and Biodiversity Plan.

The group has worked together to evaluate best practice in Aotearoa New Zealand and globally, to identify our key challenges and recommend priority action areas. The CRG's input and work has helped co-design the review of the plan. During this process we have stretched our network to bring as much information from stakeholders right across our region, in doing so learning about what brilliant work so many people are already doing in this area. Being able to coordinate our action to be most effective, efficient and remain focused on what really matters are key to the success of our district. Thank you to everybody who has helped feed information forward into this work.

This has been a wonderful and hugely passionate team who are more than willing to dedicate their time to create change for something so important to us all now, but even more importantly to our children and future.

Ngā mihi maioha



BRIDGET LEGNAVSKY
Chair, Queenstown Lakes Climate Reference Group

MEMBERS OF THE CLIMATE REFERENCE GROUP:

Dr Lyn Carter

Cr Alexa Forbes

Cr Niki Gladding

Tony Pfeiffer

Dr Jim Sallinger

Cr Quentin Smith

Alec Tang

Gail Thompson

Cr Esther Whitehead

Dr Barry Wills



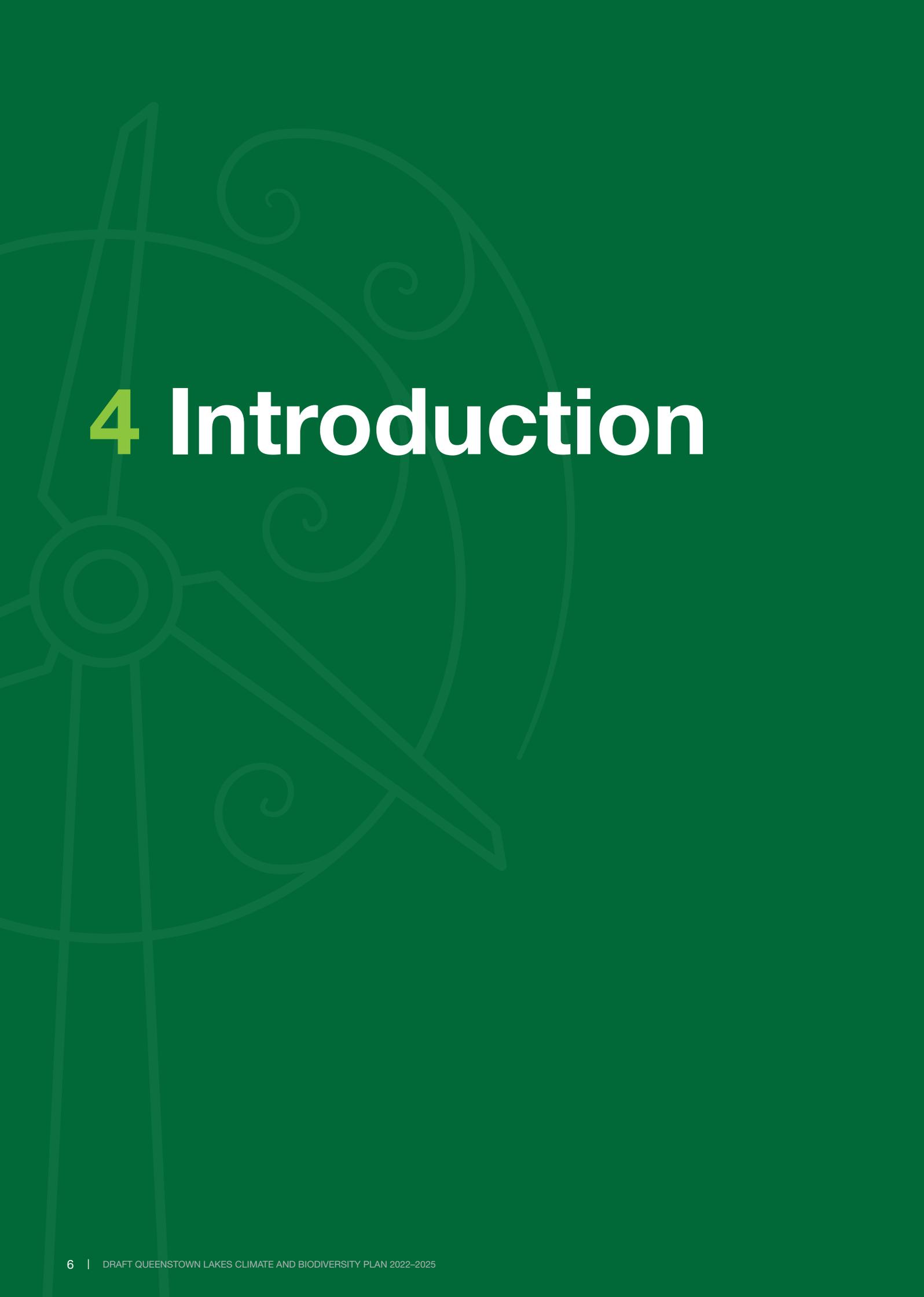
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Te Reo Māori translation: Please note, QLDC uses the local Kāi Tahu dialect which replaces 'ng' with 'k', e.g. tākata (people) instead of tāngata







4 Introduction

This decade is crucial. So are our collective next steps.

Three years have passed since we declared a Climate and Ecological Emergency in our district and our first Climate Action Plan was developed.

A lot has changed since then. The COVID-19 pandemic has demonstrated how interconnected humankind is and how we can all be affected by a global crisis. It has also shown how quickly we can adapt to change and find new solutions when we work together.

The scientific evidence for urgent climate action is clear. The International Panel for Climate Change's 2021 Assessment Report documents how record levels of greenhouse gases and heat have shifted the climate into uncharted territory. The impacts of this change, such as record temperatures, unprecedented weather events and shifting climate patterns, are being experienced here and around the globe.

This plan sets out how we're going to respond to climate change in Queenstown Lakes. We have compiled 66 actions. They range from embedding climate action into Council decision-making to building food resilience, and many areas in between.

While Council is leading the development of this plan, we see it as belonging to the whole district, and it wouldn't be possible without input from community groups, mana whenua, climate experts, local businesses, and conservation groups.

This plan belongs to the district. Climate change affects everyone.

THIS PLAN IS STRUCTURED IN TWO PARTS.

The first part provides background information on the state of our emissions in the district, the likely impacts we will see in the future, a timeline of progress, challenges we face, and an overview of how the plan was developed.

The second part outlines the following six key outcomes and the actions that will be delivered over the next three years:

1. QLDC demonstrates ambitious climate leadership
2. A low-emission and effective transport system
3. A low-emission and climate resilient built environment
4. Communities are low-emission and climate resilient
5. Low-emissions businesses thrives
6. The natural environment flourishes

Our partnership with Kāi Tahu is foundational to this plan.

The partnership between Kāi Tahu and Queenstown Lakes District Council underpins the 2022-25 Climate and Biodiversity Plan.

Over the past three years our partnership with Kāi Tahu has been strengthened through the shared development of the Grow Well | Whaiora Spatial Plan. Building on this partnership, the Draft Climate and Biodiversity Plan has been informed by Climate Reference Group representation from Aukaha and Te Ao Marama on behalf of Kāi Tahu. It is also strongly aligned with the Kāi Tahu Values Framework from the Spatial Plan as shown below.

KĀI TAHU VALUES FRAMEWORK

● Value ○ Description



The role of Council.

The Kāi Tahu climate change strategy, He Rautaki mō te Huringa Āhua o Te Rangī¹, speaks to creating a legacy for those whānau to come in response to the effects of climate change. We share Kāi Tahu's aspiration to secure the best possible future for us and our children after us. The Council stands beside Kāi Tahu in the belief that amid change and loss there is also hope, and opportunities to thrive.

QLDC aims to advocate, support and lead climate and biodiversity action. Major, nation-wide policy shifts, regulation changes, and incentivisation schemes can only be implemented by central government. However, there is a lot that is within our control as a Council to become leaders on our pathway to net-zero in 2050.

ADVOCATE

Council has a role to advocate for our people and environment. To date, we have strongly advocated for greater urgency, ambition and funding commitment from central government. A summary of our climate action advocacy can be found in the annex of this document.

SUPPORT

Council has been working with our community and local partners to deliver climate actions. This includes funding a wide variety of community groups, projects and conferences that are focussed on district level emissions reduction, climate change education, biodiversity regeneration and helping our communities to be prepared and resilient for a just and equitable transition.

LEAD

Not only are we one of the largest employers in the district, but we also invest a significant amount in public infrastructure. The way we work and invest matters and this plan will ensure that Council activity considers the climate and the environment. Our ambition is for QLDC to be a leader and learner and embed climate action into our organisational culture.

¹ <https://ngaitahu.iwi.nz/wp-content/uploads/2018/11/Ngai-Tahu-Climate-Change-Strategy.pdf>

5 The importance of adaptation, mitigation and biodiversity

In 2019 we declared a climate *and* ecological emergency.

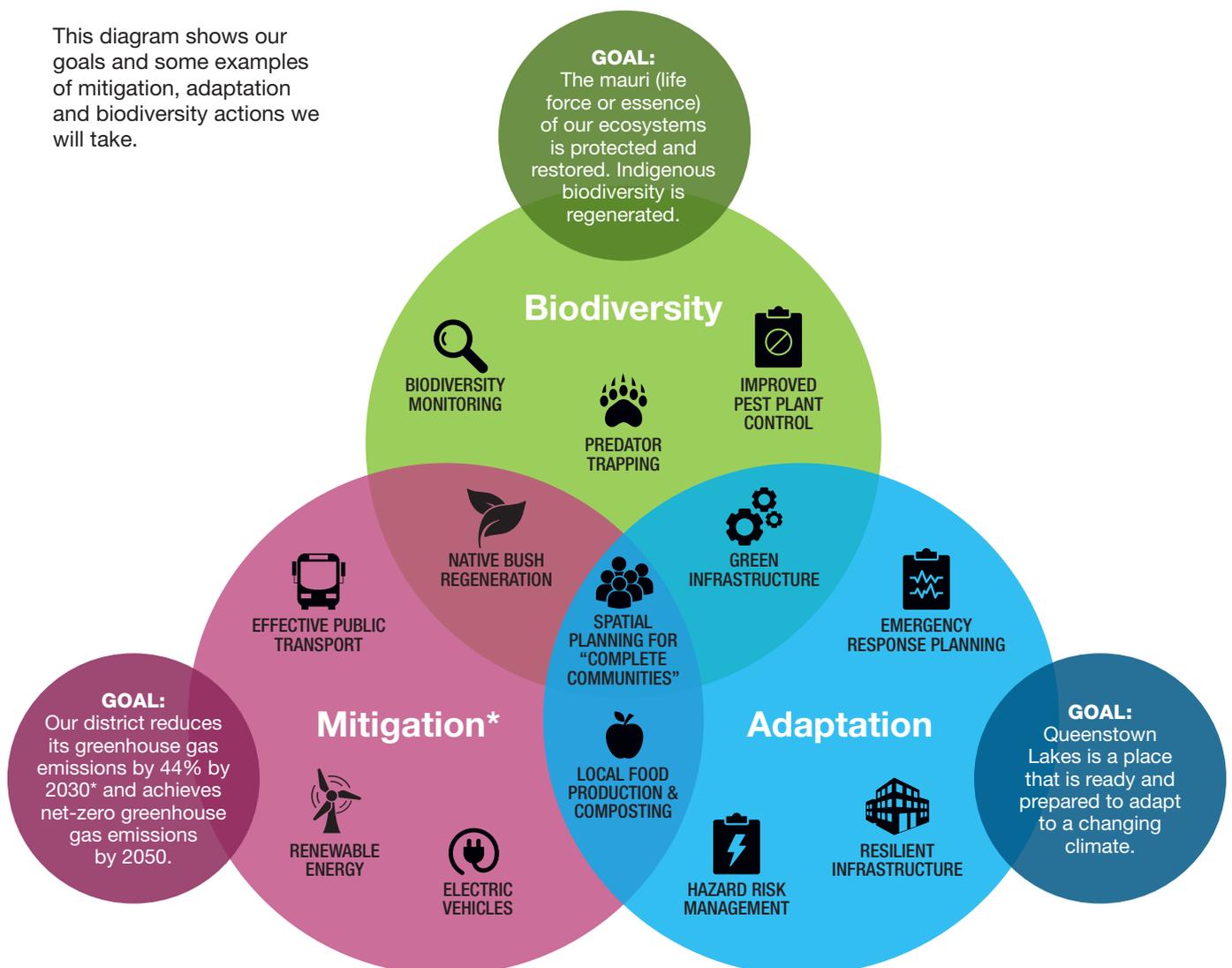
This draft plan builds on our 2019-2022 Climate Action Plan with an increased focus on biodiversity. The Climate *and* Biodiversity Plan includes a new outcome: a Flourishing Natural Environment. This reflects the need to focus on emissions reduction, climate change adaptation, *and* biodiversity regeneration in an integrated and holistic way.

OUR RESPONSE REQUIRES MITIGATION, ADAPTION AND BIODIVERSITY ACTIONS

An effective climate response requires mitigation, adaption and biodiversity activities to address the causes of climate change and also adapt to our changing environment.

Mitigation refers to the effort to reduce or prevent greenhouse gas emissions – for example taking the bus instead of the car. Adaptation is adjusting to life in a changing climate – for example reducing our vulnerability to extreme rainfall events by improving flood defenses.

This diagram shows our goals and some examples of mitigation, adaptation and biodiversity actions we will take.



* Against a 2019 baseline and aligned with the 1.5 degree science-based target pathway outlined in the 2020 Emissions Reduction Roadmap.

Tackling the biodiversity and climate crises together.

Biodiversity refers to the wide variety of animal and plant life on Earth. Biodiversity creates healthy ecosystems, supports clean air and water, plant pollination, pest control, and much more.

Nature is vitally important to the wellbeing of humans. Healthy ecosystems which support a rich biodiversity, protect people from the impacts of climate change and capture carbon from the atmosphere. However, our biodiversity and ecosystems are also vulnerable to the effects of climate change.

Biodiversity is in crisis globally, with an estimated one million species currently threatened with extinction. Despite an increase in policies and actions to support global biodiversity, biodiversity trends have continued to decline over the last decade, with extinction risk increasing. In Aotearoa New Zealand we have a high proportion of species found nowhere else in the world. Unfortunately, around 4,000 of these species are threatened or at risk of extinction.²

It's not too late to reverse these biodiversity trends³ and "nature-based solutions" are an effective way to achieve change. Protecting and regenerating our biodiversity is critical to the wellbeing of our district and our climate change adaptation and mitigation efforts.

Nature-based solutions (NbS) involve working with nature to address societal challenges, providing benefits for both human well-being and biodiversity.

² (DOC, 2020) Te Mana o Te Taiao - Aotearoa New Zealand Biodiversity Strategy 2020.

³ IUCN (2021) Issues Brief: Post-2020 Global Biodiversity Framework. October 2021





6 Vision 2050

In March 2019, the Council unanimously agreed to commit to Vision Beyond 2050.

Vision Beyond 2050 is a set of vision statements to inform future decision making and planning. The Climate and Biodiversity Plan plays a key role in laying out the roadmap for achieving the following community outcomes:



Zero carbon communities | Parakore hapori

From Makarora to Kingston, our district sets the standard for regenerative, low-impact living, working and travel.

COMMUNITY OUTCOMES

Our homes and buildings take the best ideas from the world, but use sustainable, locally-sourced materials.

Our public transport is the cleanest, greenest, innovative choice for district-wide connectivity.

Active travel is an integral part of an accessible and safe network for all of our people.

Zero waste is just something that we do here.



Disaster-defying resilience | He Hapori Aumangea

Queenstown Lakes is a place that is ready and prepared for every emergency.

COMMUNITY OUTCOMES

Our communities are resilient to disasters and adapting to a changing global climate.

Our people stand tall through any challenge, caring for whānau, neighbours and visitors alike.

Our infrastructure is as resilient as our people.

Recovery empowers our people to quickly find a new normal.



Deafening dawn chorus | Waraki

Our ecosystems flourish and are predator-free under our kaitiakitanga.

COMMUNITY OUTCOMES

We are all kaitiaki of our protected and restored incredible environment, flora and fauna.

Our people and visitors respect the privilege of accessing our rivers, lakes and mountains.

Our waterways and lakes are drinkable.

We set the standard for combating biodiversity loss.



7 Our emissions profile

**QLDC's emissions
were calculated to
be 25,179 tonnes
of CO₂e in financial
year 2018-2019.**

Our emissions profile.

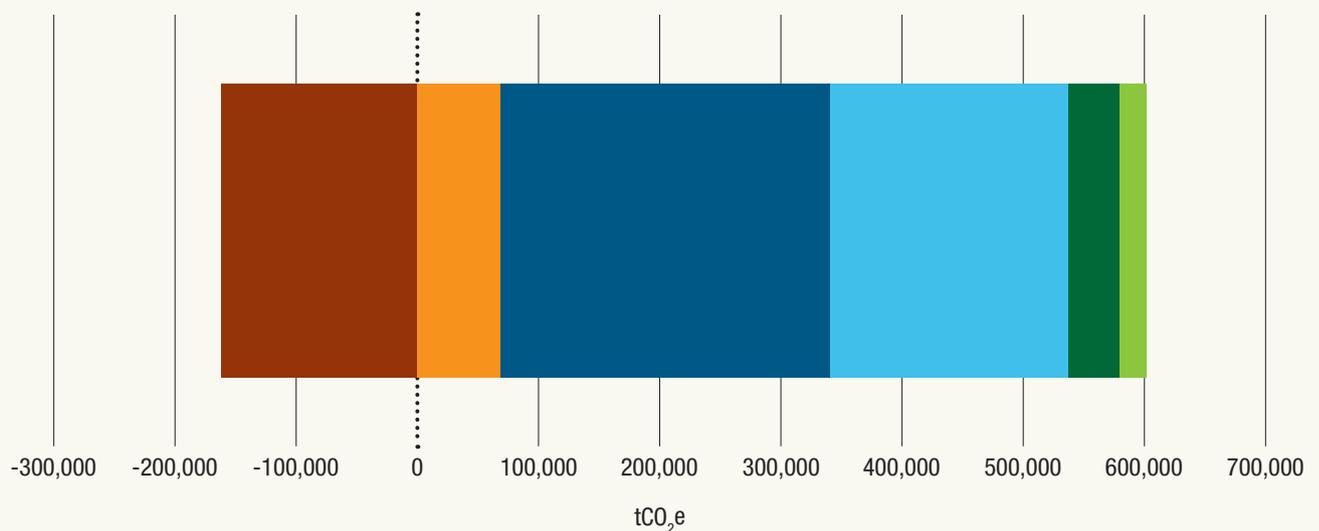
The emissions profile for the district was summarised in an Otago Region Greenhouse Gas (GHG) Profile report in 2021⁴:

In financial year 2018-2019 it was estimated that:

- > Gross emissions for the Queenstown Lakes District were 600,895 tonnes of Carbon Dioxide Equivalent (tCO₂e).
- > Net emissions (once forestry is taken into account) were 438,591 tCO₂e.

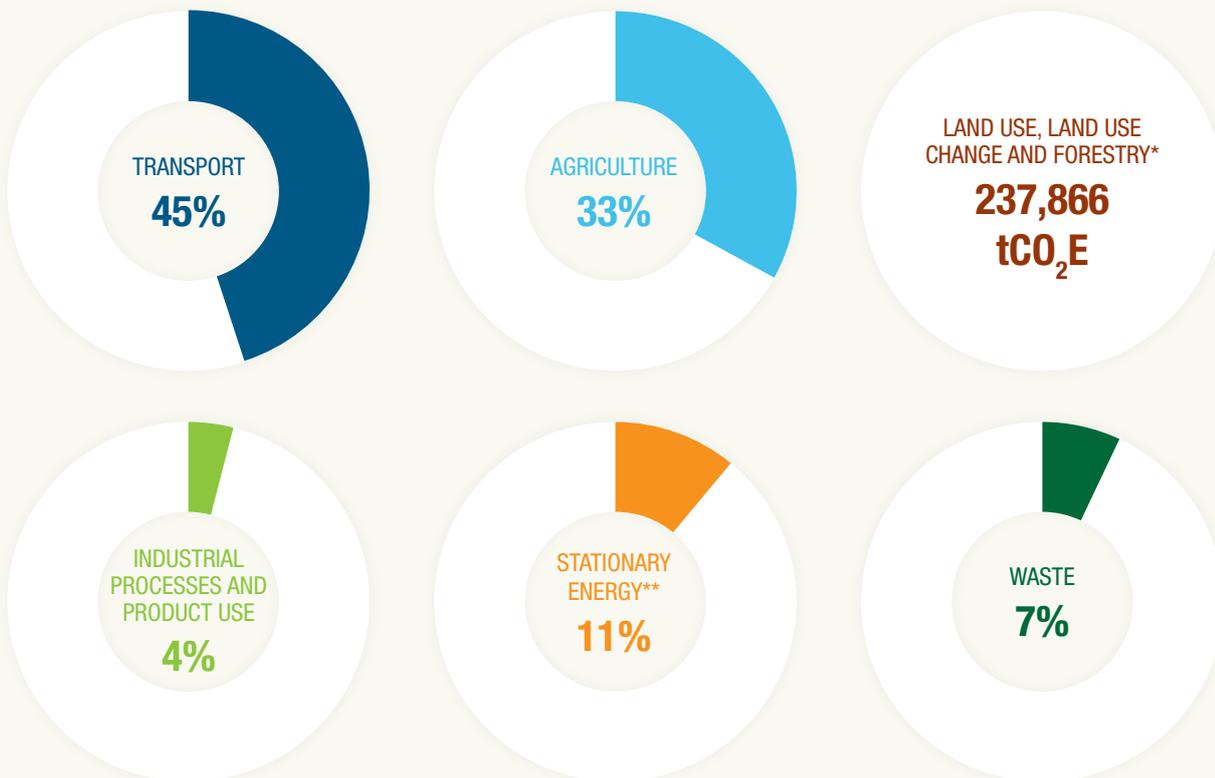
“Carbon dioxide equivalent” or “CO₂e” is a term for describing all different greenhouse gases in a common unit.

QUEENSTOWN-LAKES GREENHOUSE GASES PROFILE



- LULUCF (Land Use, Land Use Change and Forestry)
- Stationary energy (Emissions from fossil fuels used in electricity generation and in the direct production of industrial heat, as well as geothermal energy.)
- Transportation
- Agriculture
- Waste
- IPPU (Industrial Processes and Product Use)

Transport is the highest emitting sector, accounting for 45% of gross emissions. After transport, agriculture is the largest contributor to emissions in the district. Stationary energy accounts for 11% of gross emissions and is dominated by electricity consumption (contributing 68% to sector emissions). Waste contributes 7% of gross emissions. This is largely due to solid waste disposal to landfills.



Otago regional emissions

Adjusting for differences in how community and national greenhouse gases inventories are calculated, the Otago region represents approximately 6.9% of New Zealand's 2019 gross emissions and 5.6% of New Zealand's net emissions. This compares with Otago accounting for approximately 5% of New Zealand's population and 4.5% of national GDP.

* Not a % as this is sequestration – the difference between gross and net emissions.
 ** Dominated by electricity consumption.

8 Our district's emissions reduction roadmap

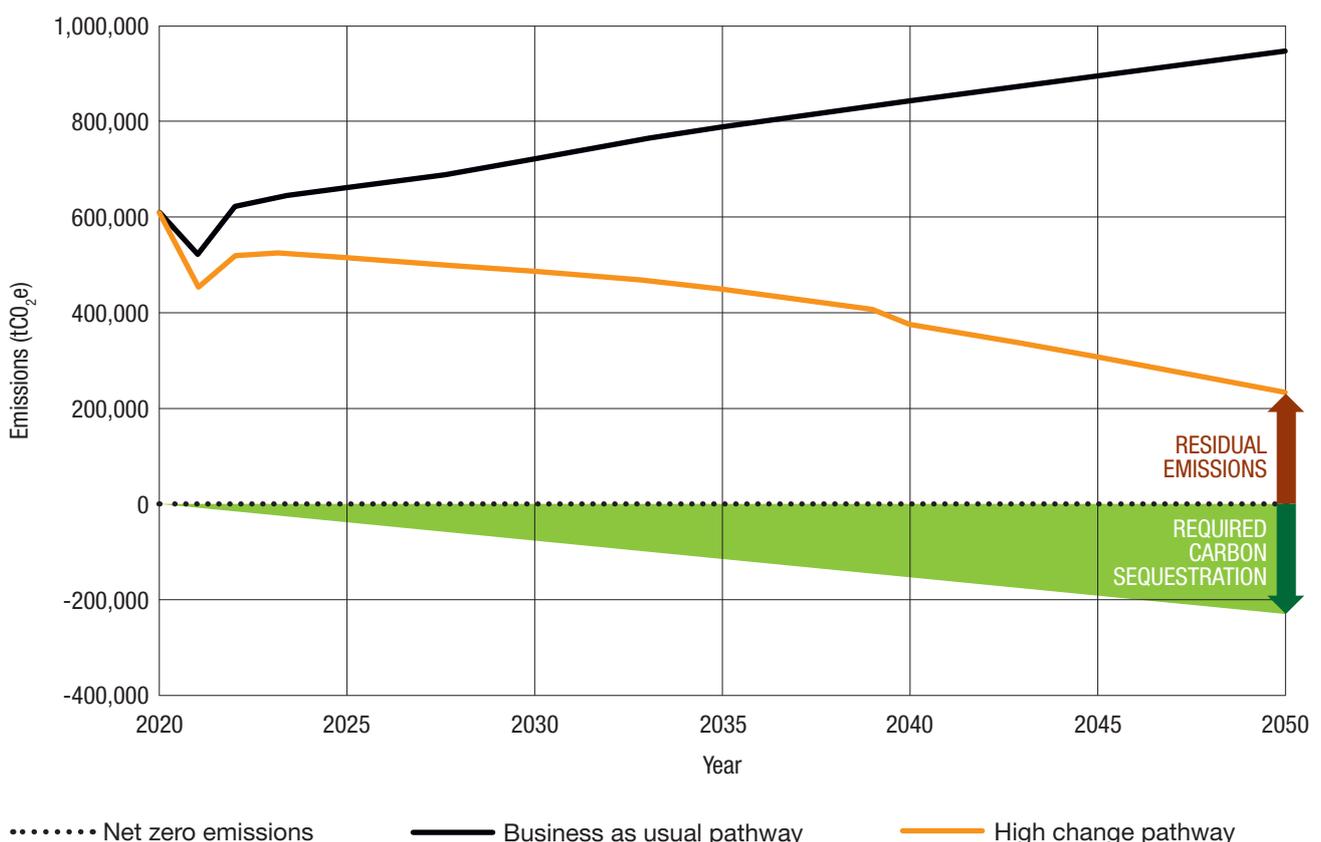
In 2020 we commissioned an Emissions Reduction Roadmap for the district.

The Emissions Reduction Roadmap describes different scenarios of what our future emissions could look like in 2050. If we were to undertake no carbon reduction interventions in the district then this could lead to us producing over 944 ktCO₂e in 2050 (in 2021 the district produced 600 tCO₂e).

A high-change pathway, in which the district adapts to new technology and behaviour change, could see our gross emissions reduce to 233 tCO₂e in 2050. If we commit to this pathway then our net-zero carbon 2050 goal is achievable if we also match it with the required carbon sequestration.

Carbon Sequestration is the process of removing CO₂ from the atmosphere to reduce global warming. The most effective means of sequestration are through natural biological processes such as photosynthesis within plants and carbon storage within soil.

EMISSIONS REDUCTION AND SEQUESTRATION – HIGH CHANGE PATHWAY



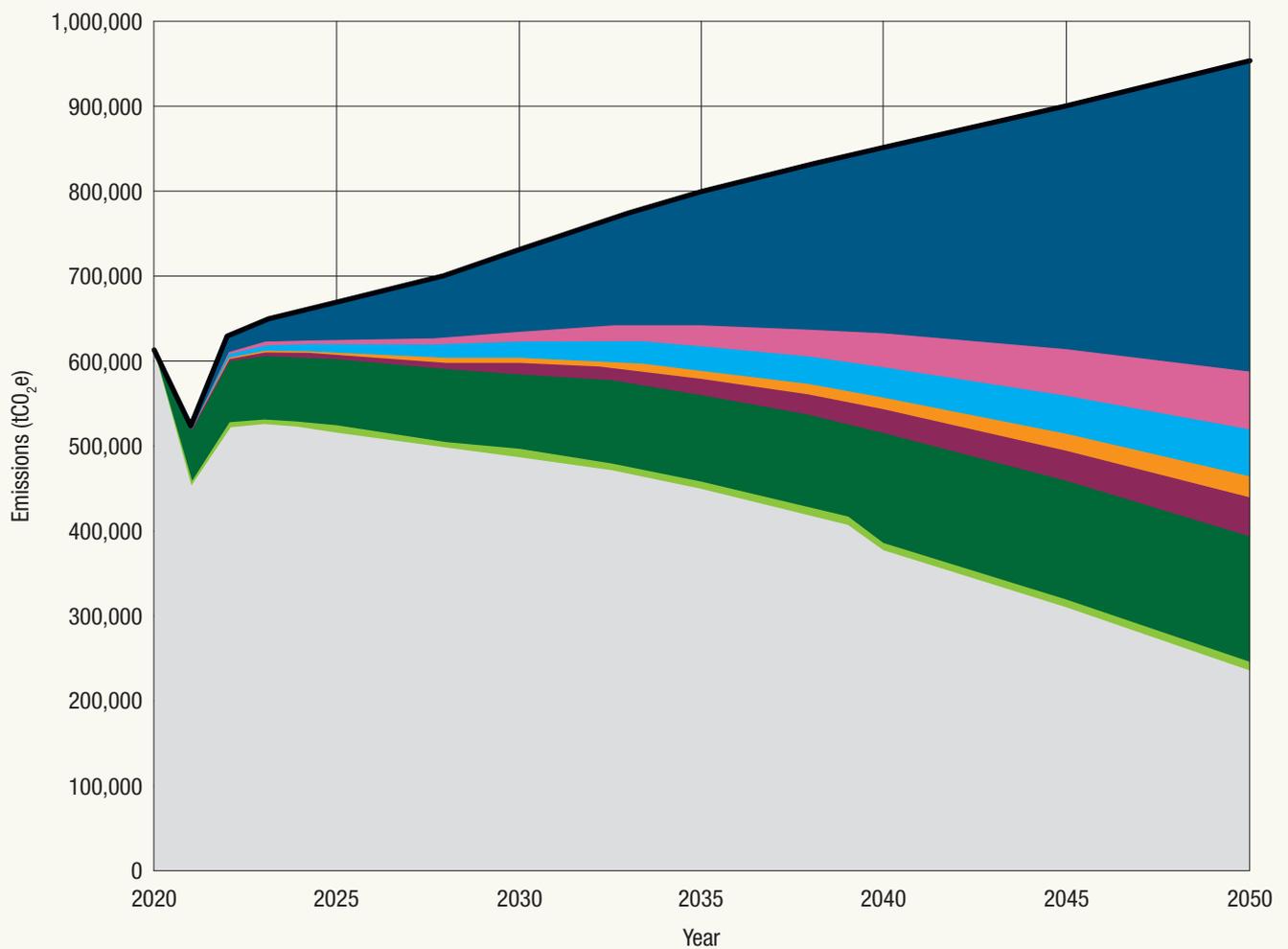


A high-change pathway requires major changes to the transport, aviation, agriculture, electricity, LPG, landfill, and wastewater sectors. The most significant reduction can be made in the road transport category.

The high change pathway aligns with the Paris Agreement 2016⁵ goal of limiting global warming to well below 2 degrees Celsius and allows us to plan for further carbon savings that align with a 1.5 degree pathway.

⁵ <https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement>

Emissions reduction potential for Queenstown Lakes District.



- Road Transport
- Aviation
- Agriculture
- Stationary Electricity
- LPG
- Victoria Flats Landfill
- Wastewater and Septic Tanks
- Remaining Emissions
- Business as Usual

9 What climate impacts can we expect in Queenstown Lakes?

There will still be significant impacts to our environment and way of life.

Here in Queenstown Lakes, we're fortunate in the sense that we don't have to deal with sea level rise and coastal communities, but there will still be significant impacts to our environment and way of life.

We're likely to see more extreme rainfall and the risk of landslides, flooding, and wildfire will all increase. Rain that would previously have fallen as snow will fall more often as rain and spring snowmelt may occur earlier in the season.

We'll also see changes to our native flora and fauna, as well as pest and crop diseases, and what crops can be grown. Rising temperatures may extend the breeding season of predators, like possums, which will in turn threaten our native birds.

By 2100, on average, there will be up to 60 more 'summer days' each year, with temperatures reaching above 25°C. Winter's highest daily maximum temperatures will increase by 5-7°C depending on location. We're likely to see more heat stress from heatwaves affecting plant, animal, and human health.

As climate change impacts upon other regions, we may see inward migration into our district. Aotearoa New Zealand could be seen as a life raft by many global citizens, so it is likely that we will see an increase in migration to our country, and our district.

These predictions are from a report by Bodeker Scientific for QLDC. The full report is available on our website. www.qldc.govt.nz/your-council/our-vision-mission/climate-action-plan

Our climate is likely to change in the following ways.



The district is likely to warm by several degrees, with a projected increase in some areas of up to 7°C.



A considerable reduction in mountain snowpack and resultant water storage, with snowmelt occurring earlier in each season. This will lead to a reduction in the volume of water through the spring melt season in addition to a variability in freeze-thaws.



Summers will get warmer with maximum temperatures from December to February increasing by as much as 6-9°C. Summer daily minimum temperatures may increase between 2-3°C depending on location.



Rainfall distribution and intensity is likely to change, with a greater likelihood⁶ of more extreme rainfall events.



On average, there will be about 12-64 fewer frost days, and up to 60 more 'summer days' each year (i.e. a daily maximum temperature above 25°C).



It will also get warmer over the winter months with the seasonal lowest minimum temperatures increasing by 2-3°C



Precipitation that would previously have fallen as snow and stored in the snowpack will more likely fall more often as rain and contribute to variability in river flows and lake levels.



Winter's highest daily maximum temperatures will increase by 5-7°C depending on location.





10 Our progress

Queenstown Lakes District climate action timeline

2017

JULY 2017

Mayor Jim Boulton signs the New Zealand Local Government Leaders' Climate Change Declaration.

2018

SEPTEMBER 2018

The first greenhouse gas profile for the district is completed.

FEBRUARY 2019

Council, Waka Kotahi NZTA and Otago Regional Council form the Way to Go Group to collaborate on planning a sustainable, accessible and connected transport system.

FEBRUARY 2019

Council begins community engagement on the Climate Action Plan 2019-2022.

APRIL 2019

Bodeker Scientific report outlines climate change implications for the district.

APRIL 2019

Council commits to Zero Carbon Communities, Deafening Dawn Chorus, and Disaster Defying Resilience as part of Vision Beyond 2050.

2019

JUNE 2019

Council declares climate and ecological emergency.

JULY 2019

Council introduces new three-bin kerbside collection service to better support residential recycling.

AUGUST 2019

Wakatipu Active Travel Network Business Case endorsed by Way to Go Group and funding allocated to commence design of Stage 1 trails.

2019 – ONGOING

Climate change and sustainability is set as a core principle of the Whaiora Grow Well | Queenstown Lakes Spatial Plan.

2020

MARCH 2020

Council signs up to the carbon accounting platform EBench, to monitor its organisational emissions.

MARCH 2020

Council adopts its first Climate Action Plan 2019-2022, following extensive community engagement.

JUNE 2020

Six projects receive funding from Council Waste Minimisation Community Fund, which aims to reduce and divert waste from landfill.

JUNE 2020

Waste diversion from landfill built into a site clearance contract for the Lakeview Development, resulting in 87% of construction and demolition waste diverted.

JULY 2020

Council appoints its first Climate Action Coordinator.

AUGUST 2020

Council established a Climate Reference Group, made up of climate experts and community leaders.

AUGUST 2020

A multi-agency project on natural hazards adaptation starts in Glenorchy.

AUGUST 2020

Council begins its transition to an electric fleet.

SEPTEMBER 2020

District Emissions Profile finalised.

NOVEMBER 2020

The district's first Emissions Reduction Roadmap and Carbon Sequestration Study are completed. These reports set out a pathway for achieving net zero carbon emissions by 2050, and look at the district's ability to capture and store atmospheric carbon.

NOVEMBER 2020

The second greenhouse gas profile for the district is completed.

FEBRUARY 2021

The Queenstown Transport Business Case is endorsed, unlocking NZ Upgrade Funding for public transport improvements along SH6 and 6A.

FEBRUARY 2021

A multi-agency project to reduce the risk of wildfire to the Mt Iron community starts.

2021

2021

MARCH 2021

QLDC with the Climate Reference Group makes a 37-page submission to He Pou a Rangi Climate Change Commission.

MARCH 2021

QLDC participates in a Local Government NZ trial to incorporate a carbon accounting approach in the design of infrastructure.

APRIL 2021

Otago Gets Ready is launched to build community resilience and help communities share information and support during emergency events.

APRIL 2021 – ONGOING

Council continues to advocate for climate actions through submissions on various regional and national policies and plans.

MAY 2021

Council partners with Enviroschools to run climate change workshops with primary and high school students.

JUNE 2021

Climate change emerges as a significant theme during consultation for QLDC's 2021-31 Ten Year Plan and Council makes changes to the plan as a result.

JUNE 2021

Otago Regional Council completes its first Regional Greenhouse Gas Inventory, working with Otago's five city and district councils.

JUNE 2021

The gas capture and destruction system at Victoria Flats Landfill is completed. This will improve air quality, reduce greenhouse gas emissions and reduce odour at the landfill.

JULY 2021

Nine projects receive funding from Council's 2021 Waste Minimisation Community Fund which aims to reduce and divert waste from landfill.

JULY 2021

Construction starts on the Luggate Memorial Centre, thought to be New Zealand's first community facility built to passive house standard.

JULY 2021

Community engagement on the development of the Destination Management Plan (with a goal of Regenerative Tourism by 2030), begins.

OCTOBER 2021

Council sponsors the WAO Summit in Wānaka, a six day community-led event promoting sustainability and climate action.

2022

2022

Climate Action Plan 2022-2025.



11 The challenges we face

Responding to climate change isn't always easy.

The challenges we face are complicated and often involve strongly divergent views over the complex array of benefits, trade-offs, and constraints.

11.1 THE CHALLENGE OF CLIMATE LEADERSHIP

We know that our community wants to see leadership from QLDC. Not only are we one of the largest employers in the district, we also invest a significant amount in public infrastructure. The way we work and invest matters and this plan will ensure that Council activity considers the climate and the environment. QLDC also has a role in supporting community and business activity and making connections so that we work together as a district to achieve our aspirations for climate change and biodiversity. Obviously this isn't something we can do alone – nearly every challenge we face will require a team effort from everyone in the district. Our ambition is for QLDC to be a leader and learner and embed climate action into our organisational culture.

11.2 THE CHALLENGE OF URBAN GROWTH

Growth is a loaded term. For some it inspires optimism and aspiration, for others frustration and concern. From one perspective, growth means more carbon emissions, more waste, more congestion. From another it means improved urban design, greater access to services, and improved transport networks.

The Queenstown Lakes Spatial Plan⁷ sets out how and where our communities will be developed to ensure our social, environmental, and economic prosperity.

The shape and form of our cities, towns and neighbourhoods influences how we live and get around, which can have a big impact on emissions and biodiversity, for example:

- > Higher density dwellings generally require less energy to heat.
- > Creating live-work-play neighbourhoods reduces the distance people need to travel.
- > Improving public transport and active transport opportunities will provide a genuine alternative to travelling by car.
- > Establishing indigenous vegetation, biodiversity corridors, and riparian plantings to support biodiversity and honour the mauri of our district.

11.3 THE CHALLENGE OF TOURISM

The economy in the Queenstown Lakes District has been dominated by the visitor economy for decades, but in recent years there has been increasing discomfort with the impact that visitors have on our communities and environment.

A priority initiative within the Spatial Plan and the previous Climate Action Plan has been to develop and implement a Destination Management Plan based upon sustainable development principles. The urgent need for this approach has been highlighted during the pandemic, with both businesses and communities calling for tourism to intentionally 'build back better'.

QLDC has partnered with Destination Queenstown and Lake Wānaka Tourism to develop the district's first Destination Management Plan, which is aiming for regenerative tourism by 2030. Destination management is a model that has been used internationally for some time and it relates to the coordination of infrastructure and amenities, visitor experience and marketing and promotion⁸.

⁷ www.qldc.govt.nz/your-council/council-documents/queenstown-lakes-spatial-plan

⁸ Further information can be found at www.mbie.govt.nz/immigration-and-tourism/tourism/destination-management-guidelines/

However, this traditional definition is insufficient in a time of uncertainty and climate change, so a more forward-thinking approach also now incorporates te ao māori, resident experience, productivity, emissions reduction and environmental protection.

The Destination Management Plan will take into account the needs of all of our people, employees, businesses, the climate and our environment⁹. Its focus will be on achieving regenerative tourism by 2030 – the right solution, in the right place, for the right people at the right time – for the benefit of the environment and our communities. It will be completed in mid 2022.

11.4 THE CHALLENGE OF PUBLIC TRANSPORT

Getting around by public transport helps reduce congestion on our roads and reduces the emissions from private cars.

We know that our community wants a better public transport service. The 2021 Quality of Life survey for Queenstown Lakes showed that while there has been an increase from the previous year in the proportion of residents who use the bus to commute on a weekly and daily frequency (11%, up from 9% in 2020), there has also been an increase in those who never catch the bus (71%, up from 65% in 2020). Only 20% of respondents agreed that public transport met the needs of the community.

The delivery of public transport is the responsibility of Otago Regional Council. We are partnering with the regional council to improve the bus service network for our residents, as well as advocating to decarbonise the bus fleet. Community bus trials are underway to better understand the need for public transport in the Upper Clutha.

11.5 THE CHALLENGE OF AGRICULTURE

Agriculture accounts for 32.4% of total emissions in the district.

The majority of these emissions are biogenic methane from the livestock in farms across the district, but fertiliser is also a contributor. Agriculture is the largest emitter of greenhouse gases for Otago and New Zealand, so it is a critical area of focus for the entire country.

Specific targets around biogenic methane reduction have been established and a five-year programme, He Waka Eke Noa, is underway to equip farmers and growers with the information, tools and support they need to reduce emissions and build resilience to climate change.

Within our district there are many examples of leading advocates, farm carbon reduction programmes, and regenerative farming practices that are helping to enable this sector transformation. While Council has limited control to accelerate progress with this

transformation, we fully support the local leadership that is being shown and will continue to explore opportunities to promote and advocate for this change.

11.6 THE CHALLENGE OF AIR TRAVEL

Aviation accounts for 17.34% of total emissions in the district.

Queenstown Airport is the fourth busiest airport for passenger numbers in the country and is the gateway to Central Otago and the Southern Lakes regions. This makes Queenstown Airport an important economic driver of the region's tourism industry and the wider local economy.

Queenstown Airport Corporation (QAC) is a Council-Controlled Trading Organisation with two shareholders – Queenstown Lakes District Council (75.1%) and Auckland Airport (24.9%).

The Council has clearly signalled sustainability and the reduction of QAC's carbon footprint as strong drivers for the strategic direction of Queenstown Airport. This includes a commitment to work with, and influence, strategic airline stakeholders in the pursuit of carbon reduction objectives and technologies. As well as a requirement to understand climate change risk, including the associated financial and legal issues.

The reliance of our district on aviation for our economy, including the tourism industry, and the contribution of the aviation industry to emissions will continue to be a focus for the Council, and our community. Evolving technology such as electric or hydrogen powered aircraft will be a critical factor in addressing this challenge.

11.7 THE CHALLENGE OF WASTE

Managing waste is a major challenge across the world. Reliance on single-use and short-lived products is creating pressure on our environment. Globally, we need to transition to a circular economy – where we keep items produced in use for longer, where waste and pollution is designed out of products, and natural systems are regenerated.

Our transition to this future state will take time and we will still need to manage the waste of the district in the most efficient way possible while driving down greenhouse gas emissions (e.g., methane).

The New Zealand Emissions Trading Scheme (ETS) regulates emissions for the waste sector. Scope Resources currently operates the Landfill at Victoria Flats, Gibbston. We ensure compliance with the ETS which includes payment of ETS levies for the emissions generated.

In 2021 a landfill gas capture and flare system was installed, which will significantly decrease emissions released into the atmosphere. In some landfills, it is

possible to capture and reuse the gas emitted from the landfill. Currently the landfill does not produce enough gas for this to be possible, however we'll continue to assess the gas output for opportunities to reuse the gas in the future.

Our principal focus is to reduce reliance on the landfill and divert high emitting materials such as organic waste away from landfill to be reused as compost or soil improvements.

A copy of the current Waste Minimisation and Management Plan (WMMP) can be found here www.qldc.govt.nz/your-council/council-documents/strategies-and-publications. The National Emissions Reduction Plan and National Waste Strategy will include a greater focus on waste emissions and Council will review its WMMP to respond to these new targets and regulatory requirements.

11.8 THE CHALLENGE OF COMMUNICATION

We know that it's hard to keep up to date with everything that is happening in the climate and biodiversity space.

We also know that to help support community education and behaviour change you need more than a webpage and quarterly newsletters.

That's why we are committed to ongoing communications to make it easy and simple for people to find the latest information that they are interested in. We also want to increase the visibility of the amazing work that is happening across the district and collaborate with community and partner organisations to run campaigns and education initiatives that are innovative, engaging and based around the best behaviour-change principles.



12 How was the plan developed?

We began developing this plan in April 2021.

The development of the plan and the prioritisation of actions and ideas has involved extensive engagement with a wide range of community groups, experts, not-for profit organisations, and partner agencies.

| STAKEHOLDER ENGAGEMENT | SUMMARY |
|--|--|
| APRIL 2021 | |
| Submissions on the 2021-31 Ten Year Plan | Of the 504 submissions on the 2021-31 Ten Year Plan, 240 provided feedback and recommendations on climate action, showing an appetite for Council to take more action. |
| Review process kicked off | The Climate Reference Group provided recommendations on the outcomes and structure of the plan. A key recommendation was to create a sixth outcome for biodiversity. |
| JUNE 2021 | |
| QLDC internal climate action hui | Staff shared ideas for accelerating climate action both within the organisation and across the district. |
| JULY 2021 | |
| Blue-sky workshop with QLDC Councillors and Wānaka Community Board | Elected members shared their enthusiasm to see more climate action in the district. A topic of particular interest was the development of communities that allowed for live, work and play within neighbourhoods. |
| Climate Reference Group | Strong sentiments came through around both education for local communities and on the role of QLDC in advocacy to Central Government. |
| Regenerative Recovery Advisory Group | Suggestions included a focus on collaboration and cooperation between organisations, community groups and QLDC, and to look at a 100-year horizon. The group also presented their final report in July ¹⁰ , following a year of work in support of the district's recovery programme. Report recommendations were fed into climate action planning. |

¹⁰ www.qldc.govt.nz/media/rosjz4s5/regenerative-recovery-advisory-group-final-report.pdf

| AUGUST 2021 | |
|--|---|
| Community stakeholder hui | Council's Climate Action Team assisted the Climate Reference Group in organising a hui for local advocates and experts to provide input and ideas. The most popular topics were around transport mode shift and biodiversity. |
| QLDC staff suggestions | Numerous staff provided detailed input into the plan. Feedback was varied, ranging from technical infrastructure or planning suggestions to embedding climate action into culture and decision making. |
| Whakatipu Conservation Collective | Discussion focused on exploring actions in the new biodiversity outcome could look like. |
| OCTOBER 2021 | |
| WAO Summit | WAO Summit attendees voted on their priorities for the Plan. 'Regenerating our natural environment' and 'designing neighbourhoods where we can live, work, learn and play without getting in the car' came out on top. |
| Enviroschools Climate 101s | Council's Climate Action Team collaborated with Enviroschools to provide Climate 101 sessions. Climate action ideas from tamariki focused on transport, food, energy, and waste. Transport was a particular interest, with the students keen to see more active travel options for them. |
| NOVEMBER – DECEMBER 2021 | |
| Suggestions refined and prioritised | <p>All community and stakeholder input was collated into a list of 600 suggestions. These suggestions were prioritised, combined, cut and refined to a list of 134 actions.</p> <p>The Climate Reference Group identified 68 of these actions as priority actions and provided recommendations on the plan outcomes. A key recommendation was for the plan to be renamed the Climate <i>and</i> Biodiversity Plan.</p> <p>Council's Climate Action Team then further developed and refined the prioritised actions with action owners and partners.</p> |
| DECEMBER 2021 – JANUARY 2022 | |
| Stakeholder feedback received and benchmarking exercise undertaken | The list of actions was shared with key stakeholders and feedback sought. 30 stakeholders responded with comments. A benchmarking exercise was conducted against other local government bodies internationally, based upon Climate Emergency UK's checklist. |
| FEBRUARY 2022 | |
| Draft plan finalised | The plan was improved and finalised based on recommendations from the Climate Reference Group, Councillors and the Executive Leadership Team. |



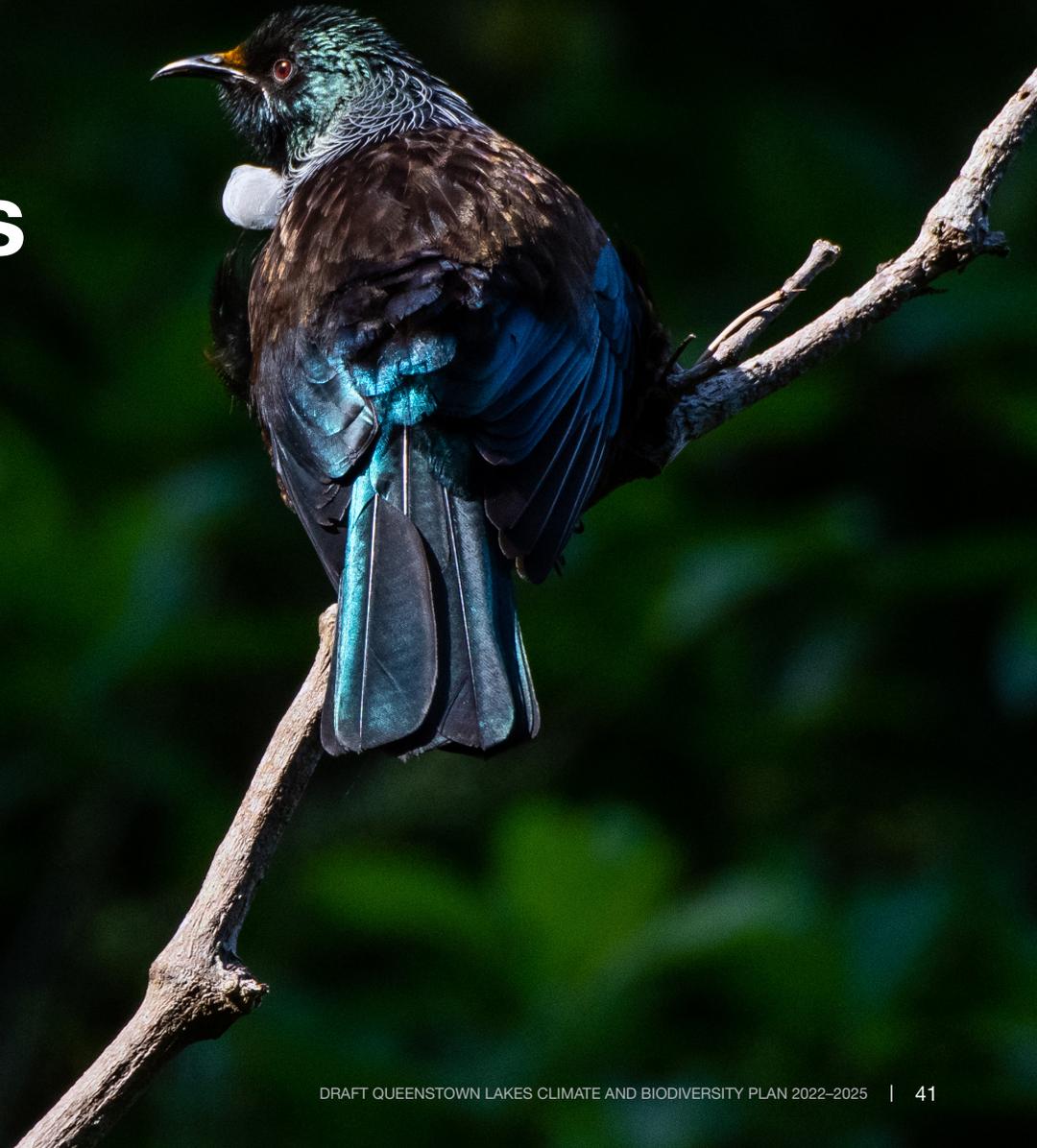
Climate action kōrero at the 2021 WAO Summit.



Queenstown Primary School's Enviro Group learning about the greenhouse effect in their tunnel house.

13 Action plan

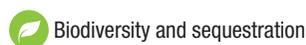
**Outcome one:
QLDC demonstrates
ambitious climate
leadership**



| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|--|--------------------------|-------------|------------------|---------|---------|-------------------------------------|--|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| Climate action is in our organisational DNA | | | | | | | | |
| 1.1 | <p>Deliver a council-wide work programme that supports significant organisational culture change, led by the internal Climate Action Group. Support a range of projects that transform the way we work and demonstrate that QLDC prioritises climate action. The Climate Action Group will support the delivery of change initiatives such as:</p> <ul style="list-style-type: none"> > Embedding sustainability into everyday decision making > Waste minimisation and circular economy > Staff use of lower emissions transport > Energy saving > Upskilling staff > Encouraging innovation > Sustainable purchasing and catering > Staff volunteering activities | Strategy & Development | | | | | \$ |    |
| 1.2 | Ensure climate change and biodiversity considerations and carbon accounting assessments are integral to the process of all new business cases. Identify tools to model scenarios. | All | | | | | \$ \$ |    |
| 1.3 | <p>→ Ensure climate change and biodiversity considerations are integral to all Council reports and decision making. Identify tools to model scenarios.</p> | All | | | | | \$ \$ |    |
| 1.4 | <p>Pledge our commitment to the international effort to limit global warming to 1.5 degrees Celsius. Key areas of action will include:</p> <ol style="list-style-type: none"> a. Pledge to support the United Nations Framework Convention on Climate Change Race to Zero campaign to help enable a district-wide focus on emissions reduction. b. QLDC joining a certified carbon reduction programme and committing to an organisational target. c. Updating the district Emissions Reduction Roadmap to take into account changes from the National Emissions Reduction Plan and latest sector transition strategies. d. Partnering and supporting local organisations who are leading the way in climate action and sector transformation e.g. Wao, WAI Wānaka, Wastebusters, Sustainable Queenstown, Destination Queenstown, Lake Wānaka Tourism. | Strategy & Development | | | | | \$ |  |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|--|--|---|-------------------------------|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| 1.5 | a. Conduct a carbon baseline of the 2021-2031 Ten Year Plan. b. Develop and agree an approach to carbon accounting across key statutory plans. Include guidance for assessing the relative climate impact of proposed initiatives in the 2023-2024 Annual Plan and 2024-2034 Ten Year Plan. | Strategy & Development, Property & Infrastructure | | | | | | |
| 1.6 | Develop and annually review the Procurement Guidelines so that they support staff to make smart buying decisions that deliver on the Procurement Policy and the Climate and Biodiversity Plan. | Procurement | | | | | | |
| 1.7 | Develop a QLDC internship pathway for students to support their career progression into the field of sustainability, biodiversity, or climate action. | Strategy & Development, HR | | | | | | |
| Our policies, strategies and plans are a springboard for district-wide climate action | | | | | | | | |
| 1.8 | Deliver integrated spatial planning decisions on land use, urban development, transport planning and natural corridor networks which help to reduce emissions, regenerate biodiversity and improve climate change resilience across the district. The below is a focus of the joint priority initiatives: a. Higher density dwellings which generally require less energy to heat. b. Creating live-work-play neighbourhoods reducing the distance people need to travel. c. Locating more houses near quality public transport and active transport, providing an attractive alternative to travelling by car. d. Designing compact settlements that reduce the requirement for new infrastructure, and the associated embodied carbon in construction. e. Encouraging mode shift to public transport to reduce emissions. | Strategy & Development | Grow Well Whaiora Partnership | | | | | |
| 1.9 | Conduct an assessment of potential obstacles to low impact living* in QLDC's policy framework (including the District Plan and Housing Strategy). Understand what barriers and opportunities exist to supporting households to reduce their emissions and improve their climate resilience. | Planning Policy | | | | | | |

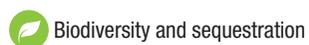
* Low impact living: a way of living where a person makes intentional choices to limit their impact on the environment.



| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|------|--|---|----------------------------------|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| 1.10 | Embed climate mitigation and adaptation, waste minimisation and biodiversity considerations into the policy development process for the Planning and Development Policy work programme. | Planning Policy | | | | | | |
| 1.11 | Include a standard assessment of climate and biodiversity impact and opportunities in the review of policies and bylaws. | Strategy & Development | | | | | | |
| 1.12 | Work with Otago Regional Council on a programme of climate change risk assessments, adaptation plans and natural hazard risk assessments studies to support community resilience projects and the implementation of a risk-based land use planning framework. | Strategy & Development, Planning Policy | Otago Regional Council, Kāi Tahu | | | | | |
| 1.13 | Develop a sustainability policy to require all QLDC commercial and community properties to develop plans for the following: <ul style="list-style-type: none"> > Waste minimisation > Energy efficiency > Water efficiency Require commercial operators entering new leases on QLDC property to provide full emissions reduction and waste minimisation plans that align with QLDC's Climate and Biodiversity Plan. | Property, Parks | | | | | | |
| 1.14 | Continue to integrate mitigation, adaptation and biodiversity into any future update of the QLDC's Land Development and Subdivision Code of Practice. Include a review of the Approved Materials, with a view to encouraging developers to use lower carbon construction materials and shift to circular economy options. | Property & Infrastructure | | | | | | |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---------------------------------------|--|---|-------------|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| We have our own house in order | | | | | | | | |
| 1.15 | Develop an Emissions Reduction Plan for QLDC's operations. Establish the scope of the plan with the boundary outlined in QLDC's 18/19 Carbon Footprint Report and align targets with limiting global warming to 1.5 degrees Celsius. | Strategy & Development | | | | | | |
| 1.16 | Integrate climate action into all levels of infrastructure delivery from planning through to completion of the projects. This would include: <ul style="list-style-type: none"> a. The Climate Action Team being a key partner in the development of the next 30 Year Infrastructure Strategy and 2024-34 Ten Year Plan. b. Take a Dynamic Adaptive Planning approach to infrastructure investment and renewals. This means council plans, policies and projects will be updated to outline how infrastructure and services will continue to adapt to the future impacts of climate change. Ensure the community is engaged as part of community adaptation conversations. c. Requiring projects with moderate or high climate impact to value and assess the relative 'whole of life' emissions impact of shortlisted options, include sustainability in design, and establish emissions-related tolerances for construction and ongoing operation of assets/services. | Property & Infrastructure | | | | | | |
| 1.17 | Convert the water heating at Alpine Aqualand, Wānaka Recreation Centre and Arrowtown Pools from LPG to cleaner energy sources. | Sport & Recreation | | | | | | |
| 1.18 | Deliver the actions in the QLDC Organisational Travel Plan and continuously review the plan. | Strategy & Asset Planning, Strategy & Development, Property, HR | | | | | | |
| 1.19 | Utilise appropriate eco-design and low impact principles in all QLDC build and refurbishment property projects, including thorough consideration of timber and sustainable construction methods, as well as renewable energy technology. | Property, Strategic Projects | | | | | | |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|---|--|-------------|------------------|---------|---------|-------------------------------------|---|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| We enable community behaviour change | | | | | | | | |
| 1.20 | Communicate and engage with the public on the climate impacts we can expect in the district and the actions required to mitigate, adapt, and build resilience. Activities may include community workshops and displays about climate science, climate action, waste minimisation and the circular economy. Share and celebrate positive action and case studies across the district, promoting the good work of community groups, businesses, and others. | Communications, Strategy & Development | | | | | \$ \$ |    |
| 1.21 | Design and deliver campaigns for the public that encourage emissions reduction. Use campaigns to inform and educate but ensure this is underpinned by behaviour change science and enabling behaviour change through design (e.g., wayfinding on active travel routes) and incentives/disincentives. This may include active travel, waste minimisation, and recycling. Encourage others to share our campaign materials. | Strategy & Development, Communications | | | | | \$ \$ |  |
| 1.22 | Develop a website featuring local climate change impacts and action. To include a local evidence base for climate action and adaptation; a household emissions calculator and reduction tool; information about grants, subsidies, and resources for new builds and home improvement initiatives such as insulation, heating, and solar panels; funding information for community initiatives and case studies. | Strategy & Development, Communications | | | | | \$ \$ |    |
| Zero waste is just something that we do here | | | | | | | | |
| 1.23 | Divert organic material from landfill. This includes: > food scraps > garden waste > timber > fats oils and grease (trade waste) > cardboard and paper > biosolids | Waste | | | | | \$ \$ \$ |  |
| 1.24 | Increase funding for the Waste Minimisation Community Fund and continue to support local waste minimisation projects. | Waste | | | | | \$ \$ |  |
| 1.25 | Continuously measure and improve wastewater treatment emissions. | Property & Infrastructure | | | | | \$ \$ \$ |  |





**Outcome two:
A low-emission
and effective
transport system**

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---------------------------------------|---|--|--|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| Our transport network is low-emission | | | | | | | | |
| 2.1 | <p>Work with Otago Regional Council and Waka Kotahi New Zealand Transport Agency to plan and implement a local public transport system that is frequent, affordable, and meets the needs of local communities, comprising;</p> <p>a. Advocate for increased public transport frequency, coverage, and facilities in the Whakatipu Basin as part of Otago Regional Council's Public Transport Business Case (2022).</p> <p>b. Ensure public transport is promoted in master planning and business cases, including the Wānaka Network Optimisation Business Case (2022-23).</p> <p>c. Deliver projects alongside Waka Kotahi and Otago Regional Council to improve public transport infrastructure and services in the Whakatipu Basin. This ranges from adding and upgrading bus shelters, improved lighting and cycle facilities, to more major works, such as improving route services (frequency and accessibility) (2021-2027); improving Frankton transport hub and intersection upgrades to improve traffic flows for public transport (2024 – 2027). Further major projects are planned beyond 2027 to develop new transport hubs in Frankton and Queenstown.</p> <p>d. Work with and support local organisations to run public transport trials in the Upper Clutha (2022 – 2027)</p> <p>e. Through the Grow Well Whaiora - Spatial Plan identify and promote potential regional public transport services to increase public transport connections within our wider region (2024 – 2027)</p> | Transport Strategy | Otago Regional Council and Waka Kotahi | | | | \$ \$ | |
| 2.2 | Accelerate investment in dedicated active travel networks and infrastructure, including improved access to public transport hubs, education facilities and other key destinations. Explore opportunities for QLDC to prioritise and directly fund infrastructure that enables active travel. | Transport Strategy | Otago Regional Council and Waka Kotahi | | | | \$ \$ \$ | |
| 2.3 | Provide accessible cycle and micro-mobility parking, e.g. scooters, in our town centres including secure options. | Transport Strategy | Local organisations | | | | \$ | |
| 2.4 | Identify, prioritise and improve road crossings for pedestrians, particularly at areas of high exposure to traffic, long waits at signals or significant distances between controlled crossing points. | Transport Strategy, Operations & Maintenance | Waka Kotahi | | | | \$ \$ \$ | |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|--|--------------------------|--|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| 2.5 | Conduct a study on how QLDC can support and accelerate the investment of electric vehicle (EV) charging infrastructure in the district. Explore incentives to encourage electric vehicle uptake (e.g. dedicated parking) through the District-wide Parking Strategy and Comprehensive Management Plans. | Transport Strategy | EV charging infrastructure providers | | | | | |
| 2.6 | QLDC expects the Queenstown Airport Corporation to action the following as defined by QAC Statement of Intent: a. Develop an emissions reduction plan to reduce its organisational greenhouse gas emissions in line with a 1.5°C science-based target. b. Implement the emissions reduction plan and report on progress annually. c. Advocate to government for sustainable aviation emissions reduction strategies. d. Work collaboratively with the aero industry and airlines to maximise the opportunity to reduce the carbon footprint associated with flying into and out of the district. | Corporate Services | Queenstown Airport Corporation | | | | | |
| We work together to change the way we travel | | | | | | | | |
| 2.7 | Reduce car use and encourage uptake of other transport options through the 'Traffic Demand Management' initiative. This will include: a. Behaviour change initiatives. b. District-wide Parking Strategy and Comprehensive Parking Management Plans. c. Promoting cycle and micro-mobility parking to the public. d. Review of the car-pooling scheme, including incentives for car-pooling by providing priority parking and priority lanes. | Transport Strategy | Otago Regional Council and Waka Kotahi | | | | | |
| 2.8 | a. Partner with local organisations to promote active travel and public transport. b. Support local organisations, businesses and communities to develop their own low emission travel plans, which will encourage how their people move around the district. | Transport Strategy | Local organisations | | | | | |
| 2.9 | Partner with businesses to deliver active travel and shared transport solutions and innovations, such as community bike or car-share schemes. | Transport Strategy | | | | | | |

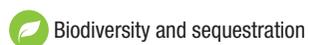
Outcome three: A low-emission and climate resilient built environment



| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|--|------------------------------------|--|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| We lead the way with low carbon infrastructure and buildings | | | | | | | | |
| 3.1 | <p>Minimise the embodied carbon (carbon emitted in the production of the materials such as concrete and steel) in the design and construction of QLDC buildings and infrastructure. Transition towards more sustainable materials and construction techniques. Particularly:</p> <p>a. Consider using reduced carbon cement for all QLDC property and infrastructure projects.</p> <p>b. Investigate whether regional demand could influence suppliers to provide reduced carbon cement options, and work with the industry to enable these opportunities.</p> | Property & Infrastructure | | | | | \$ \$ \$ | |
| 3.2 | Review the Energy Chapter of the District Plan to remove barriers to small scale and community scale renewable energy solutions. | Planning Policy | | | | | \$ \$ | |
| 3.3 | Support energy demand management technologies, tools and behaviour change to decrease peak energy usage. | Strategy & Development | Power companies | | | | \$ | |
| 3.4 | <p>Increase the promotion and availability of sustainable building design expertise and education products to the community. This will include:</p> <p>a. Partnering with the NZ Green Building Council and Superhome movement to enable improved access to design expertise, technologies and best practice techniques, to minimise waste and emissions in the design of new homes.</p> <p>b. Developing guides which go beyond the building code and promote sustainable and resilient housing and buildings.</p> | Building Services, Planning Policy | NZ Green Building Council & Superhome movement | | | | \$ | |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|--|--|---|------------------------|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| Our infrastructure is resilient to the changing climate | | | | | | | | |
| 3.5 | Assess the vulnerability of our roading and three water network assets (and the services using it) to climate change impacts. Use this evidence base to guide the planning of our infrastructure resilience programme. | Strategy & Asset Planning | | | | | | |
| 3.6 | Track the development of the National Adaptation Plan (due August 2022) and translate into local requirements. | Strategy & Development | Otago Regional Council | | | | | |
| 3.7 | Develop an adaptation framework with regional partners that specifically addresses future climate hazards and vulnerabilities. | Strategy & Development, Planning Policy | Otago Regional Council | | | | | |
| Our water resources are resilient and managed responsibly | | | | | | | | |
| 3.8 | a. Deliver an updated Water Demand Management Plan. b. Invest in innovative approaches to encourage sustainable water use, such as smart water metering, to help conserve water, reduce water network emissions and reduce the pressure on wastewater and stormwater systems. | Strategy & Asset Planning | | | | | | |
| 3.9 | Investigate options for incentivising the installation of residential rainwater collection tanks to help reduce the burden on stormwater networks and support water conservation. | Planning & Development | | | | | | |

Also check out Outcome One infrastructure and building related actions: 1.2, 1.3, 1.4, 1.5, 1.6, 1.14, 1.16 and 1.19

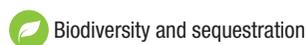


Outcome four: Communities are low-emission and climate resilient



| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|--|---|--------------------------|---|------------------|---------|---------|-------------------------------------|---|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| We support the development of thriving, climate resilient communities | | | | | | | | |
| 4.1 | Identify any risks to the culturally significant Wāhi Tūpuna and heritage sites across the district arising from the effects of climate change. | Planning Policy | Kāi Tahu | | | | \$ \$ |  |
| 4.2 | ↳ Undertake a study of the socio-economic and community wellbeing implications of climate change for the district, to help support future planning around climate adaptation and an equitable transition for all members of our community. | Strategy & Development | Public Health | | | | \$ \$ |  |
| 4.3 | Promote community-led initiatives and energy sector partnerships to implement resilient, affordable and sustainable energy solutions. | Strategy & Development | | | | | \$ |  |
| 4.4 | Continue the development of a Community Response Group network across the district. Provide training, resources, planning support and promotion to ensure these groups have the necessary capability and capacity to support their local community during emergency events. | Strategy & Development | Emergency Management Otago, Otago Regional Council | | | | \$ |  |
| 4.5 | Build capacity, resourcing and relationship networks across the social services and health sector, to ensure that the welfare of our communities can be effectively supported during emergency events or periods of prolonged stress. | Strategy & Development | Emergency Management Otago, Social Services & Health sector | | | | \$ |  |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|--|--------------------------------------|------------------------------|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| We grow a resilient and low carbon local food system | | | | | | | | |
| 4.6 | Launch a Queenstown Lakes Food Network that brings together community stakeholders to develop a shared vision of a resilient, low carbon and regenerative local food system. | Strategy & Development, Parks, Waste | Food system key stakeholders | | | | \$ | |
| 4.7 | <p>→ Develop a roadmap of initiatives and funding opportunities to accelerate and scale up community food system projects across the district. These could include:</p> <ul style="list-style-type: none"> a. Community garden initiatives across all communities in the district b. Supporting the Pataka Kai movement for community pantries c. Increasing the commitment to urban edible planting d. Mapping of fruit and nut foraging sites across the district e. Supporting community education f. Building the capacity of our food recovery and community food services network g. Bringing trail building, conservation and edible planting together where appropriate | Strategy & Development, Parks, Waste | Food system key stakeholders | | | | \$ \$ \$ | |
| 4.8 | Support composting, gardening skills, food growing hubs and the development of community composting. | Waste, Strategy & Development, Parks | | | | | \$ \$ \$ | |
| We accelerate community-led climate action | | | | | | | | |
| 4.9 | Create a live schedule of all climate action and waste minimisation related community and QLDC projects underway in district. Understand stage of development, barriers, opportunities and how QLDC can support. Develop clear criteria for assessment. | Strategy & Development, Waste | | | | | \$ | |
| 4.10 | → Invest in a Council Climate Action and Biodiversity contestable fund to support innovative community and business projects that respond to climate change. | Strategy & Development | | | | | \$ \$ \$ | |
| 4.11 | Support and promote programmes that increase the engagement of young people and build their views into climate action planning. | Strategy & Development | Education providers | | | | \$ | |



Outcome five: Low-emission businesses thrive



| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|--|-------------------------------|--------------------------------------|------------------|---------|---------|-------------------------------------|---|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| Tourism is regenerative by 2030 | | | | | | | | |
| 5.1 | <p>Partner with the Regional Tourism Operators to create a Destination Management Plan to achieve regenerative tourism by 2030. The plan must take a whole of system approach and include:</p> <ul style="list-style-type: none"> > Partnership with Kāi Tahu > Emissions and waste reduction initiatives and measures across the visitor economy > Capability building programmes for businesses, community and the workforce > A marketing model that attracts values-based visitors > Visitor mode shift from private vehicles to public and active transport > Tools to help visitors to give back e.g. to biodiversity enhancing initiatives > Effective targets, data and monitoring > Strong community engagement | Strategy & Development | Regional Tourism Organisations, QLDC | | | | \$ \$ |   |
| 5.2 | <p>Implement the actions outlined in the Destination Management Plan.</p> | Strategy & Development | Regional Tourism Organisations, QLDC | | | | \$ \$ |   |
| We support businesses to transition to a low emission future | | | | | | | | |
| 5.3 | Amplify and support a service or programme to assist businesses to be energy efficient, reduce greenhouse gas emissions, waste and water use. | Strategy & Development | | | | | \$ \$ |  |
| 5.4 | Develop a Diversification Plan that includes climate action as a key principle. | Strategy & Development | | | | | \$ \$ \$ |  |
| 5.5 | Develop a sustainability plan template with guidelines for event organisers and embed this into the processes for QLDC's event approval and funding. | Strategy & Development, Waste | | | | | \$ |  |

Outcome six: The natural environment flourishes



| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|---|-------------------------------|--|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| We integrate native regeneration and carbon removal | | | | | | | | |
| 6.1 | Collaborate with regional partners to undertake a study on the impact of climate change on native flora and fauna in the district. | Strategy & Development, Parks | QLDC, Otago Regional Council, Kai Tāhu | | | | \$ \$ | |
| 6.2 | <p>Partner with Kāi Tahu, Central Government and our community to deliver a strategy to achieve a flourishing natural environment throughout our district, which will also deliver on the Grow Well Whaiora Spatial Plan Priority Initiative 15 (develop open space network plans). Consider:</p> <ul style="list-style-type: none"> > Balancing competing objectives around carbon sequestration, fire resilience and biodiversity regeneration of terrestrial and freshwater ecosystems > Strategic direction and/or recommendations from the 2020 Sequestration Study, Tree Policy, the Otago Ecosystems and Habitat Mapping, the Blue-Green Network and other relevant plans and strategies > Plant species and increasing nursery capacity > Pest control > Catchment rehabilitation > Protecting ecosystems of national or regional significance e.g. alpine tussock land and wetlands > Collaboration with conservation trusts to achieve landscape-scale outcomes | | | | | \$ \$ | | |
| 6.3 | Use the strategy to direct QLDC's planting and plant and animal pest control programmes. Use the document to inform biodiversity and sequestration actions for the next Climate and Biodiversity Plan. | Parks, Strategy & Development | Otago Regional Council | | | | \$ \$ \$ | |
| 6.4 | Conduct a review of how Council can adopt more environmentally friendly methods to controlling pest plants to minimise and/or eliminate the use of agrichemicals such as glyphosate. This will involve trialling new technologies and methods such as wilding, meadowing, alternative agrichemicals and weed control methods. | Parks | | | | | \$ \$ | |

| # | ACTION | QLDC RESPONSIBLE TEAM(S) | PARTNERSHIP | YEAR OF DELIVERY | | | ESTIMATED COST (OVER 3 YEAR PERIOD) | GOAL |
|---|--|-------------------------------|--|------------------|---------|---------|-------------------------------------|------|
| | | | | 2022-23 | 2023-24 | 2024-25 | | |
| 6.5 | <p>a. Regenerate Coronet Forest as an exemplar of native biodiversity and a recreational hub.</p> <p>b. Develop plans for other council land that has high biodiversity potential, including Mt Iron, Matakauri Wetland, Ben Lomond and Queenstown Hill.</p> | Parks | | | | | | |
| We increase the impact of our local conservation organisations | | | | | | | | |
| 6.6 | Support capability building for staff, volunteers and board members within local conservation trusts through initiatives such as governance training, conservation standards workshops, conference funding and knowledge sharing. | Strategy & Development | QLDC, Community South, Regional Community Trusts | | | | | |
| 6.7 | Create a live schedule of all biodiversity related community and QLDC projects underway in the district. Understand stage of development, barriers, opportunities and how QLDC can support. Develop clear criteria for assessment. | Strategy & Development, Parks | | | | | | |
| 6.8 | Invest in a Council Climate and Biodiversity Fund to support innovative community and business projects that respond to climate change, including public education programmes. Include a public participative process for allocation e.g. finding ways to engage a wider group in the allocation of the funding. | Strategy & Development | | | | | | |



14 Indicators framework

The following draft measures will help us monitor progress towards the six outcomes.

The below are draft measures to monitor progress towards the six outcomes defined in this plan. Once these measures have been finalised, initial data will be obtained, and monitoring targets set.

| OUTCOME | MEASURE | DATA SOURCE |
|--|--|---|
| All | District's gross and net greenhouse gas emissions | Otago Regional Greenhouse Gas Emissions Profile |
| | Number of complete and in progress actions across the Climate and Biodiversity Plan | Internal |
| QLDC demonstrates ambitious climate leadership | Community satisfaction with QLDC measures for protecting the environment | Quality of Life survey |
| | Community satisfaction with QLDC measures for protecting biodiversity | Quality of Life survey |
| | Percentage of annual council spend committed to climate adaptation, mitigation, and biodiversity initiatives | Internal |
| | QLDC organisational emissions | Annual Organisational Greenhouse Gas Emissions Inventory |
| | Emissions from landfill | Annual Organisational Greenhouse Gas Emissions Inventory |
| | Volumes of waste/materials diverted from landfill | Monthly reporting |
| A low-emission and effective transport system | Transport greenhouse gas emissions | Otago Regional Greenhouse Gas Emissions Profile |
| | Kilometres travelled by bus passengers within the district | Otago Regional Council |
| | Counters on key active travel routes | Internal – Parks/Roading/Cycle/Pedestrian counter portal, Ecovision |
| | Community satisfaction with public transport in the district | Quality of Life survey |
| | Percentage of community who regularly use an alternative transport method | Quality of Life survey |
| | Number of public EV charging ports in the district | Waka Kotahi NZTA |
| | Number of EV registered in the district | Waka Kotahi NZTA |
| | Number of bike parking facilities | Internal – Transport & Parks |
| | Length of improvements/additions to active travel network | Internal |

| OUTCOME | MEASURE | DATA SOURCE |
|---|---|---|
| A low-emission and climate resilient built environment | QLDC capex projects aimed at reducing greenhouse gas emissions | Internal |
| | Average household energy usage | Infometrics |
| | Emissions from infrastructure delivery compared to baseline | Internal |
| | Energy sources used for home and water heating | Quality of Life survey |
| | Water demand management – measure TBC | |
| Communities are low-emission and climate resilient | Percentage of community concerned with climate change | Quality of Life survey |
| | Percentage of community implementing actions to reduce their environmental impact | Quality of Life survey |
| | Number of community response groups formed | Emergency Management Otago |
| | Percentage of Community Response Groups completed emergency hub training | Emergency Management Otago |
| | QLDC funding for community projects that address the outcomes of this plan | Internal |
| Low-emission businesses thrive | Number of businesses in the district signed up to New Zealand Tourism Sustainability Commitment | Tourism Industry Aotearoa |
| | Greenhouse gas emissions reduction of businesses that have taken part in QLDC funded programmes | Data provided by programmes |
| | Number of events with a sustainability plan | Internal |
| The natural environment flourishes | Water quality | Otago Regional Council; Land, Air, Water Aotearoa |
| | Terrestrial and wetland biodiversity indicators | Otago Regional Council (TBC) |
| | Bird counts | Department of Conservation |
| | Areas of reserves and open space | Internal |
| | Percentage of QLDC land with active regeneration work | Internal (TBC) |
| | Funds committed to conservation trusts | Internal |
| | Carbon sequestered by vegetation | Land use, land use change and forestry (LULUCF) - Otago Regional Greenhouse Gas Emissions Profile |





15 Annex

15.1 Council advocacy for climate action

Council plays an important role in providing feedback to Central and Regional Government over proposed changes to policy, plans and legislation.

IN THE PAST THREE YEARS COUNCIL HAS MADE SUBMISSIONS ON BEHALF OF THE COMMUNITY ON THE FOLLOWING TOPICS:

| |
|---|
| Ministry for the Environment – New Zealand Waste Strategy – 10 December 2021 |
| Ministry for the Environment – Emissions Reduction Plan Discussion Document – 26 November 2021 |
| Otago Regional Council – Proposed Otago Regional Policy Statement – 3 September 2021 |
| Ministry for the Environment – Natural and Built Environments Bill Exposure Draft – 4 August 2021 |
| Climate Change Commission’s first package of advice- 26 March 2021 |
| Ministry for the Environment – Reducing the Impact of Plastic on Our Environment – 4 December 2020 |
| Ministry for Business, Innovation and Employment – Building for Climate Change – 11 October 2020 |
| Ministry for the Environment – Climate Change Adaptation Survey – 20 October 2020 |
| Natural Environmental Standards for Air Quality – Particulate Matter and Mercury Emissions – 31 July 2020 |
| Ministry for Business, Innovation and Employment – Accelerating Renewable Energy and Energy Efficiency – 6 March 2020 |
| Ministry for the Environment – Joint Submission on the Draft National Policy Statement for Indigenous Biodiversity – March 2020 |
| Ministry for the Environment – Reforming the New Zealand Emissions Trading Scheme Proposed Settings – 28 February 2020 |
| Ministry for the Environment – Action for Healthy Waterways – 31 October 2019 |
| Environment Select Committee – Climate Change Response (Zero Carbon) Amendment Bill – 1 July 2019 |
| Submission on the New Zealand Biodiversity Strategy – 2019 |
| Otago Regional Council – Feedback on the ORC’s Biodiversity Action Plan 2018-2023 – 22 November 2018 |
| Ministry for the Environment – Proposed Mandatory Phase-out of Single-use Plastic Bags – 13 September 2018 |
| Local Government New Zealand – Local Government Position on Climate Change Mitigation – 16 August 2018 |

15.2 Key dates for national climate and biodiversity action

| |
|---|
| November 2019 – Climate Change Response (Zero Carbon) Amendment Act passed. |
| August 2020 – Department of Conservation released Te Mana o Taiao – Aotearoa New Zealand Biodiversity Strategy 2020 for the protection, restoration and sustainable use of biodiversity 2020 to 2050. |
| December 2020 – the New Zealand Government declares a national climate emergency. |
| January 2021 – He Pou a Rangī Climate Change Commission released their recommendations for emissions reduction pathway and carbon emissions budgets for 2022-2035. |
| February 2021 – the intended repeal of the Resource Management Act and replacement with 3 new actions, including the Climate Change Adaptation Act announced. |
| April 2021 – first National Climate Change Risk Assessment was released. |
| October 2021 – Ministry for the Environment released a discussion document for transitioning to a low emission and climate resilient future. |
| November 2021 – Ahead of COP26 the Government announces it is increasing the NZ national determined contribution commitment to 50% reduction of carbon emissions by 2030. |





MARCH 2022

 **Climate
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**QUEENSTOWN
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COUNCIL**