



Draft Environment and Sustainability Strategy



Kupu Taki

Foreword

A "Sustainable South Taranaki" is one of Council's key Community Outcomes in the 2021-2031 Long-Term Plan. We want to ensure that South Taranaki is a sustainable District, that manages its resources in a way that preserves the environment for future generations, so that our tamariki and mokopuna can enjoy the lifestyle and advantages that we currently enjoy.

The need for this Strategy has been driven by a recognition that climate change and environmental issues are something that Council and the South Taranaki community are increasingly worried about, and will need to actively address, now and into the future. The science is clear: the way we currently live is damaging our natural environment, and it won't get us to our Paris Agreement targets of net zero emissions by 2050 (see Appendix 1 for further reading on this).

To meet these challenges, and our increasing legal obligations and requirements from the Government, the Council has developed this Environment and Sustainability Strategy. Environmental sustainability and climate change are dynamic and fast-changing areas, so this Strategy will need to be a living document that drives our journey towards continual improvements, based on best-practice scientific advice, governmental standards, and changing legislation. Our first steps will be understanding our own organisational sustainability, the impacts our activities have on the environment, where the big gaps and issues are, and how we can make significant improvement on this.

The Strategy has a range of actions under four key themes that our communities have told us that they want and expect decisive action on: Sustainable Resource Management, Environmental Protection, Climate Change and Waste Minimisation. These themes also focus on the areas where we believe we can have the greatest impact on our journey to become more environmentally

VIBRANT SOUTH TARANAKI (Cultural Well-being)



A vibrant and creative District that celebrates diversity and has strong relationships with lwi/Hapū.

TOGETHER SOUTH TARANAKI (Social Well-being)



A District with healthy, safe, resilient, informed and connected people.

PROSPEROUS SOUTH TARANAKI

(Economic Well-being)



A prosperous District with a sustainable economy, innovative businesses and high quality infrastructure.

SUSTAINABLE SOUTH TARANAKI

(Environmental Well-being)



A sustainable District that manages its resources in a way that preserves the environment for future generations.

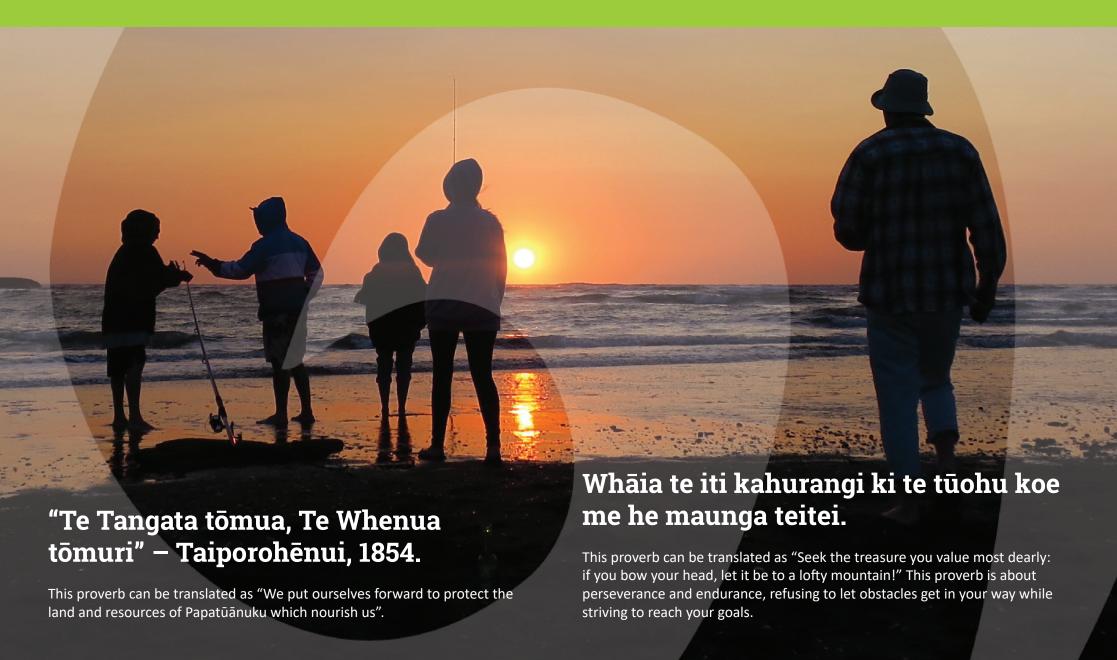
sustainable, reduce our emissions and our waste, and adapt to climate change impacts.

We want to holistically integrate environmental sustainability and climate change considerations into everything we do: from managing the Districts' infrastructure and public facilities, to the community events we run, and everything in between. However, empowering our communities and ensuring a fair and equitable transition to a low emissions future, in line with the Taranaki 2050 Roadmap, will be the key to creating an equitable, environmentally sustainable and resilient future for all of us.

None of us can address these challenges alone, so this Strategy also describes how Council can work with our communities, Iwi and hapū, partners, local groups and businesses, and central and local government. We need to work together, as a Council, as a community, and as individuals, to take action right now, and join the cities and communities around the world who have recognised the need for urgent action on the environmental and climate change crises.

Whakatauki

Proverbs



Tirohanga Rautaki

Strategy Snapshot

Our Vision

Sustainable South Taranaki:

A District that appreciates its natural environment and its physical and human resources in planning, delivery and protection.

Goal 1: Sustainable Resource Management

Ensure Council is sustainably managing the natural and physical resources for the District for future generations

Outcomes

- Environmental sustainability is at the heart of all our activities, projects, governance and decision-making
- Best-practice scientific evidence informs our work
- We invest in sustainable infrastructure and interoperable monitoring systems so that we can deliver on our Strategy goals
- We manage our finances in an environmentally sustainable and environmentally ethical way
- The custodianship of Mātauranga Māori knowledge systems, practices and teachings inform and underpin environmental sustainability responses, actions and decisions.

Why is this Strategy important

The natural world we live in and rely on is in trouble. All aspects of our physical, social, cultural and economic well-being are dependent on our natural environment and the resources it provides us. As a community leader, Council will use this Strategy to drive improvements in environmental sustainability across our organisation and District, so that together we can move towards a more resilient, low emissions, environmentally healthy and sustainable future.

What we want to achieve by 2051

Goal 2: Environmental Protection

Ensure we recognise and protect places of natural heritage and outstanding natural features and landscapes across the District

Outcomes

- Our natural ecosystems and species are protected, resilient and connected
- Our natural resources are managed sustainably for future generations
- Our flourishing biodiversity provides nature-based solutions to climate change and other environmental issues
- Our communities have the skills, knowledge and capability to be effective and active guardians of our natural ecosystems and species
- Collaboration and partnerships are delivering better outcomes for our ecosystems and species
- Kaitiaki are recognised and resourced to protect their environment and taonga species

Goal 3: Climate Change

Plan for, and respond to, the impacts of climate change through emissions reduction, mitigation and adaption plans.

Outcomes

- We develop a Climate Action Plan to ensure we are adequately mitigating for and adapting to climate change
- We consider climate change in all our decisions
- We reduce organisational emissions that contribute to clime change so that we are a nett CarbonZero organisation by 2035
- Through our partnerships and collaboration, we facilitate a just transition to nett Carbon-Zero across the District by 2050
- We reduce the negative impacts of climate change across the District
- Our communities understanding and resilience to climate change impacts increases over time
- Mātauranga Māori informs and underpins climate change work programmes

Our Commitment

We are committed to improving environmental sustainability across or District, so that ecosystems, and their finite resources, functions and provisioning are sustainably managed to remain healthy, resilient and usable for future generations.

Goal 4: Waste Minimisation

Continue to implement waste minimisation initiatives and improve our waste infrastructure.

Outcomes

- We implement our Waste Management and Minimisation Plans targets
- We aim to become a ZeroWaste District by 2050
- We provide improved local disposal options and waste management infrastructure to increase the amount of waste diverted from landfill
- We continue to implement and promote waste minimisation initiatives
- We actively work with communities, Iwi, marae-pā and waste minimisation groups to promote District-wide ZeroWaste initiatives and events through education, advocacy and collaboration.

Implementation and Measuring Success

Measuring Success

Progress towards our Strategy outcomes will b regularly assessed and publicly reported on. Reporting will focus on both the delivery of implementation actions (output monitoring) and progress towards the outcomes (outcome monitoring). The Strategy will be fully reviewed every 3 years to ensure it remains fit-for-purpose.

Working Together

We all have a role to play in living more sustainably, protecting and restoring our natural environments, and ensuring we are proactive in our planning for climate change impacts. The Strategy describes an underlying set of principles for how we can work together to achieve a more sustainable future for all our communities.

Implementation

Each of our goals and outcomes have specific action and implementation plans and timeframes for achievement. Our Strategy is a living document, so progress on our goals, outcomes and actions will be evaluated regularly and can be revised to ensure we stay on track.

Ihirangi

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Section 1

Horopaki me te Whakataki Context and Introduction

He aha te toitu te taiao?

What is environmental sustainability?

What is environmental sustainability?

Environmental sustainability has been defined by the International Institute for Sustainable Development as 'To meet the needs of the present, without compromising the ability of future generations to meet their own needs¹.' Sustainability is the foundation for today's leading global framework for international cooperation - the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs)² (see <u>Appendix 2</u> for more information on the SDGs).

The 17 SDGs were adopted by all United Nations Member States in 2015, and they provide a shared blueprint for peace and prosperity for people and the planet, now and into the future. They are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

The overarching Goals for this Environment and Sustainability Strategy align with the 17 UN SDGs. This allows South Taranaki to work towards a vision of environmental sustainability that is in line with global aspirations and agreements. Integration and cross-alignment with the SDGs will allow Council to report on and benchmark our progress against other similar agencies, both nationally and internationally.

¹ International Institute for Sustainable Development: https://www.iisd.org/

² Sustainable Development Goals: https://sdgs.un.org/goals

Ngā pōraruraru taiao kei mua i a tātou

Environmental issues we are facing

Environmental issues we are facing

Council acknowledges that environmental sustainability and climate change will challenge and change the way we live, work and play in South Taranaki, both now and into the future. Mitigation and adaptation to these issues, and supporting our communities through the transition to a low emissions future, are key components of this Strategy.

Climate change poses an unprecedented level of risk to New Zealand's natural and built environment. Our District is already experiencing the effects of a changing climate, and, over the last decade, we have felt the impacts of more frequent droughts, extreme weather and heavy rain events, and flooding and coastal inundation. In the future, these climate change impacts are expected to increase in frequency and severity.

Whilst we can project future climate changes and sea level rises nationally, there is still uncertainty on how much and exactly when these changes will occur, especially at a local level. However, as a Council, we have direct responsibility for environmental planning and implementing Government regulations, so adapting to and minimising the impacts of climate change are significant challenges that our Council must face.

All local authorities are at the frontline of planning for climate change adaptation and we also have a leadership role to play in emissions reduction, climate change

mitigation, and improving the environmental sustainability of our District. The decisions that are made today (or even where no decision is made) about infrastructure, land and water use and urban development will determine the extent and impact of climate change, community vulnerability and resilience outcomes for our future generations³.

As a region, Taranaki is at the forefront of climate change adaptation and sustainability in New Zealand, which is being driven through the Taranaki 2050 roadmap and transition process and the Tapuae Roa economic development plan. Recently, politicians, industry leaders and communities have been advocating for a complete mindset change and economic reset after the COVID-19 crisis has ended^{4,5,6,7}.

This crisis presents Council with a key opportunity to shift away from a recovery/rebuild of the economy as it previously was and move towards greater long-term environmental sustainability across our District, via a fair and equitable transition to a more resilient, regenerative and redistributive economy.

We all know the climate change threats facing South Taranaki, but new research shows changes are happening faster than we thought, and the threats to our current way of life are increasing:

- our mean annual temperature is rising;
- rainfall and drought patterns are changing;
- our coastlines are being increasingly damaged by ongoing rises in sea level.

³ LGNZ Position Statement on climate change: <u>LGNZ-Climate-Change.pdf</u>
⁴ The Guardian, 2020: <u>Covid-19-crisis-reset-economies-sustainable-footing</u>
⁵ Lawyers for Climate Action, 2020: <u>https://www.lawyersforclimateaction.nz/news-events</u>

⁶ Build Back Better, 2020: <u>https://buildbackbetter.co.nz/publications/</u>

⁷ Climate Change Commission, 2020: <u>Climate-Commission-advice-re-stimlus.pdf</u>

Ngā take nui ki te Kaunihera me te Takiwā

Key issues for the Council and the District

What this means for South Taranaki⁸ New Plymouth Coastal hazards - There is likely to be increased risk to coastal roads and infrastructure from coastal erosion and inundation, increased storm severity **North Taranaki New Plymouth District** and sea-level rise, threatening vulnerable beaches and low-lying areas. **Erosion and landslides** – More frequent and intense heavy rainfall events are likely to increase the risk of erosion and landslides. Flooding is likely to become more frequent and severe. **Central Taranaki Drought** – By 2090, the time spent in drought ranges from **Stratford District Taranaki** minimal change through to more than double, depending Taranaki Maunga Stratford on the climate model and emissions scenario considered. More frequent droughts are likely to lead to water shortages, increased demand for irrigation and increased risk of wildfires. Eitham Kaponga **Disease** - Warmer winters may alleviate cold-related illnesses Ōpunaké™ and reduce cold-related deaths, while hotter summers will likely cause heat stress and promote the spread of sub-tropical diseases and their vectors, like mosquito-borne diseases, for example. **South Taranaki** Biosecurity – Warmer, wetter conditions could increase the risk of invasive District Manaia pests and weeds over time. Climate change can adversely affect important Hāwera ecosystems and their functioning. Agriculture – Warmer temperatures, a longer growing season and fewer frosts could provide opportunities to grow new crops. Farmers might benefit from faster growth of pasture and better crop growing conditions. However, these benefits may be limited by negative effects of climate change Pātea such as prolonged drought or greater frequency and intensity of storms. Competition for water resources Waverley may increase, and greater stock losses may be experienced because of more extreme weather events. Waitōtara

He aha te pānga ki Taranaki ki te Tonga

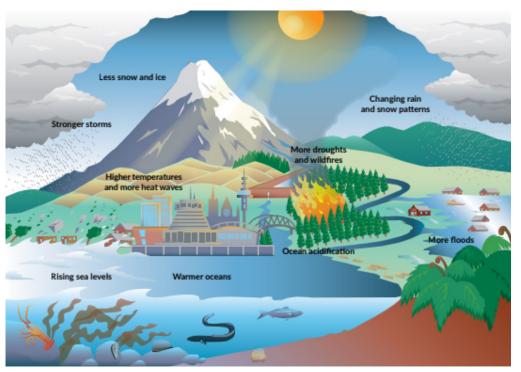
What this means for South Taranaki

Climate change adaptation is inherently tied to **greenhouse gas emissions**. Lowering the emissions profile of STDC and South Taranaki as a District are key components of this Strategy. As an organisation, STDC uses a lot of energy and other resources. Council have multiple facilities around the District that use relatively large amounts of energy and water, we have a moderate sized fleet predominantly made up of petrol and diesel-powered vehicles, and we run and manage much of the primary infrastructure supporting our communities, all of which means we have a relatively large organisational emissions and resource footprint.

South Taranaki is an economic and industrial powerhouse, heavily reliant on primary industries and its related industrial processing plants, and an onshore and offshore extraction industry for non-renewable energy resources. These activities have transformed the landscape, and use large quantities of water, energy and other natural resources. As a result, South Taranaki has very high relative emissions and resource footprints per capita.

Environmental protection for our native biodiversity and ecosystems is also a key focus of our Strategy. Native biodiversity helps provide clean water, nutrient cycling, mahinga kai (food provisioning) and materials for other purposes such as raranga (weaving) and rongoā (medicinal uses). Aotearoa New Zealand and South Taranaki's indigenous biodiversity and natural ecosystems are in continual decline, so restoring, preserving and enhancing these is crucial to achieving long-term sustainability.

The New Zealand Government released the draft National Policy Statement for Indigenous Biodiversity in November 2019⁹, followed by the New Zealand Biodiversity Strategy in August 2020. Together these documents provide an overview of the extent of the threats and pressures on our indigenous biodiversity and ecosystems, and map a path forward so that damage to



Infographic from the National Climate Change Risk Assessment, 2020

ecosystems is prevented, and as many of our remaining species, habitats and ecosystems as possible persevere⁹.

The draft National Policy Statement for Indigenous Biodiversity is expected to be finalised and gazetted in mid-2021, so this Strategy aligns with the actions and objectives described in that document.

Kei whea te Kaunihera inaiānei?

Where is Council now?

Waste minimisation is a huge issue for New Zealand. As a nation, we have one of the highest rates of per capita waste production in the OECD, and one of the lowest rates of reuse and recycling. Central government and our communities are increasingly demanding action to reduce the amount of waste we produce and send to landfill.

We need to improve the efficiency of our resource use and reduce disposal of waste to landfill. Currently, 40% of the District's waste going to landfill is organic and compostable. We need to address this problem and try to divert this large amount of reusable organic waste away from landfills, which would also reduce the emissions from that organic waste as it decomposes.

Nationally and locally, we need to shift our purchasing behaviours from a Linear Economy to a Circular Economy¹⁰. This means designing out waste and pollution from the beginning of a product's life cycle, keep materials and resources in use for as long as possible, extract the maximum value from them whilst they are in use, and then recover and regenerate products and materials at the end of each life¹¹. This in contrast to a linear life cycle, where we take resources, make them into a product, use that product and then dispose of it as waste to a landfill¹¹.

Where is Council now?

As a local Council, we are well-positioned to lead and coordinate work across our communities to help reduce emissions and improve environmental sustainability outcomes. We are a direct provider of infrastructure and services, and indirectly influence many activities responsible for emissions and the environmental impacts of building and development.

As an organisation, Council is a large employer, consumer, customer, major owner of assets and a major energy user in our growing District. Therefore, Council is ideally placed to make a meaningful contribution towards greater environmental sustainability and reducing the greenhouse gas (GHG) dependency of our organisation and District, in line with the Taranaki 2050 Roadmap, Tapuae Roa, and central government legislative work programmes.

One of the goals of this Strategy is for Council to become carbon neutral by 2035. However, climate change will still happen in spite of our mitigation actions, and therefore adaptation to these changes will be equally important. Adaptation will involve reducing the amount of harmful effects of the changing climate and working to maximize any beneficial effects. This Strategy will also help prepare the South Taranaki District and our communities for the developing wider regional and national environmental sustainability and climate change legislative programmes, and contributes to meeting New Zealand's international commitments in these areas.

¹⁰ Aotearoa-new-zealand-biodiversity-strategy/

¹¹ MFE, 201: https://www.mfe.govt.nz/waste/circular-economy

Kei whea te Kaunihera inaiānei? Where is Council now?

In 2019, Council formed a new Environment and Sustainability Team, whose initial focus was on:

- completing baseline audits and analyses of our organisational carbon emissions for the 2017/18 and 2018/19 financial years. These audits clearly showed that in order to reduce our emissions, Council needs to strategically focus our efforts on transitioning our highest emitting facilities to renewable energy sources and offset what we can't reduce via native reforestation on Council-owned land throughout the District;
- reviewing the strategic gaps in our waste management infrastructure, and implementing a commercial composting trial to attempt to address the enormous amounts of compostable organic waste currently going to landfill across the District;
- reviewing the strategic gaps in our Significant Natural Areas and biodiversity programmes, and assessing what is required to bring us in line with best-practice standards and upcoming biodiversity legislative reform.

However, further detailed and complex inter-linked work programmes are now required to address the above gaps and take action to improve our strategic approach to environmental sustainability across the organisation — **that is why Council needs an Environment and Sustainability Strategy.**

This Strategy will drive and direct a cohesive, integrated, cross-organisational, long-term work programme focussed on increasing our environmental sustainability, reducing our emissions, improving the infrastructure for management of our waste and adapting to climate change here, which will involve working strategically and collaboratively with others across the District.

In order to inform the 2021-2031 LTP budget and actions, our Environment and Sustainability Strategy also needs to ensure that:

- Council is compliant with new legislative requirements;
- a consistent cross-organisational approach is taken to reducing our emissions and embedding environmental sustainability initiatives across Council activities;
- budgets in the 2021-2031 LTP address specific actions needed to address current and predicted gaps and issues;
- Council can facilitate improved environmental sustainability outcomes across the business and the District.

Section 2

Ö Mātou Whainga Paetae Our Goals

He aha ngā whainga o te Kaunihera?

What does Council want to achieve?

What does Council want to achieve with this Strategy?

- 1. We want to continuously improve environmental sustainability across our organisation and District, so that ecosystems, and their finite resources, are sustainably managed to remain healthy, resilient and usable for future generations.
- 2. We want our Environment and Sustainability Strategy to be a living document that can be proactive to new opportunities that drive improved organisational efficiency as well as better environmental and sustainability outcomes across the District.
- 3. We want this Strategy to reflect our values and the foundations we need to succeed in the face of increasing environmental challenges, including how we work together as a District to ensure no one is left behind, and how we embed mātauranga Māori and Te Ao Māori principles in our work programmes.

Our communities have told us that they want and expect decisive action on environmental and sustainability issues, and the four priority environmental goals from our South Taranaki Community Vision exercises have been defined as Sustainable Resource Management, Environmental Protection, Climate Change and Waste Minimisation.

To deliver on our goals we have a range of Actions, which focus on the areas where we believe we can have the greatest impact on our journey to become more environmentally sustainable, reduce our emissions and help our communities adapt to climate change. Increasing the scale and pace of action will be hard but, done well, our actions can deliver broader environmental, economic, social and health benefits for everyone in South Taranaki.

The priority focus areas in the following goals and actions have been developed through reference to a number of sources, including, but not limited to:

- 1. A range of other New Zealand Councils' and high-profile businesses' Environmental and/or Sustainability Strategies;
- 2. Guidance from the Ministry for the Environment, Local Government NZ, the New Zealand Sustainable Business Council, among others;
- 3. Advice, technical expertise and guidance from members of the Local Government Climate Change Network.

As such, the following goals and actions follow current best-practice recommendations on New Zealand's key environmental sustainability issues and the actions required to address these, aligned with our Community Vision Goals and focusing on where local government can make the biggest difference.

Toitū te Rawa Taiao

Goal 1 - Sustainable Resource Management

Sustainably manage the natural and physical resources of the District for future generations

The natural and physical resources that we rely on for life have been depleted and degraded for many years. The future wellbeing of our community depends on the District being environmentally, socially and economically sustainable. This means that all activities we undertake across the District will need to ensure that our natural resources are sustainably managed for future generations.

This will include continuing our support of community groups and non-governmental organisations (NGOs) like Sustainable Taranaki and EnviroSchools, upgrading and improving our current infrastructure, and managing activities across our organisation to ensure environmental outcomes are improving across the District.

Toitu te Rawa Taiao - Sustainable Resource Management Actions:

ENVIRONMENTAL LEADER- SHIP	Council will demonstrate leadership in environmental stewardship and best-practice sustainability by applying an environmental sustainability and climate change framework to all Council policies, plans, projects, governance and decision-making processes. We will ensure that best-practice scientific evidence informs this work.
ADVOCACY AND EDUCATION	We will ensure that our communities understand and support the uptake of environmental sustainability initiatives, through continuing advocacy and environmental awareness and education campaigns covering climate change, biodiversity, freshwater and waste minimisation.
SUSTAINABLE DEVELOPMENT	We will support and promote environmentally sustainable infrastructure development and construction practices.
ETHICAL INVESTING	We will ensure our finances and investment portfolios are managed in an environmentally sustainable and ethical way using ESG (Environmental, Social, and Governance) criteria.
STATE OF THE ENVIRONMENT REPORTING	Council will publish triennial Environment and Sustainability State of the Environment reports, to maintain transparency in its environmental sustainability work programme and actions, based on a comprehensive measurement and monitoring framework (see Section 4). We will ensure that our environmental activities and goals align with Local Government Community Wellbeings ¹² and the UN SDGs (see Appendix 2), so that we can report on and benchmark our progress against other similar agencies, both nationally and internationally.
CROSS-COUNCIL PRIORITISATION	All Council facility controllers, whether asset managers, property managers, or budget holders, for facilities that use energy and create emissions, will have KPIs for energy efficiency and emissions reductions built into their annual work programmes.

¹² SOLGM, 2020: Local Government Wellbeings

Tiakina te Taiao

Goal 2 - Environmental Protection

Recognise and protect places of natural heritage and outstanding natural features and landscapes across the District

New Zealand's indigenous biodiversity and natural ecosystems are in continual decline. Restoring ecosystems and preserving and enhancing biodiversity is crucial to achieving sustainability. The integrity of natural ecosystems is essential for the overall health of the environment and resilience to extreme events. For example, healthy, functioning wetlands provide protection from flooding, remove pollutants from water and absorb carbon from the atmosphere. Flourishing and resilient indigenous biodiversity can provide nature-based solutions to climate change and other environmental issues.

Council will focus on building on any biodiversity or ecosystem protection work already underway and will aim to significantly increase provisions for the maintenance and protection of our indigenous biodiversity and natural heritage across the District.

Council will also continue to work with non-governmental organisations (NGOs) and community restoration groups working towards environmental protection to help them achieve their goals, like the Rotokare Scenic Reserve Trust, QEII Trust, Taranaki Kiwi Trust, Iwi-hapū restoration groups, and Wild for Taranaki, for example.

Our actions will align with Te Mana o te Taiao – Aotearoa New Zealand Biodiversity Strategy 2020¹³ and the proposed National Policy Statement for Indigenous Biodiversity (NPSIB)¹⁴ and ensure we identify, protect, manage and restore indigenous biodiversity, as per our legislative requirements under the Resource Management Act 1991 (RMA).

Tiakina te Taiao - Environmental Protection Actions:

DISTRICT PLAN

Through careful planning and research, serious damage and adverse impacts to our natural environments will be prevented through the District Plan, so that our natural resources are managed sustainably for future generations.

SIGNIFICANT NATURAL AREAS Council will ensure our remaining natural ecosystems and species are protected, resilient and connected, via a network of Significant Natural Areas (SNAs).

ENVIRONMENT AND Landowners will be supported with legally protecting and restoring natural ecosystems on private land through Council's Environment and Natural Heritage Fund NATURAL HERITAGE FUND and rates rebates.

RESTORATION **PROJECTS**

We will support the creation of biodiversity corridors and green spaces to connect large and important habitats throughout the District, and restoration of Council-owned properties and Reserve land, particularly at sites where riparian planting and management is required, and/or where community restoration groups are actively working on Council-owned land.

SUPPORTING OTHERS

Council will actively support and work with Iwi, hapū and community restoration groups and NGOs to help them achieve their environmental goals. We will empower our communities to have the skills, knowledge and capability to be effective and active guardians of our natural ecosystems and species, through environmental awareness and biodiversity restoration initiatives.

COLLABORATION

Collaboration and partnerships are already delivering better outcomes for our natural ecosystems and species. The protection and restoration of biodiversity and ecosystems throughout the District will be aligned with national legislation and regional efforts, including the Project Mounga Taranaki, Lake Rotokare Sanctuary, and Wild For Taranaki biodiversity accord, to which Council is a signatory.

> ¹³ DOC, 2020: Aotearoa-New-Zealand-biodiversity-strategy 2020 ¹⁴MFE, 2019: Draft national policy statement for indigenous biodiversity

Te Rerekē haere o te Āhuarangi **Goal 3 - Climate Change**

Plan for and respond to climate change with mitigation and adaptation plans

Climate change poses an unprecedented level of risk to New Zealand's natural environment, human, economy, built environment and governance (see the National Climate Change Risk Assessment (NCCRA) for New Zealand, 2020 report for further details¹⁵). Adapting to and mitigating the impacts of climate change are significant challenges and need to be a priority focus area for all councils. As the sphere of government with direct responsibility for environmental planning and regulation, much of the responsibility for adaptation falls to local government¹⁶.

The New Zealand Government has initiated actions to transition the country to a low emissions future. Through national and international legislative requirements, New Zealand is committed to becoming a world leader in climate change action.

The 2019 enactment of the Climate Change Response (Zero Carbon) Amendment Act¹⁷ legislation essentially introduces a two-fold action plan for climate change:

- a. Mitigation measures to implement New Zealand's domestic transition to a low-emissions future, in line with the direction of the global economy. Mitigation is about reducing the amount of change to our climate that we will experience in the future, through minimising or preventing the emission of greenhouse gases. Although a certain level of climate change is "locked in" due to greenhouse gases that have already been emitted, if we can reduce emissions now, then future impacts from climate change can possibly be reduced. The Government has set national targets for reducing greenhouse gas emissions.
- **b. Adaptation** measures to plan for and build New Zealand's resilience to ongoing climate change impacts. Adaptation is modifying the way we live

and do things as a result of the changes we will experience, to reduce the impacts of climate change. While there is uncertainty about exactly how the effects of climate change will play out, it is certain that change has already begun, and things are expected to continue to change. How we are able to plan, respond, adapt and change will affect the level to which climate change poses a risk or an opportunity for our communities.

The Climate Change Response (Zero Carbon) Amendment Act 2019 allocates responsibility for a National Climate Change Risk Assessment (the Risk Assessment) and National Adaptation Plan (the Plan) to central government and directs its implementation by local authorities and communities. Council's Strategy will need to align with our legislative requirements under this Act.

¹⁵ NCCRA, 2020: <u>National-climate-change-risk-assessment-new-zealand-2020</u>
¹⁶ LGNZ, 2019: <u>https://www.lgnz.co.nz/climate-change-project/</u>
¹⁷ MFE, 2019: <u>NZ climate change programme</u>

Te Rerekē haere o te Āhuarangi

Goal 3 - Climate Change

Te Rerekē haere o te Āhuarangi - Climate Change Mitigation Actions:

LOW EMISSIONS **FUTURE**

Council will help lead the District as it transitions to a low emissions future, in collaboration with local and central government, and aligned with the Taranaki 2050 Roadmap and Tapuae Roa – through energy efficiency, promotion of walking, cycling and alternative transport, landfill management, and through ensuring there is a high degree of forest cover.

CHANGE

EMBEDDING CLIMATE Climate change is a strategic priority that will be included in and influence all Council plans, projects, policies and decisions.

Council will develop and implement an energy and carbon reduction plan, setting 3-yearly carbon budgets and carbon reduction EMISSIONS REDUCTION pathways, to ensure it is a carbon neutral organisation by 2035 (excluding biogenic methane and nitrous oxide), and that our activities remain aligned with New Zealand's emissions reduction targets and the Paris Agreement.

AFFORESTATION Using One Billion Trees co-funding and through accessing and utilising other co-funding streams, native plant afforestation on Council land will be increased **PROJECTS** to develop carbon sinks for offsetting organisational emissions that cannot be reduced.

RENEWABLE ENERGY

Council assets and infrastructure using energy from fossil fuels will be incrementally upgraded to become more energy-efficient and/or run on energy from renewable sources. Assets with the highest consumption rates will be prioritised for upgrade, e.g., the Hāwera Aquatic Centre, wastewater treatment plants.

GREEN TRANSPORT

We will support the uptake of electric vehicles across the District and promote alternative active transport options by building safe walkways and cycleways (for both recreational and commuting purposes) throughout the District.

RANGATAHI

Council will investigate opportunities to develop critical thinking, communication and leadership skills of youth/rangatahi through a Rangatahi Climate Change Strategy.

Te Rerekē haere o te Āhuarangi - Climate Change Adaption Actions:

MAPPING CLIMATE RISKS

Guided by the National Adaptation Plan and the proposed Climate Change Adaptation Act, climate change related risks in our District will be clearly identified, mapped, and communicated, so that our communities' understanding and resilience to climate change impacts will increase over time.

Council will develop a Climate Action Plan, that will be integrated with the National Climate Change Risk Assessment (NCCRA) (released August 2020) and our RMA legislative instruments (e.g., the District Plan), to:

CLIMATE ACTION PLAN

- a. ensure we are considering climate change in all our decisions and planning for adaptation to climate change across the District,
- b. help Council and our communities to better understand and prepare for the potential risks and impacts to the District from climate change, across all our activities and assets.
- c. ensure that options and pathways for climate risk mitigation, adaptation or managed retreat are developed in consultation with our communities.

INCREASING RESILIENCE Acting on the Climate Action Plan, Council will ensure our communities and infrastructure develop increased resilience to extreme weather events and **AND REDUCING RISK** climate change impacts over time.

Whakaiti Para

Goal 4 - Waste Minimisation

Continue to implement waste minimisation initiatives and improve our waste infrastructure

Like most Districts in Aotearoa, South Taranaki produces an incredible amount of waste, with relatively low recycling and re-use rates. In the 2019/2020 financial year, South Taranaki's transfer stations and kerbside collection sent 10,683 tonnes of refuse to landfill.

To address our waste problem, Council aims to be a ZeroWaste organisation by 2040 and will continue to implement Council's Waste Management and

Minimisation Plan 2018¹⁸, with an initial target of reducing the total amount of waste going to landfill from the District by 5% by 2023.

Council will continue to drive and improve waste minimisation infrastructure and behaviour change, promote collaboration and partnerships, encourage leadership and innovation, and provide accessible services and facilities in our communities.

Whakaiti Para- Waste Minimisation Actions:

WASTE MANAGEMENT AND MINIMISATION PLAN	Council will continue to implement our Waste Management and Minimisation Plan targets (<u>STDC waste-management-and-minimisation-plan</u>).
ZERO WASTE DISTRICT	We will aim to become a ZeroWaste District by 2050.
IMPROVED LOCAL INFRASTRUCTURE	We will investigate how to provide improved localised disposal options and waste management infrastructure to increase the amount of waste diverted from landfill, with an initial focus on: a. Reducing the amount of compostable organic waste going to landfill (currently 40% of our waste profile), b. Reducing the amount of construction waste going to landfill, c. Developing and implementing a diversified and robust recycling system to cope with current and future demand.
CIRCULAR ECONOMY	We will continue to implement and promote waste minimisation initiatives across our communities, and encourage and support localism and a Circular Economy ¹⁹ .
ZERO WASTE EDUCATION	We will continue to actively work with communities, Iwi, marae-pā and waste minimisation groups to promote District-wide ZeroWaste initiatives and events through education, advocacy and collaboration.

¹⁸ STDC Waste-management-and-minisation-plan 2018

¹⁹ MFE, 2020: Circular-economy

Section 3

Whakatinanatia Implementation

Ka taea e te Kaunihera te whakatau nā mātou anake?

Can Council solve all these issues on our own?

Can Council solve all these issues on our own?

Council can improve our own organisational environmental sustainability and reduce our organisational emissions through internal policies, plans and actions.

However, more complex challenges, like improving the District's infrastructure for management of our waste and helping our communities to adapt to climate change will involve working strategically and collaboratively, both internally across our organisation, and externally in partnership with others across the District. We will also need support and additional funding from central government to achieve our environment and sustainability goals.

From an environmental legislation point of view, STDC has a clear focus on biodiversity, climate change adaptation and mitigation, waste management and sustainable development. However, there will be significant overlap with others in these areas, such as TRC, the Taranaki 2050 Roadmap, and the Tapuae Roa Action Plan, and we will need to work together to ensure our work programmes are synergistic, and that Council are not doubling up anywhere (see below for further details on roles and responsibilities).

Tuia te herenga tangata - Engagement and Partnership

Council plays an important role in leading the way for our community and District. To achieve our goals and vision, Council will work collaboratively with key partners such as Iwi, volunteer groups, central and regional government, other local governments, key businesses, community groups, schools, researchers and other stakeholders.

Council also needs to ensure the equal involvement of all appropriate stakeholders and interested parties in discussions to chart the way forward for our long-term environment and sustainability planning – drawing on the collective wisdom of our own people.

Successfully educating and engaging with our communities and developing partnerships will mean clearly outlining roles and responsibilities, including identifying who has control over which aspect of the environment. If overlapping responsibilities exist, then these issues can only be addressed in collaboration with other organisations.

In some areas, where appropriate, Council's role could change over time so that more responsibility is taken on by the community and other groups.

Ngā Kawenga Tāngata

Roles and Responsibilities

South Taranaki

Environmental sustainability is everyone's responsibility. STDC is taking a leadership role by modelling best-practice within our own organisation, but at a District-level Council cannot do this in isolation. Council will work in collaboration with the commitments and aspirations of the Taranaki 2050 Roadmap and Tapuae Roa, helping our region and our citizens to transition to a low emissions future.

Environmental sustainability, waste management and climate change are important conversations for everyone, as these issues will impact on everybody who lives, works and plays in South Taranaki. Our actions in the next decade will help determine the quality, equity and prosperity of our collective future in South Taranaki. Making our District a place where people and the environment can both thrive alongside one another is a task that we can all contribute to. Council has taken a leadership role at a District level in developing this Strategy. We'll continue that by ensuring other strategies, plans and actions support – and do not undermine – delivery of the Environment and Sustainability Strategy actions. STDC will lead many of the actions in the framework and will have an advocacy, partnership, support, delivery or facilitation role in others.

Commitment Levels	STDC Role
International (e.g., conventions and agreements)	Support, advocacy, benchmarking, research, best-practice protocols
National (e.g., legislation, other Councils)	Support, advocacy, implementation, benchmarking
District-level	Leadership, advocacy, collaboration, facilitation, advice
Iwi Environmental Management Plans (EMPs)	Support, facilitation, promotion, advice
Individual or business	Support, facilitation, promotion, advice

Central and Local Government

Partnership with central and other local government is essential to delivering the framework, with clear national direction providing the necessary levers and resources to support climate action.

Central and local government will need to work closely to deliver the aspirations of national and international legislation, Tapuae Roa, the Taranaki 2050 Roadmap, and this Strategy. Many of the actions in this Strategy require central government's support.

Iwi

Working alongside Iwi in partnership will be essential to the success of this Strategy, especially in light of the historical challenges facing Māori land use, the possible distributional impacts and fairness issues of policy and legislative change on Māori, and the need to recognise how Mātauranga Māori approaches to landuse often actively support positive environmental sustainability and biodiversity outcomes.

The four South Taranaki Iwi have identified the critical issues that impact on their ability to protect, enhance and sustain the environment in their own Environmental Management Plans^{20,21,22,23} (EMPs) and strategies.

²⁰ Taranaki Iwi EMP: https://taranaki.lwi.nz/our-environment/
 ²¹ Ngaa Rauru Iwi EMP: https://mgaruahine.iwi.nz/ngaruahine-kaitiaki-plan/
 ²³ Ngati Ruanui Iwi EMP: https://www.ruanui.co.nz/environmental

Ngā Kawenga Tāngata

Roles and Responsibilities

Through the Iwi Liaison Committee, Mana Whakahono a Rohe agreements (where appropriate), and by working directly with mana whenua on key issues, Council will ensure that Te Tiriti o Waitangi/Treaty of Waitangi and treaty partnerships in decision-making are upheld. The custodianship of mātauranga Māori knowledge systems, practices and teachings will help to inform and underpin environmental sustainability responses, actions and decisions.

Private Industry

Businesses are increasingly committed to climate action, particularly in delivering emissions reductions. For example, in 2011, just under 20% of Fortune 500 companies reported on their corporate sustainability and social and environmental responsibility²⁴. In 2019, this figure had increased to 86%, with many of these companies also reporting that their sustainability has also increased their profitability²⁵. Beyond this, industry and business stakeholders will be vital in developing and delivering the innovations required to meet our climate goals. Council must work together with our District's business and industry leaders to ensure South Taranaki's ongoing prosperity, and a fair and equitable transition to a low emissions future.

Residents and Communities

Everyone can make decisions in their daily lives to reduce emissions and build resilience to the impacts of climate change. These decisions range from how we travel around to what we choose to buy and eat.

To deliver real change, Council wants to help our communities understand what they can personally do and also help them harness their residents' and communities' ingenuity and diversity of thought to help change the structures and systems that underpin our economy and society.

Community groups

Iwi, marae, kaitiaki, and community groups are at the forefront of dealing with climate change and environmental sustainability and are already taking action to address these issues. Much of our success will come from helping those who know their local areas and communities best, and helping them to understand and implement the actions that are needed to make real and effective changes.

Researchers and academia

Council acknowledges that we don't have all the answers, and there is still further research required to fill the data gaps that we know exist. Identifying knowledge gaps and providing solutions means that research and innovation will be key to the delivery of our goals and actions. Building capacity and new knowledge across our District by collaborating with researchers and academia will be vital to a fair and equitable transition.

Rangatahi

Ngā rangatahi - as all young people - will hold to account those in power as decision makers for the choices made today will impact on their futures. Rangatahi bring a unique perspective on climate change. We are living in uncertain times with responsibilities to te taiao (the environment), our tūpuna (ancestors) and those who will follow. This requires active participation of rangatahi in decision-making and the delivery and monitoring of actions that will directly impact on their future lives.

²⁴ Fortune 200 companies and sustainability: https://www.sustainability-reports.com
²⁵ Increasing profitability and sustainability for Fortune 500: https://fortune.com/2019/08/19/change-the-world-sustainability-all-stars-2019/

Section 4

Te Arotake Monitoring, Reporting and Review

Aroturukī me te Pūrongo

Monitoring and Reporting

Environment and Sustainability Strategy: Monitoring and Reporting

To ensure that the Actions described in <u>Section 2</u> are implemented, and that Council is moving towards our Strategy goals and outcomes, we will produce a three-yearly State of the Environment Report for each of the Actions detailed in <u>Section 2</u>, which will be available to inform development of the next triennial LTP. Thus, the first State of the Environment Report will be produced in 2023, to inform the 2024 triennial.

The State of the Environment Report will provide detailed updates and results of activities Council undertakes to address each Action and will report on our performance against baseline data from the 2018 Long Term Plan.

The State of the Environment Report will also benchmark our progress against other comparable organisations. As well as reporting against each of the actions in Section 2, Council will specifically measure and monitor the following indicators:

What we are measuring	Key Performance Indicator	Data source	Target
Emissions reduction	STDC organisational emissions	STDC emissions inventory	Annual % decrease in organisational emissions, CarbonZero by 2035
	District-wide emissions by sector District-wide emissions per capita	District-wide GHG Inventory	Annual % decrease in sectorand District-wide emissions, CarbonZero by 2050

Climate change resilience	Quantifying STDC's exposure to climate risk, including financial, economic, legal, environmental risks	STDC Organisational Risk Exposure Assessment (OREA)	OREA completed by 2025 Decline in organisational risk exposure year on year
	Quantifying impacts and costs of predicted severe weather events for District	South Taranaki District Climate Change Risk Assessment (CCRA)	CCRA completed 2025 Decline in risk exposure and associated costs at District-level year on year
Climate change adaptation	Quantifying and map- ping areas that will require management interventions and/or strategic retreat from rising sea-levels or more frequent extreme events, e.g., flooding	South Taranaki District Climate Change Risk Assessment (CCRA)	CCRA completed by 2025
Healthy environ- ment and healthy water	Various biodiversity and ecosystem indicators across freshwater, coastal and marine ecosystems	TRC and MFE State of the Environment Monitoring (SEM) Reports	STDC SEM report shows improvement in indicators year-on-year
	Cultural Indicators	lwi, hapū, mana whenua	Iwi and hapu to decide on indicators
	Percentage landcover change	Manaaki Whenua Land- cover Database, Statistics NZ	No nett loss of indigenous vegetation

Aroturukī me te Pūrongo

Monitoring and Reporting

Economic prosperity	Regional GDP	Statistics NZ	Regional GDP remains stable or increases
	tCO2 per million \$NZ GDP	District-wide GHG Inventory	Decrease year on year in tCO2 per million \$NZ GDP
	Loss of GDP per year associated with climate related extreme events	New measure required	New measure required
Waste reduction	STDC will be a ZeroWaste organisation by 2040	STDC Waste Management and Minimi- sation Plan (WMMP) annu- al monitoring report	Decrease year on year in organisational waste to nett zero in 2040
	Tonnes recycling or reus- able items diverted from landfill per annum from the District	STDC reporting to MFE	Decrease year on year in District-wide waste to nett zero in 2050
	Total tonnes waste to landfill per annum from the District	STDC reporting to MFE	Decreasing number of tonnes of waste collected on average per household per annum.

Environment and Sustainability Strategy: Review periods

The Strategy will be reviewed every three years, in line with triennial development and consultation periods for Council's Long-term Plans. In addition to the above, if required due to significant global or national developments, review triggers will include:

- The next IPCC Assessment Report (AR6 is due June 2022: https://www.ipcc.ch/assessment-report/ar6/);
- Litigation (council or national precedents);
- Regulatory or legislative change;
- Market triggers (e.g. trouble getting finance, insurance, etc.);
- Significant increase in extreme events (outside current modelled predictions)
- Significant increase in exposure to extreme events (e.g. number of houses exposed to x event increasing);
- Post-audit, if audit demonstrates significant gaps in Council reporting or strategic approach.



Kete Kōrero

Glossary

Adaptation (climate change)	Adaptation to climate change means planning and preparing for climate change impacts that are already happening or are expected to happen in the future, such as drought, heat waves, and sea level rise.	Climate change	The 'catch-all' term for the shift in worldwide weather phenomena associated with an increase in global average temperatures. A change in the state of the climate identified (e.g., through statistical tests) by changes or trends in the mean and/or the variability of climatic properties, and that persists for an extended period, typically decades to centuries. Includes natural internal climate processes or external climate forcings such as variations in solar cycles, volcanic eruptions and persistent anthropogenic changes in the atmosphere or in land us (IPCC, 2014).
Adaptive capacity	The ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or to respond to consequences (IPCC, 2014).		
Biodiversity	"Biological diversity" means the variability among living organisms from all sources including, among others, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are		
	part; this includes diversity within species, between species and of ecosystems (Convention on Biological Diversity).	Community emissions	Community emissions result from public or business activities in the District, some of which Council can influence, for example, the movement of people or goods into and out of our public facilities.
Carbon neutral	No carbon emissions are being produced from a product/service e.g. zero-carbon electricity could be provided by a 100% renewable energy supplier.	Council emissions	Emissions resulting from the Council activities that we have direct control over such as:
Carbon Zero	Some emissions are still being generated by a building or process but these emissions are being offset somewhere else, thus making the overall nett emissions zero.		 our vehicle fleet, electricity we use for street lighting, water treatment plants etc, our waste disposal services, and our procurement, contract management and business agreement
Circular	The essential concept at the heart of the circular economy is to ensure		decisions.
Economy	Economy we can unmake everything we make, by designing out waste and pollution from the beginning of a products' lifecycle, keeping products, materials and resources in use for as long as possible, and ensuring we regenerate natural systems instead of continually depleting them.	Exposure	Lack of protection against loss or harm in a hazard zone, affecting the number, density or value of people, property, services, or other things we value (taonga) (MCDEM, 2019).
Climate	The narrow definition of climate is the average weather experienced in an area. More scientifically, climate can be defined as the statistical description of the mean and variability of climatic quantities over months to thousands or millions of years. The classical period for averaging these variables is 30 years, as defined by the World Meteorological Organisation. The quantities are most often surface variables such as	Extreme weather event	An event that is rare at a particular place and time of year. Rare is normally defined as 'as rare as or rarer than the 10th or 90th percentile of a probability density function estimated from observations'. The characteristics of extreme weather will vary from place to place. When a pattern persists, such as a season, it may be classed as an extreme climate event, especially if it yields an average or total that is itself extreme (e.g., a season of drought or heavy rainfall) (IPCC, 2014).
· · · · · · · · · · · · · · · · · · ·	temperature, precipitation and wind. Climate in a wider sense is the state, including a statistical description, of the climate system (IPCC, 2014).	Fossil fuel	A natural energy source formed hundreds of millions of years ago from the remains of dead plants and animals, such as coal, gas and petro- leum. When they are burned, they create greenhouse gas emissions.
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Kete Kōrero

Glossary

Greenhouse gas emissions	The gasses that are released by our daily activities that cause global warming. Activities include travel, food, industrial processes and heating.	Resilience	The capacity of something being able to resist and/or recover from forces that wouldotherwise change it into another state. The capacity of social, economic and environmental systems to cope with a hazardous event, trend or disturbance by responding or reorganising in ways that maintain their essential function, identity and structure, while also maintaining the capacity for adaptation, learning and transformation (IPCC, 2014).
Hazard	The potential occurrence of a natural or human-induced physical event or trend or physical impact that may cause loss of life, injury, or other health impacts, as well as damage and loss to property, infrastructure, livelihoods, service provision, ecosystems and environmental resources		
	(IPCC, 2014).	Risk	The potential for consequences where something of value is at stake and where the outcome is uncertain, recognising the diversity of values. Risk is often represented as probability or likelihood of occurrence of hazardous events or trends multiplied by the impacts if these events or trends occur. It also refers to the potential, when the outcome is uncertain, for adverse consequences on lives, livelihoods, health, ecosystems and species, economic, social and cultural assets, services (including environmental) and infrastructure. Risk results from the interaction of vulnerability, exposure and hazard (IPCC, 2014).
Impacts (consequences, outcomes)	The effects on natural and human systems of extreme weather and climate events, and of climate change. Generally refers to effects on lives, livelihoods, health, ecosystems, economies, societies, cultures, services and infrastructure due to the interaction of climate changes or hazardous climate events within a specific period, and the vulnerability of an exposed society or system (IPCC, 2014).		
lwi	Iwi Environmental Management Plans (EMPs) are holistic documents/	Sustainability and sustainable	
Environmental Management Plans (EMPs)	strategies that identify the critical issues that impact on the ability of mana whenua to protect, enhance and sustain the environment (kaitiakitanga) in their own rohe.		Environmental sustainability or sustainable development is often defined as: 'Meeting the needs of the present, without compromising the ability of future generations to meet their own needs' ²⁶ . Environmenta sustainability is a long game and that is why this Strategy is geared
Kaitiaki/		development	
Kaitiakitanga	The exercise of guardianship by the tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resourc-		towards informing long term planning by council, and consideration of the intergenerational equity that long-term investments require.
	es and includes the ethic of stewardship (section 2 RMA).	Sustainable	The Sustainable Development Goals are the blueprint to achieve a
Mana whenua	Customary authority exercised by an Iwi or hapū in an identified area, or the indigenous people (Māori) who have historic and territorial rights over the land (section 2 RMA). In this Strategy, this refers to Iwi and hapū (Māori tribal groups) who have these rights in South Taranaki.	Development Goals (SDGs) ²⁷	better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice. The 17 Goals are all interconnected, and in order to leave no one behind, it is important that we achieve them all by 2030
Mitigation (climate change)	Reducing impacts of climate change and global warming by reducing the greenhouse gasses we produce in the first place.	Tangata whenua	Tangata whenua, in relation to a particular area, means the lwi, or hapū, that holds mana whenua over that area (section 2 RMA).
Rangatahi	Young people, or the younger generation.		

²⁶ International Institute for Sustainable Development: https://www.iisd.org/
²⁷ UN, 2020: https://www.un.org/sustainabledevelopment/sustainable-development-goals/

Kete Kōrero

Glossary

Vulnerability

Vulnerability encompasses a variety of concepts including sensitivity or susceptibility to harm or risk, and a lack of capacity to cope and adapt to that risk (IPCC, 2014). Assessing vulnerability is broader than conventional risk assessments; it includes indirect and intangible consequences on the four wellbeings, and adaptive capacity (e.g., communities, whānau, hapū and Iwi may be resourceful but may lack the resources, insurance access and mandate or capacity to adapt) (Ministry for the Environment, 2019).

Āpitihanga 1 - Pānuitanga anō

Appendix 1 - Further Reading

Over 90% of scientists agree that there is overwhelming global evidence that core natural processes and systems regulating the stability and resilience of our natural systems (atmospheric, geologic, hydrologic, biospheric and other earth system processes) that our society depends upon for existence have now been altered by human activities²⁸.

Associated with these systemic changes to earth's natural processes, it is also now widely accepted that human-kind, and our activities, have been directly or indirectly responsible for the mass extinctions of plant and animal species, widespread pollution of our oceanic, freshwater and terrestrial ecosystems, and changing the composition of atmospheric gases that control how global climatic systems are regulated, among other long-lasting and potentially catastrophic long-term impacts.

Global evidence for these systemic changes includes:

- Extinction rates of animals and plants far above the long-term average. The Earth is on course to see 75% of all known species become extinct in the next few centuries if current trends continue.
- Increased levels of climate-warming CO2 in the atmosphere at the fastest rate for 66 million years, with the burning of fossil-fuels pushing levels from 280 parts per million, before the industrial revolution, to 410ppm and rising today.
- So much plastic in our waterways and oceans that microplastic particles are now virtually ubiquitous, and plastics will likely leave identifiable fossil records for future generations to discover.
- A doubling of the nitrogen and phosphorous in our soils in the past century with fertiliser use. This is likely to be the largest impact on the nitrogen cycle in 2.5bn years.
- A permanent layer of airborne particulates in sediment and glacial ice, such as black carbon, from fossil fuel burning.

In line with the above global trends, New Zealand's indigenous biodiversity and natural ecosystems are in continual and troubling decline²⁹, and New Zealand's climate is already changing, and will continue to do so for decades to come³⁰.

The most up-to-date information for New Zealand on our changing climate is available in New Zealand's Environmental Reporting Series: <u>Our Atmosphere and Climate 2020</u>

The Anthropocene, 2020: http://www.anthropocene.info/great-acceleration.php

19 MFE, 2019: https://www.mfe.govt.nz/climate-change/why-climate-change-matters/evidence-climate-change

Āpitihanga 2 - Hangaia ki ngā whainga paetae o te Whakawhanake Toitū te Taiao o t<u>e U.N</u>

The United Nations' Sustainable Development Goals (SDGs)³¹ are inter-linked targets for sustainable and equitable global development. All countries of the world have agreed to work towards achieving these goals, including New Zealand. They were adopted in September 2015, with a target of being achieved by 2030.

The following image demonstrates the interlinkages of the SDGs, with economies and societies seen as embedded parts of the biosphere:



Sustainable Development Goals:



SDG 1: Economic growth must be inclusive to provide sustainable jobs and promote equality.



SDG 2: The food and agriculture sector offers key solutions for development and is central for hunger and poverty eradication.



SDG 3: Ensure healthy lives and promote well-being for all at all ages.



SDG 10: To reduce inequalities, policies should be universal in principle, paying attention to the needs of disadvantaged and marginalized populations.



SDG 11: Make cities and human settlements inclusive, safe, resilient and sustainable.



SDG 12: Ensure sustainable consumption and production patterns.

31 https://sustainabledevelopment.un.org

Appendix 2 - Alignment with UN Sustainable Development Goals

Sustainable Development Goals:



SDG 4: Obtaining a quality education is the foundation to improving people's lives and sustainable development.



SDG 5: Gender equality is not only a fundamental human right, but a necessary foundation for a peaceful, prosperous and sustainable world.



SDG 6: Ensure availability and sustainable management of water and sanitation for all.



SDG 7: Ensure access to affordable, reliable, sustainable and modern energy for all.



SDG 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.



SDG 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.



SDG 13: Take urgent action to combat climate change and its impacts.



SDG 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development.



SDG 15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.



SDG 16: Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels.



SDG 17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

Āpitihanga 3 - Toitū te Taiao: Ngā ture ōrite me ngā rautaki Appendix 3: Environmental sustainability: related legislation and

This Strategy has been modelled on a suite of external legislation, policy statements, plans, strategies, and reviews developed at both central, regional and local government levels. We have incorporated relevant aspects of these into this Strategy and these will also influence the development of further related strategies, plans and policies to achieve our desired outcomes.

Currently, these tools include, among others:

- The Climate Change Commission's draft Aotearoa NZ emissions budgets and advice package to the Government³²
- The Climate Change Response (Zero Carbon) Amendment Act 2019³³
- The National Climate Change Risk Assessment (NCCRA) 2020³⁴
- The Waste Minimisation Act 2008³⁵
- The Resource Management Act 1991³⁶
- The Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (Freshwater NES)³⁷
- National Policy Statement for Freshwater Management 2020³⁸
- Draft National Policy Statement for Indigenous Biodiversity 2019³⁹
- Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy 2020⁴⁰
- Ngaa Rauru Iwi EMP⁴¹
- Ngaruahine Iwi EMP42
- Ngāti Ruanui Iwi EMP⁴³
- Taranaki Iwi EMP44

This will be the first Environment and Sustainability Strategy that Council has produced, and, as such, will be a document that informs:

- District Plan reviews:
- Long Term Plans;
- Asset Management Plans;
- Infrastructure Strategy
- **Financial Strategy**
- Civil Defence and Emergency Management Planning.

³² He Pou a Rangi Climate Change Commission advice to NZ Govt 2021

33 Climate Change Response (Zero Carbon) Aendment Bill 2019

34 NCCRA 2020

35 Waste Minimisation Act 2008

³⁶ Resource Management Act 1991

³⁷ Freshwater NES 2020

38 National-policy-statement-freshwater-management-2020

³⁹ Draft NPS Indigenous Biodiversity 2019

⁴⁰ Aotearoa New Zealand Biodiversity Strategy 2020

⁴¹ Ngaa Rauru EMP

42 Ngāruahine EMP ⁴³ Ngāti Ruanui EMP

44 Taranaki Iwi EMP



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