

Hearings Panel
ATTACHMENTS UNDER SEPARATE COVER

Date: Wednesday 19 May 2021
Time: 2pm
Venue: Council Chamber, Level 2, Civic Offices, 53 Hereford Street, Christchurch

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4pm to 4.15pm	5 minutes	Sustainable Ōtautahi Christchurch - Joyce Yager	39680	
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	3 minutes	Brent Thompson	39735	
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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
123	39718	Andy	Buchanan	Please see attached letter	Yes

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24 April 2021

Draft Ōtautahi Christchurch Climate Change Strategy
Public Information and Participation Unit
Christchurch City Council
CHRISTCHURCH

Dear Sir/ Madam

A “Net Zero Embodied Carbon” policy for Christchurch

Thank you for this opportunity to provide comment on the Draft Ōtautahi Christchurch Climate Change Strategy.

I am a semi-retired structural engineer in Christchurch, until recently Professor of Civil Engineering at the University of Canterbury. I am a specialist in the design and construction of low-carbon timber buildings.

I wish to speak to the Council on this submission when the time arises.

My main comments:

1. I support the overall thrust of the Draft Strategy, but it is **totally inadequate**.
2. The document is all about setting and communicating goals, with no evidence of what has been done, **no details of what will be done** to achieve those goals, and **no planned measurements of achievement**.
3. I note that more than half (54%) of Christchurch’s greenhouse gas emissions is from transport. I support **urgent action to reduce transportation emissions**. Much stronger incentives are needed for council staff and the public to use electric vehicles and electrified public transport. This must include continuation of cycleways, and rail commuting services from Lyttelton, Rangiora and Rolleston using existing rail lines.
4. The second largest (19%) source of Christchurch’s greenhouse gas emissions is from buildings and businesses. Much of this is **embodied carbon**.
5. A small but positive step to reduce embodied carbon emissions is for the Christchurch City Council to adopt a **“Net Zero Embodied Carbon”** policy for all new building construction in Christchurch, as outlined below.

The Draft Strategy refers **embodied carbon** in three separate goals. I quote as follows:

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AB

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Andy Buchanan submission on Draft Ōtautahi Christchurch Climate Change Strategy

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Goal 1: Christchurch has net zero emissions

We have also set an ambitious target of being net carbon neutral for the Council's operations by 2030.

We also need to address the embodied carbon (carbon emitted in the production of the materials such as concrete and steel) that we use in our buildings and infrastructure, and transition towards more sustainable materials and construction techniques.

Programme 4: Adapting and greening infrastructure systems

Any new infrastructure will utilise low-energy solutions, and be designed to minimise the amount of embodied carbon in the materials used so it is as efficient and sustainable as possible.

Programme 8: Energy efficient homes and buildings

Maximise resource efficiency in our existing infrastructure and facilities, and minimise embodied carbon when designing and building new facilities and infrastructure.

These are admirable goals, but there are no examples of what's already happening, and no indication of how they might be achieved.

A "Net Zero Embodied Carbon" policy

One easily achievable goal would be for the City Council to require that all new council-funded buildings in Christchurch be NET ZERO EMBODIED CARBON, starting immediately.

The cost implications of this are minimal. The result would be a much larger number of buildings using timber or other low-carbon bio-materials rather than carbon-polluting steel and concrete. This target could easily be monitored by the use of a simple carbon calculator, such as that recently released by construction company Naylor Love: <https://www.naylorlove.co.nz/carbon/>

A recent example of a Net Zero Carbon Building is the new St Albans Community Centre, opened by Mayor Lianne Dalziel on 10th April 2021. See Appendix B for more information.

My submission to the Christchurch City Council's Climate Emergency Panel in 2019, showed how a Wood Encouragement Policy (a "Wood First" Policy) could significantly reduce the city's carbon footprint. Such a policy, similar to that adopted by Rotorua Lakes Council in 2015, also adopted by British Columbia and Tasmania, would require all building designers to show that they have considered structural wood as an option for their new buildings. A "Net Zero Embodied Carbon" policy is a further step, resulting in a similar outcome.

The City could lead with its own building projects, including the buildings it owns and leases, with some form of incentive (financial or otherwise) for private building owners to follow suit.

On behalf of PTL:

Andrew H. Buchanan PhD MS BE(Hons) CPEng
Principal

Author
AB

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Appendix A: Background information:

Embodied carbon emissions vs operational carbon emissions

The two big sources of carbon emissions from the city's buildings are operational carbon and embodied carbon.

1. Operational carbon emissions result from fossil fuel used for heating and cooling the building over a life of many decades or more.
2. Embodied carbon emissions result from fossil fuel used to manufacture and transport materials used to construct the building.

In older buildings with low energy efficiency, the lifetime operational carbon can be much larger than the embodied carbon, but this is all changes for modern energy-efficient buildings, where embodied carbon becomes a bigger percentage of the total lifetime carbon emissions.

Sequestration and substitution benefits of embodied carbon

All low carbon bio-materials, such as wood, reduce embodied carbon emissions in two ways - sequestration and substitution:

1. The sequestration benefits come from the carbon which is "locked up" or "stored" in the building materials for 100 years or more, rather than being in the atmosphere.
2. The substitution benefits come from the reduction in production of traditional building materials such as steel and concrete.

MBIE Proposals for reducing carbon emissions

MBIE recently released a draft proposal for monitoring and capping the carbon emissions in new buildings. If this proposal is adopted, building consents will not be issued until the carbon impacts of each new building are (initially) monitored, and (later) held below a prescribed cap.

The Christchurch City Council could lead by example and implement a "Net Zero Embodied Carbon" policy to show how such a policy could be implemented.

Life cycle analysis (LCA)

A full life cycle analysis (LCA) quantifies both operational and embodied carbon emissions over the full lifetime of a building (cradle-to-grave), including re-use, re-cycling or disposal of the construction materials at end-of-life. The analysis often gets bogged down in the unknown disposal options in a hundred years' time. For this reason a "Net Zero Embodied Carbon" policy should concentrate on the immediate (cradle-to-gate) benefits which are needed urgently to combat the current climate crisis.

The Green Building Council

I support the submission made by the New Zealand Green Building Council to the Climate Change Commission. They support the vision of the World Green Building Council for a 40% reduction in embodied carbon by 2030 and Net Zero Embodied Carbon by 2050 for all buildings including existing buildings.

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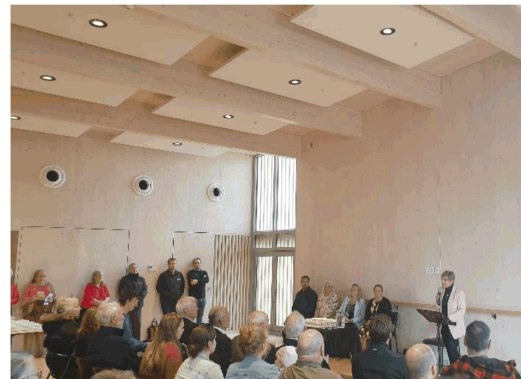


Appendix B: St Albans Community Centre - the Good Wood Story

The new St Albans Community Centre was opened on Saturday 10 April 2021 by the Mayor of Christchurch, the Hon. Lianne Dalziel. The new building sits between Colombo Street and Caledonian Road in the heart of St Albans.



The main entrance, from Colombo Street



Mayor Dalziel opening the building

This new low-carbon building is built almost entirely of wood, using modern technology. All of the walls, the floors, and the roof of the building are made of prefabricated panels of Cross Laminated Timber (CLT), consisting of cross-wise glued wooden boards. The huge structural timber panels are 100mm to 120mm thick, and up to 9 metres long. The timber floor panels are supported on timber piles and bearers, so the only concrete is in the entrance steps.

The interior faces of the CLT wall and roof panels are exposed to view, stained with an attractive whitewash. The internal doors and many other internal fittings are also made of similar wood products. The outside of the building is clad with attractive radiata pine shiplap weatherboards, giving a welcoming appearance.

The total volume of wood in the building is 293 cubic metres (which weighs 146 tonnes). The nett carbon stored in this volume of structural wood is equivalent to 179 tonnes of CO₂ emissions. This amount of carbon storage would offset the emissions from driving a typical family car almost one million kilometres.

As a comparison, if the building had been constructed of concrete rather than wood, the nett carbon balance for the structural materials would have been emissions of CO₂ rather than storage, with huge emissions equivalent to 4,400 tonnes of carbon dioxide. If we add this substitution benefit to the storage benefit, the designers' choice to build this building in wood has offset the carbon emissions from driving a family car over 20 million kilometres.

As an aside, most of the prefabricated wood for this building was imported from Austria, because the panels were not available in New Zealand. Europe was the best place to obtain the panels, satisfying the tight budget and high quality needed for the building design. For carbon accounting, the carbon costs of shipping are almost negligible, so that the carbon storage in the same volume of wood made in New Zealand would have been 179 tonnes rather than 197 tonnes, a difference of only 10%. For future buildings, a large new CLT factory will commence production later this year in Rotorua.

The good wood benefits of this building far outweigh any concerns about the source of the wood. This building has assisted the Christchurch City Council in meeting its climate change goals, resulting in a beautiful new building which is durable, resilient, and ready for use by the local community.

Architects:	Christchurch City Council architects, led by Crispin Schurr
Structural Engineers:	PTL Structural Consultants, led by Daniel Moroder
Quantity Surveyors:	WT Partnership, led by Duncan Bourne
Builder:	Watts and Hughes Construction, foreman Josh Stavropoulos
Carbon calculator:	Naylor Love Construction Ltd.

For more information contact Andy Buchanan,

Author
AB

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
12	39120	Aira	Punio	<p>Kia ora, my name is Aira (Ira) Punio. I am a Filipina migrant and currently a second-year student at the University of Canterbury. I am writing this feedback for this draft to express my interest in our city's draft against climate change.</p> <p>First of all, thank you very much for your unwavering effort to serve our community by encouraging everyone to participate and have them say. This is an important topic that everyone must need to put into consideration and there is no perfect timing to act on climate change but now, at present.</p> <p>I have an opportunity with our urban planning class to have read the draft for 'Otautahi Christchurch Climate Change Strategy 2021' and as for a student like me, it made me realise that I - upon reading the draft it raises up some self-inflicted question(s):</p> <ol style="list-style-type: none"> 1. This draft has a significant positive impact for all people who live in Otautahi, yet it might cause confusion as I saw that there might be difficulty understanding a plan with limited information and time frames. 2. Programme 1 has a clearly potential to accomplish if the City Council will start to connect with different ethnicity groups and student groups around the city. 3. As there is more housing development rising within the city, adding more accessible bus routes might have a significant impact to lessen private cars around the city. In addition, active participation by each suburbs neighbourhood can spread out the information about this strategic campaign and a potential opportunity to hear more innovative recommendations <p>Again, I would like to thank you for your time and attention. I am looking for the success of this campaign as it would mean a lot to all the people who live in Christchurch.</p> <p>Kind regards,</p> <p>Aira Punio</p>	Yes

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Draft Otautahi Christchurch Climate Change Strategy Submission

Kari Hunter

25 Apr 2021

Thank you for the opportunity to respond on this extremely important issue, and for the work that has gone into this draft.

The bigger picture

I agree with much of what is in the Strategy. However, I think our Climate Change Strategy needs to go beyond how to make incremental emissions reductions while largely continuing with business-as-usual. Therefore I want to see the following changes:

- A realistic concrete vision of our zero-carbon sustainable – where possible regenerative – future in which everyone's needs can be met.
- A strategy and planning for how we can get there.

I want a society where all of us in Aotearoa can have our most important needs met. I also want us to take responsibility for the effects we have beyond our borders, in the rest of Aotearoa and the world.

The Climate Emergency is one the biggest threats ever to the well-being of people in Christchurch. In more vulnerable parts of the world, it is already the cause of at least hundreds of thousands of deaths (according to the WHO), and suffering and displacement for many more.

The effects of climate change lag decades behind their causes. It can be hard for many of us to fully grasp the severity of the climate crisis. Nonetheless, the effects are real, and the Council's strategies must be based in the science.

We need to get to very low emissions as fast as possible, both because all emissions are causing harm, and because there are risks of passing tipping points. Due to the uncertainties, our adaptation approach needs to take into account a range of possible impacts, including less likely but more severe ones. Also, adaptation and mitigation must be solved in an integrated way.

I suggest a target of at most 20% emissions (at least 80% reductions) by 2030, as recommended by Oxfam.

We cannot rely on markets as they usually run to create the integrated long-range solutions we need to meet everyone's needs without further damage to the environment. We need the council to take a lead role in planning and implementing more of these solutions. Until we have got our emissions down to zero, I would like to see this funded more from remaining high-emissions activities.

There is a big programme needed. This will take more resources than you have. Convince central government that you must be able to gather more revenue. Make it progressive, and based on emissions.

Minor point:

In various places, the phrase “embodied carbon” could be ambiguous – use terms like “embodied emissions” and “stored carbon” or similar?

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Programme 5: Carbon removal and natural restoration

I agree with this:

“Our biodiversity and ecosystems will be increasingly threatened by climate change. By protecting and expanding natural areas in our district, we will help capture carbon dioxide, while benefiting natural ecosystems and biodiversity.

The Council’s preference is for us all to reduce our emissions as much as possible.”

For a sustainable future, the aim must be to find ways to get remaining emissions down to zero. I agree that regenerating forests, restoring wetlands and enriching soil carbon can provide other important benefits for our local communities, and are a great idea. In terms of carbon capture, they should be a way to undo some of the damage already done by past emissions, not a way to permit future emissions.

There are many places where planting trees may improve the resilience and amenity of an area, providing food, reducing erosion, and protecting the city from some of the effects of the heating climate. However, we cannot keep planting trees indefinitely. It is not a way to sustainably offset future emissions. Also, trees, particularly some of the fast growing species, are vulnerable to fires and pests, both of which can be expected to become increasing hazards as a result of climate change. Trees do not represent reliable permanent carbon sequestration.

I agree with the focus areas. I would add:

- Enrich soil carbon where it has been degraded. This is important, both for holding carbon and for improving resilience. Allowing more growth and deeper roots can help – we need less of our parks to be short-cut lawn – more long grass and polycultures please.
- Increase plant cover of all levels – more and richer ground covers, bushes, grasses, etc, both on council-managed land and private land. Rich grasslands can have advantages in holding a higher portion of their carbon underground than do forests, which can store it more durably in the event of wildfires.
- Consider limiting paving and other non-plant ground covers, both on Council-managed and private land. Consider soil health and soil carbon and where these could be improved by limiting herbicides and pesticides.
- Support domestic rain-water storage, and require it for new residential builds. This could help residents maintain growth in drier future summers if we have to be more sparing with ground-water supply.

Programme 6 : Economic transformation and innovation - Goal 3: We have a just transition to an innovative, low-emission economy

I agree with these points:

“We will support economic transformation in renewable energy, transport, health, food and technology to provide new jobs and a more diverse, resilient and sustainable economic base for Christchurch.”

“A just transition to a low-emission economy will require support for people employed in sectors impacted by rapid change.”

As a wealthy country and city with high GHG emissions (by world standards) we do not need continual economic growth. We need our economy to be oriented to ensuring that limited resources are used wisely and sustainably to meet everyone's real needs and well-being goals in ways that do not cost the Earth. The rest of the world and future Christchurch citizens need us to stop imposing

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harm on them. We need to take responsibility for our emissions, even when they are produced elsewhere and embodied in products we consume.

We need to prioritise important needs like clean air, clean and adequate water, nourishing food, a hospitable environment and climate, shelter, opportunity for education, health care, cultural and social lives. This will require a far-reaching, integrated plan. It is very unlikely that the market running more or less as usual can provide this level of planning and integration, let alone in a way that provides a just transition.

A just transition can be well-supported by recognising and increasing support for work that is already low in emissions, especially work that makes large contributions to well-being. This includes fields like teaching, care of elders and others, many of the arts, etc, that already exist. I anticipate a need for more people working in regenerative agriculture and horticulture, as we eliminate reliance on fossil fuels, artificial nitrogen fertilisers, and unsustainable intensive animal husbandry (in favour of sustainable lower animal numbers integrated into restorative farming practices).

In order for people to be able to get to work practically by zero-emissions means, these transitions need to be integrated with urban design and rural land-use, and a housing strategy. This requires long-term planning, which must start now.

In order to cut our reliance on high-emissions international freight (import and export), we need to plan for a more local economy, in which we supply more of our own local needs, and our exports are focussed less on high-volume goods.

We cannot continue to have an economy with a heavy reliance on mass international tourism. High levels of international travel are inconsistent with getting emissions down as necessary.

The Council should not continue to support high emissions activities, including those that our Council-owned companies are involved in. For instance:

- There should be no expansion of airports to accommodate more air traffic locally or in Tarras or elsewhere. Instead, air traffic needs to be drawn down.
- Our port should stop supporting the export of coal.

I support the focus areas listed for this programme; however, we need to go beyond these with strong Council leadership.

Programme 7: Low-emissions transport system (Goal: Christchurch has net-zero emissions)

“We will make significant changes to our transport infrastructure to help meet our emissions targets. To halve our emissions in the next decade, we need to dramatically reduce the kilometres travelled in fossil fuel-powered vehicles. We will promote alternatives such as active and public transport.”

I support this, except that we should be aiming to reduce our emissions to more like 20% (80% reduction in emissions) in this decade.

I am concerned that CCC LTP did not seem to have prioritised funding and time frames for this to an extent compatible with the stated emissions targets, let alone the lower emissions we should be going for.

Our aim should be to make it possible for us all to have safe (protected from motor traffic), reasonably direct, pleasant routes to cycle etc everywhere in Christchurch as soon as possible. This is a necessary step to encouraging many more people to use active transport. It should take higher

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priority than restoring roads for motor vehicles.

I have been appreciating some really good cycle ways that have been developed in recent years (e.g. Antigua St, Ferry Rd, Domain Tce, Annex Rd, Frankleigh St, Roker St). It should be possible to get fully connected routes established for a large part of the city within a year or two – by quick and temporary methods like road cones, portable fencing etc initially. These can be made more permanent over the next few years.

Improve way-finding so that people can easily find their nearest and most direct cycle routes.

There is a place for some EVs, but we cannot eliminate emissions by replacing our fleet.

Stop Tarras; draw down air traffic. Consider how to support lower emissions shipping via the port.

Programme 10: Sustainable food system

Reliable access to nourishing food is a basic need for everyone. This must be done by zero-emissions means that restore rather than degrade soils. As it is likely to become more challenging with climate change, it is important to get more resilient systems in place now, both to help hold carbon in our living city and food systems, and to make it more resilient in the face of increasing droughts etc.

I strongly support the CCC making sustainable food systems one of its top priorities in an integrated plan for a zero-carbon regenerative future.

I support all the points in this programme, particularly:

“Christchurch has an opportunity to become an international hub and leader in agri-tech research, to develop solutions that help the agricultural sector produce food with the lowest possible emissions, and crops that are resilient to the changing climate. We will support sustainable food production to improve people’s health and wellbeing, while restoring the natural environment.”

“Reduce agricultural greenhouse gas emissions and improve food security.”

I support all the focus areas. I am concerned that the specific actions described, while good, do not seem to be on a scale needed for the task of ensuring food security for all long term.

Agricultural emissions are a significant part of Aotearoa's GHG emissions. We need to reverse this. Our food-growing can instead operate by regenerative practices that can build and hold soil carbon, become more fertile without ongoing artificial nitrogen fertilisers, and be better able to hold water against droughts.

There is a capacity to grow much more food within the city, and make us less reliant on food imported into the district. This would reduce emissions from transport, support resilience in the face of future climate disruptions, and in many cases may improve health and well-being.

As I understand it, the MfE's standards for acceptable levels of soil contaminants assumes that city-dwellers will only eat small amounts of home-grown food. This means if we eat a lot of food out of our local gardens, even if they meet these standards, our diets could be exceeding safe levels of contaminants. In addition to this, there are areas that have high levels of contaminants from past land-use, not all of which is or can be well-known without testing. I've become aware that there is a real issue with contaminated land in Christchurch; for instance, people have been growing their own vegetables and fruit for years, only to find that their soil lead levels are too high to be safe. I recommend supporting people who want to grow food in community and private gardens to get free or cheap soil contamination testing, and support remediation where feasible.

I strongly support the Council protecting highly productive soils against further soil contamination,

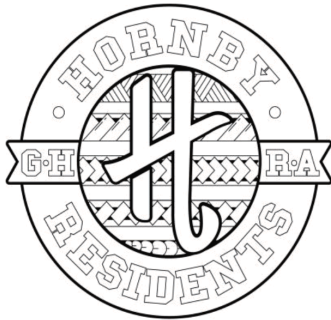
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against erosion, against urban sprawl, against excessive incursions of building and paving footprints.

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
167	39779	Ross	Houliston	Greater Hornby Residents Association	Research/Submissions Officer	Refer attached submission	Yes

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26/4/2021.

Climate Change Submission.

We will keep this brief and to the point.

First of all Climate Change needs to be taken seriously, and this does not only include that spoken about by the scientists, but, should include the effect of The Alpine Fault, as any impact through this will have a serious impact on Christchurch, as will be explained.

A 2 degrees temperature rise will possibly see sea level rise reaching as far inland as Marshlands Rd. It will have a devastating effect on roading throughout this area, as well as around the Motukarara to Little River area.

The Alpine fault scenario will have a definite bearing on our local climatic situation, as it could cause flooding throughout Christchurch. While some may not see this as climate change, I can assure you, those living in it will!

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The Alpine Fault could see aggregate being brought down our rivers in vast volumes, from the glacial beds, and flooding our rivers to the stage that the rivers may breach the stop banks.

The Alpine fault is also predicted to cause severe shaking throughout the Canterbury plain and Christchurch, which will cause liquefaction in the areas that we have allowed to be built on. ie. Swamp land such as Halswell and around the East including Marshlands Rd. After all it was not called this for no reason!

I think at this time enough said. It is time to think, moving forward, and to rework where housing and industry should be built.

We request talking rights to address our submission.

Thank you.

Ross Houliston.

Research/Submissions Officer.

G.H.R.A.

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
67	39626	Brian	Reid	<p>The entire premise that this plan is based on have already been proven to be false. Atmospheric carbon dioxide levels do not drive the earth's climate.</p> <p>Plant stomata records indicate that the atmospheric carbon dioxide levels have been at least as high as now in the last 2000 years.</p> <p>The ice core data shows that atmospheric carbon dioxide levels FOLLOW temperature changes showing the reverse causal link, that rising temperatures increase atmospheric carbon dioxide levels. From first principles it has been shown that the absolute values of atmospheric carbon dioxide levels from ice core samples is not accurate, as borne out by other more accurate proxies.</p> <p>The atmospheric carbon dioxide concentrations have been much higher (of the order of 16 times higher) in the past with similar temperatures to now.</p> <p>The only thing that links a causal effect of atmospheric carbon dioxide concentrations and temperature are the IPCC models which have not passed any validation tests. The models are so bad they could not even predict past events.</p> <p>The slight warming we have had since the mid 1800's is to be expected since exiting about the coldest period that we have had since the end of the last glaciation about 11,000 years ago. Why is such a miserable cold anomaly period being used as a reference?</p> <p>NASA has images that show that the highest carbon dioxide concentration increases are from rainforest areas that are a long way from substantial human emissions. The majority of increase in atmospheric carbon dioxide concentrations is natural.</p> <p>NASA have shown that the earth has greened with the natural increase in atmospheric carbon dioxide concentrations that we experienced. With increased atmospheric carbon dioxide concentrations plants use less water and grow faster. Thus plants are less drought prone with higher atmospheric carbon dioxide concentrations. We are now feeding more people with less land usage.</p> <p>Sea level rises are not unexpected, nor are they unusual. Sea levels have risen much faster, and slower, in relatively recent times.</p>	Yes

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				<p>There is climate change. Change is about the only constant with climate.</p> <p>NASA have predicted that with the various sun and orbital cycles that we are heading for a colder spell as less solar energy reaches the earth. It would be extremely foolhardy to increase the cost of keeping warm in these conditions chasing measures that at best would have negligible effect but in reality will have no effect on climate. These measures will have huge negative consequences.</p>	
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107	39699	Eric	Pawson	<p>The draft strategy is not yet fit for purpose: it has no mechanisms to measure and track progress against the council's own emissions targets (net zero by 2045, with 50 percent reduction by 2030). Instead, it is a series of broad programme areas, not linked to the targets in readily accountable ways. If the strategy is reworked to meet the targets, it would then be consistent with the Climate Change Commission's approach at the national level (which, ironically, the council has criticised for lack of ambition).</p> <p>The strategy should be reworked as follows:</p> <p>1 stating clear targets for five yearly periods (2025, 2030 etc), with mechanisms for assessing progress against targets and means of adjusting policies and plans accordingly (ie closing the loop)</p> <p>2 engaging Christchurch citizens in this assessment process through citizen assemblies to advise on progress and assist in devising required adjustments. This is not a job for the proposed 'climate leadership group' alone: climate policy and actions must be devolved if they are to earn public legitimacy. The city has a good engagement record to draw on (eg Share an Idea, Regenerate's engagement on OARC futures)</p> <p>3 making use of 'exemplar organisations' that are leaders in behaviour change (eg CCC itself, and the two universities), with specified ways in which their experiences can be shared and incorporated into the overall strategy</p> <p>4 ensuring that schools are engaged in the exemplar process, in order to put the energy of the climate strikers to best use, and as a means of tackling the intractable issue of personal transport emissions</p> <p>5 placing more emphasis on climate change adaptation: this is where the rub will be felt by citizens in coming years. Again, the city has experience to build on, notably the process of managed retreat that occurred in the red zones, which proved to be far messier than intended, and therefore something to be learned from.</p>	Yes

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
149	39747	Elliott	Hughes	Generation Zero	Spokesperson	Please see attached document for our full position on the proposed strategy.	Yes

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Generation Zero

The Ōtautahi Christchurch Climate Change Strategy 2021 comes at a critical time in our journey towards a net-zero city. In order to make a fair contribution towards New Zealand's 2030 NDC and to work towards our goal of a net-zero city by 2045, we must accelerate our efforts to reduce emissions. We support the work programs set out by the city council in the draft climate change strategy. However, we urge the council to develop quantifiable targets for each work program, commit to bolder 'first steps' and show leadership by working closely with partner organisations where possible.

In particular, we believe the council should develop a clearer pathway to a net-zero emissions Canterbury. We were disappointed to find that the proposed strategy does not outline how the council intends for Canterbury to meet its net-zero by 2045 goal. By providing a clear pathway to this target the council could more clearly signal future policy changes to the community. While we understand that such a pathway might take time to develop, we urge the council to at least declare an interim 2030 target for emissions reductions. Such a target would increase transparency and send a clear signal that the council will take actions to create a lower carbon Ōtautahi.

Programme 1: Building the foundation - partnerships and resourcing

Generation Zero supports the concept of programme one and would like to offer a few suggestions on how to move forward. We encourage the council to ensure that representation on any stakeholder body represents the diverse nature of our community. Iwi voices must be recognised, as well as youth and representatives of marginalized communities. Secondly, we encourage the council to include representatives from those who will most be affected by climate change. For example, a stakeholder body should include members from the suburbs of Christchurch which are most vulnerable to climate change and members who represent occupations that are likely to be impacted by climate change. Quite often the impacts of climate change on those who work outdoors or outside typical times are overlooked by non-representative stakeholder groups.

To maximise transparency, the council should ensure that the material released to and the workload required of stakeholder groups is reasonable. Transparent programmes need not only to be physically accessible, but also mentally accessible. Stakeholder groups should be given broad leeway to consider all aspects of council policy, but (unless representatives are compensated appropriately) the tasks

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required of such a body must be achievable by an average person with average work flexibility and time available. Otherwise, such groups are likely to be dominated by those with the most time and flexibility, which may not represent the wishes of the broader community.

Programme 2: Understanding the local effects of climate change

Generation Zero strongly supports gathering and communicating climate risk data to the general public. Consequently, we support Programme Two and acknowledge the existing work that is being undertaken in this area. However, we would once again like to highlight the importance of providing transparent information in addition to simply collecting it. Where the climate risks are uncertain or difficult to understand without specialised knowledge, material should be presented in a manner that enables the average user to understand without excessive effort.

Furthermore we urge the council to inform the community of potential risks at all stages of the information gathering process, even when potential impacts are uncertain or poorly understood. Although Generation Zero understands that the council may be concerned that unclear information could lead to excessive concern among citizens, we must stress the importance of including the community in the risk analysis from the very beginning. Keeping citizens ignorant of the potential impacts of climate change on their communities will ultimately harm citizens and diminish trust in the council.

We therefore urge the council to develop innovative strategies to reach people with climate risk information, as the current approach to information sharing is not accessible to the average resident. We urge the council to study international best practices and develop a broad-spectrum approach to communicate climate risk information. For example, the council could partner with local schools or adult education providers to provide climate risk education to target communities.

Programme 3: Proactive climate planning with communities

Generation Zero agrees with the concept of programme three. As with programme two, we urge the council to include community input at all stages of the adaptation process. In addition, we encourage the council to look beyond youth education programs and consider developing climate communication strategies that specifically target adult community members.

We support the council leading consultations with healthcare providers and other stakeholders, although we note that this policy focus will need to be revised in light of recent announcements. We also ask that the council considers how to include third sector groups in its consultation strategy. NGOs and community organisations

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may be able to support and facilitate climate communication and provide an interface between the council and the community.

Programme 4: Adapting and greening infrastructure

Generation Zero supports programme four and appreciates the efforts to build stronger iwi partnerships within the programme. Improving iwi partnerships will build the council's ability to fulfill Te Tiriti and, by fully incorporating the views of all stakeholders, will likely lead to better infrastructure provision and improved outcomes. We support the council's efforts to increase tree cover and provide green infrastructure more generally. However, such policies would be greatly improved if clear targets were set. Quantifiable targets would send a strong signal to the community and enable greater transparency and accountability. For example, the council could adopt a policy to increase total tree cover by 20% by 2030.

We further recommend that the council includes an additional focus area: improving climate resiliency. Superior stormwater management systems will reduce the risk of flooding and greater tree cover will mitigate the impact of heat waves, so green infrastructure can help reduce the harm caused by climate induced extreme weather events. As a result, we urge the council to include a specific extreme weather event/climate risk reduction policy focus within the green infrastructure programme. Encouraging policymakers to consider low probability high risk events explicitly will likely lead to superior infrastructure design and potentially avert costly losses from climate induced extreme weather.

Programme 5: Carbon removal and natural restoration

To offset unavoidable emissions (e.g. those from certain industrial processes) the council has correctly identified that it will be necessary to offset emissions by increasing afforestation. We support the council's attempts to situate afforestation programmes in the Greater Christchurch area, which enable our community to more fully realize the co-benefits of increasing biodiversity and increased recreational amenity. We also support the council's proposed strategy to partner with local community groups. However, partnership opportunities will bring the greatest benefits when they utilize each organisation's unique strengths. In particular, to ensure sufficient afforestation, the council must be prepared to contribute significant financial resources to this project. It appears unlikely that community groups will have sufficient means to deliver the scale of afforestation that will be necessary.

We also urge the council to develop a clear long-term plan for afforestation in Christchurch and Bank's Peninsula. While the exact level of afforestation necessary is currently unclear, by developing a reasonable estimate for required carbon

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sequestration (this could be derived from the Climate Change Commission's advice) the council could improve its ability to invest in an efficient fashion. We urge the council to prioritize developing a carbon sequestration strategy that sets quantifiable targets and develops a clear timeline. Focusing only on current opportunities will likely lead to inefficient provision of this public good, with afforestation increasing only in an ad-hoc and unplanned fashion.

Finally we support the council's focus on maximising the co-benefits of increased afforestation. We believe, when this is coupled with clear targets for carbon sequestration, this will maximise efficiency and benefits to the community. It is critical that the council first develops a clear plan for total carbon sequestration, however, so that the core purpose of the program is fulfilled while also capturing all possible co-benefits.

Programme 6: Economic transformation and innovation

We support the council's efforts to increase innovation and support a just transition to a low-carbon economy. Such efforts should not be considered a substitute for robust climate action, but rather as measures to lower the cost of transition to firms and individuals. In particular, we support the council's proposed focus on increasing access to retraining and life-long learning. Such measures can improve individuals wellbeing and the economic dynamism of labour markets. To increase access, we recommend the council partners with education providers such as the Ara Institute and also encourages council owned companies to consider how they can support job retraining programs that would increase the flexibility and relevance of their workforce. From our engagement with CHL subsidiaries we understand that many of these organisations are concerned about the increasing age of their workforce, so job retraining and ongoing education programs could potentially also reduce emerging labour shortages if well designed.

Programme 7: Low-emission transport system

In order to reach net-zero by 2045, the council has correctly identified that it must rapidly reduce transport emissions. We support the council's proposed next step and the focus on developing low-emission pathways. In order to determine the necessary level of investment in public and active transport infrastructure the council should set quantifiable mode-shift targets. By setting robust targets for public and active transport uptake, the council will reduce uncertainty for business and individuals considering their future transport solutions. For example, if the council signals it will actively support commuter public transport, businesses will be able to plan for a future where more workers utilize public and active transport and less require parking for private vehicles. Furthermore, clear mode-shift targets will help

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council members develop a clear long-term strategy for public and active transport investments.

Additionally we urge the council to explicitly adopt a holistic approach to encouraging public and active transport usage. For example, in order for individuals to effectively use sustainable transport modes, they must live in areas where such transport modes are available and effective. Development policy should be transit-oriented, to ensure that new houses are built near amenities. Policies that increase density and housing supply in high-demand areas near transport hubs (e.g. Riccarton) will support active and public transport use. Incorporating language that reflects a holistic approach to increasing sustainable mode usage would again provide certainty to individuals and businesses that investments near public and active transport corridors will be supported by council policy and improve outcomes in the long term.

Finally we urge the council to embrace cooperation with partner agencies and councils to maximise efficiency and improve outcomes. The current approach to public transport suffers from the highly balkanized nature of the system, where initiatives adopted at the regional council level are not supported by the city council and vice versa. We encourage the council to take a leadership role in developing a more collaborative approach, where councils work together to ensure that the physical infrastructure and timetabling for public transport reflects the goals and targets set by both organisations. Therefore we encourage the council to include in its climate change strategy an explicit focus on developing a more collaborative approach with partner councils and central government.

Programme 8: Energy efficient homes and buildings

As demand for electricity and low carbon energy grows, increasing the energy efficiency of our built infrastructure will reduce transition costs and improve outcomes for residents. We support the intent of programme eight. However, we remain concerned that the current strategy lacks vision and will not adequately address the needs of our community. In particular, we were disappointed to see the council seeming to take credit for Warmer Kiwi Homes (a centrally funded programme). This appears disingenuous and calls into question the commitment of the council to supporting homeowners to reduce emissions.

In order to genuinely improve energy efficiency and create warmer, dryer homes for community members, the council should commit to a more substantive 'first step'. While promoting existing resources may have marginal effects, the council should consider instead taking action that has a greater potential impact. For example, providing additional top-up funds for Warmer Kiwi Homes could reduce barriers to entry (a strategy that has already been pursued in Auckland) and increase coverage of the scheme. If such a scheme was combined with efforts to further

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promote Warmer Kiwi Homes then this could be highly effective in reducing medical costs for families, improving residents' quality of life and cutting carbon emissions.

We support the council's proposed focus areas, but note that the council should not limit itself to 'investigating' or 'advocating' for more efficient policies. Instead, the council should think creatively about options to encourage greater home generation of energy and increase energy efficiency. For example, the council should encourage CCHL firms to facilitate greater uptake of home generation where possible (e.g. by waiving connection fees for home generation infrastructure). While advocating for good policy at the central government level is beneficial, the council should also ensure that it is fully utilizing all available policy levers at the local level to achieve its climate change goals.

Programme 9: Towards zero waste

Generation Zero supports in part programme nine and appreciates the intent behind it. We find the focus areas to be lacking in tangible actions and we are concerned that the current proposed action is not as bold as it ought to be. We recognise that waste is not a major source of emissions in Christchurch and the existing work that the council has done in this area (in particular, the 2020 zero waste plan). However, we still feel that there are more solid commitments the council could make in this area. For example, it is important to start thinking about how our city and its residents will carry out daily activities following upcoming legislative changes, which will greatly restrict the use of single use plastic products. How will the City Council aid local businesses through this change and how will our City's amenities cater for zero waste lifestyles?

Programme 10: Sustainable food system

We support the council's policy of encouraging a more resilient food system. However, we believe the council's current strategy lacks both focus and a clear emphasis on maximising the benefits of resilient food systems. For example, the proposed focus on protecting highly productive soils will likely lead to inefficient choices unless it is coupled with a clear vision for the future use of this land. Land use should be guided by the greatest need in the community - for example, highly productive inner city land should clearly not be protected for agricultural use.

Consequently, we urge the council to adopt a holistic approach to land protection that seeks to mitigate the causes of urban sprawl rather than attempting to enforce a blanket protection of agricultural land. More efficient zoning policy will support the council's other goals (such as increased use of public and active transport) and protect high value agricultural land. By enabling development within existing urban

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boundaries, better zoning policy will reduce demand for housing at the border of Christchurch and consequently help protect high productivity land.

We support the council's attempts to encourage more urban food production. However, we urge the council to take bolder action to encourage community gardens and other amenities. For example, the council could partner with existing groups and provide capital or land to enable the formation of new or expanded community gardens. We understand that the proposed first steps are necessarily limited by resource capacity, but we believe that the council should aim higher than the current proposal. Greater ambition will provide a clearer signal to the community that the council is responding to existing demand for a more resilient, sustainable and lower-carbon Ōtautahi.

Summary:

The proposed programmes outlined in this document lack both quantifiable targets and bold first actions. The current strategy does not provide a firm signal to communities that their desire for strong climate action is being acknowledged or met. The council must take a leadership role by collaborating effectively with partner organisations, setting firm targets and adopting sufficiently bold 'first steps'. Generation Zero supports the initiatives outlined in this draft document, but we do not currently believe that it reflects the urgency clearly demonstrated by the council's declaration of a climate emergency.

Ngā Mihi,
Generation Zero
For further information please contact Elliott Hughes

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
161	39771	Tremane	Barr	Safer Technology Aotearoa New Zealand Society	Secretary	Please see attachment	Yes

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25/04/2021

Submission on Ōtautahi Christchurch Climate Strategy

Organisations Name: Safer Technology Aotearoa New Zealand Society

Submitters Role: Secretary

Number of Members: 200

Yes - We would like the opportunity to speak to the hearings panel about the STANZ submission.

Introduction

The Safer Technology Aotearoa New Zealand Society (STANZ) was created in 2020 to help inform, educate and advocate in the public interest including, but not exclusively, to policy makers, regulatory bodies, educationalists, the medical and scientific community as well as local, regional and central government, about the safe use of technology.¹

STANZ in general agrees with the goals outlined in the Ōtautahi Christchurch Climate Strategy 2021 for Christchurch. However, STANZ wants to make the central point that under Goal 3 and Programme 6 that the move away from resource intensive and high greenhouse emission industries needs to include digital and wireless technology which includes Information and Communication Technology (ICT), Cloud computing and wireless communications through the 4G and increasingly 5G systems cell phone transmitter technology, mobile smart phone use and the infrastructure and data centers required to run them (both locally and globally). Just when we need to be moving as a society to reduce greenhouse gas emissions this sector of the economy is massively increasing its requirements for energy outstripping the growth in renewable energy sources with it being reliant on increasing numbers of coal fired power stations in other countries e.g., China.

STANZ recommends that the CCC needs to take seriously the ICT, Cloud computing and mobile communications systems massively increasing energy requirements and increasing greenhouse gas footprint. The CCC needs to develop a plan that moves toward economic transformation and innovation that is part of a sustainable climate future for Christchurch that does not include mobile wireless 4G/5G systems.

STANZ recommends that the most energy efficient ICT system is a wired system that is not reliant on energy intensive wireless transmissions like 4G and 5G (and eventually 6G). Wired ICT systems are also faster and more secure.

STANZ outlines in this report why smart phones reliant on 4G and 5G (and 6G) mobile phones are resource intensive and high emission technologies that are incompatible with a goal for a climate sustainable society. The smartest mobile phone communication system for the future is to move to so-called "dumb phones" (e.g., Nokia) that only need the existing 2G/3G system which require much

¹ <https://www.safertechnology.co.nz/about/>

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less energy than the 4G, 5G and eventually 6G systems. This would also reduce emissions from globally located cloud computer centres required to provide computing services that smartphones need to work both locally and globally.

STANZ agrees with the French High Council on Climate report that the 5G system will increase greenhouse gas emissions.² STANZ recommends that the CCC opposes the increasing rollout and use of use of 4G and 5G mobile phone systems as to such time they can be proven safe for the climate, people and the environment.

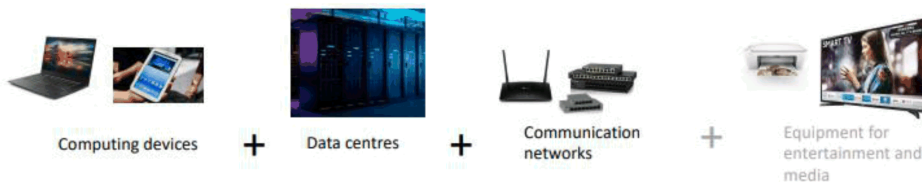
1. Information & Communication Technology Carbon Emissions

The CCC climate change strategy needs to address a key component of the modern economy in the form of the digital and wireless economy (or ICT - Information & Communication Technology) and its growing greenhouse gas emissions profile. Both the production and use of ICT equipment has a tremendous impact on our environment in terms of the raw materials required to make them and the energy consumption to power them both locally and globally. Not to mention its end-of-life disposal costs and risks of pollution. The amount of electricity consumed by the ICT sector make this a major contributor to the current and future levels of carbon and greenhouse gas emissions with alarming forecasts if measures are not taken to reverse its effects. As the volume and variety of ICT devices in usage has grown, controlling the costs and environmental impact associated with these products has become of paramount importance.³



What is the ICT sector?

ICT = information and communication technology



In a recent United Nations Environmental Program (UNEP) report on Greenhouse Gas Emissions in the ICT sector it notes that there are ways of assessing carbon impacts from ICT, websites, and mobile phone apps.⁴

² <https://www.hautconseilclimat.fr/en/>

³ <https://ictfootprint.eu/>

⁴ <https://c2e2.unepdtu.org/wp-content/uploads/sites/3/2020/03/greenhouse-gas-emissions-in-the-ict-sector.pdf>

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Tools for measuring carbon impacts

Commercial or Free	Name of the tool	Objective	More about the tool
Free	Ecoindex	Measure the carbon footprint of websites	www.ecoindex.fr
Free	Self-assessment tool	To obtain the approx. climate change and primary energy footprint of an ICT-based organization	www.ictfootprint.eu
Commercial	CO2 neutral website	Calculate CO2 emissions from website and reduce a similar amount of CO2 through climate projects	www.co2neutralwebsite.com
Commercial	CAST Green IT index	Measure software's environmental effect based on how efficiently it carry out intended actions, and how robust it is	www.castsoftware.com
Commercial	Greenspector	Performance measuring tool for mobile apps	www.greenspector.com
Commercial	Ecochain	Activity-based footprinting at the product, company, and value chain level	www.ecochain.com

The key points from the UNEP report show that:

- Trends in the ICT sector are heading in the direction of turning the sector into a significant contributor to global GHG emissions.
- A call for optimizing the ICT sector for energy efficiency – UN Environment's United for Efficiency.
- A call for more estimates of the GHG impacts of ICT devices and ICT solutions, with open, transparent data.
- A call for prioritizing sustainable human-computer interaction: "sustainability through design", and "sustainability in design".

It has been estimated that ICT related CO₂ emissions “from 2012 to 2015 went from emitting 6 million tons of CO₂ to 30 million tons. In other words, CO₂ production quintupled in just 3 years, which was equivalent to adding 5 million cars on the roads. Up to 90% of this consumption was attributable to wireless communication network technologies!”⁵

On top of this it is estimated that the energy consumption of ICT is increasing by 9% every year. Because digital technologies are recognized as essential for economic and social development, digitalization appears as an absolute need for all countries and companies. It is also considered as a way to reduce energy consumption in many sectors. However, direct environmental impacts as well as indirect environmental impacts (rebound effects) related to the growing use of ICT are constantly underestimated. Currently the ICT industry is resource intensive and growing in its greenhouse emissions all the time.

1.1 An increasingly energy-gulping digital world

The fast expansion of ICT leads to a rapid increase of its direct energy footprint. This footprint includes the energy used for the production and the use of ICT equipment (servers, networks, terminals). This direct footprint has been increasing by 9% per year. Compared to 2010 the direct energy consumption generated by 1 euro invested in digital technologies has increased by 37%. The energy intensity of the ICT sector is growing by 4% per year, in stark contrast to the trend of global

⁵ <https://ehtrust.org/wp-content/uploads/Wireless-Technologies-Ethical-Risk-Analysis-Working-Paper-2021.pdf>

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GDP's energy intensity evolution, which is declining by 1.8% per year. The explosion of video uses (Skype, streaming, etc.) and the increased consumption of frequently renewed digital equipment are the main drivers of this inflation.

Andrae & Edler of Huawei Technologies, On Global Electricity Usage of Communication Technology: Trends to 2030 Challenges 2015 estimates that in the worst-case scenario, that ICT electricity usage could contribute up to 23% of the globally released greenhouse gas emissions by 2030.⁶

And these figures are from before the Covid-19 Pandemic which has driven a massive increase in the use of video calls, remote working from home and online streaming of entertainment e.g., Netflix etc.

"Behind each byte we have mining and metal processing, oil extraction and petrochemicals, manufacturing and intermediate transports, public works (to bury the cables) and power generation with coal and gas. As a result, the carbon footprint of the global digital system is already 4% of global greenhouse gas emissions, and its energy consumption rises by 9% per year."

— Jean-Marc Jancovici, President of The Shift Project, member of the French High Climate Council.⁷

Action Point - 1

The CCC needs to develop a plan that moves toward economic transformation and innovation that is part of a sustainable climate future for Christchurch that does not include mobile wireless 4G/5G systems.

2. 4G, 5G & 6G Driving Massive Increase in Energy Demand

The unbridled energy consumption of our wireless revolution, 4G, 5G (and soon 6G) and the Internet of Things (IOT) is contributing to climate change. 5G requires millions of new cellular antennas called "small cells" - basically shorter/smaller cell towers - to be built in neighbourhoods directly in front of our homes. These 5G antennas are to connect with billions of new wirelessly connected "smart" devices referred to as the Internet of Things. Telecommunication companies are well aware that 4G/5G will increase overall global energy consumption and with-it greenhouse gas emissions.

David Bruno, an expert in electromagnetic pollution, obtained a document from the National Frequencies Authority (ANFR) concerning the installation of an Orange relay antenna site in Marseille. According to him, "the colossal power of 5G antennas is to be feared". He analysed the Orange document and found the 5G relay antennas in the 3400 to 3800 MHz band will by themselves emit electromagnetic radiation twice as strong as the sum of the relay antennas of 2G, 3G and 4G technologies combined and in the near future, people living near relay antennas will be exposed to power density levels in W / m², at least 3 times higher than those of today.⁸

The demand for mobile phone technology is outstripping any increase in efficiency. The energy consumption will rise sharply due to the ever-increasing IOT energy demands at every stage of the lifecycle particularly for 5G equipment, from device manufacture to data centers to wireless data transmissions, and networks. It is estimated that:

⁶ <https://doi.org/10.3390/challe6010117>

⁷ <https://ehtrust.org/wp-content/uploads/5G-and-Climate-Change-Flyer-EHT.pdf>

⁸ <https://ehtrust.org/climate-change-and-5g/>

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- 70.2 million “small cell” tower bases will be installed by 2025.
- 500 billion devices are expected to be connected to the Internet by 2030.
- 8.9 billion mobile phone subscriptions worldwide by 2024.
- 60% growth a year in production of wireless peripherals (Wi-Fi/ Bluetooth speakers, appliances, wearables).
- 7-fold increase in mobile data traffic globally projected between 2017 and 2022.
- In economics, the Jevons Paradox is when technological progress increases the efficiency with which a resource is used, however demand and consumption increase as well. Thus- the end result is overall increased use of the resource, despite efficiency gains and with-it increased greenhouse gas emissions.

A typical 5G base station consumes up to twice or more the power of a 4G base station. Energy costs can grow even more at higher frequencies, in order to fuel the higher number of antennas and the denser layer of small cells. In addition, the computer facilities needed to support local processing and new internet of things (IoT) services provided on mobile devices will add to the overall network power usage. Although exact estimates differ by source, the general industry consensus is that 5G will double to triple energy consumption for mobile operators, once the new 5G network installations have been completed.

“A lurking threat behind the promise of 5G delivering up to 1,000 times as much data as today’s networks is that 5G could also consume up to 1,000 times as much energy.”⁹

In a report released in November 2020 it was estimated that there will be a massive increase in the power needs of the world’s mobile technology with it more than doubling by 2030. This report is a joint study by InterDigital, a mobile and video technology research and development company, and ABI Research, with it focussed particularly on the 5G ecosystem.¹⁰ Among its key points are:

- Over the next 10 years 5G will usher in aggressive growth in energy consumption. In 2020, the overall energy footprint of the global wireless ecosystem, including network infrastructure and end use devices, topped 19.8 million tons oil equivalent (Mtoe) per year. By 2030, consumption is expected to grow to 51.3 Mtoe – a number equivalent to all the energy to be consumed throughout Sweden, or roughly the same amount of energy to be consumed by all the households in the United Kingdom that year.
- Connected devices will grow exponentially as enterprises begin widescale deployment of IoT and 5G-enabled devices. This will result in a whopping 37% increase in overall total energy consumption by 2030 and spotlights the importance of device-side energy management to tackle the CO2 emissions associated with mobile devices.
- Communications service providers (CSPs) must deploy an array of new network architectures to support a proliferation of end devices to provide the best 5G user experience. These architectures include a network of millimeter-wave base stations, virtualization radio access network (vRAN), massive multiple input and multiple output (MIMO) antenna with beamforming, carrier aggregation, dynamic spectrum sharing, network slicing, and edge servers and gateways, and will unlock new capabilities, and new

⁹ <https://ehtrust.org/climate-change-and-5g/>

¹⁰ <https://www.datacenter-forum.com/datacenter-forum/5g-will-prompt-energy-consumption-to-grow-by-staggering-160-in-10-years>

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layers of complexity, that result in much higher energy consumption in cellular networks than at present.

- As 5G usurps LTE (4G), energy consumption is expected to increase 61 times between 2020 to 2030 due to the energy demands of powerful network elements like massive MIMO and edge servers, the proliferation of 5G cell sites.
- Power consumption of the 5G network is expected to soar due to active network elements like energy-hungry baseband units, remote radio heads, small cells, and core networks.

It needs to be kept in mind that this massive increase in energy use will not just be limited to the actual running of the 5G infrastructure itself, but will also need to include the actual running of the ICT servers themselves that provide the services demanded by mobile users e.g., Facebook, YouTube, Twitter, Instagram, Google, Skype/Zoom, emails, movie videos on demand, games and music etc. At a time when we should be focussed on using less energy intensive, efficient and sustainable options 4G/5G technology is absolutely the wrong direction to be heading in.

As one physicist has put it:

The 5G revolution that the cell phone industry is so proud about is likely to prove to be an ecological disaster that could easily wipe out the Carbon emissions savings of the Paris accord.¹¹

2.1 French High Council on Climate

The French governments High Council on Climate issued a report in December 2020 on CONTROLLING THE CARBON IMPACT OF 5G. It states that 5G will increase greenhouse gas emissions in the next decade and that a moratorium would be preferable as these new frequencies have not been subject to a prior environmental assessment particularly in regard to 5G carbon emissions. It also notes that this should not be a substitute for a full assessment of all the environmental (including the material footprint), health, economic, financial, and social impacts, which should have been carried out beforehand.

For the purposes of this submission, we will just list its first recommendation on the need to clarify climate issues prior to the deployment of new wireless technologies such as 5G (and remember work is going on to develop 6G for 10 years' time which will be even more energy intensive):

"Assess new technologies from a climate perspective before deciding on measures accompanying their deployment, in the same way as the economic, financial, social, health and environmental impacts (including the material footprint) of new technologies are evaluated before deciding on any measures accompanying deployment. Such an assessment should have been conducted for 5G before deciding to allocate the necessary frequencies."

STANZ believes that the CCC should read and follow the recommendations carried in this French report. STANZ also believes that there should be an immediate moratorium on 5G in Aotearoa until such time it has had a thorough and independent assessment of its potential environmental, climate and human health impacts.

¹¹ <https://blogs.timesofisrael.com/the-green-dilemma-of-5g-densification/>

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The Executive Summary of this report can be found in English here:

https://www.hautconseilclimat.fr/wp-content/uploads/2020/12/hcc_rapports_5g-en.pdf

"Behind each byte we have mining and metal processing, oil extraction and petrochemicals, manufacturing and intermediate transports, public works (to bury the cables) and power generation with coal and gas. As a result, the carbon footprint of the global digital system is already 4% of the global greenhouse gas emissions, and it's energy consumption rises by 9% per year."

– Jean-Marc Jancovici, President of The Shift Project, member of the French High Climate Council

2.2 State of New Hampshire Final Report of the Commission to Study the Environmental and Health Effects of Evolving 5G Technology

STANZ would like to point out to the CCC that other jurisdictions are taking the risks from 5G very seriously and include for reference some information from the State of New Hampshire (USA) report from their Commission to Study the Environmental and Health Effects of Evolving 5G Technology:

What the Commission learned early on in its work is that you cannot talk about 5G without talking about the earlier generations 3G and 4G. Then the Commission embraced the concept of the Internet of Things (IoT) which is a world in which all electronic devices communicate via electromagnetic waves. This led to discussion of routers and other internal technologies. The devices receiving and sending signals via electromagnetic waves also became part of the discussion. So as the presentations and discussions went on, the Commission concluded that all things emitting radio frequency (RF) radiation needed to be considered together because of the interaction of all these waves. At the heart of the discussion was the research as to whether non-ionizing radiation causes biological effects on humans as well as other living organisms, either animal or plant. No one argues that ionizing radiation from the high energy and frequency ultraviolet, x-ray, and gamma ray end of the electromagnetic spectrum are a danger to all living things. Of concern to the Commission, and internationally, are the electromagnetic waves in the microwave range of energy and frequency. There is mounting evidence that DNA damage can occur from radiation outside of the ionizing part of the spectrum. We heard arguments on both sides of this issue with many now saying there are findings showing biological effects in this range. This argument gets amplified as [5G] millimeter waves within the microwave range are beginning to be utilized.

Full report and recommendations here:

<http://www.gencourt.state.nh.us/statstudcomm/committees/1474/reports/5G%20final%20report.pdf>

2.3 5G Satellites and IOT

Currently underway is the deployment of tens of thousands of 5G satellites destined for low earth orbit by various private operators approved by the FCC. MBIE have already given Space X permission to transmit data to and from its satellites in NZ aerospace in the 5G spectrum. However, there has been no assessment of the impact on the climate (let alone on the ozone layer of the planet) from all of the rocket launches it will take to put in place and maintain these satellites. It is estimated that these satellites will last on average about 5 years as their batteries lose capacity to store power from their solar panels. This means that it will require a constant re-placement of the old and defective

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satellites creating a treadmill of rockets emitting greenhouse gases and other toxic emissions on a continual basis. These 5G rocket launches will contribute to the:

- depletion of the ozone layer
- pollution from rocket launches (exhaust gases, black carbon, alumina, toxic chemicals)
- vast increase in energy consumption through the actual use of the 5G terrestrial and off-world satellite infrastructure
- climate impacts from manufacturing & disposal of all IOT connected “things” & infrastructure

A low carbon future demands that NZ does not participate in allowing the use of these satellites 5G microwave radio frequency radiation data transmissions in our atmosphere. Here is a list of companies that are actively planning to launch and operate large constellations of satellites in low orbit around the earth. The purpose of these satellite networks is to provide Internet and/or cell phone service everywhere on earth, as well as to facilitate the Internet of Things. All will shoot focused beams of radiation at the earth from phased array antennas.

SpaceX

SpaceX, based in the United States, already has approval to operate 12,000 satellites and has filed applications for 30,000 more. More than 1,300 have already been launched. At least initially, these satellites are for Internet only and will not communicate directly with cell phones. Subscribers will purchase a small rooftop dish and a Wi-Fi router. Beta testing by an estimated 10,000 subscribers in the U.S., Canada, U.K., Germany and New Zealand is already happening.

OneWeb

OneWeb, based in the United Kingdom, has already launched 148 satellites, and plans to begin providing service after it has 250 satellites in orbit. Initial service will be to northern latitude regions, including the UK, Europe, Greenland, Canada, and Alaska.

Telesat

Telesat, based in Canada, has increased its planned number of satellites from 117 to 1,671. It, too, is marketing its service to businesses. Its customers will include cruise ships, airlines, and governments. Telesat intends for its satellites to replace terrestrial fibre networks for long-distance communication.

AST & Science

This company, based in the U.S., is designing its satellites to communicate directly with cell phones. While this company does not plan to have as many satellites as its competitors, the power levels of its communicating beams will be much greater. Its application to the FCC specifies a maximum EIRP (effective radiating power) of up to 79.2 dBW, or more than 83,000,000 watts per beam.

Omnispace

This company, partnering with Lockheed Martin and the U.S. military (maybe even NZ's own RocketLab), is also designing its satellites to communicate directly with cell phones. Its brochure boasts that it will “enable the Internet of Things on a massive new scale. Omnispace has an experimental license from the FCC and has not revealed how many satellites it plans to operate.

Amazon

Amazon's application to operate 3,236 satellites was approved by the FCC last July.

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Lynk

Like Omnispace and AST & Science, Lynk is designing its satellites to communicate directly with cell phones. Like AST & Science, Lynk has an experimental license from the FCC and has not revealed how many satellites it plans to operate.

Facebook

Facebook is planning to launch a constellation of small, 150-pound satellites, called CubeSats. It too has an experimental license from the FCC and has not revealed how many satellites it plans to operate.

Action Point – 2

STANZ recommends that there be a moratorium on the use and continued roll-out of the 5G system in Christchurch as to such time it can be proven safe for the climate, people and the environment. The CCC needs to lobby central government to help make this a reality.

Action Point – 3

STANZ recommends that the CCC follow a similar process to the French High Council on Climate and assess new mobile phone 4G & 5G technologies from a climate perspective including the economic, financial, social, health and environmental impacts (including the material footprint).

3. Dumb Phones are the Smartest Future for Gen Less

The CCC needs to address the question of what is the best wireless communication technology future that consumes the least energy in order to help meet the Councils climate change goals. The Gen Less TV advertisements ask people to make their own positive choices to help the climate. What they do not highlight is that one of best choices an individual can make is to have a dumb phone not a smart phone.¹²



The massive growth in the mobile phone industry over the past 25 years has led to a massive increase in greenhouse gas emissions to power it. The advent of so-called smart phones from 2007 onwards has seen a massive increase in the consumption of the natural resources to make them and the electrical power to run the Cloud based data processing systems services that people want to use e.g. social media. The 4G system from 2014 onwards has helped facilitate this massive increase in mobile phone data use and this is only expected to increase massively again with the rollout of 5G.¹³

“Our energy calculations show that by 2015, wireless cloud will consume up to 43 TWh, compared to only 9.2 TWh in 2012, an increase of 460%. This is an increase in carbon footprint from 6 mega tonnes of CO₂ in 2012 to up to 30 mega tonnes of CO₂ in 2015, the equivalent of adding 4.9 million cars to the roads. Up to 90% of this consumption is attributable to wireless access network technologies, data centres account for only 9%”¹⁴

¹² <https://www.androidauthority.com/best-dumb-phones-1117854/>
<https://genless.govt.nz/>

¹³ [https://www.cesc.kth.se/polopoly_fs/1.647732.1600689929!/ceet_white_paper_wireless_cloud_v2%20\(1\).pdf](https://www.cesc.kth.se/polopoly_fs/1.647732.1600689929!/ceet_white_paper_wireless_cloud_v2%20(1).pdf)

¹⁴ <https://ehtrust.org/wp-content/uploads/5G-and-Climate-Change-Flyer-EHT.pdf>

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Action Point - 4

The CCC need to directly address the fact that so-called wireless mobile technologies are increasingly contributing to global greenhouse gas emissions which cannot be allowed to continue on a business-as-usual model. In order to protect the environment, the CCC needs to do a full life-cycle assessment (environmental, climate and social) analysis of how Christchurch can have wireless communication devices without endangering the climate and environmental and human health in general. STANZ recommends a move to the new “dumb phones” on the 2G/3G systems to help mitigate any risk to the climate while providing for basic mobile communication needs.

In reality the most climate friendly future is not through a society based on an Internet of Things that is mobile and wireless. The most climate friendly future is a digital future that is primarily wired (or fibre) with an absolute minimum of use and exposure to wireless radio frequency radiation. Particularly as wired (fibre) ICT systems require much less energy use to communicate the same amount of data with no risk to human health and the environment.

4. SUMMARY

In summary STANZ has identified that the CCC needs to take into account the fact that the mobile wireless digital economy is resource intensive and a high greenhouse emitting sector of the economy that is unsustainable for the climate. Just when we need to be moving as a society to reduce greenhouse gas emissions the mobile wireless 4G/5G sector of the economy and its supporting ICT and Cloud infrastructure is massively increasing its requirements for energy and massively increasing its greenhouse gas emissions all of which will only make climate change worse. As such, STANZ recommends that the CCC consider taking action on the areas identified by STANZ in this submission:

Action Point - 1

The CCC needs to develop a plan that moves toward economic transformation and innovation that is part of a sustainable climate future for Christchurch that does not include mobile wireless 4G/5G systems.

Action Point – 2

STANZ recommends that there be a moratorium on the use and continued roll-out of the 5G system in Christchurch as to such time it can be proven safe for the climate, people and the environment. The CCC needs to lobby central government to help make this a reality.

Action Point – 3

STANZ recommends that the CCC follow a similar process to the French High Council on Climate and assess new mobile phone 4G & 5G technologies from a climate perspective including the economic, financial, social, health and environmental impacts (including the material footprint).

Action Point - 4

The CCC need to directly address the fact that so-called wireless mobile technologies are increasingly contributing to global greenhouse gas emissions which cannot be allowed to continue on a business-as-usual model. In order to help protect the climate, the CCC needs to do a full life-cycle assessment (environmental, climate and social) analysis of how Christchurch can have wireless communication devices without endangering the climate and environmental and human health in general. STANZ recommends a move to the new “dumb phones” on the 2G/3G systems to help mitigate any risk to the climate while providing for basic mobile communication needs.

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The Cloud Begins With Coal – Big Data, Big Networks, Infrastructure, And Big Power. An Overview of the Electricity Used by the Global Digital Ecosystem

https://www.tech-pundit.com/wp-content/uploads/2013/07/Cloud_Begins_With_Coal.pdf

Assessing ICT global Emissions Footprint: Trends to 2040 & Recommendations

Abstract

In light of the concerted efforts to reduce global greenhouse gas emissions (GHGE) per the so-called Paris Agreement, the Information and Communication Industry (ICT) has received little attention as a significant contributor to GHGE and if anything is often highly praised for enabling efficiencies that help reduce other industry sectors footprint. In this paper, we aim at assessing the global carbon footprint of the overall ICT industry, including the contribution from the main consumer devices, the data centers and communication networks, and compare it with the to the total worldwide GHGE. We conduct a detailed and rigorous analysis of the ICT global carbon footprint, including both the production and the operational energy of ICT devices, as well as the operational energy for the supporting ICT infrastructure. We then compare this contribution to the global 2016-level GHGE. We have found that, if unchecked, ICT GHGE relative contribution could grow from roughly 1–1.6% in 2007 to exceed 14% of the 2016-level worldwide GHGE by 2040, accounting for more than half of the current relative contribution of the whole transportation sector. Our study also highlights the contribution of smart phones and shows that by 2020, the footprint of smart phones alone would surpass the individual contribution of desktops, laptops and displays. Finally, we offer some actionable recommendations on how to mitigate and curb the ICT explosive GHGE footprint, through a combination of renewable energy use, tax policies, managerial actions and alternative business models.

<https://www.sciencedirect.com/science/article/abs/pii/S095965261733233X>

“Lean ICT: Towards Digital Sobriety”: New Report on The Environmental Impact Of ICT

The energy consumption of Information and Communication Technologies (ICT) is increasing by 9% every year. It is possible to limit this growth to 1.5% per year by moving to sober digital practices.

<https://theshiftproject.org/en/article/lean-ict-our-new-report/>

A Study of the Environmental Impact of Wired and Wireless Local Area Network Access

Abstract:

This paper presents a life cycle assessment of the energy and emission intensity of wired and wireless local area network access. Following a cradle-to-grave approach, the energy consumed and greenhouse gas emissions in the manufacture of Ethernet switches and Wi-Fi access points (including the extraction of raw materials, component manufacturing, assembly, and transportation) as well as during their actual usage are evaluated. The results show that while the manufacturing stage is responsible for a significant fraction of the overall energy consumption, the usage phase accounts for most of the emissions.

<https://ieeexplore.ieee.org/document/6490245>

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On Global Electricity Usage of Communication Technology: Trends to 2030

Abstract

This work presents an estimation of the global electricity usage that can be ascribed to Communication Technology (CT) between 2010 and 2030. The scope is three scenarios for use and production of consumer devices, communication networks and data centers. Three different scenarios, best, expected, and worst, are set up, which include annual numbers of sold devices, data traffic and electricity intensities/efficiencies. The most significant trend, regardless of scenario, is that the proportion of use-stage electricity by consumer devices will decrease and will be transferred to the networks and data centers. Still, it seems like wireless access networks will not be the main driver for electricity use. The analysis shows that for the worst-case scenario, CT could use as much as 51% of global electricity in 2030. This will happen if not enough improvement in electricity efficiency of wireless access networks and fixed access networks/data centers is possible. However, until 2030, globally generated renewable electricity is likely to exceed the electricity demand of all networks and data centers. Nevertheless, the present investigation suggests, for the worst-case scenario, that CT electricity usage could contribute up to 23% of the globally released greenhouse gas emissions in 2030.

<https://www.mdpi.com/2078-1547/6/1/117>

Le Monde: [The deployment of 5G in France is increasingly coming up against ecological concerns](#)

Fierce Wireless [“5G base stations use a lot more energy than 4G base stations: MTN”](#) April 3, 2020

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
76	39642	Sheralee	MacDonald	<p>The principles and goals are good to see, but it certainly doesn't reflect that the Council declared a Climate and Ecological Emergency in 2019. Our total emissions are rising, our per capita emissions are still ~7.1 t/CO2e (global average 4.3 t/CO2e) and I'm sorry to say that this draft Climate Change Strategy doesn't give me any confidence that changes will be made and that we will meet our targets of achieving net zero greenhouse emissions by 2045 (excluding methane), and to halve our emissions by 2030, from 2016-17 levels.</p> <p>The strategy needs to have more interim and area specific SMART goals and targets to measure progress against and be held accountable for. 2030 is too late.</p> <p>I like the action programme approach but again it is important to put some more specific goals/targets and timeframes around each one, and prioritise the resources needed to make progress in the areas that will have most impact. Same with the Council's proposed next steps for each of the action programmes (most of which aren't very inspiring by the way!). By when, what the impact will be, and who is taking the lead responsibility.</p> <p>PLEASE outline detailed targets (especially for transport emissions and offset programs) in order to increase accountability.</p> <p>The programmes need to estimate and measure the impact of their actions (on targeted emission reductions or other measures) so that time and effort can be prioritised. It will be important to report on what is working and what isn't and make changes if needed to ensure that we meet the targets and how to hold each other to account.</p> <p>1. Building the foundation - partnerships and resourcing - ensure that partners and representatives that aren't well resourced (time/\$), are supported to be involved to ensure a just transition for all. Next step: Establish a Climate Leadership Group. By when? ASAP! And get CCHL companies to commit to their own targets, actions and investments to achieve.</p> <p>2. Understanding the local effects of climate change This should be a living document. Don't wait for it to be 'complete' before doing anything.</p> <p>3. Proactive climate planning with communities</p>	Yes

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			<p>Climate change education should be supported in ALL schools - not just coastal and low-lying inland ones. Some \$ will be needed to support community partners and others to engage to ensure a just transition and that climate justice is fully understood and acted on.</p> <p>4. Adapting and greening infrastructure systems The intent is good but it all seems incremental. What impact will these changes have? The next steps seem focused on wetlands etc but doesn't mention other infrastructure investments. How does this match up with LTP investment for the next 10 years? Improving water and energy efficiency surely must have a high impact on emissions and with all the infrastructure upgrades and new builds planned, new and better ways of doing this that significantly reduce emissions MUST be a priority.</p> <p>5. Carbon removal and natural restoration How many hectares/acres do we need to have planted by when? What impact on carbon removal (t/CO2E) will this have per annum?</p> <p>6. Economic transformation and innovation The CCC, CCHL companies and Greater Chch Partnership partners all have incredible buying power and in looking for low emission solutions themselves, could be a path to market. Govt procurement isn't mentioned in this area at all. Perhaps some targets could be set around this as part of the focus area "Enable the use of technology and rapid prototyping of innovative ideas that will transition Christchurch into a low-emission city."</p> <p>7. Low Emission Transport Yes, there are some good things already happening - but why is the next step 'Complete the Christchurch Transport plan'?! SURELY by now you have a fair idea of what needs to happen to reduce our transport related carbon emissions (54% of total, 36% being land transport)?! I expected some really bold statements and actions in here and am disappointed that the focus areas don't. Do you have any sub-targets under this heading that you can share and propose the actions to meet those? e.g. All Chch public transport zero carbon emissions by 2028? CCC (and all CCHL companies) petrol use reduces from XXXXXX L/yr to XXX L/yr by 2025 (and so on for each year?). In terms of aviation and water transport (the remaining 18%?), can CCC compel CCHL companies Port of Lyttelton and CIAL to set targets and plans to help transition these industries to lower carbon? Can there be incentives set to encourage more lower emission vehicles into our city/region (or penalise higher emission vehicles)? Please be bolder and more specific - otherwise what is even the point of having strategies/goals/plans. Constraints create innovation and change in behaviour.</p> <p>8. Energy Efficient Homes and Buildings</p>	
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				<p>The broad focus areas are fine but again, no targets, not specifics, no drive. Increase by how much by when? Decrease by how much by when? How do we know what's working/what's not? How do you lead and encourage/incentivise best practice building and energy efficiency investments beyond minimum code?</p> <p>The next step is weak and uninspiring "Promote awareness of resources available to communities and businesses to assist with energy efficiency efforts." EECA and CCC have been doing that for nearly 30 years. What has the impact been? What are the results? What else could we try that will result in significant reductions?</p> <p>9. Towards Zero Waste</p> <p>- Good. At least there are some concrete targets and plans in the Waste Management and Minimisation Plan. But again, if you could articulate what emissions reduction would result from what activities, then people could more clearly understand the impact of their change in behaviour. And communicate the impact - good or bad. If we're not doing well enough, what else do we need to do? Get people to commit to doing the right thing re waste at the point of purchase - Community Based Social Marketing (https://cbsm.com/about)</p> <p>A key problem in waste from consumption is the idea that continued GDP growth for our city/region is aspirational. If this comes with increased waste and environmental impact then surely growth is bad. A big mindshift but some cities are embracing 'doughnut economics'. How might CCC and CCHL companies lead by example in not measuring success in terms of GDP/financial growth, but by valuing emission reduction and waste reduction more?</p> <p>10. Sustainable Food System</p> <p>Again, the Council's next step of planting 500 fruit trees is uninspiring. What specifically would help us reduce how much in terms of emissions from our food system? Do we want to increase the amount of food being grown at home to reduce distribution emissions? Do we want less food waste at the dump so want to encourage people to waste less food or home compost? This programme of work mentions focus areas saying 'support, encourage, promote, reduce' but doesn't say how and what will have greatest impact. Is it really planting 500 fruit trees?!?!?</p>	
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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
94	39680	Anthea	Madill	Sustainable Ōtautahi Christchurch	Secretary	<p>Submission on Christchurch City Council Draft Ōtautahi Christchurch Climate Change Strategy</p> <p>from:</p> <p>Sustainable Ōtautahi Christchurch Inc.</p> <p>Submission prepared by: SŌC Executive</p> <p>Email contact: Colleen Philip Chairperson</p> <p>We would like to speak to the Hearings Panel about our submission. Also see accompanying document for our formatted submission.</p> <p>SŌC formed in 2005 from the merger of Sustainable Cities Trust and Christchurch-Ōtautahi Agenda 21 Forum. Former members of both those groups are involved, along with a new generation of Ōtautahi-Christchurch people, who work towards the bold vision of Ōtautahi-Christchurch people “practising, living and demonstrating sustainability in all that they do.”</p> <p>Introduction</p>	Yes

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						<p>Thank you for the opportunity to submit on the Christchurch City Council Draft Ōtautahi Christchurch Climate Change Strategy. SŌC commends the CCC for its goals around reducing the environmental contribution of our city to global carbon emissions and strongly supports the principles listed in this strategy.</p> <p>SŌC agrees with the importance placed on organisations of Christchurch and Banks Peninsula working together for positive environmental outcomes as this is the main focus of our work in Ōtautahi. But we feel that the council under estimates the potential they have for influencing positive change in the city.</p> <p>In 2019, the Christchurch City Council declared a Climate and Ecological Emergency and the draft strategy states they will act boldly and display the strong leadership required to address the climate challenges and opportunities for the district. We feel that the framework (principles and goals) of the strategy are on track and we believe the work programmes cover all the areas required, but the details of specific actions are lacking substance. The only programme that has sufficient detail for going forward is the waste area with the Waste Management and Minimisation Plan to guide progress.</p> <p>We also feel that to minimise confusion, the local examples listed in the strategy in the section “What is already happening” should be limited to those the council is directly responsible for.</p> <p>In this submission we include some of our recommendations for areas of improvement as well as emphasise the things within the strategy that have our full support.</p> <p>Goal 1 Net Zero Emissions Christchurch</p> <p>The CCC has set its first target as 50% reduction by 2030. This is nearly a decade away and SŌC believes there should be a goal for 2025 to measure our progress by. It is good to see domestic air travel emissions included in the reckoning, but the contribution of international emissions should also be included - even if only those of Christchurch residents. SŌC supports the CCC commitment to reach net zero for its own operations by 2030.</p>	
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						<p>There should be an action programme of periodic audits to see how the city is doing at implementing the strategy and address any areas where insufficient progress has been made. There should be implementation plans following on from the strategy. We don't want to see the strategy ticked off and put on the shelf.</p> <p>Goal 2 We understand and are preparing for the ongoing impacts of climate change</p> <p>Storm surges should be mentioned in the description of this goal as they have the potential to bring forward the effects of sea level rise by decades.</p> <p>Goal 3 We have a just transition to an innovative low-emission economy</p> <p>SŌC strongly supports this goal due to the potential for the lower-paid to be more adversely affected by the transition. There must be a strong focus on making sure the transition is just.</p> <p>Goal 4 We are guardians of our natural environment and taonga</p> <p>SŌC suggests that the "Be transparent" principle on page 9 should become "Be transparent and frank". It should be made clear to the community at every opportunity the dire situation that we face. We have been reticent to talk frankly about the effects of climate change for too long.</p> <p>Programme 1: Building the foundation</p> <p>We agree that an important part of the strategy is to develop a communications and behaviour change programme.</p> <p>The Council's education programmes should be designed to work alongside public facing organisations and campaigns that are already in place rather than attempting to build these from scratch, which would result in duplication and further disperse the available funding. There is a network that can be used to spread a streamlined and targeted climate change education programme. This includes adult education organisations such as the community gardens association, Envirohub, U3A branches,</p>	
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					<p>the Canterbury Workers Educational Association as well as the Council's public libraries and education programmes at Environment Canterbury. The Council should take a leading role in this as many community organisations are run on volunteer time.</p> <p>We agree that the Council needs to focus on minimising their own emissions. We feel that the Council's Sustainable Procurement Policy should be playing a larger role in this area. Despite it being mentioned often by the Council, in practice it appears there are little tangible outcomes from this that are visible to the public. The Council and CCHL have an opportunity to greatly reduce the city's emissions through setting easy and realistic expectations for contractors. For example regulations around single use plastics and sustainable transport. For example requirements for contractors could include larger companies having in house sustainability officers and environmental policies, this could then lead to more businesses placing importance on environmental outcomes.</p> <p>Programme 2: Understanding local effects of climate change</p> <p>It is good to see the emphasis in the document on ensuring vulnerable groups are supported.</p> <p>It also needs to be recognised that the whole of Christchurch is impacted by changes that occur at local community level e.g. coastal areas are directly impacted by sea level rise but all Christchurch residents and ratepayers are impacted. It is especially important that if all Christchurch ratepayers are to help with paying for adaptation or future potential compensation that the conversations about these matters include people outside of the specific communities.</p> <p>The results of the climate change risk assessment should be publicised widely to ensure the community realises the effects of climate change will be.</p> <p>Programme 3: Proactive climate planning</p> <p>We are happy to see the council working in conjunction with nationwide education programmes for students and feel there is potential for linking local resources such as</p>	
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					<p>community organisations and the Christchurch City Library mobile programmes. Climate change needs to be embedded in all aspects of learning, not just on the side. More respect needs to be given to youth voices in climate discussion.</p> <p>Programme 4: Adapting and greening infrastructure</p> <p>Living among native plants and natural ecosystems is important to wellbeing. Promoting ecological regeneration and wellbeing is an important part of responding to the ecological crisis which is inextricably linked to the climate crisis.</p> <p>Efficient water management is essential and should be considered as part of this strategy.</p> <p>There is a proposal for Christchurch to be named a 'National Park City'. Council could lead a discussion on this idea. It would serve to focus people's thinking on the opportunities we have in Christchurch to bring nature into the urban environment more holistically and effectively. A major problem in people recognising the urgency of climate action is the disconnection from nature of so many (particularly those in urban environments).</p> <p>When increasing tree cover across the city native species should be used preferentially for their biodiversity benefits, better adaptation to local conditions and resistance to fire.</p> <p>The use of stormwater tanks for detention and/or home use should be encouraged or made mandatory for new builds, as they are for hillside suburbs.</p> <p>Programme 5: Carbon removal and restoration</p> <p>In 'Next Step' more wetlands could be restored in the lower Heathcote / Ōpāwaho floodplain also.</p> <p>Programme 6: Economic transformation and innovation</p>	
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					<p>SŌC strongly supports the redefining of measures of progress to better reflect social, cultural, economic and environmental wellbeing.</p> <p>We believe that the goal of carbon neutrality should focus first on reduction before offsetting is considered. Offsetting should be used only to cover the carbon that is not able to be feasibly reduced. The Council's Sustainable Procurement Policy could be a strong driving force in this area with expectations set high for CCHL / Council owned companies. Any offsetting that does take place should be within Canterbury and with native plants.</p> <p>The Council's claims to support innovative programmes around the city need to go beyond design challenges and workshops to proactively support tangible projects that have the potential to have wide reaching high impact. What about engaging with current innovative thinkers as a next step priority? For example, transition engineers.</p> <p>Climate change response is a priority for projects funded by the Sustainability Fund but we believe the fund needs increasing to reflect need. Community driven projects are frequently the most cost effective way of achieving outcomes with in-built community support.</p> <p>Programme 7: Low-emission transport system</p> <p>Enabling an efficient public transport system with incentives to use it must be a priority. Work closely with Environment Canterbury on this work. SŌC supports the development of an effective public rail system in the region.</p> <p>SŌC believes the CCC needs to put the '10 minute city' lens over Christchurch ['Our Space'] and constantly remain conscious of what this requires and how to achieve it.</p> <p>Restrictions on free parking near the city centre could be used to speed up the transition to using public transport for commuting. The CCC could also provide Park and Ride facilities (especially for cycles) in the outer suburbs.</p>	
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						<p>Programme 8: Energy efficient homes and buildings</p> <p>Street lighting is not just about cost and energy use. Research about the impact on our invertebrates must be factored in. Council declared a climate and ecological emergency. Just having a cost and even a carbon reduction lens on some actions is not good enough and can be counter productive. We must be aware of our anthropocentric tendencies as a species and be aware of the impacts of even our climate mitigation/adaptation actions impacts on other species trying to survive on our planet.</p> <p>We want Council to support people prepared to make lifestyle/housing choices that are responsive to the climate crisis. Regulatory and attitude changes to support for example tiny houses should be expedited. Currently there appear to be rules and other bureaucratic barriers. We have people in our organisation wondering whether there is in fact “generational drag” in Council. People in positions of power and with the ability to block change who are still too comfortable within the twentieth century paradigms that brought us to the situation we are in now.</p> <p>When creating new housing areas the streets should be designed to be cycle and public transport friendly from the outset. The layout of sections should be such that houses can have a sizable roof area facing north for optimal insolation.</p> <p>Programme 9: Towards zero waste</p> <p>We strongly support the promotion of the “sharing economy”. There are initiatives in the community already. The examples used in the strategy document are a very narrow range of what is possible and we urge more imagination and listening to community conversations about this. Liaise with people attempting these types of initiatives and act as an enabling agency for them.</p> <p>We feel that ‘promoting how people can find new uses for things that would otherwise be treated as waste’ should be reworded - the concept of a circular economy is more fitting here: keeping materials and resourcing in use.</p> <p>The Council should be promoting and supporting circular economy systems that are already available and able to be rolled out in the city, for example container return</p>	
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					<p>schemes through Again Again and/or providing their own system (in line with the Government's CRS that is currently in the design phase).</p> <p>It would be good to see communities have access to things like sharing sheds, tool libraries, toys, sporting equipment, sewing machines etc and community gardens, pantries and compost. All new subdivisions could have an area for this embedded at the planning stage.</p> <p>Programme 10: Sustainable food system</p> <p>We strongly support the protection of highly productive soils. This is hugely important and recent history in Christchurch shows we are not doing this well at all. We have had a lot of development on productive soils and housing developments continue to be announced in areas of concern. This is an example to us in this strategy of rhetoric not matching reality. This concerns us deeply as it is one of the indicators it seems that perhaps this climate strategy is not yet a 'whole of Council' focus. There are other areas of council control and work that impact here. We have had developer-led developments and need to address things more effectively.</p> <p>We need to get some more checks and balances related to climate impact into decision making. Housing developers should have to make climate impact reports on each development as well as their company overall. This should include the impact on our food security in the face of the climate crisis.</p> <p>Conclusion</p> <p>In conclusion we find the Draft Strategy somewhat underwhelming. The fundamental framework is very good but we need a real action plan with tangible steps towards the goals that have been set. We need the Council to show real leadership here.</p> <p>While we understand the need for adaptation to climate change, we believe it is still a priority to focus on prevention.</p>	
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						We note the amount of consultation happening in April in Canterbury and remind councillors and others that organisations like SÖC run on the work, time, and energy of mostly volunteers. Our time being unpaid is not value-less; it is priceless. There is a serious concern being expressed amongst our members and others in the community about the amount we have been asked to do in 2021, and the commitment to genuine consultation when the overload on our people appears to have been essentially ignored by the agencies concerned.	
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**Submission on
Christchurch City Council
Draft Ōtautahi Christchurch
Climate Change Strategy**

from:

Sustainable Ōtautahi Christchurch Inc.

www.sustainablechristchurch.org.nz

Submission prepared by:
SŌC Executive

Email contact:
Colleen Philip
Chairperson

We would like to speak to the Hearings Panel about our submission

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SŌC formed in 2005 from the merger of Sustainable Cities Trust and Christchurch-Ōtautahi Agenda 21 Forum. Former members of both those groups are involved, along with a new generation of Ōtautahi-Christchurch people, who work towards the bold vision of Ōtautahi-Christchurch people “practising, living and demonstrating sustainability in all that they do.”

Introduction

Thank you for the opportunity to submit on the Christchurch City Council Draft Ōtautahi Christchurch Climate Change Strategy. SŌC commends the CCC for its goals around reducing the environmental contribution of our city to global carbon emissions and strongly supports the principles listed in this strategy.

SŌC agrees with the importance placed on organisations of Christchurch and Banks Peninsula working together for positive environmental outcomes as this is the main focus of our work in Ōtautahi. But we feel that the council under estimates the potential they have for influencing positive change in the city.

In 2019, the Christchurch City Council declared a Climate and Ecological Emergency and the draft strategy states they will act boldly and display the strong leadership required to address the climate challenges and opportunities for the district. We feel that the framework (principles and goals) of the strategy are on track and we believe the work programmes cover all the areas required, but the details of specific actions are lacking substance. The only programme that has sufficient detail for going forward is the waste area with the Waste Management and Minimisation Plan to guide progress.

We also feel that to minimise confusion, the local examples listed in the strategy in the section “What is already happening” should be limited to those the council is directly responsible for.

In this submission we include some of our recommendations for areas of improvement as well as emphasise the things within the strategy that have our full support.

Goal 1 Net Zero Emissions Christchurch

The CCC has set its first target as 50% reduction by 2030. This is nearly a decade away and SŌC believes there should be a goal for 2025 to measure our progress by. It is good to see domestic air travel emissions included in the reckoning, but the contribution of international emissions should also be included - even if only those of Christchurch residents. SŌC supports the CCC commitment to reach net zero for its own operations by 2030.

There should be an action programme of periodic audits to see how the city is doing at implementing the strategy and address any areas where insufficient progress has been made. There should be implementation plans following on from the strategy. We don't want to see the strategy ticked off and put on the shelf.

Goal 2 We understand and are preparing for the ongoing impacts of climate change

Storm surges should be mentioned in the description of this goal as they have the potential to bring forward the effects of sea level rise by decades.

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Goal 3 We have a just transition to an innovative low-emission economy

SŌC strongly supports this goal due to the potential for the lower-paid to be more adversely affected by the transition. There must be a strong focus on making sure the transition is just.

Goal 4 We are guardians of our natural environment and taonga

SŌC suggests that the “Be transparent” principle on page 9 should become “Be transparent and frank”. It should be made clear to the community at every opportunity the dire situation that we face. We have been reticent to talk frankly about the effects of climate change for too long.

Programme 1: Building the foundation

We agree that an important part of the strategy is to develop a communications and behaviour change programme.

The Council’s education programmes should be designed to work alongside public facing organisations and campaigns that are already in place rather than attempting to build these from scratch, which would result in duplication and further disperse the available funding. There is a network that can be used to spread a streamlined and targeted climate change education programme. This includes adult education organisations such as the community gardens association, Envirohub, U3A branches, the Canterbury Workers Educational Association as well as the Council’s public libraries and education programmes at Environment Canterbury. The Council should take a leading role in this as many community organisations are run on volunteer time.

We agree that the Council needs to focus on minimising their own emissions. We feel that the Council’s Sustainable Procurement Policy should be playing a larger role in this area. Despite it being mentioned often by the Council, in practice it appears there are little tangible outcomes from this that are visible to the public. The Council and CCHL have an opportunity to greatly reduce the city’s emissions through setting easy and realistic expectations for contractors. For example regulations around single use plastics and sustainable transport. For example requirements for contractors could include larger companies having in house sustainability officers and environmental policies, this could then lead to more businesses placing importance on environmental outcomes.

Programme 2: Understanding local effects of climate change

It is good to see the emphasis in the document on ensuring vulnerable groups are supported.

It also needs to be recognised that the whole of Christchurch is impacted by changes that occur at local community level e.g. coastal areas are directly impacted by sea level rise but all Christchurch residents and ratepayers are impacted. It is especially important that if all Christchurch ratepayers are to help with paying for adaptation or future potential compensation that the conversations about these matters include people outside of the specific communities.

The results of the climate change risk assessment should be publicised widely to ensure the community realises the effects of climate change will be.

Programme 3: Proactive climate planning

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We are happy to see the council working in conjunction with nationwide education programmes for students and feel there is potential for linking local resources such as community organisations and the Christchurch City Library mobile programmes. Climate change needs to be embedded in all aspects of learning, not just on the side.
More respect needs to be given to youth voices in climate discussion.

Programme 4: Adapting and greening infrastructure

Living among native plants and natural ecosystems is important to wellbeing. Promoting ecological regeneration and wellbeing is an important part of responding to the ecological crisis which is inextricably linked to the climate crisis.

Efficient water management is essential and should be considered as part of this strategy.

There is a proposal for Christchurch to be named a 'National Park City'. Council could lead a discussion on this idea. It would serve to focus people's thinking on the opportunities we have in Christchurch to bring nature into the urban environment more holistically and effectively. A major problem in people recognising the urgency of climate action is the disconnection from nature of so many (particularly those in urban environments).

When increasing tree cover across the city native species should be used preferentially for their biodiversity benefits, better adaptation to local conditions and resistance to fire.

The use of stormwater tanks for detention and/or home use should be encouraged or made mandatory for new builds, as they are for hillside suburbs.

Programme 5: Carbon removal and restoration

In 'Next Step' more wetlands could be restored in the lower Heathcote / Ōpāwaho floodplain also.

Programme 6: Economic transformation and innovation

SŌC strongly supports the redefining of measures of progress to better reflect social, cultural, economic and environmental wellbeing.

We believe that the goal of carbon neutrality should focus first on reduction before offsetting is considered. Offsetting should be used only to cover the carbon that is not able to be feasibly reduced. The Council's Sustainable Procurement Policy could be a strong driving force in this area with expectations set high for CCHL / Council owned companies. Any offsetting that does take place should be within Canterbury and with native plants.

The Council's claims to support innovative programmes around the city need to go beyond design challenges and workshops to proactively support tangible projects that have the potential to have wide reaching high impact. What about engaging with current innovative thinkers as a next step priority? For example, transition engineers.

Climate change response is a priority for projects funded by the Sustainability Fund but we believe the fund needs increasing to reflect need. Community driven projects are frequently the most cost effective way of achieving outcomes with in-built community support.

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Programme 7: Low-emission transport system

Enabling an efficient public transport system with incentives to use it must be a priority. Work closely with Environment Canterbury on this work. SŌC supports the development of an effective public rail system in the region.

SŌC believes the CCC needs to put the '10 minute city' lens over Christchurch ['Our Space'] and constantly remain conscious of what this requires and how to achieve it.

Restrictions on free parking near the city centre could be used to speed up the transition to using public transport for commuting. The CCC could also provide Park and Ride facilities (especially for cycles) in the outer suburbs.

Programme 8: Energy efficient homes and buildings

Street lighting is not just about cost and energy use. Research about the impact on our invertebrates must be factored in. Council declared a climate and ecological emergency. Just having a cost and even a carbon reduction lens on some actions is not good enough and can be counter productive. We must be aware of our anthropocentric tendencies as a species and be aware of the impacts of even our climate mitigation/adaptation actions impacts on other species trying to survive on our planet.

We want Council to support people prepared to make lifestyle/housing choices that are responsive to the climate crisis. Regulatory and attitude changes to support for example tiny houses should be expedited. Currently there appear to be rules and other bureaucratic barriers. We have people in our organisation wondering whether there is in fact "generational drag" in Council. People in positions of power and with the ability to block change who are still too comfortable within the twentieth century paradigms that brought us to the situation we are in now.

When creating new housing areas the streets should be designed to be cycle and public transport friendly from the outset. The layout of sections should be such that houses can have a sizable roof area facing north for optimal insolation.

Programme 9: Towards zero waste

We strongly support the promotion of the "sharing economy". There are initiatives in the community already. The examples used in the strategy document are a very narrow range of what is possible and we urge more imagination and listening to community conversations about this. Liaise with people attempting these types of initiatives and act as an enabling agency for them.

We feel that 'promoting how people can find new uses for things that would otherwise be treated as waste' should be reworded - the concept of a circular economy is more fitting here: keeping materials and resourcing in use.

The Council should be promoting and supporting circular economy systems that are already available and able to be rolled out in the city, for example container return schemes through Again Again and/or providing their own system (in line with the Government's CRS that is currently in the design phase).

It would be good to see communities have access to things like sharing sheds, tool libraries, toys, sporting equipment, sewing machines etc and community gardens, pantries and compost. All new subdivisions could have an area for this embedded at the planning stage.

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Programme 10: Sustainable food system

We strongly support the protection of highly productive soils. This is hugely important and recent history in Christchurch shows we are not doing this well at all. We have had a lot of development on productive soils and housing developments continue to be announced in areas of concern. This is an example to us in this strategy of rhetoric not matching reality. This concerns us deeply as it is one of the indicators it seems that perhaps this climate strategy is not yet a 'whole of Council' focus. There are other areas of council control and work that impact here. We have had developer-led developments and need to address things more effectively.

We need to get some more checks and balances related to climate impact into decision making. Housing developers should have to make climate impact reports on each development as well as their company overall. This should include the impact on our food security in the face of the climate crisis.

Conclusion

In conclusion we find the Draft Strategy somewhat underwhelming. The fundamental framework is very good but we need a real action plan with tangible steps towards the goals that have been set. We need the Council to show real leadership here.

While we understand the need for adaptation to climate change, we believe it is still a priority to focus on prevention.

We note the amount of consultation happening in April in Canterbury and remind councillors and others that organisations like SŌC run on the work, time, and energy of mostly volunteers. Our time being unpaid is not value-less; it is priceless. There is a serious concern being expressed amongst our members and others in the community about the amount we have been asked to do in 2021, and the commitment to genuine consultation when the overload on our people appears to have been essentially ignored by the agencies concerned.

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
93	39679	Sandy	Brinsdon	Canterbury District Health Board	Team Leader, Community and Public Health	Submission is attached	Yes

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Canterbury

District Health Board

Te Poari Hauora o Waitaha

Item 5
Attachment D

Submission on Draft Ōtautahi Christchurch Climate Change Strategy

To: Christchurch City Council

Submitter: Canterbury District Health Board

Attn: Sandy Brinsdon
Community and Public Health

Proposal: The strategy is a long-term framework for Christchurch's climate change journey. It aims to be part of a wider conversation about what we can all do to reduce greenhouse gases and respond to the effects of climate change.

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SUBMISSION ON Climate Change Strategy, CCC

Details of submitter

1. Canterbury District Health Board (CDHB).
2. The submitter aims to reduce potential health risks by several means including early engagement through submissions. This is an example of a situation where we believe it is important to ensure the public health significance of potential adverse effects of a strategy are adequately considered during policy development.

Details of submission

3. We welcome the opportunity to comment on the Draft Climate Change Strategy (the Strategy). The future health of our populations is reliant on a responsive environment where all sectors work collaboratively, and this strategy has an important role to play.

General Comments

4. Climate Change is something the CDHB is very cognisant of. CDHB is a signatory to the “Environmentally Sustainable Health Care: Position Statement” prepared in 2019 for South Island DHBs. The Position Statement recognises the significant impact of Climate Change and identifies what the health sector can do to contribute to reduce the risk from climate change. The background paper that supports the Position Statement aims to inform the commitment, statements, and actions of the South Island District Health Boards in their efforts to achieve an environmentally sustainable health system. The final position paper has been signed off by four of the five South Island DHBs.
5. Health, disease and overall wellbeing are influenced by a wide range of factors, such as climate change, which lie beyond the health sector (see figure 1). These are often referred to as the ‘social determinants of health’¹.

¹ Public Health Advisory Commission. 2004. *The Health of People and Communities. A Way Forward: Public Policy and the Economic Determinants of Health*. Public Health Advisory Commission: Wellington.
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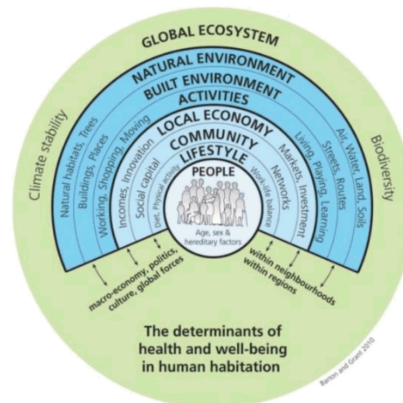


Figure 1. Barton and Grant's Health Map

6. CDHB supports the Strategy and the strong focus CCC is putting on climate change. While the Strategy does outline some co-benefits around air quality, housing and extreme heat events it is missing the opportunity to outline much wider co-benefits on health and wellbeing when addressing climate change². As an example, transport mode shift that has the potential to reduce Greenhouse gas emissions and improve air quality will also reduce non-communicable diseases (NCDs) such as diabetes and cardiovascular disease by increasing physical activity and reducing obesity. Reducing rates of NCDs like these will have enormous positive effects on the communities wellbeing.
7. Another strong example of the link between non-communicable diseases and Climate Change is highlighted by a report³ on the linkages between Type 2 Diabetes and Climate Change, in the 21st century. Both are rapidly accelerating and are fuelled by changes in the way we live. The impacts and solutions are multi-faceted, for example the impact of heat waves and extreme weather events on the health outcomes of people with diabetes; the impact of climate change on food security and type 2 diabetes risk; and the impact of rising obesity levels and diabetes via such things as active transport and good urban planning. This is a local and global problem. A recent New Zealand report⁴ predicts that within the next 20 years, the number of people with type 2 diabetes will increase by 70-90% up from around

² *Climate Change and Health in New Zealand. Climate Change Policy Statement. New Zealand College of Public Health Medicine. 2013*

³

<https://ncdalliance.org/sites/default/files/rfiles/IDF%20Diabetes%20and%20Climate%20Change%20Policy%20Report.pdf>

⁴

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- 228,000 to 390,000-430,000 and will absorb approximately 10% of the Vote Health budget.
8. The identified goals and programmes of action in the CCC Strategy are all relevant. The challenge for CCC is that the listed focus areas and next steps are not bold enough to drive change. They focus more heavily on existing progress. Without clear budget commitments and priorities assigned to the programmes of actions it will be difficult for CCC to meet the identified targets in the Strategy. Specific comments and recommendations on the individual programmes of action are provided below.
 9. CDHB does not believe there is a strong enough equity lens across the strategy. The Goals include discussions of 'just transitions' and being guardians of the natural environment. What is not clearly articulated is how to manage the complexity and challenges that exist between who is affected by climate change and who is paying to reduce the impact. CDHB recommends including this discussion and identify how CCC is looking to address this in the most equitable way and what involvement there can be in the decision-making process. For example, the Strategy notes that all Council's decision-making reports have a section considering the impacts on Climate Change and CDHB recommends this also includes an equity assessment.
 10. The Strategy agrees that partners are needed to deliver the goals and programmes outlined. Climate Change is not the domain of any one sector and therefore it would be useful if the Strategy outlined further some of the existing partnerships that CCC is part of. While the strategy outlines where this fits into the bigger picture (page 31) the detail is largely focused on CCC and internal policy links. CDHB recommends developing further the linkages more with other local, regional and national networks and strategies.
 11. The CDHB recommends a 'Health in All Policies' (HiAP) approach is used to address the climate crisis and developing actions to reduce the impact of climate change. CDHB and CCC have a long history of working together in this way and an intersectoral approach to public policy development has consistently shown value.
 12. While the Strategy identifies existing relationships with Ngai Tahu CDHB recommends that CCC ensure te Tiriti o Waitangi is central to the strategy through more than seeing Māori as just one of many stakeholders. The Waitangi Tribunal

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states⁵ in their Ko Aotearoa Tēnei (Wai 262) report: “...that it is for Māori to say what their interests are, and to articulate how they might best be protected.” It is the responsibility of all sectors to prioritise Maori health and wellbeing and the collaboration required around Climate Change provides opportunities to truly enact this.

Specific Comments

Programme One: Building the foundation

13. The key feedback for this program area has been outlined above (point 10). CDHB recommends that the Strategy is clear about existing relationships and how they fit together along with ensuring equity is part of decision making. An additional comment would be to make this bolder by explicitly having a council apply a weighting against the climate change and equity impact in their decision-making process. This is stronger than just asking for it to be identified in papers going to council.

Programme Two: Understanding the local effects

14. The next step is too broad- ‘complete climate change risk assessment’. This work will be ongoing and should not delay action that can be done now. Having some idea of timeframes around these actions in this strategy will also help the community to understand priorities.

Programme Four: Adapting and Greening infrastructure

15. This action needs to be clearer about how extensive this adapting and adopting of green infrastructure will be. CDHB recommends that asset management plans do more than just ‘consider’ green infrastructure but are required to identify viable solutions wherever it is possible.

Programmes Five and Six: Carbon removal and natural restoration/ Economic Transformation

⁵ New Zealand. Waitangi Tribunal. (2011) Ko Aotearoa tēnei : a report into claims concerning New Zealand law and policy affecting Māori culture and identity. Te taumata tuatahi. (Waitangi Tribunal report 2011). <https://www.waitangitribunal.govt.nz>

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16. Fully realising the expectations under this programme is going to require allocating budget. The CDHB queries how this strategy will allocate and prioritise budget to each programme of action CDHB recommends that such allocation is clear in the Long Term Plan currently being completed.

Programme Seven : Low-emission transport system

17. There are many benefits of pushing a change in mode share as noted in points 6 and 7 above. While low emission vehicles are an important part of this it is more important to move populations to less reliance on individual motor vehicles. The infrastructure savings and health benefits alone make this a sensible move alongside climate change impacts. CCC should be bold in moving to be a city supporting and enabling active transport including public transport, walking and cycling. The current process of looking at each cycleway suburb by suburb means the whole system is at risk. Consultations should focus on how to minimise local community concerns while delivering strong city-wide policy.

Programme Eight: Energy efficient homes and buildings

18. The CDHB recommends the action on this be strengthened. There is a significant amount of work CCC can be doing in the space around building and development requirements, as noted in the strategy under 'what's already happening'. This needs to be bolder and CCC seen to be leading this discussion by identifying how actions in this area can positively impact on addressing climate change. Warm and efficient homes is another clear co-benefit area with strong wellbeing outcomes as well as reduction in effects on climate change.

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Conclusion

19. The CDHB does wish to be heard in support of this submission.

20. Thank you for the opportunity to submit on CCC Climate Change Strategy

Person making the submission



Dr Anna Stevenson
Public Health Specialist
Date: 23/04/2021

Contact details

Sandy Brinsdon
For and on behalf of

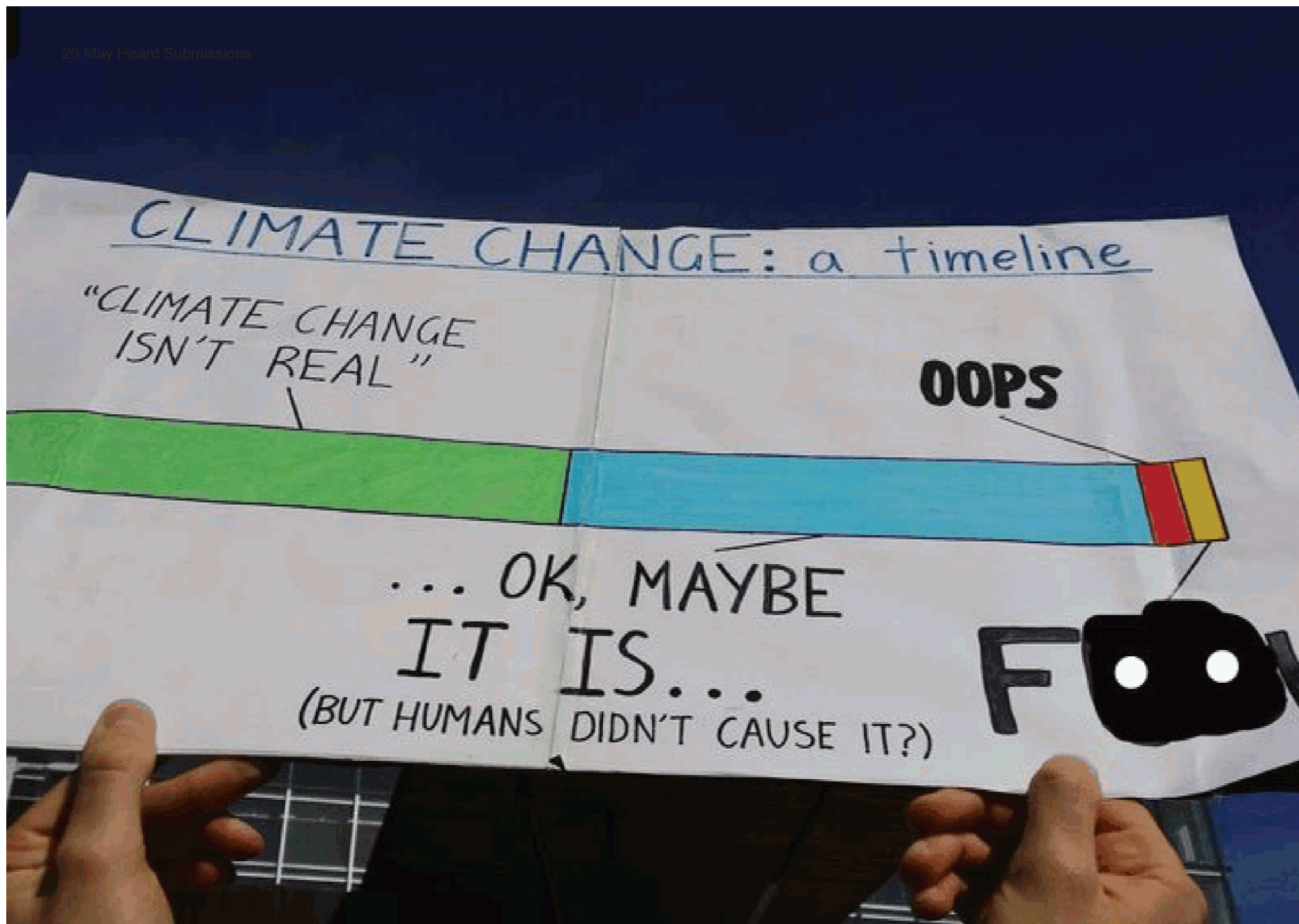
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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
90	39675	Liza	Sparrow	Sumner Community Residents' Association	Co-Chair	<p>This submission is being made on behalf of SCRA (Sumner Community Residents' Association). As a committee representing a community of approximately 5,000 residents we would like to talk to the Hearings Panel on the risks to Sumner and Taylors' Mistake communities in the likely event of a flood and unlikely event of a tsunami and/or earthquake (AF8) resulting in rock roll and rock fall. All events may lead to Sumner and Taylors being shut off from emergency responders for several days.</p> <p>Luckily our community has effective retreat zones in the surrounding hills. We therefore would like CCC and CDEM to consider supporting our community to be resilient, prepared, self sufficient in the case of a natural disaster.</p> <p>We believe as a residents' association we are in a position to coordinate with local emergency responders, businesses, residents and visitors to coordinate an education campaign and to install containers/buildings in retreat zones to store comms, food, water, blankets and which also provide shelter.</p> <p>We would like to ensure that all decisions made on the effects of local climate change be done in conjunction with affected communities. We feel it is important for all options to be explored especially when issues such as retreat are considered.</p> <p>We would appreciate the chance to submit on this issue.</p> <p>Regards</p> <p>Liza Sparrow</p> <p>Co-Chair</p>	Yes

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
148	39746	Cora	Scott	School Strike 4 Climate Ōtautahi	member and organizer	<p>As a city, we must do everything we can to reduce our carbon footprint and make it easier for the citizens of Ōtautahi to lower their carbon footprint. Christchurch city council must invest in green infrastructure if we want to achieve our goals of net zero emissions by 2045 and halving emissions by 2030. This green infrastructure should be focused around sustainable transport, aka buses, bike lanes and not prioritizing cars on the road. We must also focus on educating young people about sustainability, climate change, and the impacts of central and local government decisions.</p> <p>It's difficult growing up fearing our leaders do not have a sufficient plan to deal with the impending climate crisis. It is disillusioning and disheartening. Through this climate strategy, you have the chance to prove to us, your future generation and Ōtautahi's population that you have a comprehensive, ambitious plan to tackle this crisis. We must halve our emissions by 2030 and achieve net-zero by 2050 in line with the 1.5-degree aim. You have the chance to be leaders in the climate change space, so please, make the right choice.</p> <p>The strategy itself places too little focus on reducing emissions and too much on mitigating and offsetting them. Mitigation is not a long term solution and there should not be too great a focus on this. Much of the strategy also relies on promises and plans of plans. Timelines and specific pathways need to be created promptly so that we can have an assurance that the council will meet their goals.</p> <p>We feel that this submission process is quite inaccessible, especially to those with limited time and energy, who in many cases will be worse impacted by the climate crisis. This includes people living in low socio-economic areas, who often work long shifts and do not have the time or energy to meaningfully engage with your submissions process as it stands now.</p> <p>At first sight, it feels too content-heavy - putting the burden on the wider public</p>	Yes

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					<p>to read, understand, then give feedback on your climate strategy. We feel this is too high an expectation and will exclude a larger demographic of the population. The conversation around climate change needs to be inclusive of everyone, so we highly suggest alternative methods of engagement around this, that make the conversation accessible, as well as making the submission process simpler to follow.</p> <p>The language and terminology used is often complex and inaccessible to both youth and less-educated adults, making it harder to engage these demographics. Furthermore, it often relies on the reader having a large amount of background knowledge meaning they have to take extra time to research and/or understand what is being said. Information is often convoluted and provides little clarity.</p> <p>Could add that the language and terminology used is inaccessible to youth as well as less educated people which is bad</p> <p>We demand that the Council honor Te Tiriti o Waitangi while making decisions on climate change.</p> <p>Te Tiriti refers to the three principles of partnership, participation, and protection when it comes to the relationship between tangata whenua and the government. Therefore, when it comes to decisions on climate change, we demand that the government ensures that tangata whenua voices are at the forefront of those decisions; especially when it comes to Māori environmental, cultural, social, and economic interests.</p> <p>We demand that the Council lower emissions in order to limit the global temperature rise.</p> <p>It's said that the best way to stop a bathtub from overflowing is by first turning off the tap, and the same goes for our emissions. Under the Paris Agreement, the NZ Government has promised to reduce our emissions in order to limit a global temperature rise to 1.5°C above pre-industrial levels. Therefore, we demand that they keep this promise by doing everything in their power to lower our emissions,</p>	
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						<p>listening to what science has to say about achieving the 1.5C goal.</p> <p>We demand that the Council invest in a just transition for all workers affected by Covid-19.</p> <p>When it comes to transitioning to a thriving, carbon neutral future, nobody can be left behind. Therefore, we demand that the government work towards a just transition for all people in unsustainable jobs and industries, as well as those who have lost jobs due to Covid19. This means immediate investment in retraining, and the provision of alternative jobs in clean, sustainable industries that don't harm our planet and its ecosystems which we depend on for survival</p> <p>We demand that Christchurch City Council invests more into green transport infrastructure.</p> <p>Transportation in Christchurch makes up the largest percentage of our greenhouse gas emissions at roughly 50%. We appreciate that there is currently some investment in cycleways and decarbonising our buses around the city, however, there are still significant improvements to be made in order to reduce the number of gas-guzzling cars on the road. Therefore, we demand that Christchurch City Council invests more into green transport infrastructure, including free public transport and other incentives to get people out of cars and forms of transport with high greenhouse gas emissions.</p> <p>We demand investment in climate education in Christchurch and throughout Aotearoa.</p> <p>As young people, we feel that we and future generations need to be equipped with the knowledge to help us to deal with the ongoing climate crisis. Many of today's children don't know the extent of the crisis, and won't until it is too late. Anyone that does not know about, or does not try and make a significant change to the current climate crisis is not helping. The only way to change this is to educate people on what is happening before it is too late. Therefore we demand that more of an emphasis is placed on climate education in schools; and also for</p>	
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					<p>an increase in the funding of climate education programs both in Christchurch and throughout Aotearoa.</p> <p>We demand that Christchurch City Council and Christchurch Holdings Limited immediately halts the development of the Tarras airport proposal.</p> <p>In the escalating climate crisis, there is no room for airport expansion and investment in other high emitting projects which directly contradict the promises made when the government declared a climate emergency. The last year has also shown us that the stability of industries such as tourism isn't guaranteed, therefore we should base our decisions on what is guaranteed: that if we fail to act on the climate crisis, we will fail to safeguard a livable future for us and our children.</p> <p>Goal 1</p> <p>The emissions targets are good, but they could be better. The IPCC special report on achieving a 1.5 °C warmer world indicates a global need to halve emissions by 2030 and to achieve net-zero emissions by 2050. These goals importantly include methane, and use a 2010 baseline. In contrast, the Council's Draft Strategy appears to have a weaker target regarding methane, and a slightly less stringent baseline of 2016-17. This is the bare minimum. As a wealthy nation that has historically contributed more than its fair share of emissions, we should be playing a greater role in reducing global emissions. We want Christchurch City Council to adopt a target consistent with a 1.5 °C world by including methane in the total emissions reductions targets, in which Christchurch's contribution reflects our wealth and privilege, and using a baseline of 2010 or earlier as the bare minimum.</p> <p>Goal 2:</p> <p>Support for communities affected by climate change must acknowledge that lower-income communities be less resilient as they will feel the impacts of a changing environment more keenly. The council must allocate more resources</p>	
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						<p>and funding towards these communities so that they do not get left behind.</p> <p>Goal 3:</p> <p>The narrow definition of ‘just’ that has been used in the climate change strategy excludes social-cultural and environmental factors of climate justice as well as only mentioning strategies for mitigation rather than pathways through which we can adapt which are all key factors that cannot and should not be overlooked. The transition must include social, cultural, economic and environmental factors within mitigation AND adaptation.</p> <p>Goal 4:</p> <p>The council must replenish natural environments by replanting trees and restoring wetlands. However, it is also necessary to recognize that emission mitigation strategies are not a substitute for emission reduction strategies, and that tree’s and wetlands can not be relied upon indefinitely to remove carbon dioxide from the atmosphere.</p> <p>Programme 1:</p> <p>Collaboration with community groups must highlight youth voices, and be an accessible and safe space for youth. Youth are the key stakeholders, the ones who will inherit our planet, and thus they cannot be spoken over. We recommend that the council work with schools to set up student orientated groups that provide a space in which youth are empowered to take action. We also ask that they further involve youth by providing students with more education and clarity on both the science and the council’s proposals concerning climate change.</p> <p>Programme 2:</p> <p>This plan has merit however there is a risk that focusing on these triggers will prevent flexibility and timeliness when taking action. For example, if previously</p>	
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					<p>identified triggers do not become apparent until it is too late to act.</p> <p>Programme 3 and 5:</p> <p>There must be more of a focus on wildfire risk as we are susceptible to them particularly on the Port Hills, as was shown during the Port Hills fires. Strategies must be implemented to protect communities from fire risk and prevent fires, for example by providing a budget and plan to replant the Port Hills with fire retardant species. As a retreat from coastal and river areas occurs, vacated areas should be used for riparian plantings designed to protect from hazards such as sea-level rise and flooding, sequester carbon and restore biodiversity.</p> <p>Programme 4:</p> <p>At present, the council's plan for sustainable infrastructure is too narrow. We recommend that they widen the scope of their plan to also focus on intensifying the city to prevent urban sprawl, building up instead of out, and maximising the capacity of the land. More communal gardens and urban forests would help remove the need for land-intensive private homes and help bring communities together.</p> <p>Programme 6:</p> <p>Industries directly affected by climate change will not be the only ones needing support. While an economic transition is hugely important, there must be support for a social and cultural transition as people and communities are forced to adapt and change, so that no one is left behind.</p> <p>Programme 7:</p> <p>More focus is needed on cycleways. Pre-existing ones must be maintained and expanded, especially the ones that have sudden ends in unsafe locations and new cycleways must be built to connect pre-existing ones to create an accessible network across the city. Companies should be made to incentivise public</p>	
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					<p>transport and sustainable transport such as biking, electric bike, electric cars and walking. Connecting green modes of transport such as walking, biking and busing so that users can cross between modes according to their needs. Reinstate and create new electric train infrastructure for passenger use.</p> <p>Programme 9:</p> <p>Being zero waste is not just about recycling already used products, but also about limiting waste produced altogether. We recommend that the council provide an incentive for businesses to pursue lower waste options such as sustainable packaging, (e.g. for food) and to lower overall consumption. Change needs to come from the businesses that are providing services to communities and producing large amounts of rubbish. Without this leadership, it is a greater challenge for individuals to lower their waste production.</p> <p>Programme 10:</p> <p>The council must consider how development may impact /harm the production of food, We recommend that the fertility of soils and their potential for the production of mahinga kai is taken into account when considering the development of subdivisions and expansion of the city. In this way, we protect our fertile soils.</p>	
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As a city, we must do everything we can to reduce our carbon footprint and make it easier for the citizens of Ōtautahi to lower their carbon footprint. Christchurch city council must invest in green infrastructure if we want to achieve our goals of net zero emissions by 2045 and halving emissions by 2030. This green infrastructure should be focused around sustainable transport, aka buses, bike lanes and not prioritizing cars on the road. We must also focus on educating young people about sustainability, climate change, and the impacts of central and local government decisions.

It's difficult growing up fearing our leaders do not have a sufficient plan to deal with the impending climate crisis. It is disillusioning and disheartening. Through this climate strategy, you have the chance to prove to us, your future generation and Ōtautahi's population that you have a comprehensive, ambitious plan to tackle this crisis. We must halve our emissions by 2030 and achieve net-zero by 2050 in line with the 1.5-degree aim. You have the chance to be leaders in the climate change space, so please, make the right choice.

The strategy itself places too little focus on reducing emissions and too much on mitigating and offsetting them. Mitigation is not a long term solution and there should not be too great a focus on this. Much of the strategy also relies on promises and plans of plans. Timelines and specific pathways need to be created promptly so that we can have an assurance that the council will meet their goals.

We feel that this submission process is quite inaccessible, especially to those with limited time and energy, who in many cases will be worse impacted by the climate crisis. This includes people living in low socio-economic areas, who often work long shifts and do not have the time or energy to meaningfully engage with your submissions process as it stands now.

At first sight, it feels too content-heavy - putting the burden on the wider public to read, understand, then give feedback on your climate strategy. We feel this is too high an expectation and will exclude a larger demographic of the population. The conversation around climate change needs to be inclusive of everyone, so we highly suggest alternative methods of engagement around this, that make the conversation accessible, as well as making the submission process simpler to follow.

The language and terminology used is often complex and inaccessible to both youth and less-educated adults, making it harder to engage these demographics. Furthermore, it often relies on the reader having a large amount of background knowledge meaning they have to take extra time to research and/or understand what is being said. Information is often convoluted and provides little clarity.

Could add that the language and terminology used is inaccessible to youth as well as less educated people which is bad

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1. **We demand that the Council honor Te Tiriti o Waitangi while making decisions on climate change.**

Te Tiriti refers to the three principles of partnership, participation, and protection when it comes to the relationship between tangata whenua and the government. Therefore, when it comes to decisions on climate change, we demand that the government ensures that tangata whenua voices are at the forefront of those decisions; especially when it comes to Māori environmental, cultural, social, and economic interests.

2. **We demand that the Council lower emissions in order to limit the global temperature rise.**

It's said that the best way to stop a bathtub from overflowing is by first turning off the tap, and the same goes for our emissions. Under the Paris Agreement, the NZ Government has promised to reduce our emissions in order to limit a global temperature rise to 1.5°C above pre-industrial levels. Therefore, we demand that they keep this promise by doing everything in their power to lower our emissions, listening to what science has to say about achieving the 1.5°C goal.

3. **We demand that the Council invest in a just transition for all workers affected by Covid-19.**

When it comes to transitioning to a thriving, carbon neutral future, nobody can be left behind. Therefore, we demand that the government work towards a just transition for all people in unsustainable jobs and industries, as well as those who have lost jobs due to Covid19. This means immediate investment in retraining, and the provision of alternative jobs in clean, sustainable industries that don't harm our planet and its ecosystems which we depend on for survival

1. **We demand that Christchurch City Council invests more into green transport infrastructure.**

Transportation in Christchurch makes up the largest percentage of our greenhouse gas emissions at roughly 50%. We appreciate that there is currently some investment in cycleways and decarbonising our buses around the city, however, there are still significant improvements to be made in order to reduce the number of gas-guzzling cars on the road. Therefore, we demand that Christchurch City Council invests more into green transport infrastructure, including free public transport and other incentives to get people out of cars and forms of transport with high greenhouse gas emissions.

2. **We demand investment in climate education in Christchurch and throughout Aotearoa.**

As young people, we feel that we and future generations need to be equipped with the knowledge to help us to deal with the ongoing climate crisis. Many of today's children don't know the extent of the crisis, and won't until it is too late. Anyone that does not know about, or does not try and make a significant change to the current climate crisis is not helping. The only way to change this is to educate people on what is happening before it is too late. Therefore we demand that more of an emphasis is placed on climate education in schools; and also for an increase in the funding of climate education programs both in Christchurch and throughout Aotearoa.

3. **We demand that Christchurch City Council and Christchurch Holdings Limited immediately halts the development of the Tarras airport proposal.**

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In the escalating climate crisis, there is no room for airport expansion and investment in other high emitting projects which directly contradict the promises made when the government declared a climate emergency. The last year has also shown us that the stability of industries such as tourism isn't guaranteed, therefore we should base our decisions on what is guaranteed: that if we fail to act on the climate crisis, we will fail to safeguard a livable future for us and our children.

Goal 1

The emissions targets are good, but they could be better. The IPCC special report on achieving a 1.5 °C warmer world indicates a global need to halve emissions by 2030 and to achieve net-zero emissions by 2050. These goals importantly include methane, and use a 2010 baseline. In contrast, the Council's Draft Strategy appears to have a weaker target regarding methane, and a slightly less stringent baseline of 2016-17. This is the bare minimum. As a wealthy nation that has historically contributed more than its fair share of emissions, we should be playing a greater role in reducing global emissions. We want Christchurch City Council to adopt a target consistent with a 1.5 °C world by including methane in the total emissions reductions targets, in which Christchurch's contribution reflects our wealth and privilege, and using a baseline of 2010 or earlier as the bare minimum.

Goal 2:

Support for communities affected by climate change must acknowledge that lower-income communities be less resilient as they will feel the impacts of a changing environment more keenly. The council must allocate more resources and funding towards these communities so that they do not get left behind.

Goal 3:

The narrow definition of 'just' that has been used in the climate change strategy excludes social-cultural and environmental factors of climate justice as well as only mentioning strategies for mitigation rather than pathways through which we can adapt which are all key factors that cannot and should not be overlooked. The transition must include social, cultural, economic and environmental factors within mitigation AND adaptation.

Goal 4:

The council must replenish natural environments by replanting trees and restoring wetlands. However, it is also necessary to recognize that emission mitigation strategies are not a substitute for emission reduction strategies, and that tree's and wetlands can not be relied upon indefinitely to remove carbon dioxide from the atmosphere.

Programme 1:

Collaboration with community groups must highlight youth voices, and be an accessible and safe space for youth. Youth are the key stakeholders, the ones who will inherit our planet, and thus they cannot be spoken over. We recommend that the council work with schools to set up student orientated groups that provide a space in which youth are empowered to take action. We also ask that they further involve youth by providing students with more education and clarity on both the science and the council's proposals concerning climate change.

Programme 2:

This plan has merit however there is a risk that focusing on these triggers will prevent flexibility and timeliness when taking action. For example, if previously identified triggers do not become apparent until it is too late to act.

Programme 3 and 5:

There must be more of a focus on wildfire risk as we are susceptible to them particularly on the Port Hills, as was shown during the Port Hills fires. Strategies must be implemented to protect communities from fire risk and prevent fires, for example by providing a budget and plan to replant the Port Hills with fire retardant species. As a retreat from coastal and river areas occurs, vacated areas should be used for riparian plantings designed to protect from hazards such as sea-level rise and flooding, sequester carbon and restore biodiversity.

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Programme 4:

At present, the council's plan for sustainable infrastructure is too narrow. We recommend that they widen the scope of their plan to also focus on intensifying the city to prevent urban sprawl, building up instead of out, and maximising the capacity of the land. More communal gardens and urban forests would help remove the need for land-intensive private homes and help bring communities together.

Programme 6:

Industries directly affected by climate change will not be the only ones needing support. While an economic transition is hugely important, there must be support for a social and cultural transition as people and communities are forced to adapt and change, so that no one is left behind.

Programme 7:

More focus is needed on cycleways. Pre-existing ones must be maintained and expanded, especially the ones that have sudden ends in unsafe locations and new cycleways must be built to connect pre-existing ones to create an accessible network across the city. Companies should be made to incentivise public transport and sustainable transport such as biking, electric bike, electric cars and walking. Connecting green modes of transport such as walking, biking and busing so that users can cross between modes according to their needs. Reinstate and create new electric train infrastructure for passenger use.

Programme 9:

Being zero waste is not just about recycling already used products, but also about limiting waste produced altogether. We recommend that the council provide an incentive for businesses to pursue lower waste options such as sustainable packaging, (e.g. for food) and to lower overall consumption. Change needs to come from the businesses that are providing services to communities and producing large amounts of rubbish. Without this leadership, it is a greater challenge for individuals to lower their waste production.

Programme 10:

The council must consider how development may impact /harm the production of food. We recommend that the fertility of soils and their potential for the production of mahinga kai is taken into account when considering the development of subdivisions and expansion of the city. In this way, we protect our fertile soils.

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
82	39663	Richard	Suggate	<p>In May 2019 the Christchurch City Council declared a climate and ecological emergency. This strategy lack a sense of urgency and commitment that you would expect to see in response to an 'emergency' . The implementation measures are often random, insubstantial and timid and tactical rather than strategic. If the Council really believes there is an emergency, then allocate the planning resources to complete this strategy in a way that measures the risks, determines the outcomes and has measurable and timely actions that create strategic change.</p> <p>Programme 1: Building the foundation</p> <p>A Christchurch Citizens Assembly should be established to advise the Council on implementation of this Strategy, or at least make sure the 'Climate Leadership Group' is fully representative not just of elites.</p> <p>Programme 2: Understanding local effects of climate change</p> <p>Completing a risk assessment is an important step, but it would be desirable to complete it prior to completing the implementation steps for this Strategy, as it should inform future decision-making.</p> <p>Programme 3: Proactive climate planning.</p> <p>Proactive climate planning with communities is a good programme but it should cover much more than just coastal planning. The increased likelihood of floods, droughts and fires and Council and community response, should all be planned for through collaborative engagement.</p> <p>Programme 4: Adapting and greening infrastructure</p> <p>Habitat improvement at Bexley (Ōtākaro Avon River Corridor Regeneration Area) is only one of many projects that need to be initiated and should also be spelled out in the Strategy. There are multiple opportunities across the City and the Peninsula for Council intervention to establish large scale natural regeneration. The traditional infrastructure system also needs 'greening'. Drainage, sewage, roading, utilities can all benefit from 'green' design to reduce emissions and absorb CO2.</p>	Yes

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				<p>Programme 5: Carbon removal and restoration</p> <p>I completely support indigenous planting and there are many ways Council can encourage it and work in partnerships. Indigenous restoration is more than just planting - it also includes natural regeneration and weed and pest control. The Council should be providing strong incentives to landowners to leave areas to regenerate where this will improve catchments, biodiversity and provide a carbon income.</p> <p>Programme 6: Economic transformation and innovation</p> <p>Educational and promotional events are useful, but direct Council intervention is possible through the district plans and by-laws to discourage economic activities that generate adverse environmental effects and emissions. Taking strong intervention in the transport area to discourage private vehicle usage and free-up public transport will have beneficial economic consequences through increased efficiency (reduced travel times and less congestions).</p> <p>Programme 7: Low-emission transport system</p> <p>Amend this to read "Complete the Christchurch Transport Plan to understand pathways to reduce emissions, refine options and implement progressive measures to achieve the level of reductions we are seeking."</p> <p>Programme 8: Energy efficient homes and buildings</p> <p>The text is very aspirational about 'we will design..'. But what is the Council going to do. Private and commercial owners of buildings will do what they wish to do through income and personal desires being affected by a mix of regulations and financial incentives. To change this takes more than just education. The by-laws and the district plan also should be used. There should be a commitment for all Council buildings and infrastructure to be more energy efficient and incentives for solar panels to be installed on roofs.</p> <p>Programme 9: Towards zero waste</p> <p>Implementation of the Council's Waste Management and Minimisation Plan is a specific and detailed action and I support it.</p> <p>Programme 10: Sustainable food system</p> <p>This programme is unfocussed and has one token implementation action (which I support). There is much more that could</p>	
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				be done. e.g. Strong support for Enviro-Schools, and Community Gardens. District plan protection for high value productive soils. The encouragement of farming practices that produce food in a way is sustainable and minimises green house gas emissions and nitrogen getting into waterways and aquifers.	
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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
102	39693	Rob	Kerr	Ōtākaro Regeneration Company	Director	Please see attached document	Yes

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Submission on CCC Climate Change Strategy 2021

Ōtākaro Regeneration Company

Preamble

We commend Christchurch City Council in developing the Climate Change Strategy. Although we have a number of significant concerns regarding the strategy as it stands; the general direction of travel towards a comprehensive programme is supported.

Key points of submission

A A Lack of ambition

While the strategy includes a principle of 'being bold', and Council's previous setting of a zero net emission target by 2045 and declaration of a climate emergency is supported, the actual strategy is weak, vague and does not provide any ambition or accountability.

Council have resolved that addressing the threat posed by Climate Change as an emergency, however it fails to set out a roadmap, establish targets and milestones or establish any reporting or monitoring. Instead, there are promises and platitudes. This is a business as usual strategy for an extraordinary threat that needs a new type of response.

The strategy not sufficiently tangible or ambitious to provide any assurance that the strategy will be successful. It needs to be recast significantly.

RECOMMENDATIONS:

- REVISE STRATEGY TO SET BOLD AND AMBITIOUS TARGETS FOR THE COUNCIL AND WIDER PARTNERS, SECTORS AND COMMUNITIES
- ASSERT RESPONSIBILITIES AND ACCOUNTABILITIES FOR EVERYONE WHO NEEDS TO TAKE ACTION IN THE CITY. DO NOT RESILE FROM STATING CLEARLY WHO NEEDS TO DO WHAT.

B Whose strategy is this?

A series of changing references (us/we) and unclear statements leads to confusion on the purpose of this strategy. Is it for the Council as an organisation, or is it for the City of Christchurch? The answer is unclear with many mixed messages. The city is crying out for leadership and it is time for the Council to step up and lead the city – not just the organisation.

The strategy acknowledges that the 'Council cannot do it alone' but then fails to provide any mechanism for the city to work together to address the existential threat that we face. A climate leadership group is not broad or wide enough to enlist the full collaboration of the city's residents again is a BAU response to the threat.

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A new approach is required that captures the whole community: It is time a new cross-sector and cross-community forum was established as a citizen's jury to drive and make the key decisions on climate change mitigation and adaptation.

RECOMMENDATIONS:

- WE STRONGLY RECOMMEND THAT THE CITY COUNCIL STEP UP AND PROVIDE CITY WIDE LEADERSHIP INSTEAD OF AN INWARDS LOOKING STRATEGY THAT ADDRESS ONLY WHAT THE COUNCIL AS AN ORGANISATION DOES.
- RE-POSITION THE STRATEGY AS CLEARLY FOR THE WHOLE CITY.
- STATE WHAT YOU EXPECT OF THE OTHER STAKEHOLDERS IN THE CITY.
- SET UP A CITIZENS JURY TO GUIDE AND DECIDE HOW WE SHALL FACE THESE CHALLENGES.

C No outcomes defined:

What are the outcomes (Specific and measurable) which are being sought? Who is accountable for achieving them? Who is going to going them and how often?

The strategy is loose, vague and full of nice platitudes, but no specific outcomes set out to be achieved. The statements that 'we need everyone to do their part' is somewhat patronising and not helpful when the strategy fails to define what everyone's part needs to be , and what outcomes 'we' are all seeking to achieve.

Outcomes should be linked to the national strategy: what contribution is Christchurch to make to the national outcomes set out by the Climate Change Commission. For the avoidance of doubt, this should be hard and specific measures set against a milestone with a single party accountable for meeting this target.

RECOMMENDATION:

- CLEARLY SET OUT THE OUTCOMES THAT ARE SOUGHT BY THE STRATEGY AND HOW THEY WILL CONTRIBUTE TO NATIONAL TARGETS AND OUTCOMES
- IDENTIFY WHO IS RESPONSIBLE FOR ACHIEVING THEM.

D No accountability or roadmap:

For all strategies, but particularly this one when the stakes are so high, we would expect that tight and focussed monitoring against targets on progress as a core part of the strategy. This should be incorporated in an overall roadmap which shows the steps along the way in which the city needs to be achieving in order to face the challenges we have ahead.

It is too late to leave it to the individual programmes to work this out as that is both further time lost, but also there is no cohesion or accountability across the overall strategy.

Regular reporting to the city on progress, risks and obstacles to success are also critical to ensure that we can review and adapt the strategy over time.

RECOMMENDATION:

- INCORPORATE ROBUST AND SMART TARGETS AND MILESTONES TOWARDS THE OUTCOMES
- ESTABLISH A ROBUST MONITORING AND REPORTING PROGRAMME THAT SHOWS WHAT IS HAPPENING.

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- **DEVELOP A ROADMAP INCORPORATING THE OUTCOMES AND MILESTONES BY WHICH PROGRESS CAN BE MEASURED AND ALL HELD TO ACCOUNT.**

E No financial assessment.

We understand the well established practice of shying away from stating the financial implications of a strategy however the idea of deciding a strategy and then working out the financial implications has always led to a failure to deliver or on-going delay and confusion.

What is required to deliver this strategy. How much will it cost and who is going to pay. How does this compare with no action?

The continued tactic of avoiding the financial consequences of a strategy will lead to further underinvestment. How can you know if the strategy is the best approach if you do not understand how to pay for it? How can the Council or any partner commit to the strategy without understanding the implications?

Continuing to avoid this crucial matter is not being bold or providing leadership: quite the opposite.

RECOMMENDATION:

- **SET OUT THE ROUGH ORDER COSTS OF IMPLEMENTING THE STRATEGY FOR ALL PARTIES, INCLUDING THE IMPACT ON HOUSEHOLDS, BUSINESSES AND ORGANISATIONS**
- **BE BOLD ENOUGH TO SET OUT WHAT THE BURDEN WILL BE.**

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
77	39648	Zhongheng	Wu	<p>I am a Year 8 student at Intermediate. My name is Zhongheng Wu. We looked at the environment plan in class and I have a few suggestions for it:</p> <p>- Programme 2: I think you should survey students to see what we think. Because in the future when we grow up we will be the ones running Christchurch. We all have a vision for what we can strive for!</p> <p>- Programme 7: "Christchurch has high levels of private car use and low level use of public transport. " There is a reason why large numbers of people never ride on public transport. Because it is not convenient. The only reason people use private cars is because they are more convenient. You can go out without having to wait for the bus. I have used the bus a few times in the past. Every time I had to wait for a long time, and I rarely see a bus half full. There's almost always less than half of the seats used. So my suggestion for this is to consider using smaller buses that come more frequently. We can use big buses on more popular routes. That's another thing you can do -- research how many people actually ride what buses and what are the popular routes.</p> <p>Another solution for the low emission transport system is to encourage people to buy private cars that are fuel efficient, hybrid, or electric. And the council should start a programme to educate drivers on how to save energy and drive safely and efficiently.</p> <p>- Programme 10: There is one problem you did not address in here - Plastic packaging. Plastic over-packaging is everywhere. It is toxic to our environment, and this problem is deteriorating every day. For example, we wrap carrots in plastic even though we all know it's not the best way to keep them fresh. There are alternatives. The easiest is paper bags. We already use them to hold mushrooms, so why not expand their use?</p> <p>To make paper bags carry heavy loads, we can add strong biodegradable fibre to them. Many people are already using reusable bags for shopping. However, that's not enough because the manufacturers of foods and other goods are still using too much plastic in their manufacturing and end products.</p>	Yes

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
137	39735	Brent	Thompson	<p>Climate change is one of the greatest threats facing today's children. Not only will they have to cope with the direct consequences of sea level rise and an increasingly unstable climate, such as loss of land and property and reduced food productivity, they will also be forced to contend with increasing competition for essential resources such as fresh water, and likely conflict and mass migration as parts of the world become uninhabitable.</p> <p>I would like to take this opportunity to express my support for the proposed goals of reducing carbon dioxide emissions by 50% from 2016/2017 baseline by 2030, and achieving net zero by 2045. I regard these targets as bare minimum, and would strongly support more ambitious targets, particularly by 2030, as eliminating the final 50% over 15 years will be much harder than the first 50% over 9 years. Stronger Action between now and 2030 will result in lower cumulative emissions in total, and also avoid placing the burden unfairly on future generations.</p> <p>I broadly support all the programs 1 to 10, but I would like to draw particular attention to the importance of reducing vehicle km driven in program 7, Low-Emissions Transport System. The third focus area; "improving the attractiveness of sustainable transport modes compared to driving" is of the utmost importance. Electric vehicles are essential for decarbonising transport, but without also reversing the growth in vehicle numbers and km driven, it will be impossible to make the necessary reductions by 2030.</p> <p>Anywhere that vehicles remain strictly necessary, those vehicles should be electric. I would like to see the council's own fleet reduced in size and switched to electric wherever possible before 2025. That will set an example for other businesses and the public to follow, as well as ensuring that more electric vehicles hit the second hand market a few years later.</p> <p>In conclusion, the draft Climate Change Strategy is an excellent start, but strengthening ambitions and actions can only make it better.</p>	Yes

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
79	39651	David	Grogan	<p>I would like to see more aggressive measures - 25% methane reduction by 2045, will this target achieve sub 2 degrees warming?</p> <ul style="list-style-type: none">• Install more pedestrian priority (zebra) road crossings. Currently it is faster and safer for people in my office to drive for lunch then it is to walk 500m.• Reduce grass and verge cutting and replace with wildflower planting. Examples in Europe have shown these areas act as a carbon sink, increase insect populations and save tax payers money.	Yes

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
8	39100	Dhianne	Estinozo	<p>Kia ora! My name's Dhianne and I have lived in Christchurch for 16 years now. I moved here when I was 12 years old and have always felt lucky to be living in this city. I am currently studying at the University of Canterbury and have a keen interest in urban planning and city policies. I think Christchurch has great potential to be a more sustainable city. I like the optimism and inclusiveness of this climate change strategy. I think it's great that we have a target for 2031. However, there is a few things I would like to address in this draft:</p> <p>- It's a bit vague especially when it comes to addressing the biggest contributor to Christchurch's emission footprint which is our public transport. How are you going to address the private car use? Many residents are moving further away from the city centre, including Rangiora and Darfield because they can't afford to buy houses in the city. This will cause more people to use private cars. How will we address this issue?</p> <p>- There is a current stigma about using public transport in Christchurch. How are gonna shift this stigma? How are the employees, especially the executives and managers of the Council going to work at the moment? Are they using public transport or using private cars? Are they setting an example for the residents of Christchurch?</p> <p>- The long term goal of 2031 is great. But is there specific goals of when we need to achieve certain things? Just like building a house, we need to know specific dates/years of which area needs to be done. As realistically, this can't be achieved in one go. There needs to be a series of plan and specific timelines for this.</p> <p>- It's not very clear why we are closing the Riccardo Bus lounge and how this will help with Climate change.</p> <p>-How will you communicate the achievements to the public? I think placing it in the newspaper, radio news or social media for the general public will be a great idea. The information you have isn't very accessible unless someone is really looking for it.</p> <p>-I think it's great idea including the energy efficient homes and buildings but how will you do this? Especially for low socio-economic families.</p> <p>-I also think planting fruit trees is a great idea. Which schools and community locations will these be located? Will it be easily accessible to everyone? What about the low socio economic places (or food deserts) of Christchurch? Will they get first</p>	Yes

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				<p>priority?</p> <p>Thank you for taking the time to read out my concerns. I have more questions but I don't want to overwhelm you. Please don't hesitate to contact me if you require any information.</p>	
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Heard Submissions Alongside LTP

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
51	39562	Tom	Atkins	<p>Please fast track the final section of the Nor'West Arc cycle way i.e. from Ilam Rd/Creyke Rd corner to Harewood road.</p> <p>That last section of Ilam road (to Memorial Avenue), assuming this is the start of that final section, is incredibly dangerous for cyclists with no cycle path at all - in stark contrast to the section of Ilam Road where very safe cycle paths were completed years ago.</p> <p>In order to make it safe particularly for school children to cycle to/from school (Burnside High School, Burnside Primary, Cobham Intermediate, Christ The King). And of course extending further through Bryndwyr to Harewood Road would also serve the same purpose.</p> <p>If you could make temporary arrangements as an interim measure (as per parts of Ferry Road) that would greatly reduce the risk of a terrible accident.</p> <p>I expect public consultation is required as for other sections of this cycleway for a permanent solution- but please prioritise so this part of ChCh can catch up with other parts of ChCh w.r.t. cycle paths asap.</p> <p>Thank you very much</p>	Yes

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
54	39585	Garry	Moore	Tuesday Club	co-coordinator	<p>The Tuesday Club had a talk by Tony Moore last week. We are having a talk by Dr Rod Carr chair of the Climate Change Commission this Tuesday and then the week after Tony Moore is coming back to compare the talk by Dr Carr with the CCC proposal.</p> <p>After this meeting we wish to submit our thoughts on this plan. These will be submitted later than your close-off date.</p>	Yes

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
83	39664	Fiona	Bennetts	<p>Kia ora,</p> <p>Thank you for the opportunity to comment on the proposed Ōtautahi Christchurch Climate Change Strategy.</p> <p>I fully support the nine principles, the four climate goals, and the 10 climate action programmes proposed for Ōtautahi Christchurch.</p> <p>Here are some of my thoughts:</p> <ul style="list-style-type: none"> • I recently learned about Hope Spots (Hope Spots - Mission Blue (mission-blue.org)). What is being done to protect our rivers, harbours and ocean? These are important ecological areas and their protection helps save animals, ecosystems, and ultimately humans. Can we move to electric ferries in our harbours and rivers? • Could the Council utilise existing education programmes such as Roots & Shoots (The Jane Goodall Institute New Zealand)? • Education funding – Dr Rod Carr said recently at a Climate Change Commission presentation that no-one was responsible for funding education on climate change yet. Can this come from the Ministry for the Environment or Ministry of Education? • Transport – we need both carrot and stick approaches. Charge for parking in all retail areas as carparking is a luxury not a right. Remove parking where there are other facilities such as bike racks and bus stops. Slow speed limits down – make driving inconvenient while making the roads safer for cyclists and pedestrians. Build more cycleways and install more cycle lanes. Make more bus priority lanes (all major arterial routes). Seriously investigate Light rail. Reinstate passenger trains between Christchurch and Dunedin. Make buses free in the CBD or all over Greater Christchurch (funds from Ministry of Transport diverted away from motorway spending). Build more alleyways/storm-water basins to connect suburbs with off-road shared-use paths – short cuts are a great incentive. • Urban planning – prevent sprawling; grow up not out. More Living 2 and 3 areas. More townhouses close to amenities. More amenities close to townhouses. More community gardens and awareness of these. More rooftop gardens. More 	Yes

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				<p>nature connections for non-human animals (e.g. birds and insects) to live in our city with us.</p> <ul style="list-style-type: none"> • Water – reuse grey water and waste water, everything is a resource. • He Puna Taimoana (New Brighton hot pools) – install a heat transfer system with the local supermarket like Graham Condon pool has. • Waste – encourage central government to ban more/all single use plastics and encourage product stewardship. Change wheelie bin sizes – smaller red bin, provided it doesn't encourage abuse of the yellow bin and green bin. Capture all gas emissions from waste (another resource). • Energy – more solar and wind energy harvesting. End coal and oil/diesel use. All Council vehicles (bikes, cars, trucks, etc.) to be electric by 2030 or sooner (as they reach end of life). • Food – we need to move away from grazing ruminants and instead invest in regenerative agriculture, indigenous plantings, and alternative crops. This is more urgent than planting fruit trees. Perhaps some of the fruit and nut trees in the residential red zones (RRZ) can be relocated to schools and community gardens as the RRZ are redeveloped. <p>Ngā mihi,</p> <p>Fiona Bennetts</p>	
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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
84	39667	Nick	Clark	North Canterbury Federated Farmers	Manager General Policy	Please refer to attached submission.	Yes

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SUBMISSION

TELEPHONE

| WEBSITE WWW.FEDFARM.ORG.NZ



To: Climate Change Strategy

Submission on: Otautahi Christchurch Climate Change Strategy

Date: 23 April 2020

Contact: **NICK CLARK**
MANAGER GENERAL POLICY
Federated Farmers of New Zealand

P
M
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Item 5
Attachment D

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**SUBMISSION TO CHRISTCHURCH CITY COUNCIL
OTAUTAHI CHRISTCHURCH CLIMATE CHANGE STRATEGY**

1. INTRODUCTION

- 1.1 North Canterbury Federated Farmers (NCFF) welcomes the opportunity to submit to Christchurch City Council on its *Otautahi Christchurch Climate Change Strategy*.
- 1.2 NCFF has been a long-standing submitter to Council on a wide range of issues, including annual and long-term plans, district planning, and bylaws. We are a key representative of the city's rural communities, especially remote rural areas such as Banks Peninsula.
- 1.3 NCFF is one of 24 provinces comprising Federated Farmers of New Zealand (FFNZ). Climate change is one of FFNZ's most significant policy priorities. FFNZ engages on national policy and legislation, including the Climate Change Response (Zero Carbon) Amendment Bill, Emissions Trading Scheme (ETS) settings and regulations, and most recently the Climate Change Commission's draft advice to government. FFNZ is also an active participant in the *He Waka Eke Noa* Primary Sector Climate Change Partnership, specifically addressing agricultural emissions.
- 1.4 NCFF believes councils should stick to focusing on ensuring their regions can best adapt to the expected impacts of climate change and to only seek to mitigate emissions which they are directly responsible for. They should not seek to manage emissions that they have little ability to effectively influence and are already subject to considerable work at a central government level and, with respect to agricultural emissions, being managed through the *He Waka Eke Noa* Primary Sector Climate Action Partnership between central government, the primary sector, and Iwi/Māori.
- 1.5 NCFF is deeply concerned about the Council's emissions reduction targets and what they could mean for its actions to meet them. We are also concerned the impact of some of its programmes could have on the viability of farming and the sustainability of rural communities.
- 1.6 NCFF requests the opportunity to discuss this submission with the Council.

2. SUMMARY OF RECOMMENDATIONS

- 2.1 NCFF recommends that the Council should:

Goals

- (a) Amend the City's emissions reduction targets to make them consistent with those in the Climate Change Response Act.
- (b) Adopt its proposed focus on understanding and preparing for the ongoing impacts of climate change.
- (c) Ensure its policies support the ongoing efficiency and productivity of farming as we transition to an innovative, low-emissions economy.
- (d) Support farmers in their guardianship of the land through rates relief for protected land and funding for environmental protection work.

Programmes

- (e) Ensure its climate leadership group includes a representative from the rural community and/or the agricultural sector.

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- (f) Engage with rural communities on its work to understand the local effects of climate change.
- (g) Engage with rural communities on its work on proactive climate planning.
- (h) Ensure that climate change-related infrastructure projects are cost effective and provide strong value for money.
- (i) Recognise the 'green infrastructure' rural landowners already provide and maintain at their own cost.
- (j) Involve rural landowners and communities on its intentions for carbon removal and natural restoration.
- (k) Ensure its efforts on economic transformation and innovation enable food production to continue to have a positive future in the district.
- (l) Ensure that its work on a low-emission transport system recognises the need to continue to maintain rural local roads to a reasonable standard.
- (m) Ensure that energy efficiency initiatives do not impose unreasonable regulatory costs and make the cost of building unduly expensive.
- (n) Engage with rural communities on waste management issues.
- (o) Focus its activities on sustainable food systems to initiatives to reducing food waste, encouraging home gardening, and protecting highly productive soils. It should not involve itself in reducing agricultural emissions, supporting regenerative agriculture, improving food security, or promoting low-emission food choices as none of these are appropriate roles for local government.

3. CLIMATE CHANGE GOALS FOR CHRISTCHURCH

- 3.1 The draft strategy sets out the following climate change goals for Christchurch:
- Goal 1: Net zero emissions in Christchurch.
 - Goal 2: We understand and are preparing for the ongoing impacts of climate change.
 - Goal 3: We have a just transition to an innovative low-emission economy.
 - Goal 4: We are guardians of our natural environment and taonga.

Goal 1: Net Zero Emissions in Christchurch

- 3.2 The Council has set very ambitious emissions targets for Christchurch, including a net zero target by 2045 and a 50% reduction in emissions from 2016/17 baseline by 2030 (excluding methane). For methane it targets a 25% reduction by 2030 and a 50% reduction from 2016/17 baseline by 2045. It also wants the Council's own operations to be carbon neutral by 2030.
- 3.3 While we appreciate the Council following best practice in adopting a split gas approach, the emissions reductions targets are significantly more ambitious than those in the Climate Change Response (Zero Carbon) Amendment Act ('Zero Carbon Act'), passed in 2019. The targets legislated for in this amendment are:
- Reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; and
 - Reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030.
- 3.4 NCFF strongly believes that Council's targets should be consistent with those in the national legislation. Whether such ambitious targets are achievable is a huge 'if' given the fact that central government policy and programmes (especially He Waka Eke Noa and the ETS) will have the biggest influence on emissions.
- 3.5 We are also deeply concerned about what the Council's targets over and above the national targets would mean for the economy and for rural communities. In particular,

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a 25% reduction in methane by 2030 is two and half times more than the Zero Carbon Act's 10% reduction.

- 3.6 Although *He Waka Eke Noa* is working hard on ways for farmers to reduce on-farm methane emissions, a 25% reduction by 2030 is likely to be well in excess of what can be achieved through new or improved farm practices and technologies. Policies to drive reductions of that size will inevitably result in reduced agricultural production, mainly of low intensity (and highly efficient) sheep and beef farming. Over time we fear with pastoral farming becoming less economically viable it will drive significant land use change, especially on Banks Peninsula.
- 3.7 Based on experience in other parts of the country, we fear that the Peninsula's current pastoral landscape will be replaced over time through wholesale conversion to a monoculture of blanket exotic plantation forestry. This will decimate rural communities through reductions in population and employment and the closure of supporting businesses and community services. The wrong tree in the wrong place also adds to risks of wildfire, problems with weeds and pests, and damage from 'slash' (debris) washed into waterways, not to mention negative implications for indigenous biodiversity.
- 3.8 These unfortunate outcomes would be a consequence of an overly ambitious emissions reduction target requiring hard-line policies to meet them. We urge the council to moderate its targets, especially for methane.
- 3.8 Recommendation: NCFF recommends the Council should amend the City's emissions reduction targets to make them consistent with those in the Zero Carbon Act.**
- 3.9 NCFF is comfortable with the Council aspiring for its own operations to be carbon neutral by 2030.

Goal 2: We understand and are preparing for the ongoing impacts of climate change.

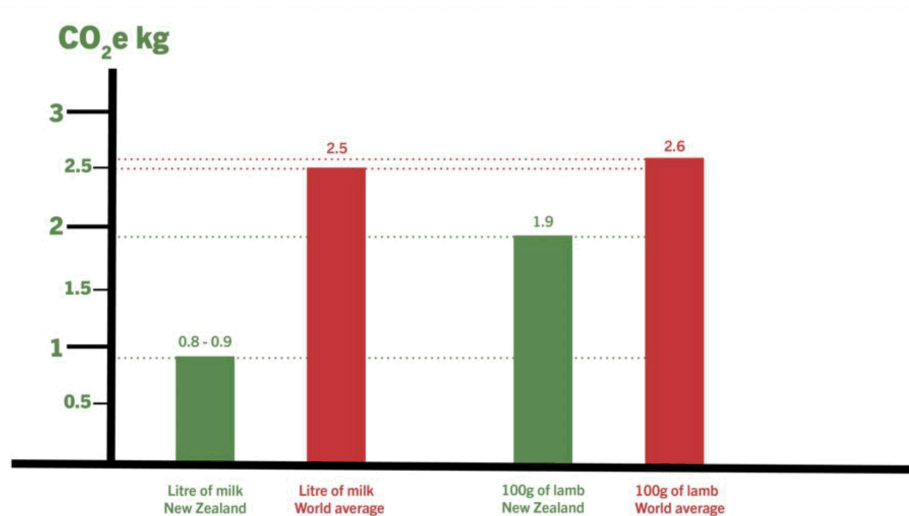
- 3.10 Planning for the future, especially the impacts of sea level rise for coastal communities and risks of drought and wildfires is very important and we therefore strongly support the Council focusing attention on this goal. Localised climate change adaptation planning is where local government can make a useful contribution, working with affected communities and landowners, including farmers.
- 3.11 Recommendation: NCFF recommends the Council adopts its proposed focus on understanding and preparing for the ongoing impacts of climate change.**

Goal 3: We have a just transition to an innovative, low-emission economy.

- 3.12 FFNZ supports a 'just transition' although in practice this will be challenging. FFNZ notes that New Zealand's relatively low-intensive pastoral agriculture makes it already one of the most efficient and productive in the world, with much lower emissions per unit of production than its international counterparts. Also, unlike most developed economies, New Zealand agriculture is also almost entirely unsubsidised (which is a key factor in efficiency and productivity). The chart below shows the emissions efficiency of New Zealand dairy and meat (lamb) production.¹

¹ Climate Change and the Global Dairy Cattle Sector: The role of the dairy sector in a low-carbon future, the Food and Agriculture Organisation of the United Nations and the Global Dairy Platform Inc, Rome 2019, pp.26
Clune, Stephen, Enda Crossin, and Karli Verghese. "Systematic review of greenhouse gas emissions for different fresh food categories.

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- 3.13 Our point is that while some may consider farming to be a 'resource intensive' industry, in reality New Zealand farming is highly efficient and productive. We do not believe it would be in anyone's interest to force reductions in production which will only be picked up through increased production (and emissions) by less efficient and productive agricultural sectors overseas (which is known as 'emissions leakage').
- 3.14 NCFF contends therefore that pastoral farming within Christchurch should continue to have an important future.
- 3.15 **Recommendation: NCFF recommends the Council should ensure its policies support the ongoing efficiency and productivity of farming as we transition to an innovative, low-emissions economy.**

Goal 4: We are guardians of our natural environment and taonga.

- 3.16 NCFF is strongly supportive of this goal. The vast majority of farmers are excellent guardians of the land and make great efforts, almost entirely at their own expense, to protect and promote the natural environment and biodiversity.
- 3.17 NCFF believes the Council should help support farmers to this end as opposed to ever more heavy-handed regulation of activities. Options include through rates relief via remissions on land that has been set aside for conservation purposes (e.g., protected through the QEII Trust and/or the Banks Peninsula Conservation Trust) or funding to assist farmers meet some of the costs of environmental protection, such as riparian and other tree planting, fencing off waterways and protected areas, and weed and pest control.
- 3.18 **Recommendation: NCFF recommends the Council should support farmers in their guardianship of the land through rates relief for protected land and funding for environmental protection work.**

Ledgard, S.F., Chobtang, J., Falconer, S.J. and McLaren, S., 2016. Life cycle assessment of dairy production systems in New Zealand, Integrated nutrient, and water management for sustainable farming. (Eds L.D. Currie and R.Singh). <http://flrc.massey.ac.nz/publications.html>. Occasional Report No. 29. Fertilizer and Lime Research Centre, Massey University, Palmerston North, New Zealand.

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4. CLIMATE ACTION PROGRAMMES

- 4.1 The draft strategy has the following climate action programmes:
- Programme 1: Building the foundation – partnerships and resourcing.
 - Programme 2: Understanding the local effects of climate change.
 - Programme 3: Proactive climate planning with communities.
 - Programme 4: Adapting and greening infrastructure projects.
 - Programme 5: Carbon removal and natural restoration.
 - Programme 6: Economic transformation and innovation.
 - Programme 7: Low-emission transport system.
 - Programme 8: Energy efficient homes and buildings.
 - Programme 9: Towards zero waste.
 - Programme 10: Sustainable food system.

Programme 1: Building the foundation – partnerships and resourcing.

- 4.2 NCFF supports building partnerships within the community on climate action and setting up a climate leadership group with key stakeholder representatives to implement the strategy. This group needs to include at least one representative from the rural community and/or the agricultural sector, especially if the strategy is to result in areas of work that will impact on them.

- 4.3 **Recommendation: NCFF recommends the Council should ensure its climate leadership group includes a representative from the rural community and/or the agricultural sector.**

Programme 2: Understanding the local effects of climate change.

- 4.4 NCFF supports the Council's plan to do more work to understand the local effects of climate change, including completing Christchurch's climate change risk assessment – including environmental, social, cultural, and economic impacts. It will be critical to engage with rural communities on these effects.

- 4.5 **Recommendation: NCFF recommends the Council should engage with rural communities on its work to understand the local effects of climate change.**

Programme 3: Proactive climate planning with communities.

- 4.6 NCFF supports the Council's plan to support communities plan for and adapt to future climate change challenges, including on Banks Peninsula. We agree it should engage with key stakeholders and we consider this should include representatives of rural communities, including on Banks Peninsula.

- 4.7 **Recommendation: NCFF recommends the Council should engage with rural communities on its work on proactive climate planning.**

Programme 4: Adapting and greening infrastructure projects.

- 4.8 NCFF supports investment in improving infrastructure and making it more resilient to the effects of climate change. However, all infrastructure spending must be cost effective and provide strong value for money. It is also important that business-as-usual infrastructure spending is not compromised or squeezed for scarce funding, such as roading and three waters.

- 4.9 We also note that rural landowners already do a lot of work managing land drainage on their properties, such as waterways, drains, culverts, swales, and wetlands. This

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is being reinforced by policy and regulation for freshwater management and will be further reinforced by policy and regulation on its way for indigenous biodiversity. Farmers are and will be responsible for managing their land drainage to standards in line with these policies and regulations.

- 4.9 Recommendation: NCFF recommends the Council should ensure that climate change-related infrastructure projects are cost effective and provide strong value for money.**

- 4.10 Recommendation: NCFF recommends the Council should recognise the 'green infrastructure' rural landowners already provide and maintain at their own cost.**

Programme 5: Carbon removal and natural restoration.

- 4.11 NCFF agrees that it is better to reduce emissions than rely too much on offsetting through, for example, tree planting. Planting trees buys time but it is not a long-term solution. Furthermore, blanket afforestation that displaces pastoral farmland can have significant economic, social, and environmental costs and risks, especially when that forestry is of the exotic plantation variety. Exotics are attractive from a climate change perspective as exotic trees grow quickly and sequester carbon faster than most indigenous trees that would be eligible for carbon credits.

- 4.12 NCFF is therefore cautious about this programme. We therefore recommend the Council work closely with rural landowners and communities on its planting intentions to ensure the right trees are planted in the right places. We would support a genuine partnership in this respect.

- 4.13 Recommendation: NCFF recommends the Council should involve rural landowners and communities on its intentions for carbon removal and natural restoration.**

Programme 6: Economic transformation and innovation.

- 4.14 NCFF supports the intention of supporting a move towards low-emission, high value local businesses. However, as mentioned in our comment under Goal 3, we note that agriculture is already highly productive and efficient and is among the most emissions efficient in the developed world. While it is encouraging that the Council sees food as a sector of potential, the Council should ensure food production (including pastoral farming) continues to have a positive future in the district. This includes land use regulation that does not impose unreasonable restrictions and costs on farmers, continuing to invest in rural infrastructure (e.g., rural roads), and that rates that are kept under control.

- 4.15 Recommendation: NCFF recommends the Council should ensure its efforts on economic transformation and innovation enable food production to continue to have a positive future in the district.**

Programme 7: Low-emission transport system.

- 4.16 NCFF agrees that with 54% of the City's emissions, transport is the biggest emissions problem. NCFF supports work in this area to reduce emissions (as listed in the draft strategy) but the Council should recognise that the ETS's impact over time on fuel prices and increasing uptake of electric vehicles should have the biggest impact on emissions.

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- 4.17 Of more concern to rural communities, especially those in remote areas, is that there are few viable alternatives to the use of private motor vehicles and road freight transport for transport within rural areas or to the City and that is likely to be the case for the foreseeable future. The City's transport policies and roading programme needs to recognise that rural local roads will need to continue to be maintained to a reasonable standard to keep these social and economic lifelines.

- 4.19 Recommendation: NCFF recommends the Council should ensure that its work on a low-emission transport system recognises the need to continue to maintain rural local roads to a reasonable standard.**

Programme 8: Energy efficient homes and buildings.

- 4.20 NCFF agrees that more energy efficient homes and buildings would be desirable, but it is important to ensure that benefits of initiatives exceed the costs. They should not impose unreasonable regulatory costs and make building unduly expensive, so adding to problems with housing affordability. The ETS's impact on electricity and energy prices arguably provides the best signal for encouraging energy efficiency.

- 4.21 Recommendation: NCFF recommends the Council should ensure that energy efficiency initiatives do not impose unreasonable regulatory costs and make the cost of building unduly expensive.**

Programme 9: Towards zero waste.

- 4.20 NCFF supports initiatives to reduce waste, including reusing and recycling. FFNZ is a strong supporter of Agrecovery, which is a product stewardship scheme for agricultural waste products. That said, consideration of waste management initiatives needs to ensure that the benefits exceed costs, including compliance costs. It would be useful for the Council to engage with rural communities on waste management issues.

- 4.22 Recommendation: NCFF recommends the Council should engage with rural communities on waste management issues.**

Programme 10: Sustainable food system.

- 4.23 NCFF would support some of the initiatives under this programme, such as reducing food waste, encouraging home gardening, and protecting highly productive soils. However, we are not convinced of the merits of the Council endeavouring the reduce agricultural emissions, supporting regenerative agriculture, improving food security, or promoting low-emission food choices. None of these are appropriate roles for local government and the Council should stick to where it can make a useful contribution.

- 4.24 In particular, there is already a lot of work already happening on reducing agricultural emissions, such as through the *He Waka Eke Noa* Primary Sector Partnership.

- 4.25 *He Waka Eke Noa* is working to co-design policy and programmes to measure, manage and incentivise the reduction of agricultural greenhouse gas emissions. It is working on ways to equip farmers and growers with the knowledge and tools they need to reduce emissions, while continuing to sustainably produce quality food and fibre products for domestic and international markets. It includes collaboration on the detailed development of an appropriate farm gate emissions pricing mechanism by 2025. More information can be found here: <https://hewakaekenoa.nz/>

- 4.26 Federated Farmers is concerned the Council may be considering undertaking, or being encouraged to undertake, actions to manage agricultural emissions, especially

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methane and nitrous oxide. By doing so, it risks acting prior to the completion of work under *He Waka Eke Noa* which would be at best duplicative and at worst could undermine this important work. We do not want farmers being sent redundant or conflicting messaging about this issue.

- 4.27 Meanwhile, 'regenerative agriculture' is a vague and uncertain term, with it contended that most New Zealand farming is (by being low-intensity pastorally-based) already 'regenerative'. The Council does not need to promote 'food security' but rather it should seek to avoid actions that would compromise it, for example by imposing policies and regulations on farmers that will reduce food production or increase costs of production. Low-emissions food choices should be a matter for consumer choice, not for government (central or local) to influence. New Zealand dairy and meat production stacks up extremely well for emissions and it is very important to recognise that meat and dairy are important part of a balanced, nutritional diet.
- 4.27 **Recommendation: NCFF recommends the Council should focus its activities on sustainable food systems to initiatives to reducing food waste, encouraging home gardening, and protecting highly productive soils. It should not involve itself in reducing agricultural emissions, supporting regenerative agriculture, improving food security, or promoting low-emission food choices as none of these are appropriate roles for local government.**

7. **ABOUT NORTH CANTERBURY FEDERATED FARMERS**

- 5.1 North Canterbury Federated Farmers is a voluntary, member-based organisation that represents farming and other rural businesses. It is one of 24 provinces that comprise Federated Farmers of New Zealand, which has a long and proud history of representing the needs and interests of New Zealand farmers.
- 5.2 The Federation aims to add value to its members' farming businesses. Our key strategic outcomes include the need for New Zealand to provide an economic and social environment within which:
- Our members may operate their business in a fair and flexible commercial environment;
 - Our members' families and their staff have access to services essential to the needs of the rural community; and
 - Our members adopt responsible management and environmental practices.

ENDS

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Hamish & Annabel Craw - # 39726

This is our submission on Otautahi Christchurch Climate Change Strategy. We farm at [redacted] and our family has farmed here for six generations. We farm 3500 stock units of sheep and beef cattle and carry out significant biodiversity restoration through fencing, native planting and regenerative farming methods.

Goal 1: Net Zero Emissions in Christchurch

The Council has set very ambitious emissions targets for Christchurch, including a net zero target by 2045 and a 50% reduction in emissions from 2016/17 baseline by 2030 (excluding methane). For methane it targets a 25% reduction by 2030 and a 50% reduction from 2016/17 baseline by 2045. It also wants the council's operations to be carbon neutral by 2030.

While we appreciate the Council following best practice and adopting a split gas approach, these targets are significantly more ambitious than those in the Climate Change Response (Zero Carbon) Amendment Act ('Zero Carbon Act'), passed in 2019. The targets legislated for in this amendment are:

Reduce net emissions of all greenhouse gases (except biogenic methane) to zero by 2050; and

Reduce emissions of biogenic methane to 24–47 per cent below 2017 levels by 2050, including to 10 per cent below 2017 levels by 2030.

We strongly believe that Council's targets should be consistent with those in the national legislation.

We are also deeply concerned about what the Council's targets over and above the national targets would mean for the economy and for rural communities. In particular, a 25% reduction in methane by 2030 is two and half times more than the Zero Carbon Act's 10% reduction.

Awareness of He Waka Eke Noa

Through this submission we want to ensure the CCC is aware of the He Waka Eke Noa – Primary Sector Climate Action Partnership which grew out of discussions about how to achieve the best outcomes for the country and the food and fibre sector while playing our part in global efforts to tackle climate change. A group of Aotearoa New Zealand food and fibre sector leaders, the Food and Fibre Leaders Forum, put forward a pathway to reducing emissions in He Waka Eke Noa – the Primary Sector Climate Change Commitment document.

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In October 2019, the government agreed to work with the primary sector and iwi/Māori to equip farmers and growers with the knowledge and tools they need to reduce emissions, while continuing to sustainably produce quality food and fibre products for domestic and international markets. This work involves designing a practical and cost-effective system for reducing emissions at the farm level by 2025. It also includes designing an appropriate farm-level pricing mechanism building on the principles set out in He Waka Eke Noa. <https://hewakaekenoa.nz/about/> and adoption of on farm practises to achieve emissions reductions.

<https://hewakaekenoa.nz/wp-content/uploads/2020/08/HWEN-Steering-Group-Confirmed-Terms-of-Reference.pdf>

<https://www.dairynz.co.nz/media/5792241/primary-sector-climate-change-commitment-july-2019.pdf>

Through the Otautahi Christchurch Climate Change Strategy we would not like to see duplication of work that is already being done through He Waka Eke Noa. The Christchurch City Council should align any on-farm targets and practice change to that which is developed and implemented by the primary industry at a national level.

Concern over land use change to achieve off setting

Policies which drive reductions to the size which the Christchurch City Council are proposing will inevitably result in reduced agricultural production and there is real concern within the Banks Peninsula community that low intensity and highly efficient sheep and beef farming land will be replaced with blanket conversions to exotic plantation forestry to meet the off setting targets

We urge the council to carefully consider how they set policy and incentivise off-setting of carbon emissions to avoid wholesale conversions of pines on Banks Peninsula. These blanket conversions of exotic plantation forestry would take place of biodiversity restoration, change the visual landscape, reduce jobs, increase weed and pests and negatively impact the natural and special landscape.

Recognition of low intensity - high efficient sheep and beef farming on Banks Peninsula

Through this submission we also want to raise awareness of the low intensity highly efficient sheep and beef farming on Banks Peninsula. Due to the climate, contour and isolation of rural Banks Peninsula sheep and beef farmers operate a very low input system with sensible and limited use of fertilisers, minimal cultivation and imported feed. This keeps emissions low compared to high intensive farming systems. Farms also need to be highly efficient to avoid carrying stock over the summer period where grass growth is lower due to lower rainfall and hot temperatures. This requires farmers to get young stock to saleable weights in a short period making their emissions very low per kg of food.

Banks Peninsula agriculture net emissions are far lower than what is stated in the 15%+ of total Christchurch City Council emissions in the Strategy as most farms on Banks Peninsula have many tools to offset emissions through existing native vegetation, regenerating native forest, pastures and soils. We encourage the CCC to take this into consideration.

Goal 4: We are guardians of our natural environment and taonga.

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We are strongly supportive of this goal. As landowners who have recently retired 18 hectares of Banks Peninsula hill country for native regeneration as we are very passionate about the role we have as guardians of our land and sea. This 18 hectare conservation project will require upwards 10 hectares to be planted of 15,000 native trees to be planted and maintained for the next 10 plus years in order for the ecosystem to be self-sustaining.

We are also embarking on two more coastal regeneration projects which includes 5 hectares of unique coastal hill country restored and enhanced. We have chosen these sites through our Farm Environment and Biodiversity planning due to their unique locations, catchment to waterways and coastline and existing biodiversity.

These projects are very expensive and cost between \$6000- \$12000 per hectare depending on the amount of fencing, existing biodiversity and amount of native trees required to plant and maintain along with significant in-kind time.

We strongly encourage the CCC to work to support farmers to continue the fantastic work they are doing with protecting and enhancing their natural environment and avoid imposing any regulation that may limit their ability to continue this good work.

We would also like to see the CCC increase the funding available to landowners in particular farmers to carry out their long term aspirations for their properties related to enhancing and protecting their environment. E.g. tree planting, fencing, wetland protection, coastal restoration and weed and pest control.

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
85	39668	Jacqueline	Newbound	Project Lyttelton Incorporated	Manager	<p>(Attached as a PDF)</p> <p>CLIMATE CHANGE STRATEGY - Christchurch City Council</p> <p>Response from Project Lyttelton.</p> <hr/> <p>Project Lyttelton strongly supports the statement in the CCC Climate Change strategy that "Climate Change is the biggest challenge of our time ... responding to it is now an urgent issue".</p> <p>We note with interest that the CCC LTP and the Climate Change Strategy are open for consultation at the same time. It is imperative that the outcomes of the consultation on the Climate Change Strategy, set the parameters for the LTP and we would like confirmation from CCC that this will meet the climate change target set by CCC.</p> <p>Project Lyttelton would like to:</p> <ul style="list-style-type: none"> • congratulate CCC on recognising that the planet faces both a climate and an ecological emergency • welcome this comprehensive Climate Change Strategy which shows vision and leadership • support the format of having goals and principles against which to judge/monitor the Climate Action Programmes • endorse the principle of honouring Te Tiriti and notes that this is more than simply 	Yes

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					<p>acknowledging the principles of the Treaty. The Council needs to be clear how it will honour tino rangatiratanga, so central to Te Tiriti.</p> <ul style="list-style-type: none"> proposes to partner with CCC to implement the 10 climate action goals in Lyttelton to demonstrate how a community can come together to tackle the issues of climate change <p>Looking at the CCC Climate Strategy Goals – Our thoughts are as follows:</p> <p>Goal 1. Net Zero emissions</p> <ul style="list-style-type: none"> Focusing on reduction not sequestration - Does that mean 100% reduction in emissions? Sequestration of carbon is a bonus of ecosystem restoration, an essential action, but targeting and measurement must be focussed on reducing emissions. Zero net emissions by 2045 target must be more ambitious (Principle 3. Act Boldly) but good in that it sends a message to central government with respect to its 2050 goal. The CCC goal of 25% reduction in methane by 2030 – is this biogenic methane from agriculture practises within Christchurch City Council boundaries? Agriculture is 15% of emissions and methane will be a big part of that. Methane is a powerful ghg and should be reduced as much as possible in the next 5-10 years. Current dairy farming industry totally unsustainable. Act Boldly - In the “Principles” the language of this document on leadership, “acting boldly”, requires bigger reduction in biogenic methane. Methane rising from waste disposal must also be reduced, by reducing the amount of waste deposited in open air. Project Lyttelton applauds target to cut emissions of Council operations to net zero by 2030. 	
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Heard Submissions Alongside LTP

					<ul style="list-style-type: none"> • Supports decision to address embodied carbon. Construction industry is one of the nation's biggest emitters (Climate Change Commissions Advice document) • Supports the chosen "signs of success" • Project Lyttelton Goals– <ul style="list-style-type: none"> o Project Lyttelton, in partnership with the CCC and Banks Peninsula Community Board, to facilitate the setting up of a Lyttelton Carbon Neutral network made up of stakeholders and businesses in Lyttelton to work towards Lyttelton being certified a carbon neutral community. o Project Lyttelton to be certified carbon neutral (working towards being carbon positive) to enable Project Lyttelton to then disseminate this information into the local community and businesses to see if Lyttelton can be certified as a carbon neutral community. <p>Goal 2 – Understand and prepare for the ongoing impacts of climate change.</p> <ul style="list-style-type: none"> • Project Lyttelton agrees building resilient communities helps lessen impacts and mitigates against future impacts. • The co-benefits are that the changes required will support the welfare and wellbeing of our people, our communities and our planet. • As transport represents 54% of Christchurch current emissions, dynamic infrastructure planning will be essential to enable new ways of moving around our city. • Project Lyttelton's Goal – <ul style="list-style-type: none"> o Working through the Learning Exchange, LIFT Library and in conjunction with the Lyttelton Harbour Information Centre, create, and make readily available to the community, multi-media resources to raise awareness of climate change issues to 	
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Heard Submissions Alongside LTP

					<p>enable households to play an active role in achieving carbon neutral Lyttelton.</p> <p>Goal 3 Just transition to an innovative low emission economy</p> <ul style="list-style-type: none"> • CCC must take into account in their planning the necessity of reducing inequality. Central government must accept the responsibility to raise incomes for those who will be most adversely affected by climate change. • Strongly agree with “signs of success”. • Project Lyttelton’s Goals - <ul style="list-style-type: none"> o Develop social enterprises and community businesses which provide jobs and ensure that the co-benefits of CCC strategy actions result in lower costs for households. <p>Goal 4. Kaitiakitanga of natural environment.</p> <ul style="list-style-type: none"> • Nature-based solutions to climate change are a priority. Environmental degradation needs to be reversed with the resulting social and economic wellbeing co-benefits. • Project Lyttelton’s Goals - <ul style="list-style-type: none"> o Facilitate the setting up of a community group to work with the CCC on restoration of native forest on the hills around Lyttelton. <p>Climate Action Programmes</p> <p>Programme 1 – Building the Foundation</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • As a community experienced in building resilience and committed to climate 	
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Heard Submissions Alongside LTP

					<p>action, Project Lyttelton is eager to be a climate change partner with the CCC.</p> <ul style="list-style-type: none"> • All CCC activities should be undertaken through a “just” climate change lens. • The Climate Leadership Group must include “key stakeholder representatives” from the local community groups who have knowledge and passion for these issues, e.g., Climate Friendly Lyttelton; 350Christchurch; Sustainable Otautahi Christchurch. • Establishing local Citizens’ Assemblies to discuss and present strategies for action on specific issues would widen the decision making. • Project Lyttelton: Next Steps – <ul style="list-style-type: none"> o Project Lyttelton supports the formation of a Leadership group and would welcome inclusion in the membership. o Project Lyttelton to formulate “Climate Friendly Lyttelton” to act as a driver and support to take forward climate change initiatives, activities, and events with the purpose of enabling Lyttelton to be a climate friendly community. <p>Programme 2. Understanding the local effects of climate change.</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • Drought is an expected major impact on the Port Hills, creating risk of fire. When replanting native trees on Port Hills, careful attention must be paid to replanting the least flammable species. • Ensure consideration of all risks – environmental, social and financial for local communities. • Completion of Christchurch’s climate change risk assessment is urgent and should be before the end of July 2021 and published in full on the CCC website, and widely in the local public media. 	
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Heard Submissions Alongside LTP

					<ul style="list-style-type: none"> • Project Lyttelton: Next Steps – <p>o to collaborate with community organisations, Councils, Community Board and others working in the Lyttelton Harbour Basin on activities around climate change.</p> <p>Programme 3. Proactive Climate Planning in Communities</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • CCC to support ECan’s Enviro schools programme and look for mechanisms to involve the youth voice. • Provide substantial articles at least weekly to The Press, and local community newspapers, on actions being planned by CCC, so that the public learns about issues and remedies, and joins the action. • Project Lyttelton: Next Steps – <p>o Project Lyttelton is awaiting the coastal hazard assessment and strategic adaption framework with interest to build up a picture of the issues to be faced within the Harbour Basin. As part of the coastal environment, our community has already been affected by climate change effects (e.g., Port Hills fires), and will further be affected in the future.</p> <ul style="list-style-type: none"> • Programme 4 – Adapting and greening infrastructure systems • Project Lyttelton strongly supports this climate action programme. • Restoring wetlands increases biodiversity, mitigates flooding, and stores carbon. • Food forests on unused land • The Christchurch area’s increasingly strong drought conditions require a scheme 	
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Heard Submissions Alongside LTP

					<p>to help all property owners establish and maintain effective rain-water collection tank systems</p> <ul style="list-style-type: none"> • Consideration to “depave” and look at more porous pathways and walkways where appropriate. • Could Christchurch, the Garden City, be the first “National Park” City? • Project Lyttelton: Next Steps - <p>o Project Lyttelton is proposing initiatives such as “Lyttelton as a Community Garden”, looking to have an outreach community garden coordinator to work with schools, businesses, and households to green Lyttelton’s back yards, unused land, schools and early childhood centres, streets and businesses.</p> <p>Programme 5. Carbon Renewal and Natural restoration.</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • Fire risk is increasing, especially in the Port Hills area. Some forested areas are mainly flammable exotic plantations, which should be removed and replaced with less flammable long-life native trees, which also store more carbon dioxide than exotics do. • Project Lyttelton: Next Steps – <p>o To look at projects to support and inform on issues such as fire risks/ local households/native plantings across the Lyttelton and wider Harbour Basin.</p> <p>Programme 6 – Economic transformation and innovation</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • Many economists now agree that the current economic system which depends on 	
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Heard Submissions Alongside LTP

					<p>a global growth model, is a major contributor to the environmental and climate change crises we face. This model privatises the benefits and externalises the costs which are borne by the environment and social structures/low-income communities. Transformation suggests a fundamental change, both nationally and internationally, from the current model based on market forces and globalisation.</p> <ul style="list-style-type: none"> • A transformational model cannot continue with Business as Usual. International flights may become more expensive leading to fewer tourists, overseas trade may decline as we seek to be more self-sufficient as a region and as a nation, long distance road transport of goods could also decline. All this will impact existing businesses but there will be jobs in new more sustainable industries, so again we need to be aware of the social and financial costs as we manage the transition. • As well as changing the neoliberal economic model we need to look at a more integrated approach to our regional economy. CCC must work towards a circular economy where businesses take responsibility for minimising the energy used in the process, while ensuring the product can be repaired or, at the end of its usable life, can be disassembled and the parts reused. Distances travelled between steps in the life of the production and disassembly are kept to a minimum. The process should source raw or recycled materials as near to its production plant as possible while also being as close to its consumers as possible. • Project Lyttelton supports the CCC on: <ul style="list-style-type: none"> v focussing on strong regional economies enabling householders to buy as much of their basic needs, food, energy, furniture, clothing, etc. as locally as possible, v supporting and growing local entrepreneurship and social enterprise based on industries that address mitigation of, and adaptation to climate change. This may require enabling legislation by central government and Christchurch City Council may need to strengthen the support it already offers for social enterprise. • Community energy based on shared generation from household solar panels, and solar panels on community buildings like schools and health centres, is a good 	
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Heard Submissions Alongside LTP

					<p>example of a social enterprise which would have social, economic, and environmental benefits. This model may require us to move away from corporate models for delivery of public utilities like electricity and telecom.</p> <ul style="list-style-type: none"> • Project Lyttelton would like the CCC to <p>v Focus on encouraging all local businesses to source materials, products, staff and support, as much as possible from the Christchurch/Canterbury region.</p> <p>v Identify and establish the development of suburbs to be strong local economies with social enterprises and encourage the setting up of small local tool libraries, and repair sheds.</p> <p>v Support the growth of community education centres offering free or low-cost classes in skills useful for getting by in the new economy – including gardening, health maintenance, making do with less, energy conservation, weather-stripping, etc.</p> <p>v Next steps for Project Lyttelton – Working in collaboration with local businesses and community groups, investigate setting up an energy conservation social enterprise, retrofitting houses with insulation, developing a community energy business based on solar/wind/wood lots, and an education programme on energy efficiency and conservation.</p> <ul style="list-style-type: none"> • Project Lyttelton: Next Steps – <p>o For Project Lyttelton to engage alongside ChristchurchNZ, Canterbury Employers Chamber of Commerce and others to promote events and activities to drive action on climate change, as it is essential the CCC partner with communities and community organisations to enable implementation at a grassroots level.</p> <p>Programme 7 – Low emission transport system</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. 	
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Heard Submissions Alongside LTP

					<ul style="list-style-type: none"> • Speed up the conversion of the city's bus fleet to electric. • End all planning for the Tarras Airport. • Provide parking areas at the outer ends of main bus routes to encourage more use of public transport. • Act urgently on bringing passenger rail transport from Rangiora, Lyttelton and Rolleston to central Christchurch. • Enable cycles to go through the Lyttelton tunnel either through waiving the bus fare for those wanting to get their bikes through the tunnel or by another mechanism e.g., transiting cycles through the tunnel. • Coastal shipping transport needs to be considered as an option in transport planning. • Project Lyttelton: Next Steps – <ul style="list-style-type: none"> o Working to get cycle access through the tunnel. o Looking to develop an edible school walkway to promote walking from a young age. o Working with CCC and Ecan to promote the use in Lyttelton of the public transport system. This will include removing barriers to usage with incentives. <p>Programme 8 – Energy Efficient Homes and Buildings</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • Energy efficiency is important in using less electricity, improving health, and saving families' fuel bills. 	
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Heard Submissions Alongside LTP

						<ul style="list-style-type: none"> • Lyttelton has many older homes which still have little or no insulation. While there is mention in the CC Strategy document of the retrofitting of these older houses in this Programme, only 8,000 homeowners have taken up the offers of support and advice. • Social enterprise and community businesses could run energy efficiency businesses. Council loans play a significant role in enabling this. • Promote the conversion of rooftops to white surfaces to reflect sunshine and so reduce heat absorption in the area. • Project Lyttelton: Next Steps – <p>o to work to bring CCC initiatives, events and information into the Lyttelton communities who can be supported to take up existing opportunities to insulate and retrofit a very old, historic housing stock.</p> <p>Programme 9 – Towards Zero Waste</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • Need to consider E Waste - Further examples are the recycling of electrical and electronic goods but the public is unaware of the existence of such services. The CCC could publicise the names of e-waste recyclers, and second-hand shops. • The change to a circular economy is dependent on central government legislating for manufacturers to take responsibility for packaging and for making their goods easier to mend and longer lasting. CCC could ask the LGA to lobby government to legislate to enable a circular economy. • There are many businesses and not-for-profit organisations enabling the reuse and upcycling of materials similar to the Council Ecoshops. CCC Waste Management and Minimisation could work in partnership with such enterprises to 	
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Heard Submissions Alongside LTP

					<p>reduce waste to landfill.</p> <ul style="list-style-type: none"> • Develop 2 or 3 recycling/re-use centres that turn waste into resources of various kinds – including compost and scrap – and into remanufactured or re-usable products. • Project Lyttelton: Next Steps – <ul style="list-style-type: none"> o Moving from a reduced waste to a Waste Free Farmers Market. o Longer term, through community composting to ensure no food waste goes through the Lyttelton tunnel. o Through the Project Lyttelton Garage Sale look at waste free living with recycling, upcycling and options for waste to be reused by others in the community. <p>Programme 10 – Sustainable food system</p> <ul style="list-style-type: none"> • Project Lyttelton strongly supports this climate action programme. • A functioning food system includes growers, processors, retailers, delivery, cafes and restaurants and waste treatment. Needs to be structured and planned to promote localisation. • Transporting food over very long distances should be discouraged. • Reduce emissions by promoting local food producers. • Farmers Markets are an integral part of a sustainable food system and there are several in Christchurch, including Lyttelton. Supermarkets should be encouraged to reduce transport over long distances. Perhaps a better ETS will incentivise localisation. • Implement this winter (June, July, August) the plan to plant 500 fruit trees in 	
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Heard Submissions Alongside LTP

					<p>schools and community locations.</p> <ul style="list-style-type: none"> • Support community food centres, including commercial food-processing, food-preserving, and food-storage facilities available at low cost (or on a labour-barter basis) to small-scale local producers. • Support community gardens to develop individual beds available for seasonal rental for those with no home gardens, as well as communal beds for growing produce for soup kitchens in appropriate suburbs. • Project Lyttelton: Next Steps – <ul style="list-style-type: none"> o re-establish the Grow Harbour Kids programme o introduce an “adopt a local producer” programme to link the Farmers Market with Lyttelton Primary School. o Lyttelton as a community garden promoting food production throughout the community with seasonal growing and cooking workshops and activities. o Community Garden events and activities to promote home food production. o Seedling production for the Farmers Market, schools and early childhood centres, and local families. o Partnering with CCC to identify land in Lyttelton, as well as the school grounds, to implement this winter (June, July, August) the plan to plant 500 fruit trees in schools and community locations <p>Project Lyttelton welcomes the opportunity to submit on Climate Change and would welcome a further conversation with Christchurch City Council on how we could work in partnership to take forward and implement the strategy at a community level.</p>	
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Heard Submissions Alongside LTP

						Jacqueline Newbound on behalf of the Climate Friendly Lyttelton Team	
						23 April 2021	

Heard Submissions Alongside LTP



CLIMATE CHANGE STRATEGY - Christchurch City Council

Response from Project Lyttelton.

Project Lyttelton strongly supports the statement in the CCC Climate Change strategy that “Climate Change is the biggest challenge of our time ... responding to it is now an urgent issue”.

We note with interest that the CCC LTP and the Climate Change Strategy are open for consultation at the same time. It is imperative that the outcomes of the consultation on the Climate Change Strategy, set the parameters for the LTP and we would like confirmation from CCC that this will meet the climate change target set by CCC.

Project Lyttelton would like to:

- congratulate CCC on recognising that the planet faces both a climate and an ecological emergency
- welcome this comprehensive Climate Change Strategy which shows vision and leadership
- support the format of having goals and principles against which to judge/monitor the Climate Action Programmes
- endorse the principle of honouring Te Tiriti and notes that this is more than simply acknowledging the principles of the Treaty. The Council needs to be clear how it will honour tino rangatiratanga, so central to Te Tiriti.
- proposes to partner with CCC to implement the 10 climate action goals in Lyttelton to demonstrate how a community can come together to tackle the issues of climate change

Looking at the CCC Climate Strategy Goals – *Our thoughts* are as follows:

Goal 1. Net Zero emissions

- Focusing on reduction not sequestration - Does that mean 100% reduction in emissions? Sequestration of carbon is a bonus of ecosystem restoration, an essential action, but targeting and measurement must be focussed on reducing emissions.
- Zero net emissions by 2045 target must be more ambitious (Principle 3. Act Boldly) but good in that it sends a message to central government with respect to its 2050 goal.
- The CCC goal of 25% reduction in methane by 2030 – is this biogenic methane from agriculture practises within Christchurch City Council boundaries? Agriculture is 15% of emissions and methane will be a big part of that. Methane is a powerful ghg and should be reduced as much as possible in the next 5-10 years. Current dairy farming industry totally unsustainable.

Heard Submissions Alongside LTP



- **Act Boldly** - In the “Principles” the language of this document on leadership, “acting boldly”, requires bigger reduction in biogenic methane. Methane rising from waste disposal must also be reduced, by reducing the amount of waste deposited in open air.
- Project Lyttelton applauds target to cut emissions of Council operations to net zero by 2030.
- Supports decision to address embodied carbon. Construction industry is one of the nation’s biggest emitters (Climate Change Commissions Advice document)
- Supports the chosen “signs of success”
- **Project Lyttelton Goals–**
 - Project Lyttelton, in partnership with the CCC and Banks Peninsula Community Board, to facilitate the setting up of a Lyttelton Carbon Neutral network made up of stakeholders and businesses in Lyttelton to work towards Lyttelton being certified a carbon neutral community.
 - Project Lyttelton to be certified carbon neutral (working towards being carbon positive) to enable Project Lyttelton to then disseminate this information into the local community and businesses to see if Lyttelton can be certified as a carbon neutral community.

Goal 2 – Understand and prepare for the ongoing impacts of climate change.

- Project Lyttelton agrees building resilient communities helps lessen impacts and mitigates against future impacts.
- The co-benefits are that the changes required will support the welfare and wellbeing of our people, our communities and our planet.
- As transport represents 54% of Christchurch current emissions, dynamic infrastructure planning will be essential to enable new ways of moving around our city.
- **Project Lyttelton’s Goal –**
 - Working through the Learning Exchange, LIFT Library and in conjunction with the Lyttelton Harbour Information Centre, create, and make readily available to the community, multi-media resources to raise awareness of climate change issues to enable households to play an active role in achieving carbon neutral Lyttelton.

Goal 3 Just transition to an innovative low emission economy

- CCC must take into account in their planning the necessity of reducing inequality. Central government must accept the responsibility to raise incomes for those who will be most adversely affected by climate change.
- Strongly agree with “signs of success”.
- **Project Lyttelton’s Goals -**
 - Develop social enterprises and community businesses which provide jobs and ensure that the co-benefits of CCC strategy actions result in lower costs for households.

Heard Submissions Alongside LTP



Goal 4. Kaitiakitanga of natural environment.

- Nature-based solutions to climate change are a priority. Environmental degradation needs to be reversed with the resulting social and economic wellbeing co-benefits.
- **Project Lyttelton's Goals -**
 - Facilitate the setting up of a community group to work with the CCC on restoration of native forest on the hills around Lyttelton.

Climate Action Programmes

Programme 1 – Building the Foundation

- **Project Lyttelton strongly supports this climate action programme.**
- As a community experienced in building resilience and committed to climate action, Project Lyttelton is eager to be a climate change partner with the CCC.
- All CCC activities should be undertaken through a “just” climate change lens.
- The Climate Leadership Group must include “key stakeholder representatives” from the local community groups who have knowledge and passion for these issues, e.g., Climate Friendly Lyttelton; 350Christchurch; Sustainable Otautahi Christchurch.
- Establishing local Citizens’ Assemblies to discuss and present strategies for action on specific issues would widen the decision making.
- **Project Lyttelton: Next Steps –**
 - Project Lyttelton supports the formation of a Leadership group and would welcome inclusion in the membership.
 - Project Lyttelton to formulate “Climate Friendly Lyttelton” to act as a driver and support to take forward climate change initiatives, activities, and events with the purpose of enabling Lyttelton to be a climate friendly community.

Programme 2. Understanding the local effects of climate change.

- **Project Lyttelton strongly supports this climate action programme.**
- Drought is an expected major impact on the Port Hills, creating risk of fire. When replanting native trees on Port Hills, careful attention must be paid to replanting the least flammable species.
- Ensure consideration of all risks – environmental, social and financial for local communities.
- Completion of Christchurch’s climate change risk assessment is urgent and should be before the end of July 2021 and published in full on the CCC website, and widely in the local public media.
- **Project Lyttelton: Next Steps –**
 - to collaborate with community organisations, Councils, Community Board and others working in the Lyttelton Harbour Basin on activities around climate change.

Heard Submissions Alongside LTP



Programme 3. Proactive Climate Planning in Communities

- **Project Lyttelton strongly supports this climate action programme.**
- CCC to support ECan's Enviro schools programme and look for mechanisms to involve the youth voice.
- Provide substantial articles at least weekly to The Press, and local community newspapers, on actions being planned by CCC, so that the public learns about issues and remedies, and joins the action.
- **Project Lyttelton: Next Steps –**
 - Project Lyttelton is awaiting the coastal hazard assessment and strategic adaption framework with interest to build up a picture of the issues to be faced within the Harbour Basin. As part of the coastal environment, our community has already been affected by climate change effects (e.g., Port Hills fires), and will further be affected in the future.

• **Programme 4 – Adapting and greening infrastructure systems**

- **Project Lyttelton strongly supports this climate action programme.**
- Restoring wetlands increases biodiversity, mitigates flooding, and stores carbon.
- Food forests on unused land
- The Christchurch area's increasingly strong drought conditions require a scheme to help all property owners establish and maintain effective rain-water collection tank systems
- Consideration to "depave" and look at more porous pathways and walkways where appropriate.
- Could Christchurch, the Garden City, be the first "National Park" City?
- **Project Lyttelton: Next Steps –**
 - Project Lyttelton is proposing initiatives such as "Lyttelton as a Community Garden", looking to have an outreach community garden coordinator to work with schools, businesses, and households to green Lyttelton's back yards, unused land, schools and early childhood centres, streets and businesses.

Programme 5. Carbon Renewal and Natural restoration.

- **Project Lyttelton strongly supports this climate action programme.**
- Fire risk is increasing, especially in the Port Hills area. Some forested areas are mainly flammable exotic plantations, which should be removed and replaced with less flammable long-life native trees, which also store more carbon dioxide than exotics do.
- **Project Lyttelton: Next Steps –**
 - To look at projects to support and inform on issues such as fire risks/ local households/native plantings across the Lyttelton and wider Harbour Basin.

Heard Submissions Alongside LTP



Programme 6 – Economic transformation and innovation

- **Project Lyttelton strongly supports this climate action programme.**
- Many economists now agree that the current economic system which depends on a global growth model, is a major contributor to the environmental and climate change crises we face. This model privatises the benefits and externalises the costs which are borne by the environment and social structures/low-income communities. Transformation suggests a fundamental change, both nationally and internationally, from the current model based on market forces and globalisation.
- A transformational model cannot continue with Business as Usual. International flights may become more expensive leading to fewer tourists, overseas trade may decline as we seek to be more self-sufficient as a region and as a nation, long distance road transport of goods could also decline. All this will impact existing businesses but there will be jobs in new more sustainable industries, so again we need to be aware of the social and financial costs as we manage the transition.
- As well as changing the neoliberal economic model we need to look at a more integrated approach to our regional economy. CCC must work towards a circular economy where businesses take responsibility for minimising the energy used in the process, while ensuring the product can be repaired or, at the end of its usable life, can be disassembled and the parts reused. Distances travelled between steps in the life of the production and disassembly are kept to a minimum. The process should source raw or recycled materials as near to its production plant as possible while also being as close to its consumers as possible.
- Project Lyttelton supports the CCC on:
 - ❖ focussing on strong regional economies enabling householders to buy as much of their basic needs, food, energy, furniture, clothing, etc. as locally as possible,
 - ❖ supporting and growing local entrepreneurship and social enterprise based on industries that address mitigation of, and adaptation to climate change. This may require enabling legislation by central government and Christchurch City Council may need to strengthen the support it already offers for social enterprise.
- Community energy based on shared generation from household solar panels, and solar panels on community buildings like schools and health centres, is a good example of a social enterprise which would have social, economic, and environmental benefits. This model may require us to move away from corporate models for delivery of public utilities like electricity and telecom.
- Project Lyttelton would like the CCC to
 - ❖ Focus on encouraging all local businesses to source materials, products, staff and support, as much as possible from the Christchurch/Canterbury region.
 - ❖ Identify and establish the development of suburbs to be strong local economies with social enterprises and encourage the setting up of small local tool libraries, and repair sheds.

Heard Submissions Alongside LTP



- ❖ Support the growth of community education centres offering free or low-cost classes in skills useful for getting by in the new economy – including gardening, health maintenance, making do with less, energy conservation, weather-stripping, etc.
- ❖ Next steps for Project Lyttelton – Working in collaboration with local businesses and community groups, investigate setting up an energy conservation social enterprise, retrofitting houses with insulation, developing a community energy business based on solar/wind/wood lots, and an education programme on energy efficiency and conservation.
- **Project Lyttelton: Next Steps –**
 - For Project Lyttelton to engage alongside ChristchurchNZ, Canterbury Employers Chamber of Commerce and others to promote events and activities to drive action on climate change, as it is essential the CCC partner with communities and community organisations to enable implementation at a grassroots level.

Programme 7 – Low emission transport system

- **Project Lyttelton strongly supports this climate action programme.**
- Speed up the conversion of the city's bus fleet to electric.
- End all planning for the Tarras Airport.
- Provide parking areas at the outer ends of main bus routes to encourage more use of public transport.
- Act urgently on bringing passenger rail transport from Rangiora, Lyttelton and Rolleston to central Christchurch.
- Enable cycles to go through the Lyttelton tunnel either through waiving the bus fare for those wanting to get their bikes through the tunnel or by another mechanism e.g., transiting cycles through the tunnel.
- Coastal shipping transport needs to be considered as an option in transport planning.
- **Project Lyttelton: Next Steps –**
 - Working to get cycle access through the tunnel.
 - Looking to develop an edible school walkway to promote walking from a young age.
 - Working with CCC and Ecan to promote the use in Lyttelton of the public transport system. This will include removing barriers to usage with incentives.

Programme 8 – Energy Efficient Homes and Buildings

- **Project Lyttelton strongly supports this climate action programme.**
- Energy efficiency is important in using less electricity, improving health, and saving families' fuel bills.

Heard Submissions Alongside LTP



- Lyttelton has many older homes which still have little or no insulation. *While there is mention in the CC Strategy document of the retrofitting of these older houses in this Programme, only 8,000 homeowners have taken up the offers of support and advice.*
- Social enterprise and community businesses could run energy efficiency businesses. Council loans play a significant role in enabling this.
- Promote the conversion of rooftops to white surfaces to reflect sunshine and so reduce heat absorption in the area.
- **Project Lyttelton: Next Steps –**
 - to work to bring CCC initiatives, events and information into the Lyttelton communities who can be supported to take up existing opportunities to insulate and retrofit a very old, historic housing stock.

Programme 9 – Towards Zero Waste

- **Project Lyttelton strongly supports this climate action programme.**
- Need to consider E Waste - Further examples are the recycling of electrical and electronic goods but the public is unaware of the existence of such services. The CCC could publicise the names of e-waste recyclers, and second-hand shops.
- The change to a circular economy is dependent on central government legislating for manufacturers to take responsibility for packaging and for making their goods easier to mend and longer lasting. CCC could ask the LGA to lobby government to legislate to enable a circular economy.
- There are many businesses and not-for-profit organisations enabling the reuse and upcycling of materials similar to the Council Ecoshops. CCC Waste Management and Minimisation could work in partnership with such enterprises to reduce waste to landfill.
- Develop 2 or 3 recycling/re-use centres that turn waste into resources of various kinds – including compost and scrap – and into remanufactured or re-usable products.
- **Project Lyttelton: Next Steps –**
 - Moving from a reduced waste to a Waste Free Farmers Market.
 - Longer term, through community composting to ensure no food waste goes through the Lyttelton tunnel.
 - Through the Project Lyttelton Garage Sale look at waste free living with recycling, upcycling and options for waste to be reused by others in the community.

Programme 10 – Sustainable food system

- **Project Lyttelton strongly supports this climate action programme.**
- A functioning food system includes growers, processors, retailers, delivery, cafes and restaurants and waste treatment. Needs to be structured and planned to promote localisation.
- Transporting food over very long distances should be discouraged.

Heard Submissions Alongside LTP



- Reduce emissions by promoting local food producers.
- Farmers Markets are an integral part of a sustainable food system and there are several in Christchurch, including Lyttelton. Supermarkets should be encouraged to reduce transport over long distances. Perhaps a better ETS will incentivise localisation.
- Implement this winter (June, July, August) the plan to plant 500 fruit trees in schools and community locations.
- Support community food centres, including commercial food-processing, food-preserving, and food-storage facilities available at low cost (or on a labour-barter basis) to small-scale local producers.
- Support community gardens to develop individual beds available for seasonal rental for those with no home gardens, as well as communal beds for growing produce for soup kitchens in appropriate suburbs.
- **Project Lyttelton: Next Steps –**
 - re-establish the Grow Harbour Kids programme
 - introduce an “adopt a local producer” programme to link the Farmers Market with Lyttelton Primary School.
 - Lyttelton as a community garden promoting food production throughout the community with seasonal growing and cooking workshops and activities.
 - Community Garden events and activities to promote home food production.
 - Seedling production for the Farmers Market, schools and early childhood centres, and local families.
 - Partnering with CCC to identify land in Lyttelton, as well as the school grounds, to implement this winter (June, July, August) the plan to plant 500 fruit trees in schools and community locations

Project Lyttelton welcomes the opportunity to submit on Climate Change and would welcome a further conversation with Christchurch City Council on how we could work in partnership to take forward and implement the strategy at a community level.

Jacqueline Newbound on behalf of the Climate Friendly Lyttelton Team
23 April 2021

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
88	39672	Matt	Morris	University of Canterbury Sustainability Office	Sustainability Advisor	Please see our submission, attached	Yes

Heard Submissions Alongside LTP



Response to the draft Ōtautahi Christchurch Climate Change Strategy

The Sustainability Office at the University of Canterbury is pleased to see this new draft strategy and we strongly support its goals, principles and programmes.

Reference to the United Nations Strategic Development Goals

The University of Canterbury recently revised its academic strategy and directly referenced the United Nations Sustainable Development Goals (SDGs) in several places. This has helped drive curriculum, research and operational changes. We have also undertaken a leading role in co-hosting the national SDG Summit Series for 2020-21 which, we note, Christchurch City Council is supporting directly through funds and staff time.

The University of Canterbury is committed to playing our part in combatting climate change and carefully managing its impacts in our context. Our new strategy has a dedicated work stream around achieving carbon net neutrality by 2030. Each of the projects to support that goal has targets, timeframes and accountabilities, and there are many potential overlaps with the work programmes outlined in the Christchurch City Council's Strategy. Our projects include the following areas:

- Removing coal as a fuel source for space heating, and switching to wood in the interim.
- Eventually removing all forms of combustion for space heating, and switching to ground source heat pumps as we upgrade buildings.
- Establishing more forest under the ETS.
- Reducing our total carbon emitting travel with a focus on air travel.
- Buying offsets as may be required while we deal with outstanding emissions sources.

We have closely aligned our own strategy to the SDGs. It seems striking therefore that a municipal climate change strategy released in 2021 would not mention the SDGs. Local government will inevitably be an important force in driving change to support the SDGs and thus help central government meet its international obligations. We believe that flagging the ways that your strategy supports the SDGs would give added power to this whole process.

Heard Submissions Alongside LTP



Transparency regarding CCC emissions

While the draft Climate Change Strategy sets out the regional GHG profile for Canterbury, it does not present CCC's own emission profile. We believe that transparency of this kind is essential in demonstrating leadership. The University of Canterbury has been measuring and reporting on its emissions since 2010. We suggest that if the CCC presented its profile in this Strategy document it would build confidence in the greater community which will be needed to realise the partnerships foreshadowed in the strategy.

It is also not clear how the regional emissions profile has been established. Some additional information about the provenance of the data would be extremely helpful.

Partnering

The challenge outlined in this strategy is enormous, and the Council rightly points to the need for everyone in the city and region to play their part. We also acknowledge that this is a high-level prelude to more detailed action plans – or at least that is how we understand it. When these emerge, we see UC as a potential project lead in one or more areas. We would like to discuss this further with you.

UC can link the CCC to climate change networks around the world. A wide variety of the University's academics and students are currently studying all aspects of climate change from politics, law, and psychology to climate science. Some examples of our activities are given here:

- The Association of Commonwealth Universities (ACU) recently chose UC PhD student Fatma Abdelaal as a rising-star researcher of the Commonwealth Futures Climate Research Cohort.
- Professor Bronwyn Hayward is a Coordinating Lead Author for the Intergovernmental Panel on Climate Change AR6 report (cities & infrastructure) and was a lead author for the 2018 Special Report on 1.5°C (Sustainable development & Poverty eradication).
- Civil Engineering Associate Professor Allan Scott, and his team in the United States, United Kingdom and New Zealand, have found a new low-carbon method to produce the common mineral, magnesium hydroxide or $Mg(OH)_2$ which can be used for 'carbon mineralization'.
- Community resilience is another area in which UC has strong expertise. The recently developed Bachelor of Youth and Community Leadership seeks to empower young people to take an active role in social issues, such as climate change. It supports students taking an approach to social change that yields results.

Heard Submissions Alongside LTP



- The Master of Urban Resilience and Renewal is a core degree at UC, focused on challenges associated with flood risk, coastal erosion and sea level rises. In many growing areas these are coupled with challenges of demographic growth and urban spread. The compulsory project GEOG 692 Community or Workplace Based Project comprises an individual project in the field of Urban Resilience and Renewal, under the supervision of one or more staff members. The project involves working with a community partner on a project of direct relevance and real value to that community.

We are also aware that region-wide planning to manage the effects of climate change is underway. We welcome opportunities to connect with CCC to ensure that our campus activities fit with regional plans as relevant.

Comment on the Four Goals

We agree with the four goals set out in the Climate Change Strategy. Regarding Goal 1, we are interested in seeing more discussion about how Council has determined the methane targets. We think the Goals may need to be stated more clearly. Essentially they are split between GHG reduction (Goal 1), and adaptation to the effects of climate change (Goals 2-4). Perhaps Goals 3 and 4 could be presented as sub goals of Goal 2.

Comment on the Ten Programmes of Work

We understand that this Strategy is really a plan for a plan. However, we had hoped that it would be far bolder, than it is. The Strategy seems to lack clear targets and accountabilities. We are concerned that without these, Christchurch's efforts will drift and that nothing, or not nearly enough, will get done. In particular, the absence of timeframes is deeply troubling. Council recently declared a climate emergency, *but this sense of emergency is not reflected at all in this Strategy*. The Strategy *must* have clear timeframes around all milestones.

We also feel there should be a stronger focus on wellbeing in this strategy. How is the Christchurch City Council preparing to take care of its people, who are already experiencing uncertain futures in many parts of the city? While some of this may be covered in the Coastal Hazards Adaptation Plan, a focus on wellbeing in the wider Strategy would be appreciated by many.

Similarly, there is a lack of attention to the need for further public education and behaviour change programmes. There is certainly some good work already occurring. But this work has to be accelerated if the needed impact is to be achieved.

Heard Submissions Alongside LTP



We would like to note that, as per advice from the Climate Change Commission, a focus on adaptation may be more important than reduction, and for that the community will need very clear and transparent direction. The Strategy does not express this in its current form.

Overall, the Strategy is too vague. We encourage Council to take stronger leadership on this crucial issue that will affect us all.

Building the foundation: partnerships and resourcing

We note the intention to establish a Climate Leadership Group, a concept we endorse. UC would like to be part of this, and to assist with its formation. We also note the intention to focus on the Council's own emissions and, as stated previously, we look forward to more transparency around that data.

Understanding the local effects of climate change

UC is currently undertaking an extensive climate change risk assessment, based on information from NIWA's reporting. We would welcome the opportunity to share information with the Christchurch City Council about this.

Proactive climate planning with communities

We see many opportunities for our academic staff to support some of this work, and would like to discuss with you how best to proceed with this. Samples of our research and activities are given throughout this response, and in particular we can contribute to your plans to provide climate change education.

Adapting and greening infrastructure

We absolutely agree with this approach, and note the collaborations already underway between the Christchurch City Council and UC around better systems for stormwater management (especially with our Civil and Natural Resources Engineering teams). We would also note that UC sees a need to upgrade part of the Okeover/Waiutuutu upstream section for sediment and heavy metals control, as well as to help manage the potential for surface flooding given the extensive city environment that section of the stream is receiving from. We would like to establish a formal relationship with Christchurch City Council to help us in advancing this work, which has been flagged in our Climate Change Risk Register.

Carbon removal and natural restoration

In addition to the stormwater management approach mentioned above, UC has developed a Biodiversity Strategy and has already undertaken extensive ecological restoration works (some with the support of Christchurch City Council) which have resulted in a significant increase in native bird life on campus. We do want to see this further enhanced, and are heartened that the CCC Strategy speaks about the need to naturalise waterways and introduce wetlands across the city, and encourage biodiversity. In your aim to identify partnership opportunities for indigenous planting, we think that parts of the UC campus may be considered ideal for such works, not only because we own the land (simplicity) but because our academic staff (primarily in Forestry and Biological Sciences) could monitor effects of the works to help inform developments elsewhere.

Heard Submissions Alongside LTP



Economic transformation and innovation

We agree with this approach and strongly encourage Council staff or others engaged in this work stream to connect with researchers at UC for support. We agree that a focus on education and information sharing to broaden the range of low carbon jobs and innovations is critical in ensuring success in this domain. We have also proven ability to be agile and to transfer to a low carbon economy with our innovative use of technology to continue to deliver remote, degree level teaching and research, and run the university during lockdown. Our innovations continue and will lead to a lower carbon more blended style of education delivery.

Low emission transport system

We completely agree with this approach and would like to congratulate the Council on the successful implementation of several cycleway projects throughout the city and particularly those feeding UC's campuses. We seek support from Christchurch City Council in advocating for the return of the Orbiter bus route to Ilam Road.

We would also like to see more thought around the energy infrastructure which will be required to enable the increase the use of zero-emission vehicles in the city.

Energy efficient homes and buildings

UC has invested in new buildings with a low space heating demands that make it possible for us to transition to a space heating solution that does not rely on combustion, by 2030. Some of our new buildings are already deploying ground source heat pumps and are not connected to our coal boilers at all. We are also reviewing how to reduce the energy intensities of all our buildings.

We agree with the goal to advocate to central government about required improvements to building standards. However, we are disappointed to see that Council sees its primary role in this particular area as being one of promoting existing resources. Can Council not introduce its own building code through the District Plan or other mechanism to show leadership and ensure progress?

Towards zero waste

We completely agree with the intention to maximise composting and recycling. As a large campus, we are constantly reviewing and improving our front and back end waste systems, not only because we have a significant turnover of students each year, but also because the waste system itself is undergoing frequent revision due to external pressures.

We are well aware that the New Zealand waste system is poorly organised and inconsistent throughout the country, which makes waste education in an environment such as ours (receiving populations from all over the country and abroad) very difficult.

We would welcome Christchurch City Council continuing to advocate to the Government about the need to improve the national waste system. Being so localised and idiosyncratic does not make sense for such a small country and introduces confusion, complacency and inefficiencies that we cannot afford.

Heard Submissions Alongside LTP



Further, we would welcome any opportunities to work with the Christchurch City Council on waste education programmes, particularly for our students and especially those students who are going flatting for the first time and may tend not to be as deliberate in their recycling efforts as we might like.

Sustainable food system

We fully support the decision to include a programme around sustainable food systems. On our Ilam and Dovedale campuses we have two community gardens, which are both in active use (Waiutuutu Community Garden is twenty years old next year). In addition, we have several edible sites on campus which include fruit trees, citrus and berries. This is something we would like to enhance and is one strand of our [Sustainable Food and Drink Plan](#).

Again, we believe there are numerous points of overlap with the Christchurch City Council proposals, and we would welcome the opportunity to discuss these in more depth. These could include access to academic expertise on matters of food resilience and adaptive planning, connections between city projects and student course work and of course on-campus collaborations to bolster access to nourishing food for our more vulnerable populations.

Structure and Delivery

The Climate Change Strategy does not appear to address practical considerations such as how the programmes of work will be convened, what reporting against them might be, or who is responsible for ensuring success. There are considerable overlaps between the different programmes, and we hope that they will not be split out into silos, but rather that there will be some mechanism to ensure that they are treated holistically.

Therefore UC may be able to provide advice on innovative collaborative governance structures that can 1) ensure that focus and momentum are maintained, 2) allow actors to proceed within their respective capacities, 3) synergies between the programmes are leveraged to best effect.

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
99	39686	Hayley	Guglietta	Avon Otakaro Network Inc	Network Manager	<p>Avon Otakaro Network support the goals, principles and programmes of this draft Climate change policy</p> <p>We wish to see a higher lever of community collaboration to achieve these outcomes and we advocate for the development of the Otakaro Avon River corridor as a priority to achieve these goals.</p> <p>It is really important that this body of work is not a vehicle for Rates increases nor is it lip service, we should start to see these objectives integrated into all work programmes delivered by this council.</p> <p>The development of the OARC is a unique and once in a life time opportunity to achieve a cleaner river and plantings to offset carbon emissions. There a many community based organisations that already operating in the corridor with the expertise, passion and networks t get this riparian work achieved, lets harness this energy.</p> <p>The communities that live around the OARC are at high risk of flooding events and sea level rise issues, the stop banking and infrastructure works must be made a priority too combat this.</p> <p>The Te Ara Trail is transitional but fundamentally follows the route of the proposed city to sea pathway to encourage more cycling and less cars the road crossings need to be made safe and speed reduction measures put in place.</p> <p>Per capita out emissions are 3 times more than the global average this is not acceptable we need to get on with making bold changes.</p>	Yes

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
100	39687	Cathy	Allden	Richmond Community Garden Trust	Trustee/Garden Coordinator	Please see our full submission attached	Yes

Heard Submissions Alongside LTP



Richmond Community Garden Trust

Ref: Climate Change Draft Strategy

Our organisation supports the goals, principles and proposed programme of this climate change strategy.

We would like to see this strategy weaved in all decision making and programmes delivered by the council, not sitting on a shelf or to the side of the day to day activities as we see all too often.

We are involved heavily in Food Security, Waste reduction and the development of the Otakaro Avon River Corridor. We can contribute to the functional aspects of this strategy and would like further support to enable us to do this with the following projects.

Food Security - development of our existing community garden and food forest continue to guardian the fruit trees in the Richmond Red Zone and work with the social housing providers to establish and provide resources to their internal gardens. We would love to be further resourced to support our community to set up food forests in some of our parks.

Waste Reduction - the Richmond compost project currently removes large amounts of food waste and carbon from our local businesses and community groups we wish to expand this programme, this project also includes education, compost production and protection of our fruit trees currently we wish to add waste collection point for recycling and education on sustainability.

Riparian Planting - We wish to set up a nursery onsite to cater for the Richmond Part of the Red Zone (Riverlution) and engage with our community and develop a long term planting plan to plant in areas that are not waiting for any infrastructure works. I.e River bed, Dudley Creek, Casa block, top of swanns road. We need full collaboration with

Heard Submissions Alongside LTP

council staff to provide eco sourced seed, correct planting plans and locations to plant.
We will create local jobs, education and further community development.

46A Vogel Street - We have been given a huge opportunity by LINZ to set up this working hub for environmental groups to work, share resources and showcase sustainability features in a home environment, we ask for support to get this operational by lowering the compliance barriers and future funding.

We look forward to this Strategy becoming an integral part of the way in which this council operates.

Yours Sincerely
The Richmond Community Garden team

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
104	39695	Lindsay	Sandford	<p>I firstly find it disappointing that a document as important as this, is not written in easily readable language that the majority of people can understand. It would be far preferable to have a separate Maori language version of the document, rather than intermix languages in the same document. Constantly looking up words hurts readability, and many people will simply give up. Many words/phases don't even have a decent *consistent* translation online - at least not one that makes sense in the context of the sentence e.g. kāinga nohoanga. Is this a deliberate attempt to prevent people from participating in this discussion? Who wrote it, and how can it possibly be called a final version?</p> <p>In general I am very supportive of change that makes our daily lives more sustainable. I love cycling, I recycle, I am actively working to plant a council reserve in natives (that is currently just grazed), and I support our rivers being swimmable/supporting native wildlife. That said, as I read through this document I find myself getting concerned about the number of buzz words, and lack of concrete proposals - despite the concrete goals that are specified (net zero emissions by 2045, 50% reduced by 2030). Those are very ambitious goals for such a lack of concrete proposals. Will the attempt to stick to these numbers (plucked from thin air) cause the economy to collapse/ destroy our way of life if it is deemed critical to meet them regardless of the cost?</p> <p>Buzz words such as "a more diverse economy" and "new economy will be more resilient" sound great, yet currently my daughter doesn't even have a safe way to cycle between home (Westmorland) and school (Cashmere high). There is no plan to improve the safety of her route within the time that my daughter will be at school (even though she has only just started at the school). All high schools should have a network of safe cycling paths leading to them.</p> <p>The new cycleways are great, yet because they are hugely expensive and slow to create, they won't cover the city until well after we should be carbon neutral according to the proposed timelines. That said, painting a line on the road (right where people open their doors in a parked car), is not a solution. Separating cycle lanes using "bump strips" (similar to those used in parking lots - currently used on Ilam road by the university), is a good, much cheaper solution.</p> <p>Another concrete proposal - new houses should have efficiency star ratings. I see most new houses having huge areas of glass. Double glazing doesn't help much - the R-rating is still less than 0.4 compared to a wall with minimum R2.0. Even warm countries like Australia have star ratings for the whole house's efficiency, rather than just the minimum rating for a wall or window like we have here.</p>	Yes

Heard Submissions Alongside LTP

			<p>Unlike cycleways, and efficient housing, many of the solutions to the current problems will be new technology, and creating them will be a global effort. Any goals that are more ambitious than equivalent goals in technology powerhouses such as the USA are certain to either destroy our economy or fail. Destroying the economy will mean no money to pay for changes to be made. Desperate people on the breadline won't be concerned about saving native flora and fauna or climate change.</p> <p>How flexible will these goals be? What costs are acceptable on the way to meeting them? These are incredibly important questions, and I didn't see them addressed in the document.</p> <p>This next comment is not as relevant to the council, but will hopefully influence the lines of thinking. Stopping supply of fossil fuels (such as stopping oil exploration off Taranaki, or making it hard for coal mining companies to find a bank that will allow them to use it), is not the solution to anything. Supply will just come from overseas, and we lose the tax revenue and jobs here in NZ - the money from which could have been used to help effect change. We need to work on the demand side of the equation - why do people/businesses need oil and coal? How can alternatives be made more attractive.</p> <p>All in all, this document is not worth the digital ink used to print it. Any decisions made based on it are a joke. I am highly concerned what "interpretations" will be made from it.</p>	
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Heard Submissions Alongside LTP

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In general I am very supportive of change that makes our daily lives more sustainable. I love cycling, I recycle, I am actively working to plant a council reserve in natives (that is currently just grazed), and I support our rivers being swimmable/supporting native wildlife. That said, as I read through this document I find myself getting concerned about the number of buzz words, and lack of concrete proposals - despite the concrete goals that are specified (net zero emissions by 2045, 50% reduced by 2030). Those are very ambitious goals for such a lack of concrete proposals. Will the attempt to stick to these numbers (plucked from thin air) cause the economy to collapse/ destroy our way of life if it is deemed critical to meet them regardless of the cost?

Buzz words such as "a more diverse economy" and "new economy will be more resilient" sound great, yet currently my daughter doesn't even have a safe way to cycle between home (Westmorland) and school (Cashmere high). There is no plan to improve the safety of her route within the time that my daughter will be at school (even though she has only just started at the school). All high schools should have a network of safe cycling paths leading to them.

The new cycleways are great, yet because they are hugely expensive and slow to create, they won't cover the city until well after we should be carbon neutral according to the proposed timelines. That said, painting a line on the road (right where people open their doors in a parked car), is not a solution. Separating cycle lanes using "bump strips" (similar to those used in parking lots - currently used on Ilam road by the university), is a good, much cheaper solution.

Another concrete proposal - new houses should have efficiency star ratings. I see most new houses having huge areas of glass. Double glazing doesn't help much - the R-rating is still less than 0.4 compared to a wall with minimum R2.0. Even warm countries like Australia have star ratings for the whole house's efficiency, rather than just the minimum rating for a wall or window like we have here.

Unlike cycleways, and efficient housing, many of the solutions to the current problems will be new technology, and creating them will be a global effort. Any goals that are more ambitious than equivalent goals in technology powerhouses such as the USA are certain to either destroy our economy or fail. Destroying the economy will mean no money to pay for changes to be made. Desperate people on the breadline won't be concerned about saving native flora and fauna or climate change.

How flexible will these goals be? What costs are acceptable on the way to

Heard Submissions Alongside LTP

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All in all, this document is not worth the digital ink used to print it. Any decisions made based on it are a joke. I am highly concerned what "interpretations" will be made from it.

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
111	39703	Dorenda	Britten	Dorenda Britten Ltd	Company Director	<p>6. Economic transformation is no-longer about purely financial success but about our duty to people, planet and profit.</p> <p>Our current business advisory programs do little to inspire the adoption of new thinking and the innovation that follows.</p> <p>Business, if it has the tools, can and will ignite a change in thinking for all our citizens.</p>	Yes

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
120	39715	Brown	Vicki	Richmond Residents and Business Association	Chair		Yes

Heard Submissions Alongside LTP

**CHRISTCHURCH CITY COUNCIL OTAUTAHU CHRISTCHURCH CLIMATE
CHANGE STRATEGY 2021, April 2021**

The Richmond Resident and Business Association.

CORE PURPOSES of the RICHMOND RESIDENTS' and BUSINESS ASSOCIATION (est 2018)

- To actively involve the community when promoting projects which enhance the quality of the resident and business communities' lives in the Richmond area.
- To provide a forum for the consideration, development and advancement of ideas which benefit the wellbeing of all the community.

CORE VALUES of the RICHMOND RESIDENTS' and BUSINESS ASSOCIATION (est 2018)

- To achieve our purposes through transparency, collaboration, respect, empathy and acceptance of our diversity, views and needs.
- To protect and treasure our heritage and develop pride in being part of the Richmond area.

Contents:

1. Background
2. Climate Change Goals
3. Climate Change Principles
4. Climate Change Programs
5. Conclusion

Heard Submissions Alongside LTP

1. Background

Richmond is an active community represented by strong community leadership which is embedded in many hard-working organisations in the suburb.

We have and continue to work hard to develop strong and collegial relationships with CCC staff and elected members within the Council itself and the two Community Boards our suburb straddles.

Richmond as a suburb and community has committed time and resources as a community to read, understand and consider the CCC Climate Change Strategy. We have kept both relevant community boards, Linwood-Central-Heathcote and Papanui-Innes, fully informed of our concerns and plans and have developed a good collaborative working relationship. We submit here to the whole of council to put forth our case to fully partner with us on the practical things that our community can do to achieve these Climate Change Goals.

We urge the council to favorably consider this submission and recognise our willingness for representatives from RRBA to be heard in person should a hearing process occur.

2. Climate Change Goals

We wholeheartedly support the goals of this strategy. Per capita our emissions are 3 times higher than the global average. This is unacceptable for a country that promotes itself as clean and green, and we promote ourselves as The Garden City.

Our suburb exists alongside the Otakaro Avon River and at risk of sea level rise and flooding events that will impact people's properties and lives: we need to plan for this.

Our toanga and natural environment is important to our residents and have shown over recent years the desire and energy to be involved in the protection of such.

Heard Submissions Alongside LTP

3. Climate Change Principles

We wholeheartedly agree with the Principles of the Strategy and wish to see these in action, not just housed in another document somewhere. Partnerships between mana whenua, the community and council must be transparent, held as a high priority and more collaborative than ever before.

Many people are stressed trying to navigate normal life with increases in mental health issues, drug and alcohol abuse and poverty. Climate change impacts will just add further to these stressors. We have to plan in advance, make decisions using accurate data, and be bold about the changes that need to be made.

4. Climate Change Programmes

We support the 10 programmes and the practical ways these can be implemented in Richmond area as follows:

Green Scaping

As our roading programmes are rolled out we have the opportunity to reduce the road footprint and increase the green infrastructure in our suburb by giving street space over to plants and an increased urban tree canopy, rain gardens, edible spaces, cycleways and places to rest and gather.

We would like to see a roll out of the CCC's Living Streets Charter in Richmond, with particular emphasis placed initially on streets with pre-existing wide berms (such as London, Avalon and Alexandra Streets), and for it to be extended further into the suburb over the next decade.

Cities in North America who have adopted this resiliency and adaptation to climate change through their *Complete Streets Policy* have observed a calming of traffic, cleaner waterways, safe zones for pedestrians and cyclists, and improvement of ecological functions, ensuring that complete streets are green streets.

www.sightline.org/2018/08/07/how-complete-streets-can-be-green-streets/?utm_campaign=meetedgar&utm_medium=social&utm_source=meetedgar.com

OARC - Ōtautahi Avon River Corridor

As well as the opportunity for community lead planting, we wish to advocate for the Red Zone Parks Development money to be brought forward to 2021, to help support the activation that is already occurring in the River Corridor by our local community and groups.

Heard Submissions Alongside LTP

Community Led Planting

Support our very active community and local groups who have expertise to undertake more planting days, both native and edible, in our parks and in the OARC. Bring back the Parks Community Liaison Team to help with these initiatives.

Safe Cycle Ways

Support the We are Richmond plan to implement a safe cycle way, connecting cyclists with the central city from Shirley Road to Fitzgerald Ave along an existing cycle way and the network of cycle friendly slow-speed-zone side streets, rather than via hazardous arterial routes.

Speed Reduction

Support We Are Richmond to reduce the speed on all Roads in Richmond to 40km/h on the "Collector" roads (Stanmore Rd, North Avon Rd, North Pde), and 30km/h on "Local" roads (all other streets). This will help reduce carbon emissions as well as making the streets safer due to lower speeds, which will encourage more cycling and walking around the suburb in conjunction with, and further aided by the roll out of the Living Streets Charter mentioned above.

Cycle Racks

Install cycle racks in key locations, Avebury House, Stanmore Road Cafe, Richmond Park, and 10 Shirley Road to encourage more cycling.

Te Ara Trail Safety

Implement the already planned for quick wins on the Te Ara Trail. Every day 100's of school children from across the city use this trail to get to and from the Kerrs Reach Rowing venue. We need safe crossing point for them across Fitzgerald Avenue and Stanmore Road, and a slowing of traffic speeds on Swanns Road, Retreat Road and North Avon Road to encourage even more people onto their bikes in an effort to reduce carbon emissions.

Food Security plan

The Richmond Food Security Plan is underway driven by the Richmond Community Garden and Delta Community Trust. We are removing food waste and cardboard from the system and converting it to compost for the community garden and fruit trees in the OARC.

Please support this initiative to grow and aid more waste reduction initiatives to the mix.

Heard Submissions Alongside LTP

New Housing

We are experiencing a dramatic increase of new house construction, both free standing single and much more densely packed infill housing. We need to ensure these houses are of a higher amenity quality than we are currently experiencing, that more effort is made to protect and retain established trees on new build sites rather than allowing developers to bulldoze them (which is counterproductive in the goal of battling climate change), and for development contributions to be funneled directly back into the infrastructure and parks within Richmond.

Community Collaboration

We wish to see this improve. Time and time again the Council takes a top-down approach, rather than using local knowledge and expertise to help achieve results with community buy in, which ultimately saves costs, eliminates duplication, and produces much better outcomes.

5. Conclusion

A climate change strategy document is one thing but it needs to be embedded in the culture and everything that is being produced, long Term Plans, infrastructure design, and day to day business this is not something that we are seeing currently. There is a lot of talk but in our experience when it comes to action it all gets put into the too hard basket i.e planting more fruit trees in parks and on the streets, opening up more planting areas in the OARC and supporting local initiatives that will deliver in waste reduction and education around sustainability.

We continue to be a community that wants to be actively engaged and would like to continue fostering a creative and collaborative approach. The successful historical outcomes include, Richmond road repair program, planters for Stanmore Road, Community engagement with Avebury House, Richmond Community Garden, Riverlution, and, more recently, Avon Ōtākaro Network. The interest in the body of work of Richmond Residents and Business Association has been working on and achieving is attracting more interest and support within the Richmond community. The community has more ownership and engagement when it is involved through the entire process.

We want to work together with the City Council and the Community Boards to create a suburb that uses our ideas, skills and talents where we can all participate towards a final outcome and feel valued.

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
124	39720	Chris	Doudney	<p>Christchurch City Council Draft Climate Change Strategy</p> <p>Strategy: a plan of actions designed to achieve a long-term or overall aim</p> <p>Overall aim: minimise negative effects of the acknowledged climate change emergency</p> <p>Goals: Within necessary timeframes, eliminate fossil fuel emissions, enable net zero all other emissions, manage sea level rise, enable economic transition.</p> <p>Actions: Identify timeframes for activities, establish programmes and targets.</p> <p>The draft offered for comment is an extraordinarily vague strategy document, with woolly aims and hopes and with most activities comprising further planning. The strategy's goals are generally business as usual; and the ten "programmes" lack targets and timeframes. In this time of climate emergency, the strategy offers little leadership.</p> <p>The first matter that is critical to the issue of climate change is the complete cessation of fossil fuels use as energy sources, very soon (much sooner than 2035, let alone 2050). Fossil fuel elimination is hardly addressed in the draft strategy.</p> <p>The second critical matter is that the City must have a strategy that obtains most of its desired results in the near term - not much point in getting there in 2060 after various dire tipping points have cast us all irrevocably down the path of certain disaster. Therefore the strategy has to have a timeframe with specific goals and verifiable targets to be met.</p> <p>The timeframe has to be cast in the period 2021 - 2030, starting immediately.</p> <p>The draft strategy is correct to acknowledge that change is inevitable; the status quo is not possible, or desirable.</p> <p>It is noted that the strategy's costs are to be funded from the LTP budgets - specific sums should be allocated as soon as possible to identified activities.</p> <p>Actions for the City to pursue, under revised headings and goals, include:</p>	Yes

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				<p>Accelerate EV bus acquisition, to be complete (ie no diesel or petrol buses) by 2024 and implement bus-on-demand EV shuttle services starting in 2022.</p> <p>Enable provision of EV charging facilities at all required locations by 2023, ongoing.</p> <p>Ban or exorbitantly tax fossil fuelled vehicles from central city by 2025, whole city by 2028, and encourage EV adoption through incentives eg free parking, loan finance.</p> <p>Implement major tree planting programmes of both native and non-native species for most city streets starting in 2021, with all major roads completed by 2026.</p> <p>Implement a planning policy which encourages central city dwelling in conjunction with shops and other commercial activities. (Unlike current zone-based policies), and bans residential or commercial development on land with high quality soils; and treats central city airbnb as motels.</p> <p>Ensure that the City Council is net zero emissions by 2025, not 2030 as suggested.</p> <p>Publicise necessary actions to reach goals, and counter with factual statements any false advertising by fossil fuel organisations (eg current gas industry propaganda proposing “co2 free gas” - not a likely practical possibility and certainly not in Christchurch before 2050).</p> <p>Subsidise solar panel installations on residential and commercial properties on a ‘rent to own’ basis, in conjunction with rationalisation of city power networks and grid connections.</p> <p>Implement rail connections to external conurbations including Lyttelton by 2023, with a new station at Colombo Street, and electrify the service as part of a national plan to electrify all rail services.</p> <p>Actively promote green power generation industries, eg wind turbines.</p> <p>Promote the reinstatement of the Lyttelton/Wellington ferry service, with battery powered ships.</p> <p>Reduce air travel by encouraging sea and rail travel, including movement of goods.</p>	
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Heard Submissions Alongside LTP

Christchurch City Council Draft Climate Change Strategy

Strategy: a plan of actions designed to achieve a long-term or overall aim

Overall aim: minimise negative effects of the acknowledged climate change emergency

Goals: Within necessary timeframes, eliminate fossil fuel emissions, enable net zero all other emissions, manage sea level rise, enable economic transition.

Actions: Identify timeframes for activities, establish programmes and targets.

The draft offered for comment is an extraordinarily vague strategy document, with woolly aims and hopes and with most activities comprising further planning. The strategy's goals are generally business as usual; and the ten "programmes" lack targets and timeframes. In this time of climate emergency, the strategy offers little leadership.

The first matter that is critical to the issue of climate change is the complete cessation of fossil fuels use as energy sources, very soon (much sooner than 2035, let alone 2050). Fossil fuel elimination is hardly addressed in the draft strategy.

The second critical matter is that the City must have a strategy that obtains most of its desired results in the near term - not much point in getting there in 2060 after various dire tipping points have cast us all irrevocably down the path of certain disaster. Therefore the strategy has to have a timeframe with specific goals and verifiable targets to be met.

The timeframe has to be cast in the period 2021 - 2030, starting immediately.

The draft strategy is correct to acknowledge that change is inevitable; the status quo is not possible, or desirable.

It is noted that the strategy's costs are to be funded from the LTP budgets - specific sums should be allocated as soon as possible to identified activities.

Actions for the City to pursue, under revised headings and goals, include:

- Accelerate EV bus acquisition, to be complete (ie no diesel or petrol buses) by 2024 and implement bus-on-demand EV shuttle services starting in 2022.
- Enable provision of EV charging facilities at all required locations by 2023, ongoing.
- Ban or exorbitantly tax fossil fuelled vehicles from central city by 2025, whole city by 2028, and encourage EV adoption through incentives eg free parking, loan finance.
- Implement major tree planting programmes of both native and non-native species for most city streets starting in 2021, with all major roads completed by 2026.
- Implement a planning policy which encourages central city dwelling in conjunction with shops and other commercial activities. (Unlike current zone-based policies), and bans residential or commercial development on land with high quality soils; and treats central city airbnb as motels.
- Ensure that the City Council is net zero emissions by 2025, not 2030 as suggested.
- Publicise necessary actions to reach goals, and counter with factual statements any false advertising by fossil fuel organisations (eg current gas industry propaganda proposing "co2 free gas" - not a likely practical possibility and certainly not in Christchurch before 2050).
- Subsidise solar panel installations on residential and commercial properties on a 'rent to own' basis, in conjunction with rationalisation of city power networks and grid connections.
- Implement rail connections to external conurbations including Lyttelton by 2023, with a new station at Colombo Street, and electrify the service as part of a national plan to electrify all rail services.
- Actively promote green power generation industries, eg wind turbines.
- Promote the reinstatement of the Lyttelton/Wellington ferry service, with battery powered ships.
- Reduce air travel by encouraging sea and rail travel, including movement of goods.

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
126	39722	Bronwyn	Hayward	Please see my comments attached in the PDF	Yes

Ōtautahi Christchurch
Climate Change Strategy 2021

d MNZM

Bronwyn Hayward is a Professor of Political Science and International Relations at the University of Canterbury. She is director of Hei Puāwaitanga: Sustainability, Citizenship and Civic Imagination Research Group at UC and was a lead author of the Intergovernmental Panel on Climate Change (IPCC) Special report on 1.5 deg C warming. She is also a co-ordinating lead author of the IPCC assessment Round 6 for the *Cities and Infrastructure* Chapter and a member of the IPCC Core Writing group. These comments are made in a personal, professional capacity.

(If there is an opportunity I do wish to be heard in an oral submission)

Introduction

The aim of the Ōtautahi Christchurch Climate Change Strategy is unclear. This is unusual. At the outset the strategy document clearly notes the pressures of climate change and the city has declared a climate emergency but what is the vision or alternative? A long list of 10 goals for consultation are offered all of **which are fine but its not clear what vision drives the council** -what kind of city do we want to be an dhow does this strategy inform the strategic goals in the Long term plan? What emphasis do we place on wellbeing in the city? **There is a total silence in the whole document on wellbeing** and yet we know from our experience of disasters (earthquakes and terror attacks) it is wellbeing that is impacted as much and sometimes more than immediate impacts our economy – this is also true of our changing climate, the impact of the Port Hills fires, the flooding of Flockton basin all had significant lasting stress on families and communities. **What kind of city will CCC lead?**

Moreover the draft strategy reads as a summary of existing plans and proposals not a strategy for a city to protect its people, infrastructure, industries, culture and eco-systems from climate change or a systematic plan to measure and reduce emissions in a fair and transparent way.

It is great that the city acknowledges Ngāi Tahu Papatipu Rūnanga and whānau, because they have already begun to develop climate adaptation and mitigation strategies and as the plan notes climate change will have a particular impact on cultural wellbeing, resilience and the ability for mana whenua to maintain ancestral links with the landscape and taonga species- but also as mana whenua they are one of the biggest land owners, significant farmers and investors in the region.

It is also great that the plan begins with some metrics (metrics which were completely absent from the long term plan, as if they were written by a different team of authors?). For example data is offered for the financial year 2018/19 that shows that our “district’s” total gross greenhouse gas emissions were 2.72 million tonnes of carbon dioxide equivalent (tCO₂-e), slightly higher than two years ago. However, due to population increase, our per capita emissions remained stable at 7.1 tCO₂-e/person. This is more than the global average of approximately 4.3 tCO₂-e per person (**How does this compare to NZ city averages?**). The report notes The bulk of Christchurch’s greenhouse gas emissions came from transport (54.0% including 36% from land transportation), the energy powering our homes, buildings and businesses (stationary energy, 19.0%), agriculture (15.3%), waste (7.4%) and industrial product and gas use (IPPU, 4.2%)- **We need this information clearly reported each year, preferably six monthly on the CCC website (page one) so we can track progress**

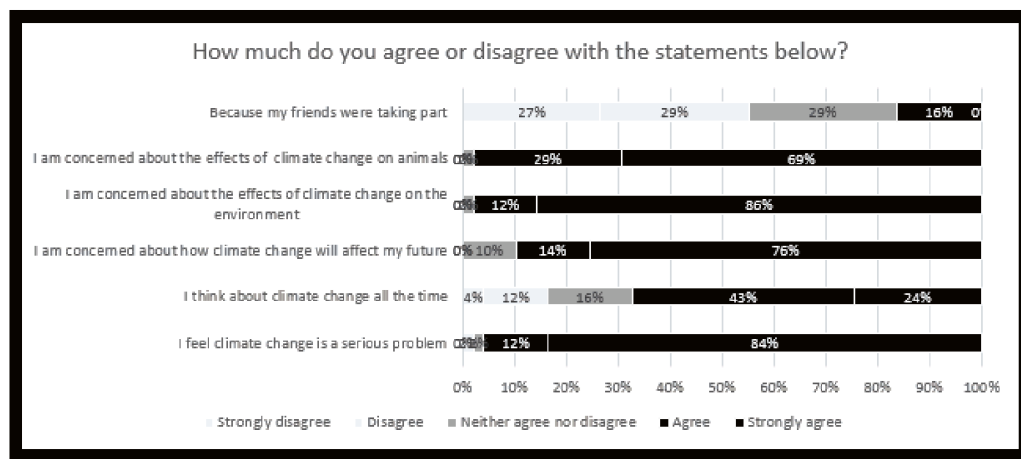
Why cities?

It is vital that cities get their climate change strategies right, and start implementing them on the ground because despite New Zealand's unusual climate emission profile, (reflecting the impact of agriculture in our economy) cities internationally take up only two percent of the world's land area but here in New Zealand 86 percent of our population live in cities and in terms of climate impact, cities create an enormous climate impact- they consume over two-thirds of the world's energy and account for more than 70% of global CO2 emissions (C40, 2020).

I note that Christchurch city had amongst the highest proportion of children and youth taking part in climate strikes of any of the seven world cities we have been following young people's sustainability behaviours in with 1 in every 3 children taking part in a climate strike

It is good that the city long term plan strategy has called the biggest intergenerational challenge of our time because our research shows a staggering 79 percent of children and youth in Christchurch surveyed this year said that they don't feel that they can influence planners and city decision makers in Christchurch, so it is good on this issue the council is starting to listen .

A recent survey of 300 young Christchurch residents aged 12-24 years from across the city conducted with my colleague Dr Kate Prendergast of UC for the UK Economic and Social research council we asked the following



The figure above suggests climate change is a significant issue for youth of Christchurch¹.

Christchurch has the highest proportion of youth taking part in climate protests compared to 6 other world cities where we are conducting similar research. A stunning 97% of Christchurch 12-24year olds we surveyed feel climate change is a serious problem and virtually all (98%) are concerned about the effects of climate change on the environment and 93% are concerned about how climate change will affect their future . More positively 91% said they felt acting with other people can make a difference to climate change.

A third of our sample of children and youth aged 12-24 years living in Christchurch had protested at least once. Of these youth, a concerning 61% also reported they think about climate change every

day. While anxiety about current and future impacts of climate change are justified, growing anxiety won't be easily resolved without real action.

It is essential the city takes a more measurable and planned approach to addressing climate change. At the moment the introduction is virtually absent of any set dates- the goals should very clearly have a date – by when will we be next zero? Etc I note the Council declared a climate emergency in 2019 and set a target of net zero greenhouse emissions by 2045 (excluding methane), and to halve our emissions by 2030 from 2016–17 levels. **It should calculate and set out its sources of emission** (from the city and from trading companies)

The climate strategy needs to also very clearly identify adaptation strengths, gaps and critical needs. For example, both the city long term plan and this strategy needs to include measures of social vulnerability to climate change, (how many Christchurch people are income AND/OR asset exposed) from fires, storms, coastal inundation, urban heat effects, reduced/polluted water, new local diseases and mental stress so that the impact of steps to reduce this vulnerability can be measured and reported on. This base line data can and must be provided with regular annual reporting otherwise how can we as Christchurch people measure the progress of our elected council and staff?

The city long term plan and this strategy is silent on aspects of its investment which are contradictory to stated climate goals, in particular investment in a proposed Tarras airport is an ill conceived and poorly justified plan that is not only unsustainable but will ensure that the city is exposed to long term climate liabilities and risk and a plan which will use up significant political social capital of the council, risking bogging it down for years in acrimonious debates, and unsubstantiated claims of environmental and commercial benefits. This airport plan lacks social licence or environmental licence. It reflects poor governance, poor communication, and is a text book example of investing in a future stranded asset. It is also not clear in the current plan what the range of uses and purposes the domestic or public transport aspects of the budget will be spent on, and how these impact overall city climate plans-nor is it clear how **fire risks inform current and future subdivisions or coastal inundation** informs development plans along South Shore etc .

Resources: Resource allocation is not clear at all in this strategy- how much will be invested and how will Key performance indicators be measured? By when?

As noted in my LTP submission, water management is a core concern for all cities particularly in a changing climate. The council is to be commended for working to ensure there is enough water and that water reserves are sustainably and well-managed. Here it is to the disadvantage of the council that the city's climate plan is not more clearly integrated into wider long term planning objectives, because this plan could also justify the need for the managed approach to water including water charging for high users, which is an important and fair step.

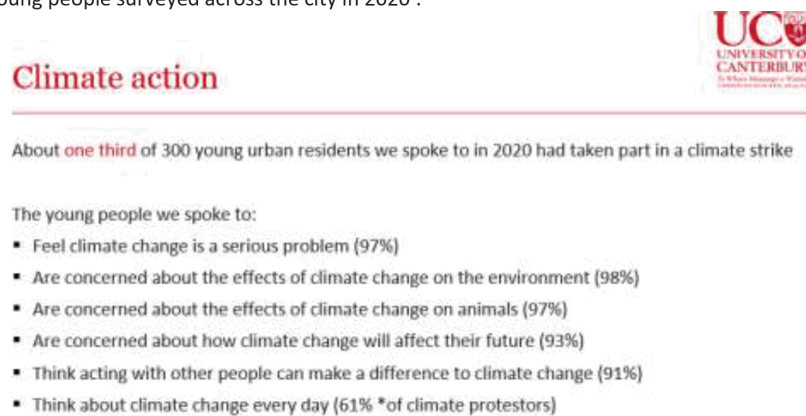
All households should also be provided with regular water use information and this should be reported also in comparison to their neighbours in their street and the city (a standard practice in many cities internationally). Reporting on water norms and using this kind of social nudge technique has an educative and behavioural norm encouraging more water recycling and saving.

Wellbeing and climate – tracking the difference the city makes. Finally but most importantly the city strategy fails to recognise that people without secure incomes are the most vulnerable to climate change-along with children, the elderly and the disabled, Indigenous people and ethnic minorities. so how will the city calculate vulnerability and track the way it reduces this vulnerability

Heard Submissions Alongside LTP

4

i Thanks to Dr Kate Prendergast for the following graphics drawn from the above study and a sample of 300 young people surveyed across the city in 2020 :



Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
136	39734	Prue	Stringer	<p>I applaud the CCC for declaring a Climate Emergency, and thank you for the draft Climate Strategy.</p> <p>Since Climate Change is the greatest threat to us all, too much talk and delayed action will not suffice.</p> <p>The 4 goals are good, and the 10 programmes are a start, but I see the need for much more urgent action. We need tougher targets, and reduced timelines.</p> <p>Programme 1. The Climate leadership group must make serious and urgent changes to "business as usual". Working in partnerships very important.</p> <p>7. Transport: must be prioritised. Bring forward spending on both active and public transport projects, particularly the cycle ways. Spend on education/behaviour change on these, make them more convenient and appealing. Discourage car driving, eg. make city parking more expensive.</p> <p>Support shared ride and shared vehicle-use programmes.</p> <p>8. Building regulations must require higher efficiency standards, in insulation, water use etc.</p> <p>10. Food system: No more nearby productive agricultural/horticultural land should be built on. Food supplies need to be local, not requiring much transport.</p> <p>Overall, good goals, but much more immediate action needed on the programmes. Spend now !</p> <p>Push for more support from central government, and more local govt decision-making (eg we should NOT have to have a hugely costly stadium). We could put that money into a just transition for all, to a sustainable city that we can all be proud of well into the future.</p>	Yes

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
141	39739	Ruth	Sharr		Yes

Heard Submissions Alongside LTP

Ōtautahi Christchurch Climate Change Strategy (Christchurch City Council)

Name: Jo Robertson & Ruth Sharr
Submitting on behalf of: A group of Addington School parents
Address:
Mobile number:
Email:
Do you wish to speak to your submission? Yes
Personal information not to be disclosed: Nil

1. Preamble

We are an informal group of both recent and long-term residents who initially came together in response to safety concerns around crossing SH 76 ("Brougham Street") going to and from Addington School. The lens we apply to our submission is:

- a. Does the draft Strategy take a partnership approach with mana whenua?
- b. Does the draft Strategy recognise the need for equity according to socio-economic status, ethnicity, and locality across Christchurch?
- c. Does the draft Strategy recognise the need for intergenerational justice?
- d. Does the draft Strategy recognise the need for just outcomes beyond both Christchurch and Aotearoa New Zealand?

Addington has been cut in half by SH 76 ("Brougham Street") for 50 years, but its amenity has declined as traffic volumes have risen. Some of this traffic takes the opportunity to "rat-run" through our community on the way to or from Moorhouse Avenue. In the context of the draft Strategy, the traffic driving through our suburb (either on SH 76 or "rat-running") has a high proportion of single-occupancy vehicles from further out whereas our residents typically either commute short distances or walk or bike. Consequently, we are the victims of poorly considered green fields development around SW Christchurch and Selwyn District along with other folks' unsustainable travel choices.

2. Initiatives in the draft Strategy we strongly support. Although we support many of the principles, goals and programmes in the draft Strategy, we have important caveats based on the principles listed in the Preamble to our submission. We support, with caveats as below:

- a. The principles used to inform development of the draft Strategy (p9), with the caveat that they need to more comprehensively address the potential for unjust programmes and outcomes as climate change is addressed.
- b. The recognition (p2) that addressing climate change has the potential to bring wider benefits to our community, with the caveat that addressing climate change also has the potential to exacerbate inequality and injustice within Christchurch and beyond.
- c. The use of feedback from a wide variety of mana whenua, technical and community interests (p4) in developing the draft Strategy. Our caveat here is that this conversation needs to continue and to expand in its scope.

Heard Submissions Alongside LTP

- d. The recognition in Goal 3 of the importance of a “just transition” in addressing climate change. Our caveat here is that the draft Strategy does not adequately address questions of justice, either locally or globally.
- e. The recognition in Goal 1 (“Zero net emissions”) of the importance of acting locally to address climate change. Our caveat here is that the draft Strategy (especially Programme 7 Low emission transport system) exacerbates existing injustices both locally and globally.
- f. The recognition in Goal 4 (“We are guardians of our natural environment and taonga”) that our natural environment can contribute to carbon neutrality and that our taonga can provide the inspiration to keep going.

3. Summary of changes requested to the draft Strategy. The changes listed below follow from the four principles listed in our Preamble.

- a. Amend the **Principle** “we will ensure people are empowered to participate in our programmes and we will avoid our response to climate change having inequitable impacts on people” so that it reads “we will ensure people are empowered to participate in our programmes and we will avoid our response to climate change having inequitable impacts on people both within Christchurch and beyond”.
- b. Amend the paragraph in **Goal 1** “We also need to address the embodied carbon (carbon emitted in the production of the materials such as concrete and steel) that we use in our buildings and infrastructure, and transition towards more sustainable materials and construction techniques” so that it includes the embodied carbon in transportation systems. Suitable wording might be: “We also need to address the embodied carbon (carbon emitted in the production of the materials such as concrete, *aluminium* and steel) that we use in our buildings, *vehicles* and infrastructure, and transition towards more sustainable *products* and construction techniques”.
- c. Amend the paragraph in **Goal 1** “Our city will be designed so people can take fewer and shorter trips to access goods and services, and have access to safe and reliable low-emission travel choices” so that it includes active transport options. Suitable wording might be: “Our city will be designed so people have access to safe and reliable low-emission and active travel travel choices
- d. In **Goal 3**, add “equitable” to the “Sign of success: Innovation and economic diversity – creative climate change solutions and innovation will be supported for a more diverse, resilient and sustainable economy” so that it reads “....a more equitable, diverse, resilient and sustainable economy”.
- e. In **Goal 3**, add to “Sign of success” the paragraph: “Socio-economic inequality declines within Christchurch”.
- f. In **Goal 3**, add to “Sign of success” the paragraph: “Supply chains for products and services used by people and businesses within Christchurch meet international norms around social and environmental sustainability”.
- g. In **Goal 4**, make more explicit reference to the role of a te Tiriti partnership in sustaining and protecting our “natural environment and taonga”.
- h. In **Goal 4**, add to “Sign of success” the paragraph: “A te Tiriti partnership – communities within Christchurch will recognise that in addressing climate change they are adding to the mana of te Tiriti”.
- i. In **Programme 1** add (or amend) a Focus Area that explicitly refers to the role of the te Tiriti partnership in establishing other programmes in the draft Strategy.

Heard Submissions Alongside LTP

- j. From **Programme 1** amend the Focus Area “Develop a ‘just transition lens’.....” to read “Develop a ‘just transition lens’.... to ensure actions benefit all geographic areas and demographics within Christchurch and support those most vulnerable to change.
- k. In **Programme 4**, add “rainwater harvest” to “Promote sustainable water use...” to read “Promote sustainable water use (including rainwater harvest) as part of a response to reduced surface water supply”.
- l. In **Programme 6**, emphasise the importance of applying just measures of ‘progress’ so that the relevant Focus area reads “Redefine measures of progress to better reflect social, cultural, economic and environmental justice and wellbeing within and beyond Christchurch”.
- m. From **Programme 7** replace the Focus Area “Encourage use of zero exhaust emission vehicles (such as battery electric vehicles and electric bikes)” with “Encourage use of battery electric scooters and electric bikes”.
- n. Add to **Programme 7** the Focus Area “Remove rat-runs from residential areas”.
- o. Add to **Programme 7** the Focus Area “Join the 8-80 Cities initiative, and incorporate this philosophy and its associated infrastructure expectations in the Long-Term Plan”.
- p. Add to **Programme 7** the Focus Area “Work with Environment Canterbury and adjacent district councils to plan and implement more express buses from outlying towns to the central city”.

4. **Transport contributes a large proportion of CO₂ emissions.** Issues relating to SH 76 were the catalyst that initially brought our group together. As outlined in the consultation document, transport contributes 54% of the city’s greenhouse emissions. This makes transport the obvious primary target in Christchurch’s climate strategy.

Bearing this in mind, City Council should initiate the following projects:

- i. Work with Environmental Canterbury, Selwyn District Council and Waka Kotahi NZTA to convert one of the existing southern motorway lanes to a public transport express (and truck) lane running from Rolleston to the central city. Such a lane will cut down the numbers of single-occupancy vehicles travelling into the city from beyond the city boundary by providing a convenient and cost-effective alternative.
- ii. Remove existing “rat-runs” by strategic application of “no entry”, “no right turn”, no left turn” or “no exit”. Examples of “rat-runs” deserving of such treatment can be found across the city, but in our area Poulson Street, Macaulay Street, Ward Street and Collins Street are especially victims of this behaviour. Rat-runs provide extra capacity for cars, thereby encouraging their use (the “induced demand” phenomenon), as well as diminishing the liveability of our community (and others) and an environment conducive to active transport.
- iii. Work with school Boards of Trustees at secondary schools and with the Ministry of Education to rigidly apply enrolment zones. This should remove the large volume of traffic that involves parents taking their children to out-of-zone schools.
- iv. Working with CDHB, explain to Ministry of Education the narrow-mindedness of their intent to create “super-schools” of 2000+ students that necessarily involve transporting children.

Heard Submissions Alongside LTP



The density of traffic along SH 76 makes walking and cycling less attractive for folk living in Addington.

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
144	39719	Diana	Shand	<p>Congratulations to Christchurch City Council for the move to develop a draft strategy and commit thereby to action. My submission is the call for more detail in how the strategy will be implemented, and the operational plan and funding. Action needs to be sooner rather than later and impetus will be built from bold investment.</p> <p>My submission focusses on three main areas:</p> <ol style="list-style-type: none"> 1. The need for community education and involvement to ensure the outcomes we seek, will require effort and feedback on how cumulative efforts contribute to success. Therefore, it is important to involve key education centres in both designing ways to contribute and developing ways to measure and publicise progress. School education is a key to wider understanding....and with the school-strikes-for-climate bringing a willing community aboard, each school, indeed each classroom, could be measuring and reporting on their success on reducing GHG emissions (from transport and waste primarily, but there may also be some use of fossil fuels to address) against targets....and getting incentives, acknowledgement and publicity for their efforts. <p>Involve the Universities/polytechnics/institutes of technology likewise. And all major institutions including hospitals and community facilities, new buildings and developments etc.</p> <p>In the matter of measuring and promoting progress, I would note that Christchurch City was indeed a significant member of the Communities for Climate Change - New Zealand Programme which involved a staged approach for systematically identifying and addressing Greenhouse Gas (GHG) emissions in local government council operations and their communities. (See attached report)</p> <p>As National Project Manager of the CCP-NZ Programme from 2004 - 2010, I observed the great incentive for actions, not only within councils, but also among councils, and for their communities, that came from the feeling that there was actual progress being achieved. By 2021 there must be ever more refined methods of calculating the reductions from council and community efforts, and all efforts should be made to align these methods in local government across New Zealand.</p> <p>Promotion of these methods and of progress, is also very important, so that people in communities feel their efforts are worthwhile. Energy consumption of specified areas could be measured and results shared by the energy companies, and more needs to be done to ensure this is achieved over time. Energy Conservation will continue to be very important in reducing GHG for we still continue to use fossil fuels in times of hydro-energy (and other sustainable energy generation) shortfall - and as it is energy conservation increases our resilience and dependence.</p>	Yes

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				<p>2. As the bulk of Christchurch's greenhouse gas emissions came from transport (54.0% including 36% from land transportation) it is the area to concentrate on...and it is of concern that rail is not mentioned in the text. We have heavy rail corridors which exist and should be used especially for commuter rail from Rangiora/Amerley and Ashburton/Timaru. The District Councils are supportive of this, seize the opportunities. Within the city commuter rail between Lyttelton and the city could be a starting point, and there are other short hauls that should be piloted. Considering the long term benefits and the greater number of people involved, investment in rail at the stage would have must greater benefit than the investment of long-haul cycle trails. We want commuters out of cars, and the number of cycle commuters that would use the Lincoln-Rolleston - Christchurch links, or the Rangiora - Christchurch links would be minimal compared to the potential to take commuters out of cars on these links by train.</p> <p>Commuter rail transport will also be important in addressing housing shortages and some of the anomalies to be imposed by the National Policy Statement - Urban Development (NPS-US) which requires an Auckland solution to be imposed on Christchurch, and indeed one that will have detrimental ramifications to our city. The NPS-UD is driven by the need for more housing in New Zealand, and Christchurch earthquakes assisted Christchurch building new homes ahead of other cities...often to the detriment of productive soils (as between Christchurch and Lincoln)...a terrible loss which has not been accounted for in GHG accounting. Rapid transport, especially longer distance rail transport, will bring housing options further afield and indeed, like for Rolleston, opportunity to build new townships on less-fertile soils and connect them to major cities. The data for commuter road transport, or other regular usage, from further afield which could be served by better rail connection, is imperative. And we must continue on the development of any rapid transport and public transport systems</p> <p>3. Further to housing, the greenest house is that that already exists. The additional embedded energy in building new houses is significant, and money would be better invested in restoring and refurbishing existing houses especially heritage buildings which can be repurposed. In some cases this also brings more affordable housing within the reach of the most needy, e.g. the heart of Christchurch there are many old Edwardian houses which have been converted to contain flats or rooms housing many at a reasonable cost....and these are being replaced by new houses well beyond the reach of even first-time home owners. These new houses should be built elsewhere and there should be incentives and support for heritage buildings to be repurposed or renovated for living to meet new tenancy standards. Otherwise little is being done for the whole strata of society whom are next to living on our streets, who once lived or would live in so-called "old dungsers" many of which are capable of restoration to a good standard and repurposing and indeed may already be contributing "hidden density". Investment in heritage and character building restoration and refurbishment is an investment in CHC emission savings.</p>	
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				<p>So all in all, considering the Carbon sequestration, the shortage of building timber, the social needs for lower cost i.e affordable habitations, part of our climate change strategy should to maintain old houses that are already the emphasis should be on maintaining and improving existing housing stock as well as increasing with new housing (with emphasis on green building standards), and there is an added case for increasing investment in heritage, and grants and incentives for this purpose</p> <p>4. And a further matter - considering the energy powering our homes, buildings and businesses (stationary energy, 19.0% of emissions), much greater effort should be put into converting waste to energy. And using wood from exotic plantations. In this area the current use of pinus radiata as carbon sinks should be recognised more as a short term gain obtained growing these plantations. On maturity and harvest much of this wood is used for woodpulp and converted to short term use e.g. tissue paper. Furthermore, sawn timber from pine plantations needs to be tantalised i.e. impregnated with toxic chemicals to have obtain the durability necessary for building...so the emphasis should be on maintaining and restoring native bush (and ecosystems including wetlands) and so more enduring carbon sequestration, or planting hardwoods. We are also recognising now, the loss of carbon from soil loss and disturbance which comes from exotic plantation harvesting, and the increasing risk of fire for these plantations with the climate we are to expect over the next decades.</p> <p>If we preserve and protect our native ecosystems, we will protect ourselves. As with so many things, solutions can be found in nature....</p>	
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Communities for Climate Protection – New Zealand Actions Profile 2009



I.C.L.E.I
Local
Governments
for Sustainability

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Environment**
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Wellington City Council, New Zealand, hosted the CCP-NZ National Programme Office from 2007–2009. The CCP-NZ Programme has been assisted with funds from Genesis Energy for activities and forums, and funds from Civic Assurance for the CCP-NZ Intern Programme.

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Executive Summary

Amid all the white noise surrounding climate change, local government councils have shown significant community leadership through activities that contribute to the abatement of greenhouse gas emissions. Thirty-four councils, covering 83 per cent of the New Zealand population, joined the Communities for Climate Protection® – New Zealand (CCP®-NZ) Programme between 30 June 2004 and 30 June 2009.

Measures that result in energy conservation, renewable energy, sustainable transport, waste reduction, and more sustainable living are measures that reduce greenhouse gas emissions.

The 34 councils in the CCP-NZ Programme are committed to reducing their (corporate) emissions and their communities' emissions. They are following a quantifiable approach with a systematic process marked by the achievement of milestones.

The effect of individual actions can be measured and the cumulative impact of these actions shows that local government can make, and indeed, is making, an important contribution to reducing the national greenhouse gas emission footprint.

The total of reported and quantifiable emission reductions from CCP-NZ council activities, since councils' inventory base-year to 30 June 2009, has been conservatively calculated to be more than 400,000 tonnes CO₂-e. This is at least 133,300 tonnes carbon dioxide-equivalent (CO₂-e) per year that is now being abated.

This is using average electricity emissions factors as agreed by the Ministry for the Environment (see Appendix 3 for a discussion on average and marginal emission factors).

Using marginal electricity emissions factors, councils have reported an accumulation of more than 487,000 tonnes CO₂-e of emissions reductions up to 30 June 2009. This is the total of reported and quantifiable emissions reductions from CCP-NZ councils' activities since their inventory base-year. On this marginal emission factor basis the annual total of emission reductions has reached at least 208,000 tonnes CO₂-e per year, and this rate is growing steadily.

Over the course of the Programme, ICLEI Oceania used its international reach to share experiences, best practice, and technical know-how.

ICLEI Oceania used its international standing to develop protocols for local government greenhouse gas emissions abatement.

Technical developments included the creation and publication of the new International Local Government Greenhouse Gas Emissions Analysis Protocol, and a New Zealand Supplement to the International Protocol.

ICLEI Oceania also worked with New Zealand councils to develop the Carbon Neutrality Framework for Local Government, based on the International Protocol, and this is being adopted across Australasia and beyond.

The sharing of council experiences across New Zealand has been highly valued. ICLEI Oceania staged several events to facilitate CCP-NZ networking and the exchange of information and to acknowledge councils' progress. These events included two national CCP-NZ Forums, 10 CCP-NZ Recognition Events, technical forums, public seminars, workshops, and international forums (see Box 1).

At ICLEI Oceania's Australasian conference *Accelerating Now!* CCP mayors from Australia and New Zealand launched the Australasian Mayors Council for Climate Protection.

There are many areas of existing local government operations and practice that can be modified or re-designed to make significant improvements to energy conservation or energy efficiency, and result in financial savings while achieving reduced usage of scarce resources. These changes should also improve the local environment and reduce emissions.

This report showcases councils' progress and actions. It reiterates the strong business case for greenhouse gas abatement activities where emissions are costs to councils, while reductions (from energy efficiency and waste reduction) produce savings.

Councils have reported significant reductions in greenhouse gas emissions from the utilisation of landfill gas and major savings in the use of building electricity energy after changing office or street lighting technology. There have also been savings from the installation of renewable energy technologies including photovoltaics and micro-hydro or wind turbines.

The challenge now for councils is to intensify their efforts to achieve even greater corporate and community emissions reductions.

The efforts of all councils in the CCP-NZ Programme are to be commended. This report demonstrates their work and its value, and offers ideas for other councils to consider.

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1 The Communities for Climate Protection – New Zealand Programme

Councils and the CCP-NZ Programme

Councils play a crucial, grassroots role within their communities, so local government work on climate change is instrumental in providing community leadership, reflecting public concerns, and implementing government policy.

During 2004–2009, the Ministry for the Environment worked with local government on climate change by supporting the CCP-NZ Programme. ICLEI – Local Governments for Sustainability delivered the Programme through its Oceania Secretariat.

The CCP-NZ Programme provided a strategic framework¹ within which councils determined the actions to take that reduce greenhouse gas emissions in their (corporate) activities and their communities' activities.

CCP-NZ assisted councils to identify measures to reduce greenhouse gas emissions such as:

- saving energy, particularly from energy-management initiatives, and by promoting renewable energy
- increasing sustainable transport options
- enhancing urban design and facilitating local mobility
- reducing emissions from landfills
- supporting the adoption of low-carbon and low-energy technologies.

Once a council committed to becoming a CCP-NZ participant, it started to work towards completing five milestones.

- Milestone 1: Conduct a greenhouse gas emissions inventory, analysis, and forecast.
- Milestone 2: Set emissions reduction goals.
- Milestone 3: Develop a local action plan to achieve these goals.
- Milestone 4: Implement and quantify the benefits of policies and measures in the action plan.
- Milestone 5: Monitor progress towards the reduction goal.

Measuring abatement – emissions analysis protocols

ICLEI worked with an international advisory group to develop the International Local Government GHG Emissions Analysis Protocol.² The protocol provides guidelines to assist local governments to quantify the greenhouse gas emissions from their internal operations and from the communities within their municipal or geopolitical boundaries.

By developing common conventions and a standardised international approach, ICLEI seeks to facilitate comparisons between councils to ensure tangible reductions in greenhouse gas emissions are achieved.

The New Zealand Supplement to the International Protocol describes how the principles outlined in the protocol are to be implemented in New Zealand. It reflects the requirements of the New Zealand context and the Ministry for the Environment's Guidance for Voluntary, Corporate Greenhouse Gas Reporting, but is specifically focused on local government.

Carbon neutrality framework for local government

Many organisations are advocating carbon neutrality, and some councils are keen to lead their community by example. However, there is no single independent global standard for carbon neutrality that can be used to support a claim of neutrality.

ICLEI Oceania, through the Australasian Mayors Council for Climate Protection – New Zealand (AMCCP-NZ), developed a Carbon Neutrality Framework for Local Government following consultation with all councils in New Zealand. This established an independent standard to define the concept and support a claim of carbon neutrality. The framework's publication on the CCP-NZ website has been welcomed with feedback from around the world. In New Zealand, Wellington City Council has adopted this framework as an appropriate basis for documenting its transition to a carbon neutral city.

The framework describes the parameters of carbon neutrality frameworks established by local governments. It is important that any proposal for carbon neutrality be considered within the context of the policy environment created by other spheres of government. In particular, the move toward emissions trading in both Australia and New Zealand may affect approaches to carbon neutrality.

¹ The standardised and internationally recognised CCP methodology is described in Appendix 1.

² For publications and reports, including the Protocols see the CCP-NZ website: www.iclei.org/index.php?id=9203.

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Box 1	Forums, workshops and events
<p>Council staff and elected members repeatedly emphasise how highly they value meeting local government colleagues and stakeholders and having access to global networks. Focused forums and workshops build momentum and support and facilitate networking and the exchange of information. Sharing knowledge and skills is an essential feature of how ICLEI works.</p> <p>CCP-NZ National Forums 2006 and 2008</p> <p>Each of the national CCP-NZ forums held in Auckland (2006) and Hamilton (2008) drew over 100 participants from about 30 CCP-NZ councils and other stakeholders. Keynote speakers included the Minister Responsible for Climate Change Issues, Ministry for the Environment management, ICLEI Oceania executive officers, and the international ICLEI Secretariat. Participating stakeholders included representatives of <i>Local Government New Zealand</i>, the Ministry for the Environment, the Energy Efficiency and Conservation Authority (EECA), councils that had been part of EECA's EnergyWise Councils Partnership, the New Zealand Business Council for Sustainable Development, and others.</p> <p>Workshops covered topics such as generating support for local climate change action, establishing action on climate change, and working with local business.</p> <p>CCP-NZ Recognition Events</p> <p>Ten CCP-NZ Recognition Events showcased councils' progress. Events were held in Auckland, Hamilton, Rotorua, Wellington, Christchurch, Dunedin, and Melbourne. An event was held during each <i>Local Government New Zealand</i> conference in 2004–2008.</p>	<p>Australian local government forums</p> <p>ICLEI Oceania has made CCP-NZ councils welcome at all of its Australian Sustainability Forums. CCP-NZ council staff and elected members have availed themselves of these opportunities, attending forums in South Australia, Victoria, New South Wales, and Queensland.</p> <p>Accelerating Now!</p> <p>ICLEI Oceania's <i>Accelerating Now!</i> conference in May 2007 in Melbourne was a major event for Australasian local government.</p> <p>The conference brought together over 450 representatives of local authorities working on ICLEI Oceania campaigns, especially CCP, from both sides of the Tasman Sea. The 55 conference attendees from New Zealand included seven mayors and three regional council chairs, as well as a significant number of senior managers, representing 21 councils. Representatives from the Ministry for the Environment, <i>Local Government New Zealand</i>, the New Zealand Business Council for Sustainable Development, Genesis Energy, and Beacon Pathway also attended the conference.</p> <p>Public forums</p> <p>ICLEI Oceania organised a public forum, <i>Climate Change and Us</i>, for local government and the community before the international <i>Climate Change and Governance</i> conference in March 2006 in Wellington.</p> <p>Distinguished British geologist and former chair of Shell Lord Ron Oxenburgh chaired the forum. Dr Kevin Trenberth, head of the Climate Analysis Section, United States National Centre for Atmospheric Research, and Wayne Wescott, ICLEI Oceania's chief executive officer addressed the forum. More than 300 people attended.</p> <p>The public workshop <i>Renewable Energy Uptake in New Zealand Cities: The Vision and Barriers</i> was organised by ICLEI Oceania in conjunction with the New Zealand Centre for Sustainable Cities and the School of Government, Victoria University of Wellington.</p> <p>The workshop was held on 1 April 2009 and led by international renewable energy expert Dr Eric Martinot and CCP-NZ local government politicians and officers.</p> <p>Workshops and seminars</p> <p>The <i>Energy Management Forum for Local Government</i> was held in Huntly on 3 April 2008. ICLEI Oceania organised this forum in collaboration with Genesis Energy. The forum comprised a full day of technical presentations and workshops on energy management.</p> <p>Forum attendees included customer energy managers from Genesis Energy and 35 council officers representing 24 councils (20 being CCP-NZ councils). These officers were policy analysts, energy managers, and property managers.</p> <p>This forum was a major opportunity to encourage the take-up of opportunities for energy efficiency in local authorities.</p> <p>International forums</p> <p>ICLEI Oceania worked closely with the CCP-NZ mayor who the Ministry for the Environment funded to represent New Zealand local government at the <i>Fourth Municipal Leaders Summit on Climate Change</i> in Montreal, Canada in December 2005.</p> <p>ICLEI Oceania also worked closely with two CCP-NZ councils that attended the <i>ICLEI World Congress</i> in Cape Town, South Africa in March 2006, and with representatives of another CCP-NZ council attending the local government gathering of the <i>United Nations Climate Change Conference</i> in Bali in November 2007.</p>

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Australasian Mayors Council for Climate Protection

www.climatemayors.com

Composition of AMCCP

The Australasian Mayors Council for Climate Protection (AMCCP) is a non-partisan body of mayors and chairs working together on climate change action.

The AMCCP is similar to local government leadership groups around the world, such as Mayors for Climate Protection (United States), the London Climate Change Partnership, signatories to the Covenant of Mayors, and the World Mayors Council on Climate Change.

Establishment of AMCCP

The AMCCP was established as an advocacy body for councils participating in CCP Australia and CCP-NZ. ICLEI Oceania provides Secretariat support.

Local government leaders from Australia and New Zealand launched the AMCCP at ICLEI Oceania's *Accelerating Now!* conference in Melbourne in May 2007.

The AMCCP Coordinating Committee includes six New Zealand mayors.



Aims of AMCCP

With the assistance of the ICLEI Oceania Secretariat, and with links to influential international bodies, the AMCCP will:

- advocate an agenda for accelerated action on climate change
- forge innovative partnerships
- identify opportunities for collective action
- broaden the base of technical expertise and on-the-ground experience available to participating CCP councils.

Structure of AMCCP

In New Zealand, all mayors and chairs interested in promoting action on climate protection may join the AMCCP. As of 30 June 2009, AMCCP comprised the mayors and chairs of the 34 councils in the CCP-NZ Programme and the 238 mayors of CCP councils across Australia.

AMCCP-NZ

The first meeting of AMCCP-NZ was held in Rotorua in July 2008 at the time of the *Local Government New Zealand* conference and was open to all New Zealand mayors. AMCCP-NZ's activities have included participating in AMCCP teleconferences and making a submission on the Emission Trading Scheme Review.

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2 Corporate and Community Emissions and Reductions

This section provides statistical data from the base line inventories of councils. Data from all 34 CCP-NZ corporate and community base-year inventories was extracted from the ICLEI Greenhouse Gas Analysis software for this analysis. This database includes energy used by those councils that have operations in the agriculture sector, but it **does not** include agricultural

emissions (e.g. methane and nitrous oxide emissions from animals), nor forestry offsets.

The word "community" in this report means the residents, commerce, and industry within the council's land boundaries.

The expression "corporate emissions" in this report means the council's operational emissions.

Council corporate emissions are a subset in the council's community emissions.

Analysis of corporate and community base-year data provides an interesting snapshot of emissions and energy that local government and its communities use in New Zealand.

Corporate emissions

From summated base-year figures for the 34 councils, of the 146,247 tonnes CO₂-e total corporate emissions, the building sector accounts for 42 per cent (see Graph 1 and Table 1).

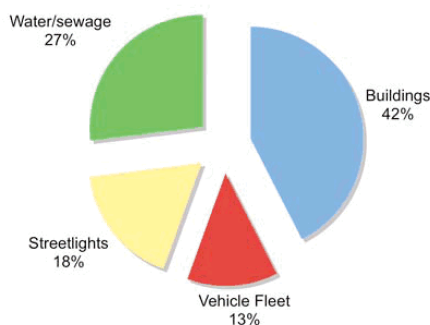
The building sector includes recreation centres, which are the largest 'building' energy users, particularly in the larger urban councils. The water and sewage sector accounts for 27 per cent, streetlights 18 per cent, and vehicle fleets 14 per cent of total corporate emissions.

Emissions from corporate waste are only a small proportion of total corporate emissions (less than 1 per cent). However, as less than half the CCP-NZ councils had undertaken a corporate waste audit, the data available was insufficient and hence has been excluded from this analysis.

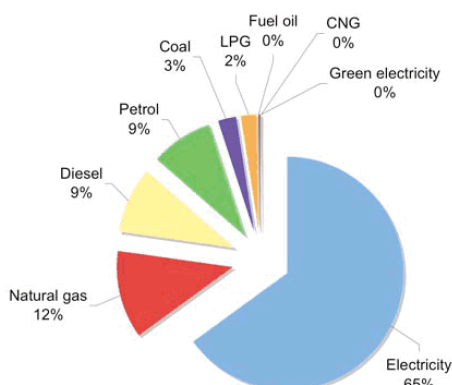
Some councils have installed worm-farm facilities for staff food-scrap waste, reducing the emissions from their corporate waste and providing an inspirational educational facility for staff and school trips through the council offices. According to the limited corporate waste data available, scrap paper contributes up to 80 per cent of corporate waste emissions, especially in smaller councils where recycling is not a viable alternative.

The proportions of council corporate emissions produced from various energy sources are presented in Graph 2.

Graph 1 - Corporate Emissions by Sector



Graph 2 - Corporate Emissions by Energy Source



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Table 1 Corporate base-year emissions & energy by sector (excluding waste & other)		
Sectors	Greenhouse gas emissions (tonnes CO₂-e per year)	Energy (GJ per year)
Buildings	62,862	1,035,376
Water/sewage	38,848	678,341
Streetlights	25,192	444,711
Vehicle fleet	19,345	308,029
Totals	146,247	2,466,457

Analysis by corporate sectors

The summation of the total "consumer" energy councils used for corporate purposes provides an interesting snapshot of local government.

The proportions of the 2,466,457 GJ of total consumer energy used in the buildings, water and sewage, streetlights, and vehicle fleet sectors are similar to the proportions for emissions from these sectors because waste and other emissions sources are small (see Graph 3). As is usual with statistics produced from totals, the proportions of energy and emissions for these sectors vary greatly for individual councils. For example, the water and sewage sector is responsible for up to 80 per cent of energy and emissions from one council, although the average for all CCP-NZ councils is only 25 per cent.

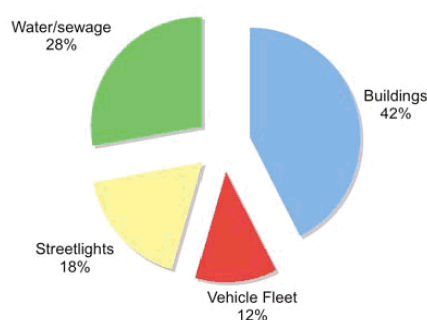
Data from Watercare Services on water and wastewater energy and emissions covering all councils in the Auckland region has not been included (except that Waitakere City included its share in its inventory data).

Analysis by energy source

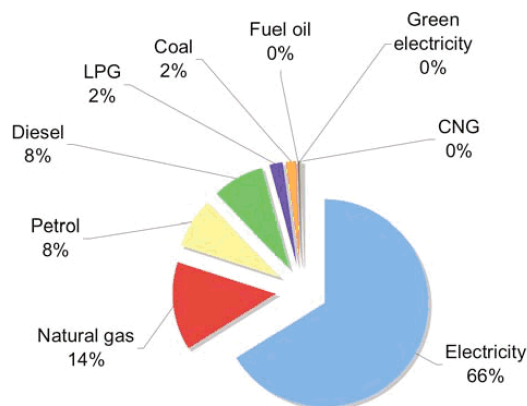
The analysis by energy sources shows that electricity is the dominant energy form for council corporate purposes, accounting for around 66 per cent of all energy supplies councils use. Natural gas provides a further 14 per cent of total energy (see Graph 4).

The total amount of coal burnt by the 34 CCP-NZ councils has decreased significantly since the base-year inventories. Use of

Graph 3 - Corporate Energy Usage by Sector



Graph 4 - Corporate Annual Energy Usage by Source



wood energy (pellets) has grown recently, although none was recorded in council corporate base-year inventory data.

The cost of the total annual corporate energy that CCP-NZ councils purchased exceeded

\$64 million. This cost would be much higher today, because electricity and petrol and diesel costs have risen dramatically over the last five years.

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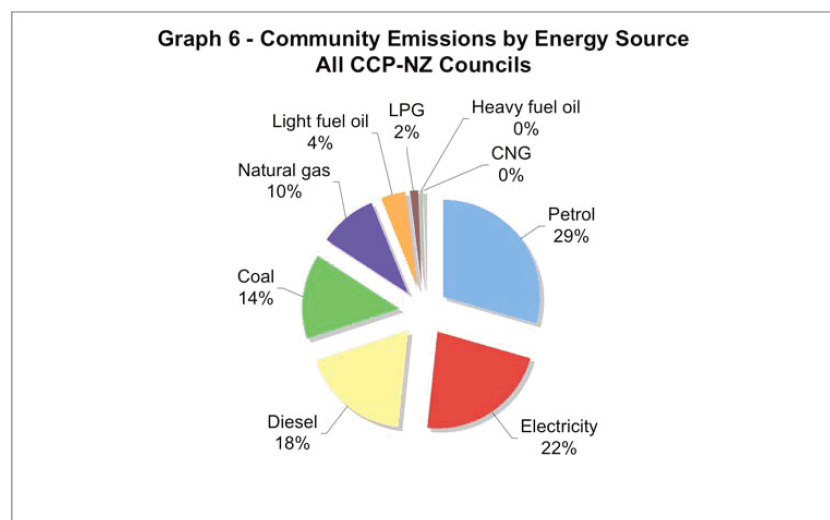
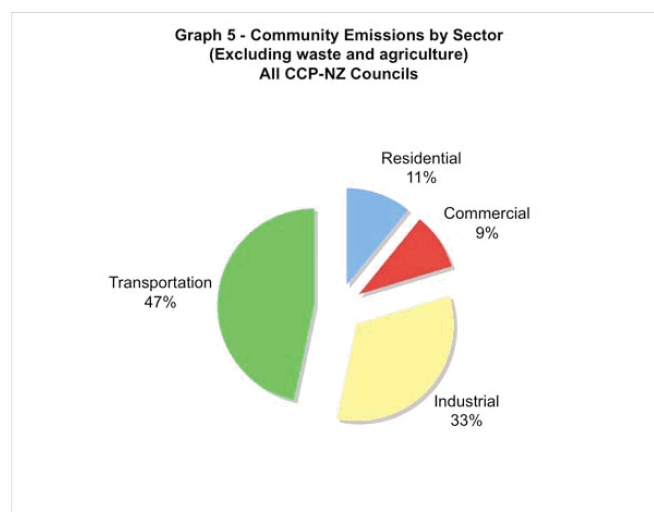
Table 2 Corporate base-year emissions & energy by source (excluding waste & other)		
Source	Emissions (tonnes CO₂-e/year)	Energy (GJ/year)
Electricity	94,919	1,614,655
Natural gas	17,407	350,852
Diesel	13,595	200,985
Petrol	12,806	192,309
Coal	3,798	42,012
LPG	3,191	53,020
Fuel oil	531	7,239
CNG	0	1
Green electricity	0	5,384
Total	146,247	2,466,457

Community emissions

ICLEI Oceania supplied CCP-NZ councils with community inventory data based on the 2001 census population, occupations, and vehicle registrations in each council area. This data excluded agricultural and forestry emissions and offsets, in accordance with a Ministry for the Environment decision. The data was sourced from the Ministry for Economic Development, Energy Efficiency and Conservation Authority, and Ministry of Transport. ICLEI Oceania analysed the data and produced a set of community data (or "proxy data") for each council geographic area. This community data allowed each council to assess and review the size of its community's footprint and identify community sectors that the council could more easily influence.

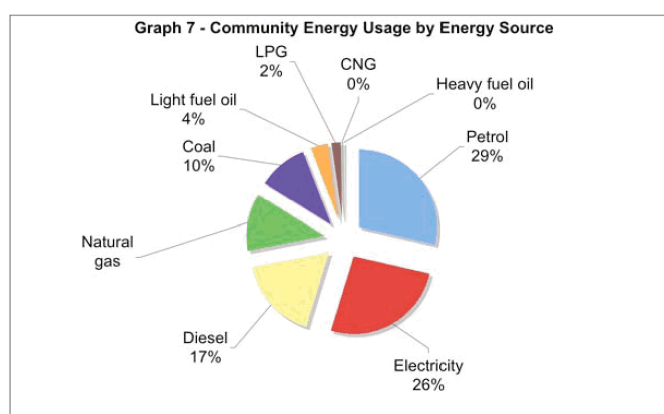
The community (2001) energy and emissions data for the 34 councils is presented in Graphs 5–7 and Table 3. Emissions are analysed by sector and energy source. This is community data, so the proportions of emissions allocated to each sector reflect the breakdown of energy emissions by sector for the whole country. Waste data for New Zealand for the 2001 base-year broken down to a council level was not available from the Ministry for the Environment. Some councils entered data from their own records, but it was insufficient for accurate analysis.

Many CCP-NZ councils actively help their community with waste reduction, green waste diversion, and recycling programmes, and community waste emissions have been falling.



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Table 3 Community emissions and energy data (all CCP-NZ councils)				
Source	Emissions (tonnes CO ₂ -e)	Emissions (tonnes/head per year)	Energy Usage (GJ per year)	Energy (GJ/head per year)
Petrol	6,427,811	1.99	96,513,654	29.94
Electricity	4,890,066	1.52	88,022,046	27.30
Diesel	3,980,320	1.23	57,937,688	17.97
Coal	3,082,857	0.96	35,088,626	10.88
Natural gas	2,144,802	0.67	40,588,322	12.59
Light fuel oil	882,938	0.27	12,178,452	3.78
LPG	347,798	0.11	5,758,223	1.79
Other	103,417	0.03	1,386,481	0.43
Total	21,860,009	6.78	337,473,492	104.68



Emissions reductions (corporate and community) achieved by CCP-NZ councils

ICLEI Oceania analysed corporate and community emission reductions achieved from CCP-NZ council activities initiated after the council inventory base-year. The results show that local government in New Zealand has achieved substantial emissions reductions from their corporate and community activities.

All quantifiable community emissions reduction activities reported by CCP-NZ councils relate to the reduction of emissions from council owned landfills. Following publication of the new International Greenhouse Gas Protocol it was decided to report all of these projects as "corporate" emissions reductions. (See the discussion on waste emission reductions below.)

There are two sets of reduction figures included in this report. This is because electricity emissions

reductions have been calculated in two ways in New Zealand. See further information on electricity emissions factors below and in Appendix 3.

Based on the results reported so far, there remains significant potential for more emissions reductions from the local government sector.

Results using average electricity factors

Using the average electricity emissions factors, the annual emissions reductions reported and quantified following CCP-NZ council activity totals more than 133,300 tonnes CO₂-e per year.

On this emission factor basis, the total of reported and quantifiable

emissions reductions resulting from CCP-NZ council activities since councils' inventory base-years through to 30 June 2009, is now more than 400,000 tonnes CO₂-e.

Results using marginal electricity factors

Using marginal electricity emissions factors to calculate electricity efficiency emissions reductions, the total annual emissions reductions from CCP-NZ council activity increases to at least 208,000 tonnes CO₂-e per year.

On this marginal emissions factor basis, the accumulated total of emissions reductions since council base-year up to 30 June 2009 is at least 487,000 tonnes CO₂-e.

Heard Submissions Alongside LTP

Electricity emissions factors

ICLEI Oceania normally only reports emission baselines and emission reductions using annual average electricity emissions factors.

However, the emission reduction results for some projects reported by CCP-NZ councils and included in this report have already been reported in different fora by other authorities, such as EECA or the Ministry for the Environment.

Also some of these council projects have been awarded emission reduction credits by the Government. In these cases, reductions in emissions by electricity efficiency projects or by using renewable energy sources for the generation of electricity have been calculated using a marginal electricity emissions factor. More information on electricity emissions factors is included in Appendix 3.

Waste emissions reductions

Waste dumped into landfills was originally considered as a source of "community" emissions. Waste data entered into ICLEI's Greenhouse Gas Analysis software was entered as "community waste" data.

Publication of the new International Local Government Greenhouse Gas Emissions Analysis Protocol changed this for emissions from a landfill owned or controlled by a council.

These emissions are now considered as 'government' (i.e. corporate) scope 3 emissions.

Because many councils are using landfill gas reduction projects to replace corporate energy sources the continued assessment of these emissions as "community" was problematic. For instance some councils use the landfill gas for generation of electricity, which then replaces the purchase of electricity from the grid.

For this Actions Profile, emissions reductions from energy efficiency, green energy generation, or conversion of landfill gas (methane) into carbon dioxide in a generator, boiler, heater, or by burning in a flare have not been separated into Corporate and community, but been added together and recorded as "total emissions reductions".

Community emissions reductions

The impacts of the many community sector activities councils undertake or promote are small and often difficult to quantify. Therefore, the only community projects counted in this report relate to the conversion of landfill gas to a useful energy source or converted to CO₂.

Emissions reductions from other community projects, such as council support for the retrofitting of low income and pensioner housing, have not been included in this analysis because of lack of reliable data on numbers of conversions undertaken with council support.

Accordingly, the reported total impact from council activities is considered to be a conservative estimate.

Government agencies understand the difficulty of quantifying the impacts of community emissions reduction projects. For instance, EECA acknowledges that it is difficult to identify analysis and quantification mechanisms in the community sector, such as for measuring household retrofit energy efficiency and climate change impacts. The "savings" achieved by retrofitting a particular household vary with the specific house and the behaviour of the specific residents. Therefore, EECA accepts that it can assess retrofitting only by using average impacts.

Heard Submissions Alongside LTP

3 CCP-NZ Councils – Corporate Sector Actions

Buildings

Buildings owned or managed by councils can account for a very large portion of councils' corporate emissions. Administrative buildings, swimming pools, recreation centres, and libraries are generally large buildings that expend large quantities of energy on heating and cooling, lighting, electronic equipment, and hot water systems.

While retrofits of existing buildings can achieve substantial reductions in energy usage, the largest gains are achieved through the development of new facilities using advanced "green building" methods.

Local government has become a strong supporter for promotion of green buildings with the New Zealand Green Buildings Council. Partnerships between local government, architects and building owners include trials of green building techniques, such as greenroof applications, to demonstrate the benefits.

Many CCP-NZ councils have taken, or are exploring, steps to reduce energy use by retrofitting or redesigning building energy using systems. Such steps are saving at least 1,825 tonnes of CO₂-e from being emitted each year.

Lighting upgrades

Retrofitting light fixtures to energy-efficient models can have high up-front costs for large buildings, but the money saved on electricity bills can pay these costs off in just a few years. Numerous councils have made lighting alterations, which saved money and emissions.

Auckland Regional Council made significant savings by upgrading its central city office with 1,600 energy-efficient light fittings, including a sensor system to dim or turn off lights when unneeded. The system uses 14.5 per cent of energy compared with the old system, resulting in savings of about 561,000 kWh, \$128,000, and 391 tonnes of CO₂-e per year (as published on council website). The monetary savings will pay back the initial EECA loan in less than five years.

Recreation and aquatic centres

The cost of running aquatic centres, one of the largest users of energy, has been justified by the perceived high value communities place on such facilities. However, more councils are exploring ways to keep the community value while drastically lowering their carbon footprint. Swimming pools are typically energy-hungry, and not just for water heating. The pool hall air is maintained at 2 degrees above the water temperature to minimise the pool's surface evaporation loss.

In Dunedin City Council's Moana Pool Complex, the relative humidity was being controlled through the introduction of external air and the extraction of the warm moist air to outside. That process was energy intensive with a loss of energy calculated at 330 kW, and a gas energy cost of \$161,000 per year (as published on council website).

The council installed a 450 kW heat pump to recover energy from the extracted air that is currently going to waste, utilising this heat to reduce boiler gas use for pool heating, and installed an additional air handler.

The air handler extracts air from the pool hall, allowing the recovery of the "lost energy" (330 kW). Additional compressor energy (120 kW) provides 450 kW of pool heating through plate heat exchangers distributed to the showers and pool water of the main, lap/dive, learners, and leisure pools.

Hamilton City Council reduced unnecessary energy usage by installing new, smaller, variable-speed-drive pumps and smart controls at Waterworld. The highly efficient new pumps use less power while purifying the whole pool. Connected to a flowmeter, the pumps measure purified water going into the pool, improving water quality after high-use periods. Each year, this new system saves around 50 tonnes CO₂-e, and annual electricity costs have fallen from \$7,000 to \$2,700 (as published on council website).



Heard Submissions Alongside LTP

Box 2

Case study: Waitakere City Council's green building developments

Council headquarters

Waitakere City Council moved its headquarters to Henderson's town centre, carefully choosing a location near the railway station and bus terminal to optimise staff travel options. Architects and engineers incorporated numerous elements of green building technology into a council facility designed to be environmentally sustainable.

The six-storey council building has an administration wing and a civic wing. The administration wing is designed with a passive solar energy construct, so daylight can reach deep into the interior, a low-energy ventilation system, and energy-efficient lighting. It also has solar water heating, a micro-wind turbine, a worm-composting farm, and intensive recycling facilities.



The "green roof" of the civic wing is alive with drought-tolerant plants. Rainwater collection and stormwater management, using swales and rain gardens, were included in the plans.



Rainwater collected from the roof supplies water features in the gardens and is used to flush toilets.

A Japanese garden sits near the civic building to quell noise pollution from the nearby trains and to offer staff a tranquil outdoor escape.

The council oversaw the development of cycle and walkways to encourage staff to leave their cars at home. For vehicle commuters, priority parking is given to those who car-pool.

Leisure centre and library

Green buildings not only reduce the council's carbon footprint, but also save it money every year. With sustainability at the forefront in its operations, the council incorporated green building elements into the new Massey Leisure Centre and Library.

Green elements in the library included an 8.16 kW photovoltaic system on the roof, which generates an average of 11,090 kWh of electricity per year.

Rainwater is collected from the roof and filtered for the showers, toilets, and taps (which are all low flow).

The carpark is made of permeable pavers, which allows water to soak into the ground, cleansing it before it gets into streams and slowing it to help prevent floods. The abundance of cycle racks encourages active transportation.

Cooling and ventilation are controlled by natural means with the assistance of mechanical fans. Underfloor ducts help to cool the air before circulating it, and concrete floors store heat from the sun, then release it slowly. The building is well insulated to contain heat in the winter and maintain coolness in the summer. Two walls in the meeting room were built using earth bricks, which have good thermal qualities.

Energy-efficient lighting is fitted throughout the building and, along with adjustments to the gas services to improve efficiency, the council has achieved a 26,120 kWh (8.62 per cent) reduction in usage (as published on council website).

Water and sewage

The water supply and sewage (waste-water) pumping and treatment sector is responsible for more than 25 per cent of corporate emissions from CCP-NZ councils. This highlights this sector as one where savings should be sought.

Studies and pilot programmes around the world have documented the potential for large savings of emissions through reduced water consumption and by not treating all water to drinking-water quality if not required. Significant challenges need to be addressed to implement such behavioural and infrastructure changes.

Councils report that public water-conservation promotional campaigns are usually only effective for short-period supply restrictions such as summer droughts. Such

campaigns do not provide reliable longer-term efficiencies that reduce the need for new water supply infrastructure (e.g. dams and treatment systems). Behavioural change needs to be supplemented by technology-supported improvements.

ICLEI Oceania facilitated Milestone 3 workshops for council staff developing local action plans. Staff identified four solutions with significant potential for energy and emission reductions for this sector.

- Optimising pumping technology and controls, such as installing variable-speed drive pumps to work alongside fixed-speed drive pumps – often results in more efficient water supply and sewage systems.
- Installing water meters on customers' supply points – demonstrated to reduce

domestic water use and wastage.

- Installing rainwater and greywater collection facilities for new buildings or subdivisions – attractive for councils with water supply problems, and rainwater tanks smooth the flow impacts from stormwater systems during high-rainfall events.
- Analysing electricity tariffs for water and sewage pumping – significant cost savings.

CCP-NZ councils' actions to reduce emissions from the water and sewage sector are resulting in more than 1,700 tonnes CO₂-e being saved annually.

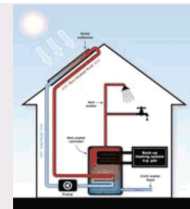
Beacon Pathway studied water supply energy and emissions issues, using input from four CCP-NZ councils. Its findings will be published later in 2009.

Heard Submissions Alongside LTP

Box 3 Nelson City water under the spotlight

Nelson City Council installed water metering on every property progressively from 1999. Since metering became operational, the highest summer peak water flow has dropped more than 16 per cent to under 35,000 cubic metres per day and the average summer peaks by over 37 per cent.

The average water usage in Nelson has fallen to under 160 litres per person per day, but pressure for further reductions is being maintained. The council is reviewing the efficiency of existing water supply equipment and the potential for demand-management initiatives approaches to avoid having to invest in new water-supply dams.



Street lighting

More than 330,000 streetlights are run for over 4,000 hours each per year across all councils. Street lighting consumes a significant amount of electricity and costs councils well in excess of \$18 million per year.

With electricity being this sector's dominant energy source, emissions are strongly connected to the average annual emissions performance of the New Zealand electricity system. Emissions from this sector will drop significantly when New Zealand achieves a more sustainable and renewable electricity supply (i.e. the Government's renewable electricity target of 90 per cent by 2025).

For CCP-NZ councils, emissions from street lighting account for more than 16 per cent of council corporate emissions. This makes this sector an area of considerable interest for council infrastructure staff seeking savings.

New Zealand councils have been undertaking trials of various technologies and techniques, such as solar and LED streetlights for walkway lights and by upgrading traffic signals to LED lights or using lower wattage bulbs. These efforts have led to a minimum of 248 tonnes CO₂-e abated every year.

Emissions from street lighting in locations where diesel-powered off-grid electricity is used are even higher, so projects such as Southland District Council's move to install renewable electricity generation on Stewart Island will result in even more greenhouse gas savings.

There are many barriers to the implementation of savings in this sector that arise from the structure of the electricity system in New Zealand and the imposition of large fixed charges by network companies.

Councils in locations where the electricity network is still community-owned appear to achieve lower costs and this opens the door to the establishment of better public lighting partnerships with the electricity industry.

Australian councils have had the benefit of a programme that shared street-lighting expertise through the Sustainable Public Lighting Toolbox. Some of the material on the ICLEI Oceania website is applicable to New Zealand councils (www.iclei.org/index.php?id=spl_ho). Specific information on options for improvements to street-lighting and collective technology trials for New Zealand councils are expected to be available shortly through a New Zealand Electricity Commission-funded contract.

Refer to the Commission's website for more information on these street lighting developments (www.electricitycommission.govt.nz).

Box 4 Solar lights trial – Kaikoura District Council

After a study showed that 38 per cent of Kaikoura District Council's corporate emissions came from energy used to operate streetlights, the council trialled solar-powered LED streetlights in two locations. Solar-powered streetlights are more eco-friendly and offer a smaller life-cycle cost than grid-electricity powered lights. They were also found to have a well-focused light stream with less light spill, making them desirable in areas where a reduction in light spill is required.

By promoting this new environmentally friendly technology, Kaikoura District Council has raised awareness of alternative energy options. The council has now ordered additional solar lighting for replacement fittings and for areas where establishing mains power would be expensive.



Heard Submissions Alongside LTP

Vehicle fleet

The number of vehicles on the roads is increasing; almost all contributing toxic fumes to air pollution and using petrol, a non-renewable resource. Councils participating in the CCP-NZ Programme have taken a sharp look at their vehicle fleets. Many councils have audited their fleets, which has led to action to improve efficiency.



Franklin District Council purchased more efficient vehicles, as did Waitakere City Council, which replaced 42 of its fleet with hybrid and smaller vehicles such as the Toyota Prius and Yaris.

Rodney District Council improved its electronic booking system to encourage vehicle pooling when possible. Other councils are clustering site inspections for more efficient vehicle usage and to lessen the number of trips.

Many councils have implemented new purchasing policies to consider biofuels and emission figures in future purchasing decisions, are trialling hybrids, and are reducing the number of vehicles in their fleets.

Bicycle fleets

Council-owned vehicles are often used for short distance trips to city meetings, building inspections, monitoring permits, and so on. Vehicles emit more emissions when the engine has not fully warmed up, so by using a bicycle for short trips, those emissions are avoided. Active transportation is an efficient mode of travel and perfect for short-distance trips. Numerous councils have added bicycles to their corporate fleet for staff to use, encouraging active transportation rather than use of carbon-emitting vehicles.

Auckland City, Auckland Regional, Christchurch City, Papakura District, Nelson City, North Shore City, Rodney District, Waitakere City, and Wellington City Councils and Environment Canterbury, have introduced a bicycle fleet to promote sustainable and active transportation and abate air pollution and CO₂ emissions.

Employee commute

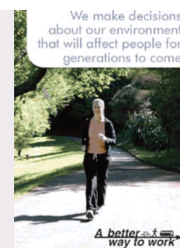
Most people commute between work and home and contribute indirectly to carbon emissions. Many councils have undertaken an employee commute survey and analysed staff travel methods to calculate the tonnes of carbon emissions and gigajoules of energy consumed. Data from the surveys has led to councils looking in depth at commuting options, particularly more sustainable transport forms. Actions have included travel plans, inter-office carpooling schemes, and priority parking for energy-efficient vehicles. Councils have upgraded facilities with showers and secure storage areas for people wishing to use active transport methods such as cycling, walking, and running.

Many councils have explored and/or implemented upgrades to their public transport systems, allowing for more accessible and/or more frequent transportation to urban centres. Councils such as Western Bay of Plenty District Council have turned their Workplace Travel Plan into a friendly competition to see which department has the largest group of sustainable commuters.

Box 5

Employee Commute Survey – Environment Waikato

Environment Waikato conducted the Employee Commute Survey for its Workplace Travel Plan, which will be tied in with its Milestones 2 and 3 corporate goal and local action plan. A workplace travel plan encourages staff to choose eco-friendly ways of commuting. Critical to its success is a "whole of organisation" approach, ensuring "smart travel" gradually becomes a natural part of the organisation's culture for staff and visitors. The survey showed many staff members drove their car alone, but 67 per cent of these commuters were prepared to carpool. Overall results showed that 31 per cent of all staff travelled to work sustainably (e.g. bussing, biking, or walking) and a further 22 per cent of all staff used carpools.



Box 6

Workplace Travel Plan – Waitakere City Council



Waitakere City Council began developing its Workplace Travel Plan in 2006 to change employee transport behaviour. A significant reason for moving the council's headquarters to Henderson was proximity to public transport, minimising reliance on personal vehicle commutes. Immediately, a 10 per cent reduction in single-occupancy travel to and from work occurred. The council also upgraded and created cycle and walkways for safe active transportation and improved the public transportation system. The Sustainable Urban Planning Council is implementing plans for neighbourhoods, improving access to local jobs and services and sustainable methods of transportation. The Hobsonville neighbourhood development alone has reduced car travel by half.

Heard Submissions Alongside LTP

Waste

Landfill waste releases toxic methane gas as it breaks down. Councils, including Christchurch City, Palmerston North City, and Wellington City Councils, have established landfill gas electricity generators that capture methane and convert it into usable energy.

Several CCP-NZ councils have conducted corporate waste audits to determine what waste is being produced. Councils have used the information to set up recycling systems to divert waste from landfills.

In the past few years, many waste-minimisation programmes have been initiated, including intensive

recycling measures, food waste separation in council buildings with worm farm or industrial-composting set-ups on council premises.

Much information is being disseminated on reducing, reusing, and recycling practices.

Waste minimisation and landfill gas conversion is saving over 71,000 tonnes CO₂-e per year.

Box 7

Landfill gas converted to energy – Christchurch City Council

Methane gas from the Burwood landfill has been piped to the Queen Elizabeth II (QEII) Park swimming complex in Christchurch. It is used for heating and electricity generation. This project has reduced greenhouse gas emissions by around 40,000 tonnes CO₂-e per year and produced energy savings in excess of \$1 million per year as well as the \$3.5 million revenue from the sale of the emission credits (2008–2012), that helped fund the development and implementation of the Christchurch City Council's 2008–2018 Sustainable Energy Strategy for Christchurch.

After a drying process at the landfill site, the gas is piped 3.7 km underground to QEII Park. The gas fuels two boilers and a cogeneration plant, which produces electricity and heat.

Other benefits from the project include:

- sustainable reductions in electricity and LPG use – displacing 12.83 GWh of non-renewable energy every year
- energy savings in excess of \$1 million a year – with the energy cost per visitor decreasing from \$1 to 40 cents
- easier revegetation of the Burwood landfill site because the landfill gas that used to damage plant roots is now captured
- a gas-fired refrigeration plant installed as part of the gas treatment plant, as an alternative to an electrically driven plant, saves 0.3 GWh of electricity a year. (Details as published on the council website.)

Renewable energy

New Zealand is shifting towards renewable energy systems for direct energy usage and to produce electricity. Local government has a significant role to play, starting by supplying some of its own energy needs from bountiful, locally available, renewable sources.

Numerous councils in the CCP-NZ Programme have installed solar hot water systems at their facilities and support their communities to do the same by offering rebates and grants. Council-owned or contracted renewable electricity generation systems, such as landfill gas generators, solar photovoltaics, micro-hydro and wind turbines, are reducing carbon dioxide emissions by more than 30,000 tonnes per year.

South Waikato District Council has introduced solar hot water systems at the Tokoroa Pool Complex for shower water heating and expects to collect enough solar energy from the panels, to the equivalent of 18,400 kWh, that will cut the

annual electricity bill by more than half.

Nelson City Council has launched its vision to become New Zealand's first "Solar City" by capitalising on its sunny climate. The council plans to assist 1,700 Nelson households install solar water heating systems over the next three years, and then plans to grow the scheme to cover 10,000 homes. Nelson is also planning to install a 90 kW mini-hydro system on the Maitai River near the water treatment plant, to save at least \$15,000 of electricity per year.

Waitakere City Council generates electricity through solar photovoltaic panels and a wind turbine on the roof of its administrative building in Henderson. Southland District Council is partnering with local network company SIESA to trial solar and wind energy on Stewart Island to improve sustainability and reduce emissions from the Island's diesel-fuel generators.

Christchurch City Council has shown that as well as councils reducing energy use and saving money, they

can also earn money from the same emission-reducing actions. The council has become the first New Zealand council to receive money, almost NZ\$1 million for 2008, from the sale of carbon credits awarded under the Kyoto Protocol. These were mainly for the capture, burning, and use of methane gas from the Burwood landfill for heating the Queen Elizabeth II pool.

Many other CCP-NZ councils are investing in renewable energy systems. ICLEI Oceania believes local authorities have an important role to play in encouraging the development of renewable electricity generation projects at the local level to help councils reduce their corporate and community greenhouse gas emissions.

Heard Submissions Alongside LTP

Box 8 Landfill gas generator – Wellington City Council

Wellington City Council and partner Todd Energy have installed a landfill gas electricity generator at the Southern Landfill. The generator, driven by a large combustion engine specifically designed to run on the landfill gas, converts the greenhouse gases (methane) being produced in the landfill into usable energy. This is expected to put 8 million kWh of electricity per year into the local network, enough to power 1,000 average Wellington households for a whole year. This generation converts methane to carbon dioxide, a much less atmospherically damaging greenhouse gas, but also avoids the release of between 1,600 (average) and 5,000 (marginal) tonnes of CO₂-e emissions per year from fossil-fuelled power stations connected to the electricity grid.



Photo courtesy of Wellington City Council.

Box 9 Wind-generated electricity – Christchurch City Council

In 2003, Christchurch City Council took another step to support its vision of a sustainable and renewable energy city. The council agreed to purchase all of the electricity generated by a prototype 500 kW wind turbine that local company Windflow Technology Ltd was about to install at Gebbies Pass. The projected generation of 1 million kWh a year would be sufficient electricity to power the council's civic offices.

This deal supported an innovative Christchurch-based company and fitted well with other council initiatives to support local business and job creation. Support for the project also achieved the purchase of zero-carbon renewable energy, support for a local business, creation of many new jobs in the Christchurch area, and the development of a new technology that was clean and eco-friendly.

The project has proven to be a success for the city and Windflow Technology. The company is now completing the installation of a 97-turbine wind farm near Palmerston North and is planning other wind farm opportunities.

See www.ccc.govt.nz/EnergyEfficiency/Projects/HarnessTheWind.asp or www.windflow.co.nz.

Heard Submissions Alongside LTP

4 CCP-NZ Councils – Community Sector Actions

Introduction

Local government leaders are promoting corporate operations that reduce emissions within council and are working with their communities to help people shift to lower energy consumption choices. Councils are leading the action, preparing their communities through education programmes and workshops to be more sustainable and resilient.

Two of the many actions councils are taking are supporting and encouraging healthy home initiatives – adding insulation and modern clean-heat sources – and waiving the basic building consent fees for the installation of solar water heating panels.

Councils have a major role in investing safe routes for active transportation, walking and cycling throughout cities and upgrading public transport systems.

Mayoral Challenge – Bike Wise

February is Bike Wise month and in 2009 at least 12 CCP-NZ council mayors were reported to be out on two wheels, encouraging the community to follow suit and go for a bike ride.



The Mayoral Challenge is a fun competition for the title of Cycle Mad City and promotes cycling as a fun, healthy, and sustainable form of transport. Hundreds of people across the country cycled around their communities, with their local mayor leading the pack. New Plymouth District took the title away from Rodney District this year, but that could easily change next year as councils continue promoting active transportation as a sustainable and enjoyable mode of transport.

Earth Hour 2009

For one symbolic hour on Saturday 28 March 2009, 51 per cent of New Zealanders voted by switching off non-essential energy consumption. They joined over 4,000 cities and towns in 88 countries worldwide in WWF's third annual Earth Hour.



Logo courtesy WWF

Demonstrating commitment to climate change mitigation, 22 participant councils in the CCP-NZ Programme became "partner cities" in the WWF initiative. Councils turned off all non-essential council power, leading by example in mitigation action, and encouraging businesses and residents in their areas to "turn it off".

Councils planned actions such as community events and free outdoor concerts, distributed information about reducing consumption, hung lanterns in the main square, gave away native tree seedlings and tens of thousands of eco-bulbs, and more. Hamilton City residents saved 10.3 per cent of their electricity (26.45 megawatt hours) the largest tally in New Zealand. This council even hosted a "solar lounge" for the event, powered by solar photovoltaic panels, where people could come and find out about alternative energy generation.



Lights out at Hamilton council building

World Environment Day and Climate Days of Action

Wellington was the international host of World Environment Day on 5 June 2008. This global event is observed annually in over 100 countries. While CCP-NZ councils supported this with a variety of activities, Wellington City Council took a leading role in events promoting energy efficiency, alternative energy, forest conservation, and eco-friendly consumption. CCP-NZ councils supported this day again in 2009.

Photo courtesy Andy Morley-Hall



A Climate Day of Action has been held in December for the last three years to align with United Nations Framework Convention on Climate Change conferences. Many CCP-NZ councils worked with community groups on climate change education and symbolic actions on this day.

Wellington City Council supported a successful event on 6 December 2008 at Waitangi Park. Over 5,000 people joined in climate-related activities, visited a marquee with more than 30 displays from environmentally conscious organisations, shared information on reducing carbon footprints, and enjoyed live music. Greater Wellington Regional Council brought a city bus to the event, promoting public transportation as an alternative to personal vehicle use.



Heard Submissions Alongside LTP

Sustainability and Climate Change – plans and actions

Many councils see the connection between climate change and unsustainable practices in business and lifestyles. They are working to reverse trends and developing sustainability plans for their communities.

Wellington City Council, which has an aspirational goal of carbon neutrality for the council and community, has developed a Climate Change Action Plan with sustainability as the overarching response to the issue of climate change. Actions involve working across corporate units and with business and community organisations, including piloting, with the Wellington Sustainability Trust, a network of the Sustainable Energy Advice Centre.

Christchurch City Council is using the sale of its carbon credits to fund the move to a more sustainable Christchurch. Its Sustainable Energy Strategy for the community emanated from consultations with the Europe-based Energie-Cités in early 2006. Christchurch is a unique member of Energie-Cités, the first city outside Europe to be asked to join this association of over 1,000 urban centres in 26 countries. Its projects earning carbon credits vary from awareness raising among residents and local business on energy issues to building partnerships with community

organisations, energy industry players and local businesses.

Transport

Transportation emissions make up almost half of all community emissions. Actions to reduce emissions from vehicle use are being implemented across New Zealand. Having accessible and dependable public transportation can greatly reduce the reliance on private vehicle usage for daily commuting. The provision of good public transportation systems is a key action in reducing emissions.

Moves to increase public transport patronage have seen considerable success in many areas, such as in Christchurch where Christchurch City Council and Environment Canterbury have worked in tandem to achieve passenger number increases and satisfaction reflecting good planning in response to residents needs. This has resulted in better connections between desired destinations, better coverage, integrated ticketing, increased frequency, more direct routes, and an improved image.

Some cities and towns are rolling out measures to entice drivers away from the security and convenience of personal transport with better bus shelters, improved reliability, and “real time” notices at bus stops. The upgrade of train services and electrification of tracks, as Wellington and Auckland councils

have contributed to, represent major investments that councils see as prudent in view of declining oil reserves and the need to reduce greenhouse gas emissions.

Councils are also widely encouraging the use of active transportation in their communities, although this is for health, as well as energy efficiency and climate change mitigation reasons. They are supporting initiatives such as Walking School Buses and constructing safe cycle routes through cities. Several councils have made large investments to develop or extend active-transport infrastructure. Hamilton City Council built over 90 km of cycling routes in 18 months and Palmerston North City residents enjoy extensive on- and off-road cycle paths. Dunedin City Council recently completed a bike path along the foreshore, and Environment Canterbury has begun trialling bicycle racks on public buses to make it easier for people wanting to commute by bicycle.



Box 10 New Plymouth District Council's award winning Coastal Walkway

In 1999, New Plymouth District Council began constructing a pedestrian and cycle path that hugs the coastline, making for a magnificent and attractive area for active transportation. The current seven-kilometre Coastal Walkway stretches almost the entire length of the city between Port Taranaki and the mouth of the Waiwhakaiho River, connecting recreational areas and residential areas to the central business district with plans to extend the walkway another 4 km to Bell Block. It will include a shared cycle-pedestrian bridge over the Waiwhakaiho river.

Photo from New Plymouth District Council website.



Heard Submissions Alongside LTP

Waste

Residential waste decomposing in landfill produces large quantities of methane, a powerful greenhouse gas. Most councils are responsible for providing waste services to their communities, so they can directly influence the reduction in greenhouse gas emissions.

Kaikoura and Kapiti Coast District Councils have begun kerbside recycling programmes to reduce the amount of unnecessary items finding their way to the landfill. Porirua City Council developed Trash Palace as a recycling recovery initiative, and Wellington City Council began a trial of recycling receptacles alongside rubbish bins

in the central business district. A new waste and recycling facility developed jointly by Manukau and Auckland City councils is achieving large reductions in waste to landfill.



A material recovery facility built for Christchurch City Council's new domestic waste kerbside collection has, within its first four months, diverted 15,000 tonnes of waste from the city's landfill. The council's

new organic material processing plant is to open in July 2009 and will annually process 62,000 tonnes of the city's domestic garden and food waste into compost.

Many councils are offering free workshops to the community on composting and worm farms and helping schools develop waste-minimisation programmes.

Kaikoura District Council and Christchurch City Council are running cloth nappy schemes to reduce the significant flow of disposable nappies to landfill.

Box 11

Landfill gas heating system – Nelson Hospital

An innovative partnership by Nelson City Council, Nelson-Marlborough District Health Board, and an energy company has resulted in a significant reduction of emissions plus a financial benefit for the city and the district health board.

The council was looking for alternatives to flaring off the gas from its landfill and was presented with a proposal to burn the gas in a boiler at the Nelson Hospital. The boiler produces 1.5 megawatts of thermal energy, and provides about two-thirds of Nelson Hospital's steam and hot water requirements. The hospital will save the burning of 2,500 tonnes of coal a year, and the whole project will result in a reduction of greenhouse gas emissions of around 5,000 tonnes per year for the next 15 years.

The council has gained a revenue stream from a previously wasted resource, as well as reducing local air pollution and helping it to meet the new tighter clean-air standards.



Box 12

Wellington City Council – Kai to Compost project

From January to June 2006, Wellington City Council, with funding from the Ministry for the Environment, ran a trial collection of food waste from several restaurants and cafés and Westpac Stadium – the Kai to Compost project. Over the six months, the project collected 102 tonnes of food waste, saving 92 tonnes of greenhouse gas emissions.

The council gave unique brown wheelie bins to participants with simple information about what was allowed and not allowed to go into them. A collection truck was specially modified to give the bins a power wash when they were emptied, overcoming one of the main concerns about collecting putrescibles (i.e. food rotting and smelling).

Once collected, the food waste was mixed with green waste at the Living Earth plant at the Southern Landfill and turned into compost for sale to local gardeners.

Photo courtesy of Wellington City Council



Heard Submissions Alongside LTP

Residential

Council participation in Healthy Homes projects

Investing in housing energy efficiency and conservation is more effective than building new power plants, and many CCP-NZ councils are assisting in community projects that will result in the retrofitting of housing for greater heat insulation.

Research undertaken by the Otago Medical School demonstrates that every dollar invested in the sustainable refurbishment of housing of lower socioeconomic families results in two dollars of direct health system savings plus many other savings, such as reductions in emissions from thermal generation and the need to build new power stations.

The Intergovernmental Panel on Climate Change noted that residential building retrofits provide the greatest potential for reducing a country's emissions by 2020. Retrofitting homes in an energy-efficient way and building new houses with energy-saving techniques and technologies also brings direct benefits in improved indoor and outdoor climatic conditions.

Kaikoura District, Masterton District, Waitakere, Christchurch, Dunedin, Porirua and Wellington City Councils are among many CCP-NZ participants that have upgraded their own pensioner housing or have supported local community energy trusts providing household insulation retrofits for low income families. Many of these projects are implemented with funding from the Government (EECA).

Refer to www.eecn.org.nz for more information on the community trusts, and for EECA see www.eeca.govt.nz.

Auckland City Council offered free insulation retrofits to low income residents, and New Plymouth District Council has begun its own Better Homes programme, and is on target to insulate 10,000 Taranaki residences by 2014. Nelson City Council assisted in the installation of 25 solar hot water systems on houses this year, and plans to help more in future. A few councils have gone further and are employing eco-advisors to give free advice on home retrofitting and sustainable design.

Little differences that make big savings inside households are also being initiated. Kapiti Coast District Council approved a community

energy-saving project involving the bulk purchase of energy-saving light bulbs for free distribution to households. The benefits of the project were clear: for a cost of \$76,500, the benefit to ratepayers (in the form of electricity savings) will collectively be around \$5.8 million over the life of the bulbs. Recycling options for the bulbs is also provided. This project is funded through savings achieved from other council energy-efficiency projects, and Contact Energy contributed \$25,000 to the project.

Porirua City Council also supported a light bulb exchange programme for households, trading eco-bulbs for less-efficient incandescent bulbs.

The benefits of investing in more energy-efficient homes go beyond individual advantages. Housing retrofits are a tool to help address the financial crisis as well as climate change. Refurbishment creates new jobs and boosts regional and national economies.

A lack of knowledge of the benefits to the community from retrofits in the housing sector impedes decision-making by central and local government and private sector investment.

Heard Submissions Alongside LTP

5 CCP-NZ Councils - Profiles

Each of the 34 CCP-NZ councils, listed alphabetically, is profiled below.



Auckland City Council

Population: 382,540

Joined CCP-NZ: 2005

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.aucklandcity.govt.nz

Major actions taken

Completed an inventory of 2005 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Employed an energy manager, installed an energy management monitoring system, and audited energy usage in swimming pools and major buildings.

Developed a corporate travel plan, encouraging alternative travel modes to and from the council and for work purposes.

Applying green star building principles to the refurbishment of administration buildings.

Diverted seaweed (collected from beaches) from the landfill to compost.

Community actions completed

Provided residential sector support, including a free eco-design service, a free household energy advice service, and insulation retrofits for low-income households.

In the transport sector, improved public transport, increased cycling infrastructure, and supported walking and cycling at schools.

Reduced waste with composting and recycling education initiatives.

Focusing on high-quality urban design outcomes with a priority on developing pedestrian-friendly spaces.



Auckland Regional Council

Population: 1,237,239

Joined CCP-NZ: 2006

Milestones completed: M4

Corporate goal: Reduce energy use by 20 per cent on 2005/06 levels by end of 2009/10, and further reduce greenhouse gas emissions (including farming) by 20 per cent by 2019, in line with the commitment towards a low-carbon region.

Community goal: Commit to work with other councils to develop community goals.

Website: www.arc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Completed a full energy audit for the council's Pitt Street offices.

Upgraded to efficient lighting in the Pitt St headquarters. The total cost of the lighting upgrade was \$758,545, which was funded through a \$157,000 grant from the Electricity Commission and a loan from the Energy Efficiency Conservation Authority (EECA) that the council will repay over 4½ years using the savings from the new lighting system.

Reviewed the 10-year Regional Park Management Plan.

Outlined initiatives to improve the council's energy efficiency and sustainability programme.

Developed and implementing a sustainable procurement policy and support practices.

Implemented a travel plan, including a customised package of measures to promote alternative travel choices for staff.

Community actions completed

Working with other Auckland region territorial local authorities to develop community-wide initiatives.

Heard Submissions Alongside LTP



Carterton District Council

Population: 6,870

Joined CCP-NZ: 2003

Milestones completed: M3

Corporate goal: 10 per cent below 2001 by 2010 and 70 per cent below by 2025

Community goal: 10 per cent below 2001 by 2010 and 70 per cent below by 2025

Website: www.carterton.co.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Corporate actions completed

Instituted energy audits on key facilities.

Installed energy efficient lighting in council chambers and pensioner flats.

Established a pump-efficiency replacement policy.

Implemented efficient fleet operational practices.

Installed motion sensors in depot toilets.

Trialled a solar streetlight at a rural intersection.

Implemented information technology system efficiencies and double-sided printing.

Improved efficiency of heating in the library.

Established an energy-invoice tracking system.

Community actions completed

Produced a community local climate actions plan in partnership with Masterton and South Wairarapa District Councils.

Supported the community warm and healthy homes retrofit programme.

Supported community energy efficiency education initiatives.

Implemented recycling and waste minimisation projects.

Established water meters to reduce water and energy consumption.

Heard Submissions Alongside LTP



Christchurch City Council

Population: 369,000

Joined CCP-NZ: 2004

Milestones completed: M5

Corporate goal: 69 per cent below 1994 by 2011.

Community goal: 16 per cent per person below 2008 by 2018.

Website: www.ccc.govt.nz

Major actions taken

Completed an inventory of 1994 corporate emissions to establish a baseline from which to measure emission reductions, with re-inventories for 2001 and 2008.

Completed community inventories for 2001 and 2006.

Corporate actions completed

Achieved a 57 per cent reduction of carbon emissions from a 1994 baseline.

Reduced more than 160,000 tonnes of CO₂-e since 2001.

Collected landfill gas from the Burwood Landfill and used to heat and power QEII recreational centre. Emissions reduced by 40,000 tonnes of CO₂-e per year, energy cost savings of \$1M per year, emissions reduction units (from savings) sold for more than \$3M. Carbon credit revenue used for the implementation of the Sustainable Energy Strategy.

Purchased 1 GWh/year green-electricity from the Windflow 500 turbine on Port Hills, saving 625 tonnes CO₂-e per year and saving \$27,000 per year in energy costs.

Replaced coal heating in Centennial Pool with ground-source heat pump, and heat recovery from a local manufacturer, saving \$30,000 per year and approximately 60 tonnes of CO₂-e per year.

Collected used vegetable oil to heat Halswell Swimming Pool instead of diesel.

Installed ground source heat pumps to replace coal or LPG at five other pools.

Upgraded traffic lights technology, saving 715 tonnes of CO₂-e per year, and \$50,000 per year in energy costs.

Upgraded lighting at the Christchurch Art Gallery, saving 87.5 tonnes CO₂-e per year, and \$15,000 per year in energy costs.

Instituted green building principles for retrofits of council buildings.

Replaced LPG with landfill gas to heat the Christchurch Art Gallery – due for completion in 2009.

Proposed 6 green star building by powering, heating and cooling new Council Civic Offices with a tri-generator running on landfill gas – due for completion in 2010.

Community actions completed

Adopted Christchurch Sustainable Energy Strategy 2008–2018.

Seeking to intensify development and enhance quality of life using less resources through Greater Christchurch Urban Development Strategy.

Adopted Christchurch Sustainability Policy and Travel Demand Management Strategy.

Developing Climate Change Strategy due for public consultation in October 2009.

Established Target Sustainability Programme to provide resource efficiency advice to Christchurch businesses.

Introduced new city-wide wheelie bin service to separately collect organics, recycling and refuse in 2009.

Upgraded lighting at the Christchurch Art Gallery, saving 87.5 tonnes CO₂-e per year, and \$15,000 per year in energy costs.

Supported community energy efficiency initiatives and housing retrofits.

Offered free inner-city bus service.

Established 130 kilometers of cycle lanes.

Heard Submissions Alongside LTP



Dunedin City Council

Population: 114,891
Joined CCP-NZ: 2006
Milestones completed: M1
Corporate goal: Not yet established.
Community goal: Not yet established.
Website: www.cityofdunedin.com

Major actions taken

Completed an inventory of 2005 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Appointed energy manager in March 2006.
 Established a comprehensive Energy Management Programme with long-term objectives to increase the energy efficiency of council activities, improve sustainability of the council's energy supply, reduce environmental impacts arising from energy use, and provide community leadership on energy issues.
 Analysed biggest energy users and areas of largest energy savings potential.
 Installed heat pumps to replace LPG in Moana Pool, producing substantial emission savings.
 Identified major efficiencies available for the Dunedin Art Gallery.
 Reviewed lighting changes for the Civic Centre.
 Identified major potential emission reductions at Green Island and Musselburgh wastewater treatment plants.

Community actions completed

None reported.



Environment Canterbury Regional Council

Population: 508,102
Joined CCP-NZ: 2004
Milestones completed: M2 (Corporate)
Corporate goal: Vehicle carbon emissions shall be maintained or improved upon from base 2001 level (0.153 kg/km small; 0.194 kg/km medium) between 2009/10 and 2018/19; and electricity usage per m² of occupied floor area shall be maintained or improved upon from 2001 base level (149 kWh/m²/year) between 2009/10 and 2018/19.
Community goal: Not yet established.
Website: www.ecan.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Corporate actions completed

Reduced vehicle carbon emissions, measured by CO₂ emissions kilograms per kilometre travelled.
 Reduced electricity consumption, measured by electricity consumption per square metre in the Christchurch office.
 Reduced waste going to landfill, measured by the amount of waste per staff member going to landfill per year from the Christchurch office.
 Towards becoming carbon neutral by ensuring that CO₂ emissions per staff member do not increase.

Community actions completed

Developed an action-driven Regional Energy Strategy to enhance the energy resilience of Canterbury by ensuring the region has a secure, reliable, affordable, and sustainable energy system.
 Implemented Clean Heat Project – at least 50 per cent energy efficiency conversions since programme inception in 2003 (14,000 out of 26,000).
 Environment Canterbury has become a provider of energy efficiency installations as part of the New Zealand Insulation Fund – *Warm Up New Zealand – Heat Smart* from 1 July 2009.
 Introduced the Greater Christchurch Travel Demand Management Strategy in 2009 as part of the Greater Christchurch Urban Development Strategy.

Heard Submissions Alongside LTP



Environment Waikato Regional Council

Population: 365,292

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.ew.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Developed the Regional Energy Strategy to assist with development of regional renewable energy supply options.

Working with territorial local authorities to develop a regional action programme based on Regional Ecological Footprint and the Regional Energy Strategy.

Corporate actions completed

Audited internal building energy in 2008: implementing recommendations – low-flow showerheads, changes to building temperature set-points, and de-lamping some areas.

Audited vehicle fleet and currently implementing recommendations, including developing new vehicle purchase criteria, and down-sizing.

Overhauled corporate recycling systems: implemented Govt 3 system, reduced waste to landfill 26 per cent in 2009, and purchased a worm farm in 2008.

Community actions completed

Introduced educational initiatives to encourage carbon-saving behaviour change: bulletin articles, intranet pages, and sustainable living programmes.

Developed a sustainable purchasing initiative.



Far North District Council

Population: 55,845

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.fndc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and community 2001 emissions to establish baselines from which to measure emission reductions.

Completed forecasts for 2011 for corporate and community emissions.

Corporate actions completed

Installed energy efficient lighting in John Butler Centre and council offices.

Adopting more energy-efficient computers.

Installed energy monitoring software (e-Bench).

Completed building energy and waste audits and developing action plan for implementation of suggested measures.

Community actions completed

Consulted on a climate change programme in the 2009 Long Term Council Community Plan.

Drafted a new chapter for the District Plan to include specific provisions for renewable energy and energy efficiency.

Heard Submissions Alongside LTP



Franklin District Council

Population: 55,506

Joined CCP-NZ: 2007

Milestones completed: M3 (Corporate)

Corporate goal: 5 per cent reduction on 2006 levels by 2011.

Community goal: Not yet established.

Website: www.franklin.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Installed an energy management system.

Initiated energy audits and implemented initial low-cost opportunities. Higher cost measures on hold until Auckland local government reorganisation outcomes are known.

Established sustainability criteria in procurement procedures.

Reviewed streetlight opportunities with Counties Power.

Reviewed water and sewage pumping efficiency gains and requested pump replacement capital via the Long Term Council Community Plan.

Purchased more-efficient vehicles.

Community actions completed

None reported.



Greater Wellington Regional Council

Population: 434,034

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: 41 per cent below 2006 levels by 2050.

Community goal: Not yet established.

Website: www.gw.govt.nz

Major actions taken

Completed an inventory of 2006 corporate emissions to establish a baseline from which to measure emission reductions.

Corporate actions completed

Established goals for reducing corporate emissions by 41 per cent overall by 2050.

Established a collaborative process with territorial authorities for the development of a regional plan to respond to climate change.

Investigated the potential of mini-hydrogenation projects for water supply purposes.

Investigated the potential of installing wind turbines on some council-owned land.

Reviewed energy usage in Greater Wellington buildings.

Reviewed the vehicle fleet and vehicle purchasing policy.

Reviewed the potential for support of wood energy from regional forests.

Community actions completed

Completed, with the assistance of Landcare Research, a full inventory of 2006/07 community emissions, including agriculture and forestry, for the region and individual territorial authorities, to establish baselines from which to measure reductions.

Agreed on a renewable energy work programme for the region, focusing on wind and tidal energy and home insulation.

Heard Submissions Alongside LTP



Hamilton City Council

Population: 138,500

Joined CCP-NZ: 2004

Milestones completed: M4

Corporate goal: 20 per cent below 2001 levels by 2020.

Community goal: Stabilise at 2001 level by 2020.

Website: www.hamilton.co.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Corporate actions completed

Completed an energy audit of Waterworld recreation centre, and implemented energy efficiency projects for water treatment, exhaust heat recovery, and boiler controls.

Cogenerating biogas from waste-water digesters to supply heat and electricity to the treatment plant.

Established a landfill gas-generation facility.

Audited libraries and municipal offices, retrofitted energy efficient lighting saved significant energy.

Instituted an energy management system to monitor energy usage and payments (significant administrative cost savings).

Reviewed street lighting, particularly under-veranda lights, improved lighting, and reduced costs. Trialled LED street-lighting technology. Improved lighting at Hamilton Gardens Pavilion.

Audited Hamilton Zoo's facilities and achieved savings. Improved thermal efficiency of the chimpanzee facility with insulation and condensing boilers.

Replaced diesel boilers with condensing boilers at the Hamilton Gardens plant nursery.

Corrected power factor and installed new sub-metering at Waikato Stadium to create accurate invoices for tenants.

Adjusted Building Management System settings at Municipal Offices, Waikato Museum, and Knox Street car park.

Installed solar hot water at the Verandah Café.

Community actions completed

Appointed an eco-design-advisor to work with residents and local building companies to improve performance ratings for homes.

Delivered community education programmes to promote energy efficiency and water conservation practices.

Promoted EECA interest-free loans for householders who purchase solar water heaters.

Showcased energy and water efficient business practices and technologies and promoted transport alternatives.

Worked with major events to promote carbon management, sustainable transport to events, and waste minimisation at events to organisers, attendees, and the community.

Promoted walking and cycling as integral to transport planning, addressing safety, facilities, and infrastructure.

Promoted bus use over car use, including increased direct commuter routes, priority bus routes, and bus-related infrastructure.

Established park-and-ride facilities on Hamilton's outskirts for events.

Expanded school travel planning to include the Walking School Bus Programme and Safe Routes Programme throughout the city.

Promoted Business Travel Plans and council's Corporate Travel Plan.

Used council education programmes and regulations to overcome barriers and promote waste avoidance, minimisation, and recycling programmes. Regularly researched these barriers.

Supported native plantings to increase carbon sequestration through the Gully Restoration Programme, community planting programme, and Waiwhakareke Natural Heritage Park.

Took part in Earth Hour and raised profile of local action to affect climate change.

Supporting Enviroschools to reduce waste and use energy and water efficiently, and supporting New Zealand's first student-designed eco-classroom.

Heard Submissions Alongside LTP



Hawke's Bay Regional Council

Population: 142,710

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.hbrc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Prepared draft Milestone 2 goals and Milestone 3 action plan ideas for consideration by council staff.

Corporate actions completed

Surveyed energy usage of corporate office heating and cooling system.

Separated batteries and light bulbs from waste stream for appropriate disposal.

Improved vehicle fleet safety and reduced emissions with a move to diesel vehicles.

Community actions completed

Completed, with the assistance of Landcare Research, a full inventory of 2006/07 regional community emissions, including agriculture and forestry, to assess the potential for carbon neutrality.

Undertook a pre-feasibility study of potential water harvesting options.

Purchased land for forestry-based sewage disposal in Central Hawke's Bay for sequestration functions.

Purchased an eroded hill country farm for sequestration.



Hutt City Council

Population: 95,421

Joined CCP-NZ: 2008

Milestones completed: Political Declaration

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.huttcity.govt.nz

Major actions taken

Developing an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Installed a landfill gas collection system, flare system, and landfill gas electricity generator at Silverstream landfill.

Approved and adopted the Environmental Sustainability Strategy 2008.

Achieved Enviromark Gold for all council facilities.

Undertook energy audits of all council facilities: actions taken to date have resulted in a 40 per cent energy saving at Huia pool.

Community actions completed

None reported.

Heard Submissions Alongside LTP



Kaikoura District Council

Population: 3,456

Joined CCP-NZ: 2004

Milestones completed: M3

Corporate goal: 100 per cent below 2001 levels by 2020.

Community goal: 60 per cent below 2001 levels by 2015.

Website: www.kaikoura.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Achieved Green Globe 21 community environmental benchmarking indicators certification every year since 2004.

Corporate actions completed

Audited buildings and other facilities.

Introduced switch-off practices and activated Energy Star features for computing systems.

Trialled solar streetlights, then ordered additional systems for other locations.

Working with Main Power to develop and undertake an LED streetlight trial.

Introduced composting and worm-farm facilities for corporate food waste, including hands-on support to local schools.

Investigated water and sewage pumping efficiency initiatives.

Investigated hydro-power generation from gravity water supply systems.

Purchased bicycles for staff use around town.

Community actions completed

Supported the Trees for Travellers scheme.

Implemented zero waste initiatives including curbside recycling, coastal clean ups, "fantastic no plastic bags", cloth nappies support, and education campaigns.

Supported rainwater collection tanks.

Supported household retrofit programme.

Provided sustainability awards for local businesses.

Developed "A to B Carbon Free" Kaikoura's Walking and Cycling Strategy, February 2009.

Enhanced cycling and walking routes, providing alternatives to cars.

Hired out a Centameter electricity measuring device to help residents to check energy use.



Kaipara District Council

Population: 17,127

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.kaipara.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

None reported.

Community actions completed

None reported.

Heard Submissions Alongside LTP



Kapiti Coast District Council

Population: 44,640

Joined CCP-NZ: 2004

Milestones completed: M3

Corporate goal: 15 per cent below 2001 levels by 2010.

Community goal: Stabilise at 2001 levels by 2010.

Website: www.kapiticoast.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Corporate actions completed

Established climate change and energy manager policies, including cost-effectiveness criteria for investing in energy-related emissions reduction projects.

Appointed an energy manager.

Replacing largest single point source of emissions (diesel-fired boiler) with a carbon neutral wood-fired boiler, cutting council emissions by 22 per cent.

Auditing council's largest electricity using systems (water and waste water) to identify cost-effective savings opportunities.

Investigating switching away from natural gas for swimming pools towards more cost-effective, lower carbon alternatives.

Reviewed vehicle fleet and established new procurement criteria.

Established a sustainable procurement policy.

Established green-building criteria for all new council buildings.

Community actions completed

Consulted community through the Long Term Council Community Plan.

Reduced community emissions with a door-to-door project giving away energy efficient bulbs. Two bulbs can save the equivalent of 2 per cent of a \$1,500 rates bill every year for nine years. The project had a cost-benefit ratio greater than \$1:\$70.

Upgraded 118 council pensioner units with insulation and solar hot water to save money and emissions.

Continuing long-term commitment to investing cash savings from council energy use in community projects to cut ratepayer's costs and emissions, such as EnergyWise Home Grants.



Manukau City Council

Population: 310,335

Joined CCP-NZ: 2006

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.manukau.govt.nz

Major actions taken

Completed an inventory of 2005 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Appointed a sustainability manager and an energy manager to help drive the sustainability agenda.

Corporate actions completed

Reviewed vehicle fleet and upgraded.

Installed ultraviolet sterilisation and better pumps at the swimming pools.

Refurbished head office with energy efficient design, air-conditioning and lighting.

Recruited corporate energy champions.

Community actions completed

Negotiated a new community waste and recycling contract, which is expected to result in large community energy and emissions savings.

Continued development of public transport networks.

Heard Submissions Alongside LTP



Masterton District Council

Population: 22,623

Joined CCP-NZ: 2004

Milestones completed: M3 (Community)

Corporate goal: Reduce emissions to 25 per cent above 2001 level by 2010.

Community goal: Reduce to 10 per cent below 2001 level by 2010.

Website: www.mstn.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which reductions can be measured.

Corporate actions completed

Introduced further waste minimisation practices and reviewed vehicle fleet operations and purchasing to improve fuel efficiency and reduce emissions.

Community actions completed

Produced the Community Local Climate Actions Plan in partnership with Carterton and South Wairarapa District Councils.

Supported the community warm and healthy homes retrofit programme.

Supported community energy efficiency education initiatives.



Nelson City Council

Population: 41,679

Joined CCP-NZ: 2007

Milestones completed: M3

Corporate goal: Stabilise at 2004 level by 2012: reduce 40 per cent below 2004 level by 2020.

Community goal: Stabilise at 2001 level by 2012: reduce 40 per cent below 2001 level by 2020.

Website: www.ncc.govt.nz

Major actions taken

Completed an inventory of 2004 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Established a strong clear "solar city" vision and gained strong support from residents.

Mayor expressed the city's vision and advocated for central government policies that would establish some compulsion (standards and codes) to install renewable energy technology on new buildings.

Corporate actions completed

Installed 90 kW micro-hydrogenerator in Maitai River near water treatment plant, saving \$15,000 worth of electricity per year.

Completed a feasibility study for solar water heating at council facilities, with the first installations to occur in 2009/10.

Community actions completed

Completed a feasibility study for the city to implement a 25,000 solar water heaters loan scheme in the Nelson community.

Assisted with the pilot project installation of the first 25 solar water heating systems plus performance and economic monitoring facilities.

Employed an eco-advisor to advise on new and retrofit housing.

Established a sustainable business advisor to provide practical advice to businesses on energy and water efficiency and waste reduction.

Supported Nelson Environment Centre's "Code Red" (Peak Everything Awareness) programme.

Heard Submissions Alongside LTP



New Plymouth District Council

Population: 72,000

Joined CCP-NZ: 2007

Milestones completed: M2

Corporate goal: Stabilise at 2006 level by 2010; reduce 20 per cent by 2015.

Community goal: Stabilise at 2001 level by 2011; reduce 20 per cent by 2021.

Website: www.npdc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Completed energy audits of facilities, and starting to implement recommendations.

Contracted energy management services.

Established an energy management team, including two external consultants, that meets monthly.

Energy management team identified more than 60 initiatives for energy reduction and is proactively pursuing these through an initiatives schedule that is reviewed monthly.

Adopted an energy management policy.

Reviewed corporate budgets and found over-estimation of energy expenditure.

Introduced monthly reporting of energy consumption by activity.

Introduced quarterly reporting of energy consumption and greenhouse gas emissions to Executive Management Team.

Completed a staff travel survey over the Intranet.

Community actions completed

On-target progress in Better Homes project, aiming to retro-insulate 10,000 homes in Taranaki by 2014.

Investigating landfill gas capture project.

Facilitated community consultation workshop to set community greenhouse gas reduction targets

Recognised in the International Liveable Communities Awards (in China 2008) in three categories:

- Whole City Award – Best City under 75,000
- Sustainable Projects (Gold) Award, Coastal Walkway
- Community Sustainability (Gold) Award.

Heard Submissions Alongside LTP



North Shore City Council

Population: 200,091

Joined CCP-NZ: 2005

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.northshorecity.govt.nz

Major actions taken

Completed an inventory of 2003 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Established an ISO14064-compliant energy management system to monitor and report on energy usage across all council facilities.

Established a sustainable procurement policy and accompanying guidelines.

Corporate actions completed

Installed landfill gas-powered generator at the waste-water treatment plant.

Commissioning a carbon-footprinting exercise for the waste-water treatment plant.

Installed a burner management unit at Takapuna Aquatic Centre, achieving about 10 per cent gas boiler energy savings.

Promoted driver-efficiency training to relevant managers across council (those who have a high number of staff with allocated vehicles). Estimated fuel savings of around 10 per cent.

Conducted LED office and street-lighting trials.

Ongoing energy conservation campaigns with staff.

Regular waste and energy auditing of the council's administration buildings, including follow-up communications leading to an increase in energy efficiency policy compliance to 80 per cent.

Installed an industrial-sized worm digester and diverting organic waste, from the council's three largest administration buildings, from landfill.

Community actions completed

Established a sustainable procurement policy and accompanying guidelines.

Diverting about 800 tonnes of seaweed from landfill annually.

Undertook energy auditing and providing recommendations to Harbour Hockey Stadium and Bayview Community Centre.

Participated in Earth Hour 2009 with great results from North Shore businesses and community.

Launched the Naturally Smarter programme for North Shore residents, which covers environmental awareness, including climate change.

Heard Submissions Alongside LTP



Palmerston North City Council

Population: 80,000

Joined CCP-NZ: 2008

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.pncc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baseline from which to measure emission reductions.

Corporate actions completed

Installed landfill gas-powered generator.

Improved public transport, resulting in emission reductions.

Improved cycling infrastructure such as cyclist lanes and edgeline treatments (i.e. narrowing traffic lanes and creating space for cyclists) and off-road paths for cyclists and pedestrians.

Energy management actions include power factor correction and installation of heat pump heat transfer units at Lido and Freyberg Pools.

Installed pool covers at Lido indoor and outdoor pools.

Administration building power factor correction and lighting retrofit, plus lighting motion detectors.

Trialed streetlight timers.

Installed duck-pond pump timer.

Community actions completed

None reported.



Papakura District Council

Population: 48,783

Joined CCP-NZ: 2006

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.pdc.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Conducted energy audits on Civic Centre and Aquatic Centre.

Made operational changes to improve efficiency.

Implemented water-monitoring programme.

New construction projects to include energy efficiency options, including Massey Park Aquatic Centre and Art Gallery upgrade.

Set Long Term Council Community Plan goal of insulating more than 70 houses in the district every year.

Audited air handling and water loss issues.

Insulated and provided other energy efficiency options such as eco-bulbs and draft stops to 40 council-owned rental properties.

Contracted consultants to develop the Work Place Travel Plan.

Set up the council's Walking and Cycling Plan.

Considering energy efficiency in council procurement.

Purchased bicycles for staff.

Installed lockers for staff who cycle.

Purchased efficient vehicle fleet including petrol-electric hybrids.

Community actions completed

Participated in Earth Hour, including climate change children's art competition, energy efficiency expo, give away of more than 6,000 eco-bulbs to residents, and Auckland Astronomical Society Star Gazing at Bruce Pulman Park during Earth Hour.

Heard Submissions Alongside LTP



Porirua City Council

Population: 48,546

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.pdc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Working on Corporate Emission Reduction Target and Action Plan.

Implemented a Zero Waste programme.

Established diversion of greenwaste at Spicer Landfill.

Installed a landfill gas capture system at Spicer Landfill.

Established a corporate energy management programme.

Carried out a Level 2 Energy Audit of high-energy use facilities, with resulting action plan.

Reviewed efficiencies in council's water-pumping assets.

Community actions completed

Working on a regional Community Emission Reduction Target and Action Plan with other councils in the Wellington Region.

Supported Porirua community energy initiatives implemented by the Sustainability Trust.

Supported a low-energy light bulb exchange programme for householders.

Supported the development of PolyPalace for the recycling of used polystyrene into household insulation products and a retrofit programme.

Developed Trash Palace as a community resource recovery initiative and working on its redevelopment in partnership with Mana Community Enterprise.

A partner in eMission, a regional business sustainability and carbon-reduction programme the Ministry of Economic Development and EECA support.



Rodney District Council

Population: 89,601

Joined CCP-NZ: 2004

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.rodney.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Commenced investigations and energy audits of facilities.

Changed vehicle procurement.

Commenced street-lighting review.

Community actions completed

Implemented climate change awareness campaign "Climate Change: Global Problem, Local Solution".

Provided workshops and advice on recycling, smart shopping, saving energy and water, composting and worm-farms, and travelling smarter.

Helped Wellsford School through an eco-audit to determine where improvements could be made in energy and water efficiency and waste reduction.

Heard Submissions Alongside LTP



Rotorua District Council

Population: 62,526

Joined CCP-NZ: 2005

Milestones completed: M3 (Corporate)

Corporate goal: Stabilise at or below 2006 levels by 2010; set longer-term targets during 2011/12 potentially with a view to becoming a carbon-neutral local authority.

Community goal: Not yet established.

Website: www.rdc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Developed a Corporate Sustainability Policy and Corporate Climate Action Plan to establish future directions, and procurement actions.

Established a corporate sustainability champions group.

Corporate actions completed

Reviewed vehicle fleet.

Reviewed council buildings.

Engaged energy management services and installed energy monitoring software.

Investigated and undertook energy audits of various facilities.

Developed vehicle procurement policy.

Reviewed street lighting.

Approved landfill gas extraction and flaring.

Community actions completed

None reported.



South Waikato District Council

Population: 21,291

Joined CCP-NZ: 2004

Milestones completed: M3

Corporate goal: Stabilise by 2010, reduce by 30 per cent by 2021.

Community goal: Stabilise by 2010, reduce by 20 per cent by 2020.

Website: www.southwaikato.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Installed solar water heating for showers at Tokoroa swimming pool.

Conducted a level 2 energy audit of Tokoroa waste-water treatment plant.

Conducted a level 2 energy audit of the Tokoroa office, pools, and library.

Community actions completed

Warm Homes project in response to degraded air quality in Tokoroa (includes clean heat options).

Promoted solar water heating grants.

Promoted energy efficiency community and "smart developer" initiatives.

Trialled new efficient streetlights with developers.

Industry energy efficiency and waste reduction initiatives.

Heard Submissions Alongside LTP



South Wairarapa District Council

Population: 8,532

Joined CCP-NZ: 2005

Milestones completed: M3 (Community)

Corporate goal: 5 per cent below 2001 level by 2010; 70 per cent below by 2025.

Community goal: 10 per cent below 2001 level by 2010; 70 per cent below by 2025.

Website: www.swdc.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Corporate actions completed

Reviewed vehicle fleet.

Reviewed council buildings.

Community actions completed

Produced a community local climate actions plan in partnership with Carterton and Masterton District Councils.

Supported the community warm and healthy homes retrofit programme.

Supported community energy efficiency education initiatives.



Southland District Council

Population: 27,440

Joined CCP-NZ: 2005

Milestones completed: M3 (Corporate)

Corporate goal: Stabilise at 2005 level by 2015 and reduce by 20 per cent by 2025.

Community goal: Not yet established.

Website: www.southlanddc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Installed heat pumps to replace electric heating in main office building.

Installed trials of small renewable electricity generators (wind and solar power) on Stewart Island.

Reviewed corporate commuting energy to consider alternatives.

Introduced in-house recycling and food scrap collection.

Installed variable-speed drives in new water and sewerage scheme pumps (so they are not pumping all the time).

Reviewed the vehicle policy, which now encourages the purchase of more fuel-efficient vehicles.

Installed video-conferencing for use between council offices.

Set all council computers so they go onto standby by default if left on for long periods without use.

Community actions completed

Investigated the introduction of a three-bin kerbside collection system (for rubbish, recyclables, and greenwaste) to begin in 2010.

Heard Submissions Alongside LTP



Taranaki Regional Council

Population: 100,263

Joined CCP-NZ: 2004

Milestones completed: M2

Corporate goal: Stabilise at 2001 level by 2010.

Community goal: Stabilise at 2001 level by 2010.

Website: www.trc.govt.nz

Major actions taken

Completed an inventory of 2001 corporate and community emissions to establish a baseline from which to measure emission reductions.

Established corporate and community goals.

Corporate actions completed

None reported.

Community actions completed

Supported development of community bus services to reduce isolation and reduce community emissions.

Developed and published the Regional Walkways and Cycleways Strategy for Taranaki to promote walking and cycling as alternative modes of transport.



Waipa District Council

Population: 41,148

Joined CCP-NZ: 2007

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.waipadc.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Completed a further inventory of 2007 corporate emissions to enable a comparison with the 2006 base year.

Corporate actions completed

Encouraged staff to look at how the council's global footprint could be reduced.

Formulated Waste Champions, a group that (among other things) is working to reduce the volume of waste council staff produce and the energy that is used (lighting, air conditioning, computers, etc), and to implement recycling initiatives with council support.

Community actions completed

Encouraged residents to undertake environmentally friendly initiatives through council's support of Earth Hour and the introduction of Sustainable Living Programme classes.

Heard Submissions Alongside LTP



Waitakere City Council

Population: 175,299

Joined CCP-NZ: 2004

Milestones completed: M4

Corporate goal: 50 per cent below 2001 level by 2021.

Community goal: 80 per cent per capita below 2001 level by 2051.

Website: www.waitakere.govt.nz

Major actions taken

Completed an inventory of 2002 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Established a clear, long-term vision to guide city-wide sustainable energy initiatives.

Established a new council civic centre built to high sustainable building standards, located at a major public transport hub to reduce corporate commuting energy use and improve access for residents.

Corporate actions completed

Trialled more-efficient LED and solar streetlights.

Made swimming pool pumping efficiencies.

Rationalised the operation of the swimming pool co-generation system.

Upgraded Waipariera Civic Centre heating and lighting facilities.

Installed grid connected solar electric (PV) systems on buildings and libraries.

Upgraded traffic lights to LED bulbs.

Upgraded crematorium facilities.

Reviewed the vehicle fleet and developed tools to assist with future procurement decisions.

Installed solar water heating and a small wind turbine on the Civic Centre.

Community actions completed

Established school travel plans.

Assisted with the development of rail passenger facilities and stations and double tracking.

Developed park-and-ride facilities at rail connections, where needed.

Providing free shuttle bus services to and from major events in the city to improve the efficiency of public transport connections.

Developed extensive cycling and walking path system.

Working closely with new developments to improve sustainability.

Sponsored an eco-design advisor service for residential housing developments.

Waived basic building consent fees for solar water heating installations.

Strong support for the EcoMatters community trust and the work it is doing in retrofitting houses and providing education services.

Developed Sustainable Home Guidelines.

Introduced many community waste-reduction and recycling initiatives.

Working with EcoMatters Trust and other groups on communication initiatives promoting general awareness and specific project information for residents.

Celebrated the joint milestones of \$1 million and 5 million kWh of energy savings since 2001. The emissions reduction totals more than 2,000 tonnes.

Heard Submissions Alongside LTP



Wellington City Council

Population: 172,971

Joined CCP-NZ: 2004

Milestones completed: M5

Corporate goal: Stabilise at 2003 level by 2010, and reduce by 40 per cent by 2020 and 80 per cent by 2050 (plus aspirational goal to strive for corporate carbon neutrality).

Community goal: Stabilise at 2001 levels by 2010 and reduce by 30 per cent by 2020 and 80 per cent by 2050 (plus aspirational goal to strive for community carbon neutrality).

Website: www.wellington.govt.nz

Major actions taken

Completed corporate inventories for 2003, 2007, and 2008

Completed community inventories for 2001 and 2006.

Investigated the implications of carbon neutrality and set aspirational goals.

Corporate actions completed

Completed energy audits of several major facilities, and implemented initial measures.

Reviewed potential for co-generation at swimming pools. Installed co-generation in Johnsonville Pool.

Installed flaring facilities to destroy landfill gas at Southern Landfill.

Installed landfill gas-fueled electricity generator at Southern Landfill. (This is removing 85 per cent of landfill gas from the environment while supplying 8 GWh of electricity per year to the national grid.)

Improved energy efficiency specifications included in council housing upgrades.

Installed solar power and solar hot water heating at Makara Cemetery and Evans Bay Marina respectively.

Completed a study into the feasibility of installing a micro-hydro-turbine generator in the Moa Point outfall – agreement on implementation is yet to be reached with the operator.

Received Emissions Trading Scheme credits for an area of council forest.

Improved fuel efficiency standards for some categories of council vehicles.

Trialled energy efficient streetlights and monitored lighting quality and energy consumption.

Trialled new office waste disposal processes for the civic buildings, indicating potential for significant waste reductions.

Community actions completed

Implemented waste reduction projects such as Kai to Compost.

Trialled recycling bins in Wellington central business district in partnership with the Ministry for the Environment.

Supported warm and healthy homes projects for Wellington residents in partnership with Sustainability Trust, EECA, and Greater Wellington.

Proposed improvements to the public transport network by converting Manners Mall into a bus-only route – out for public consultation.

Heard Submissions Alongside LTP



Western Bay of Plenty District Council

Population: 42,075

Joined CCP-NZ: 2008

Milestones completed: M1

Corporate goal: Not yet established.

Community goal: Not yet established.

Website: www.westernbay.govt.nz

Major actions taken

Completed an inventory of 2006 corporate and 2001 community emissions to establish baselines from which to measure emission reductions.

Corporate actions completed

Established the in-house Sustainable Progress Group in 2007.

Completed Milestone 2+3 workshop with councillors and staff to begin development of appropriate goals and emission-reduction action plans.

Implemented waste-reduction measures within council offices, including worm farm and recycling.

Purchased staff bicycle for local trips.

Raised staff awareness of employee commuting options through competitions and a bike-to-work week.

Community actions completed

Planned new measures to reduce water use, including residential metering (from 2009/10), more water-supply line metering, and increased water charges for large connections.

Completed planning for a new recycling centre that will begin operations next year.

Heard Submissions Alongside LTP

Appendices

Appendix 1: ICLEI – Local Governments for Sustainability and CCP

The Communities for Climate Protection® – New Zealand (CCP®-NZ) Programme is part of the Cities for Climate Protection (CCP) Campaign established and run by ICLEI – Local Governments for Sustainability (ICLEI). The CCP Campaign builds global networks with a common purpose and framework.

The CCP-NZ Programme aims to achieve quantifiable greenhouse gas emission reductions from councils' own operations and influence mitigation in their wider communities.

Founded in 1990 as the International Council for Local Environmental Initiatives, ICLEI is an association of local governments dedicated to improving global environmental conditions through cumulative local action. Through its campaigns, ICLEI generates political awareness of key environmental issues, provides technical assistance and training to support local governments in addressing these

issues, and evaluates their progress toward sustainable development.

The CCP-NZ Programme, delivered by ICLEI Oceania, focuses on capacity building for council staff and working with senior management and elected members to build Programme support and momentum. The Programme involves the use of a methodology that encompasses progress milestones, elements such as political and media support, technical and Programme support, measurement and practical action, and a tangible link to the international role of local governments. Technical support includes the supply of software, training workshops, and access to a range of tools and resource materials.

The CCP methodology provides a standardised and internationally recognised process for monitoring, measuring, and reporting performance in reducing greenhouse gas emissions. The use of the international CCP Greenhouse

Gas Application software not only simplifies the development of greenhouse gas inventories and subsequent data analysis, it also permits quantitative comparisons among different communities, within individual countries and across the globe.

Councils participating in CCP-NZ are benefiting from over 15 years of international experience and best practice. New Zealand councils in the CCP-NZ Programme value the supported and structured approach that has achieved quantifiable results for the environment, financial savings for councils, and improved urban liveability for residents.

Councils in the Programme found the CCP-NZ business-case message and the methodology added value to existing council activities and fitted comfortably with the Long Term Council Community Plan planning processes.

Box 13

The CCP-NZ Programme

The CCP-NZ Programme provides a strategic framework via which councils can take action to reduce greenhouse gas emissions in their (corporate) activities and in their communities.

CCP-NZ assists councils to identify measures to reduce greenhouse gas emissions such as:

- saving energy, particularly from energy management initiatives and promoting renewable energy
- increasing sustainable transport options
- enhancing urban design and facilitating local mobility
- reducing emissions from landfills
- supporting adoption of low-carbon and low-energy technologies.

Once a council commits to becoming a CCP-NZ participant, the council proceeds to complete five milestones.

- Milestone 1: Conduct a greenhouse gas emissions inventory, analysis, and forecast for corporate and community emissions. (This helps to identify the potential for emissions reduction.)
- Milestone 2: Set emissions reduction goals.
- Milestone 3: Develop a local action plan to achieve sustainable reductions in emissions.
- Milestone 4: Implement the climate action plan and quantify the benefits of policies and actions.
- Milestone 5: Monitor progress towards the reduction goal, and start the process for re-inventory and review of the plan.

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Methodology

The CCP-NZ methodology was developed from the international CCP model that has been implemented by local governments worldwide. It uses many of the same standards, processes, and methodologies that businesses use to take a public stand on reducing their emissions.

The CCP-NZ methodology provides a standardised, and internationally recognised, process for monitoring, measuring, and reporting performance in reducing greenhouse gas emissions. The international CCP Greenhouse Gas Application (GGA) software was modified for New Zealand conditions when the Programme started in 2004. The GGA software simplifies the development of greenhouse gas inventories and subsequent data analysis for council staff. It was also designed to provide quantitative comparisons among different communities, within individual countries, and between countries.

The CCP-NZ Programme provides a strategic framework for councils to take action to reduce greenhouse gas emissions from their own or corporate activities, and from their local community.

Benefits from using the CCP-NZ methodology include helping councils to identify measures to reduce energy usage and costs, promote renewable energy supplies, increase sustainable transport options, enhance urban design, reduce emissions from landfills, support the adoption of low-carbon and low-energy techniques and technologies and reduce greenhouse gas emissions.

Climate action process

Once a council makes the leadership commitment to becoming a CCP-NZ participant, the council begins a five-milestone process. (See Box 13.)

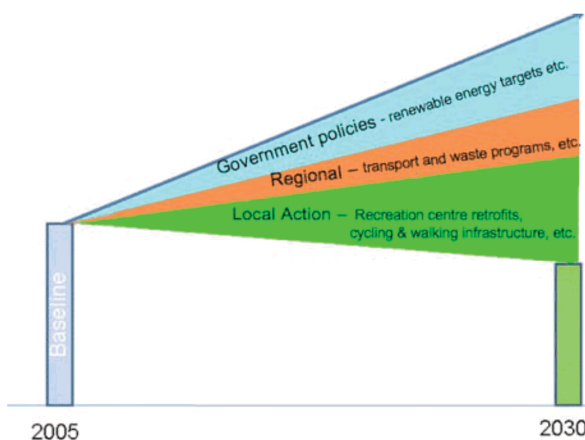
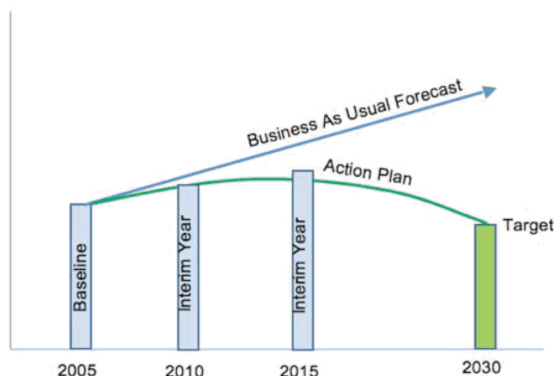
Goals are important. They come in many guises and provide a focus for long-term outcomes.

In New Zealand, the five-milestone framework provides a focus for district, city, and regional councils, but there must be recognition that some major reductions will be achieved only by central government policies and actions.



Through the milestone framework, councils gain an understanding of how local authority decisions can be used to reduce greenhouse gas emissions while improving quality of life in the local community.

It is important that all levels of government work together and that each knows the reductions that are most appropriate for each level to implement.



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Appendix 2: CCP-NZ Councils' Long Term Council Community Plans

The Local Government Act 2002 requires New Zealand councils to produce a Long Term Council Community Plan (LTCCP) every three years. LTCCPs look forward 10 years and document the council's vision, but only include detailed plans for the next three years. LTCCPs describe what will be done to achieve the 10-year vision, how much it will cost, and how it will be funded.

In order to analyse trends in local government climate change focus, an analysis was made of each Community for Climate Protection – New Zealand (CCP-NZ) participant council's draft 2009 LTCCP document and this was compared with their 2006 LTCCP.

CCP-NZ is mentioned frequently in both the 2006 and 2009 plans. At the start of 2006, 17 councils were participants in the CCP-NZ Programme. Eight of these councils mentioned the programme in their 2006 LTCCPs. In 2009, with 34 councils in the Programme, 20 specifically mentioned CCP-NZ. Some plans offered a major discussion on the milestone process and their local climate action plans.

Increase in awareness

With one exception, the CCP-NZ councils include significantly more references to the impacts of climate change in their draft 2009 LTCCPs than in their 2006 plans. This corresponds to the growing global awareness and concern about the possible effects of climate change, and reflects climate change advice the Ministry for the Environment has provided to local government.

The provision of commentaries on climate change and the potential for greater impacts also increased significantly in the draft 2009 documents.

Kapiti Coast District Council commented on the "growing awareness of major global issues, such as climate change, and their implications for local communities", and Masterton District Council noted "an increased public focus on the environment and mitigating potential impacts of climate change". South Wairarapa District Council included that the "problem

of climate change is one of two major issues confronting the council", and Environment Waikato expressed how it is "widely argued that climate change could irrevocably harm the planet and population in a relatively short time period".

For most councils, the potential impact of climate change on infrastructure is the biggest concern in 2009 plans. Future water supply and how it might be affected are also given more consideration. How climate change could affect biodiversity and green spaces appears to be of low concern and only Dunedin City Council and Environment Waikato mentioned the potential climate change impacts on the health of the community.

Climate change policy uncertainty

The Government's proposed emissions trading scheme legislation is aimed at curbing, on a least-cost basis, the increasing level of greenhouse gas emissions. The proposed scheme is likely to require councils to monitor and report on the level of emissions from landfills, to purchase and submit one New Zealand unit for each tonne of CO₂-e emitted, and to set obligations on local government regarding waste management.

Uncertainties related to impacts of climate change, and uncertainties related the Government's climate change policies are noted in many of the council draft 2009 plans.

Some councils state that they have not made provisions in their plans for increased costs from the emissions trading scheme, and others offered comment that the implementation of the scheme was likely to increase costs.

Impacts on stormwater infrastructure

The potential impacts of climate change on stormwater infrastructure featured most strongly in the plans. In 2006, nine councils highlighted the issue, increasing to 19 councils in the draft 2009 plans.

The ability of stormwater systems to cope with the effects of climate change is the main concern for many councils. Dunedin City Council commented that it could "increase the frequency of flooding events, sewer over-flows, and asset damage. This may lead to increased operational and maintenance requirements". Kapiti Coast District Council refers to potential "increased frequency and/or volume of system flooding; increased peak flows in streams and related erosion; groundwater level changes; saltwater intrusion in coastal zones; changing floodplains and greater likelihood of damage to properties and infrastructure". These comments were accompanied with a suggestion for significant increases in expenditure for storm water management.

Changing transportation focus

Transportation systems, and their role in causing climate change, were not highlighted by most councils, despite knowledge that an increased focus on more environmentally friendly modes, including public transportation, can decrease greenhouse gas emissions. While only two 2006 plans mentioned transportation in the context of climate change, that number had increased to seven in the draft 2009 plans.

Papakura City Council's draft 2009 plan noted that increased roading will have a negative effect, but the long-term impacts of vehicle emissions on climate change will be offset by a heightened focus on public transportation and other alternative modes. The link between climate change and more energy efficient transportation is not always acknowledged in the plans.

Water supply

Another important climate change-related issue for councils is the future or long-term water supply. Considering the importance of agriculture and farming to many areas, it was surprising it was not mentioned in more plans. However, it is given much more importance in 2009 with 17 councils discussing

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water supply issues in relation to climate change while only one made mention of it in 2006.

In its draft 2009 LTCCP, Carterton District Council notes the need to develop a water demand management strategy because of global climate change and sustainable development. In 2007/08 Dunedin City Council initiated a water strategy to help determine and prioritise "renewal and new capital investment in water, wastewater and stormwater infrastructure across a 50 year planning cycle". Droughts and higher temperatures, causing drier summers and lower winter rainfalls, will significantly affect long-term water supply as it places more pressure on what are already limited water resources in many areas.

In its draft 2009 plan, Waitakere City Council highlights managing climate change and future water

demand as a key issue. The plan advises considering alternative water supply sources in face of increased demand from both climate change effects and population growth. Wellington City Council notes in its draft 2009 plan that to meet future water supply demand, the effects of climate change must be taken into account.

Impacts on biodiversity

There has been a small shift in awareness and concern about climate change impacts on biodiversity from 2006 to 2009 in the LTCCPs. In 2006, only Auckland Regional Council made mention of this issue whereas in 2009 eight councils comment on the issue.

All CCP-NZ regional council and some district and city council LTCCPs express concern over the introduction of new plant and animal pests as a result of climate

change. Hawke's Bay Regional Council notes that "pests have the potential to have a significant adverse effect on the region's economic prosperity and biodiversity, lifestyles and quality of living". Greater Wellington notes that pest plant and animal eradication work is changing in response to changes in pest species resulting from climate change.

Conclusions

Overall, councils are expressing more concern that climate change is happening and are including predicted effects in their current LTCCPs. There is some uncertainty related to the Central Government's climate protection policies and their impacts. However, many of the the draft 2009 LTCCPs acknowledge increased potential effects of climate change for local government and more LTCCPs are including climate change actions.

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Appendix 3: Electricity emissions factors

The climate change impacts of electricity efficiency savings are difficult to assess accurately, except by using accepted emission factors. The New Zealand electricity system in both the North and South Islands is interconnected through the high-voltage, direct-current Cook Strait cable. The thermal generation facilities (coal- and gas-fired power stations) are located in the North Island and generation in the South Island is 100 per cent renewable – hydropower and wind. South Island councils have a strong moral justification to their claim that their electricity usage should be seen as emission free. However, for a number of weeks in every “dry year” thermal power is pushed south to reduce the run-down of the hydro lakes.

The New Zealand Government does not accept this “emission-free-electricity” claim, and has decided that all New Zealand grid-connected electricity should have the same emission factor. The Ministry for the Environment, as lead government agency for reporting on New Zealand’s greenhouse gas emissions, publishes a *Corporate GHG Reporting Guidance Manual* each year to provide assistance to companies wanting to calculate their emissions footprint. The 2007 version of this guidance manual is available from the Ministry’s website.¹

Average factors

The 2007 version of the manual recommends that corporates and government departments reporting emissions use the **average annual electricity emission factors** for reporting electricity emissions.

The annual average electricity factor is calculated from the total generation and the total fossil fuels used for electricity generation during the year. This value varies each year, from around 0.2 tonnes CO₂-e per megawatt hour in “dry years” when a lot of thermal electricity generation is required, to less than 0.17 tonnes CO₂-e per MWh in “wet years”. These small changes in emission factor make a significant change in the total electricity sector emissions.

Marginal factors

The Ministry’s guidance manual notes that it may be appropriate to use a **marginal electricity emissions factor** for specific electricity saving or renewable electricity generation projects.

The **marginal electricity emissions factor** is a calculated average instantaneous emission factor for the peak half-hour periods of the year and it also varies depending on the amount of thermal generation needed to meet the peak load each day. The marginal factor is not adjusted annually, and its value is based on a historic mix of thermal and renewable electricity generation and only approximates the worst-case generation mix.

The marginal factor is only calculated occasionally as a representation of worst half-hour periods during a year, and its value has been accepted as 0.625 tonnes CO₂-e per MWh for many years. This is more than 300 per cent higher than the current annual average electricity emission factor.

In other countries where coal is the substantial electricity generation fuel the average emission factor is over 1 tonne CO₂-e per MWh, and the value depends on the quality of the coal used.

ICLEI Oceania practice

ICLEI Oceania has consistently used the annual average electricity emission factor for reporting on council baseline emissions and for reporting emissions reduction project results, as per the Ministry for the Environment’s guidance. All baseline emissions inventory data reported in this document are based on the annual average electricity emissions factor values.

However many greenhouse gas emissions savings projects implemented by local government have already been reported by others using marginal electricity emissions factors.

So the reporting of total emission reductions in this report has been done using both average and marginal electricity emissions factors.

This ensures that ICLEI Oceania’s reported emissions reduction results for local government electricity efficiency projects line up with reporting by other bodies on the same projects – for example in reporting associated with the annual EECA Awards’, or for projects awarded credits as part of the Ministry for the Environment’s “Projects to Reduce Emissions”.

¹ Refer to www.mfe.govt.nz/publications/climate/guidance-greenhouse-gas-reporting-2008-09/index.html.

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
145	39742	Chrys	Horn	<p>Thank you for the opportunity to comment and thank you for putting together this strategy document.</p> <p>While the document is on the right general track in terms of trying to cut emissions and also give direction to future adaptation, I have some reservations about the overall approach of this strategy. I was put off as soon as I read, Our draft climate change strategy is a blueprint for collective action on Page 3. Blueprint became problematic in Planning approaches decades ago. We should not entertain that term. The last thing we need is a blueprint – something set in stone – decided before we begin with little reference to needing to adapt the approach as we learn more about the how, the when and the who. We really need something much more adaptive if we are going to turn the ship around and achieve an actual reduction in Greenhouse gas emissions and if we are to adapt to the change that is already locked in given current lifestyles.</p> <p>Action: Take the word “blueprint” out of the statement on P3 and replace it with something like sets the intention to work with</p> <p>Systems adapt</p> <p>Systems have the bad habit of adapting to stay the same in the face of change if we can't be adaptive. Witness, for example, the way oil prices drop when demand drops when people cut their use of fossil fuels, which then fosters greater demand amongst those who figure they can afford to travel and for whom climate change doesn't seem that important. We see perverse consequences from direct actions all the time in our world, and what seems like a good idea may actually turn out to be problematic because we live in such an interconnected “can of worms” world in which we are constantly met with double binds, paradoxes, and transcontextual blind spots to name a few.</p> <p>The information that we need is often in between – in between contexts, in between different people – it is in the relationships and the minutiae of everyday life as well as in the big picture. As such communities are as much part of strategizing as the council is and many of the moves that we need to make will need the information that they provide and the ideas that they generate.</p> <p>Action: Please keep the focus on working with different communities and if anything strengthen it. I doubt that it is obvious how that might best be done (I don't think this strategy has nailed it yet) but it does need to be done and it also</p>	Yes

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				<p>needs an adaptive and experimental approach.</p> <p>Fossil fuel use is connected to EVERYTHING</p> <p>Fossil fuels are the cause of climate change and at the current time they underlie nearly all of our local economy, and are needed for most of our local transport, and indirectly in the provision of the food, housing and work. Having a few “climate change Programmes” is not going to cut it. To actually mean anything, this strategy must connect with everything else that the CCC does and encourage every other agency to do the same. To reduce carbon emissions to Net Zero by 2045, every decision taken by council and by council staff needs to be assessed in light of the emissions that they will create or lead to in the same way that each decision is understood to have financial implications.</p> <p>I see little in this strategy that indicates that this is happening – including the fact that the LTP doesn’t appear to take account of climate change beyond some spending on discrete projects. It is unclear how this document relates to all the other plans and strategies that the Council has. What precedence does it have over other strategies that the CCC has?</p> <p>Actions for Goal 1:</p> <p>Insert a statement about the precedence that this strategy has in relation to other strategies. In my view it needs to be top of the list.</p> <p>Insert a statement to the effect that Climate emissions and climate adaptation must be considered in every decision the CCC makes including all spending.</p> <p>Goal 2 Managing the ongoing impacts of climate change</p> <p>Resilient communities are communities with a lot of connections and yes it helps if there has been some thought about the kinds of issues that we are going to have to address.</p> <p>This does mean NOT cutting back community funding in the LTP and instead considering how it might be increased. Community groups and community connections are really not just a “nice to have”. As we have seen over the last 10 years in Christchurch, they are vital to the way we are able to get up again after being knocked down.</p> <p>Action: Add something in this section about active support for community development and community groups and their contribution to resilience and adaptive capacity.</p>	
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Heard Submissions Alongside LTP

				<p>Goal 3 – Economy</p> <p>It is great to see that there is an understanding that strong communities also support strong innovative economies. I would add to this that there are such things as community gift economies where people are already sharing excess locally grown food, used goods and even local services which helps people get what they need for their families. We've also seen over this last year of lockdowns that household production can greatly increase when economies shift and this too is an important element in economic resilience.</p> <p>Action: Instead of strong communities (which needs to be in the previous goal) perhaps a more appropriate way to talk about it is an increased capacity for people to connect into local community economies.</p> <p>Goal 4</p> <p>Agree with Goal 4 but it seems to me that a large part of what is in front of us also involves restoration (not just protection).</p> <p>I support the programmes outlined in the strategy and note that the devil is probably in the detail of what this all actually means on the ground and how progress will be measured and assessed. This is of course subject to the comments above about climate change considerations being part of every council decision.</p>	
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Heard Submissions Alongside LTP

#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
146	39743	Caroline	Syddall	<p>Introduction. We're talking about a climate emergency and need for urgent action here. While I support the recommendations of this document overall I feel they are generally too vague, too much out in the future and too lacking in short-term actions. It does not feel like a document for urgent action to address an existing emergency. I feel as though on the timeline from the attached School Strike for Climate Action poster, the proposals in the Council's document are a response as if we are back in the green (though not actually in denial) whereas in reality we are up in the red and genuinely on the verge of the yellow. We need decisive action now!</p> <p>I absolutely support partnership with Ngai Tahu in all steps of this strategy. I have largely not listed this in each section as I take it as a given and assume that CCC does to. Does CCC have something like Ecan's Tuia partnership that ensures that Ngai Tahu is 'at the table' for all discussions?</p> <p>I support the four goals.</p> <p>1. Net zero emissions. With transport contributing to 54% of emissions, I believe the focus must be on transport and city infrastructure more than in building materials and methods. I would like to see the Council focus on city planning that creates a walkable city where people can access the bulk of the services they need by foot, bicycle or public transport, and where people feel safe doing this. I support more slow areas that reclaim neighbourhoods from cars, I urge the Council to extend the cycle network to your earlier shorter timeframe. We need to be brave and re-shape our city to make driving less convenient and walking, cycling and public transport more convenient and affordable. Electric cars are an improvement in terms of emissions but they are not a sustainable long term solution (and they do not improve the walkability and livability of neighbourhoods or cities). We must make these changes over the next few years not the next couple of decades. I would like to see the City Council work more closely with Ecan to improve the public transport system, including investigating the reintroduction of a free inner-city bus. The other signs of success listed under this action are too much focussed on talk and too little on action, we need these things but we need them now so that the practical changes happen in the near future. I fear that although the Council has declared a climate emergency you are not acting with the urgency required to respond to this emergency.</p> <p>Goal 2. Prepared for the impacts of climate change. Surely 2 years after the Council declared and climate emergency and nearly 30 years since the issue began to get attention in New Zealand, much of the knowledge relating to Christchurch must be recorded and the Council must have planning underway. If not, then the Council needs to get a high-powered</p>	Yes

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				<p>group to pull together existing research and develop plans then the Council needs to act on these quickly. The Council needs to show leadership, to be brave and to act. Again, the signs of success in this section are about consultation and planning, at this time we need success to include completed actions. The climate emergency isn't on the way, it's here.</p> <p>3. A just transition to a low-emission economy. Some of this should come out of the actions the Council has taken elsewhere, both through changes to Council jobs and to the opportunities created by a city that is re-shaped to enable people to access services locally. I would like to see the Council listen to and support small businesses, after the quakes we saw Central government stifle small businesses and enable big-business to make decision affecting local citizens, we must have a citizen and small-business led transition to a low carbon economy.</p> <p>Strong communities. The Council needs to support existing community groups and see them as partners to a better future. From those providing social and community services to those planting reserves, the Council needs to develop a partnership model which is little in evidence at present.</p> <p>Goal 4. Guardians of our natural environment and taonga. This is a clear area where Council needs to work with existing voluntary organisation as well as supporting new ones ("supporting our kaitiaki"). Council will never have the resources to do all the work required to protect and enhance our natural environment, it needs to see itself as supporting a team of citizens. I strongly support the restoration of ecosystems and green spaces, both for climate reasons and for quality of life. We need a liveable city for people and insects/birds etc. I fear we are on the verge of an ecosystem crash (how many ladybirds did you see this summer/autumn; what sort of diversity of butterflies/moths have you seen lately?) and ecosystem maintenance and re-creation is vital.</p> <p>Programme 1. Partnerships and Resourcing. Absolutely support partnership with Ngai Tahu. Suggest you get the Climate Leadership Group set up pronto and get on with the actions. As above, make sure this involves community groups and small business.</p> <p>Programme. Understanding local effects. Strongly support completing this assessment. Suggest getting one of your researchers or librarians onto checking what has already been done outside of the work the City Council, NIWA, Ngai Tahu. I am very surprised that ECan is not mentioned here, they must have done research that will be of use to the City Council. If you're not already working closely together then I suggest putting the effort into building a close, constructive relationship with them.</p> <p>3. Climate Planning with communities. Strongly support climate education in schools- another place to partner with Ecan and Enviroschools. Support all the areas you're proposing to look at here, they are all serious, mostly already existing</p>	
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			<p>issues. Coastal hazards and seawater inundation are issues that will rapidly follow the existing flooding hazards to be major problems. We need to address the question of managed retreat and be a Council that it prepared to talk about the options openly. The 'strategic adaptation framework' is going to be a very important document that needs to be out and talked about as soon as possible.</p> <p>4. Infrastructure systems. Support everything suggested here. Would also like to see the Council actively support householders to collect rainwater and possibly grey water, and strengthen messages about reducing water use and waste. To me though the big infrastructure issue is creating accessible, liveable communities to reduce car transport and enable people to support each other in their neighbourhoods. This would fit well with the proposed swales, rain gardens and tree planting- it's about reshaping our neighbourhoods and city. I support your plan for Bexley but we need a plan for the whole city (or better still a series of plans for areas within it).</p> <p>5. Carbon removal and natural restoration. Support everything here. Work on strengthening and building partnerships with existing community groups as well as building new partnerships.</p> <p>6. Economic transformation. I support your focus areas but the next step of working with ChristchurchNZ and the Chamber of Commerce does not make it sound like you're ready to talk to small businesses and community groups. It's these on-the-ground groups that are likely to bring about fast change- think of small, eco-friendly businesses popping up around the city, enabling people to access services and employment without the need to travel far, think of small businesses that can adapt quickly and that have a reason to listen to their customers and communities, think of community groups that understand their communities and can organise volunteers- I believe that this is what can transform Christchurch, not groups that represent the power groups of the past. I've just looked at the board of ChChNZ- all white, few of them seeming to have much in common with the average ChCh citizen and the senior leadership team doesn't seem much different. I do not believe that these are the people that are going to support the transformation we need for a low carbon future.</p> <p>8. Energy efficient homes and buildings. All good ideas. I particularly support promoting energy efficiency more strongly. Sometimes it feels like the Council is scared to stand up and say what it believes in. Talk about it more and help normalise energy efficiency.</p> <p>9. Towards Zero Waste. We've clearly got a heck of a long way to go here! Showing leadership is definitely needed. Promote a 'repairing economy' as well as a 'sharing economy'. Avoid future mistakes like allowing rubbish to go into yellow bins during lockdown, honestly, what were you thinking. Stick more info on recycling onto recycling bins- it shocks me to see what people put in their yellow bins, I assume that their excuse is ignorance- remove this excuse.</p>	
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				<p>10. Sustainable food system. All good stuff. The next step of planting 500 fruit trees is a pretty small step. I don't know if it's CCC or Ecan that is responsible for land zoning, but we need to stop expansion across horticultural land now. This was being talked about by a soil science lecturer at Lincoln 50 years ago. Post peak oil it will be vital to have access to food grown locally. Production in home and community gardens and parks is great but it's commercial production that will feed the people. We need to urgently identify the areas that we cannot afford to allow expansion into.</p> <p>Good ideas in here, move past the talking promptly and take brave, decisive action.</p>	
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Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
157	39767	Penny	Carnaby	Banks Peninsula Conservation Trust	Chairperson	Please see attachment	Yes

Heard Submissions Alongside LTP



Christchurch City Council

Ōtautahi Christchurch Draft Climate Change Strategy

April 2021

Submission by **Banks Peninsula Conservation Trust**

Contact details:

Penny Carnaby

Chairperson

Banks Peninsula Conservation Trust

We wish to be heard in support of this submission.

1. Overview

The Banks Peninsula Conservation Trust (BPCT) congratulates the Council on declaring a Climate and Ecological emergency in 2019. We acknowledge and agree with the urgency signalled in the Strategy and encourage the Council to act decisively. We see the Ōtautahi Climate Change Strategy (CCS) as an opportunity for the Council to showcase the landscape and unique biodiversity of Banks Peninsula including the Port Hills. We hope CCC will draw inspiration from the Banks Peninsula ecological restoration story and use this as an exemplar showing how, by working together, we can protect land, water, and soils, let the natural regeneration of native vegetation increase, and by doing so accelerate the sequestration of carbon.

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We see the CCS as a vehicle with the potential to leverage and celebrate all the aligned activities of those who are working so hard to encourage the recovery and regeneration of the distinctive flora and fauna of Banks Peninsula. Those alliances include Ngai Tahu parties, private landowners, agencies CCC/ECAN/DOC and other aligned organisations and Trusts. The BPCT passionately believes that by working together we can achieve more for the environment than we can by working on our own.

1.1 BPCT agrees with:

- The target set of achieving net zero greenhouse emission by 2045 (excluding methane) and to halve our emissions by 2030
- The underpinning structure of the Strategy with the four Climate Goals supported by 10 Action programmes outlining what we must do to achieve these goals.
- Positioning the Strategy as the overarching framework with which all Council activities including the LTP 2021-2031 budget must align.

1.2 Areas of concern:

While we understand the CCS is intended to be the overarching framework from which all CCC activities will align, we are not yet seeing this demonstrated in the draft LTP 2021-31 and this is a matter of concern.

We are particularly concerned to see proposed cutbacks to the biodiversity fund, the operational MOU for BPCT and funding for the Pest Free Banks Peninsula project signalled in the LTP 2021-31. There appears to be a disconnect between the aspirations outlined in the CCS and the funding means to deliver them.

The Trust's core work is in helping landowners to recognise, foster and protect the ecological values on their land. This includes protecting waterways and wetlands, restoring, and regenerating native vegetation across all habitats, and supporting pest control. All these activities make a positive contribution to the Climate Change Strategy. We futureproof these gains for future generations through legal covenant protection.

1.3 Opportunities: "Achieving our goals together" pg 17

The Trust supports CCC on the way they have structured the CCS around 4 Goals and 10 Programmes, and particularly aligns its activities with:

Goal 4 **"We are guardians of our natural environment and Taonga" CCS p. 16**

Programme 1: **Building the foundation – partnerships and resourcing p. 18**

Programme 5: **Carbon removal and natural restoration**

In relation to Goal 4 and Programmes 1 and 5, the Trust acknowledges and supports submissions presented by the Rod Donald Banks Peninsula Trust and Federated Farmers of New Zealand. There is considerable agreement between us all on these sections of the CCS.

We are also strongly support the desire of CCC to build partnerships and work together with aligned organisations and communities to deliver the 10 programmes outlined.

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One of the signatures of the Trust's work is our ability to facilitate and lead collaborations across agencies (CCC, ECAN, DOC), runanga, aligned organisations, landowners, and communities, all who are passionate about working together on projects which benefit the natural environment, protect natural ecosystems, and enhance biodiversity values on Banks Peninsula. We can achieve much more by working together.

We strongly recommend the CCC works with BPCT to leverage and expand on these existing collaborations including:

- **The 2050 Ecological Vision for Banks Peninsula** www.bpct.org.nz/bpct-2050-ecological-vision which brings together a range of aligned organisations and agencies (CCC/ECAN/DOC) and landowners to support the eight Ecological Goals set out in this Vision. The Vision delivers an aligned, joined up voice for all the outstanding activities and projects which enhance and restore the unique indigenous biodiversity of Banks Peninsula.
- **Ecosystem restoration** <https://www.bpct.org.nz/our-projects> Supporting private landowners to protect and enhance high-value indigenous biodiversity through establishment and ongoing ecological management support for conservation covenants, as well as a range of community education programmes on biodiversity enhancement and protection.
- **Te Kākahu Kahukura** <https://www.tekakahu.org.nz/> is a landscape scale project on the Southern Port Hills to restore a thriving and resilient indigenous forest supporting an abundance of native birds and invertebrates. This taonga for Otautahi is being realised through a BPCT-led collaboration of landowners, residents, not-for-profit organisations, Ngati Wheke, and the agencies (CCC/ECAN/DOC/SDC)
- **Pest Free Banks Peninsula** <https://pestfreebankspeninsula.org.nz> This is a collaborative programme involving 14 partner organisations, targeted to protect and enhance biodiversity on the Peninsula through the widespread removal of animal pests. Involving CCC/ECAN/DOC, iwi, aligned organisations, and landowners on Banks Peninsula. This will increase carbon storage by removing key impediments to natural regeneration.
- **The Wildside Project** <https://www.bpct.org.nz/our-projects?id=30> The Wildside Project is a large-scale collaboration of landowners, Christchurch City Council, Department of Conservation, Environment Canterbury, and BPCT for the protection of a variety of endemic, threatened, and iconic species. The Wildside covers 13,500ha and focuses on habitat protection, with 25% of the Wildside held in private or public reserve.

2. Working Together to deliver the goals and programmes outlined through collaboration and partnership

Goal 4: *We are guardians of our natural environment and Taonga CCS p. 16*

Programme 1: *Building the foundation – partnerships and resourcing CCS p. 18*

About the Trust

The Banks Peninsula Conservation Trust was formed in 2001. We have just celebrated our twentieth birthday. The Trust is a non-profit charitable organisation that works with landowners, agencies, runanga, sponsors, and the wider community to promote the conservation and enhancement of indigenous biodiversity and sustainable land management on Banks Peninsula.

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The Trust was formed as a community-driven organisation to facilitate the protection of biodiversity on private land using voluntary methods. This was following a mediated settlement of land-owner appeals to the Environment Court regarding the then Banks Peninsula District Council's decisions to impose rules about biodiversity protection on private land. In 2003 the Minister of Conservation granted BPCT covenanting authority status under Section 77(1) of the Reserves Act 1997, making the Trust the first, and we understand still the only, non-government organisation to place covenants on to land titles since the QEII National Trust began 40 years ago.

Recognised nationally by the Ministry for the Environment and Department of Conservation with the 2017 Green Ribbon Award for Community Leadership, and with a national award for Community-led Biosecurity from the Ministry for Primary Industries, the Trust is known as a highly successful community-driven conservation organisation and a leader in biodiversity protection.

The wide-spread community support for our conservation efforts is the result of: (a) working with landowners in a non-challenging and empowering way through voluntary protection methods; and (b) operating in a collaborative way that engages the community and provides the linkages between community aspirations for biodiversity protection and enhancement, partnership and funding support from the corporate sector, and the local authorities and agencies with a mandate for conservation work.

The Trust has a reputation for taking a strategic approach to biodiversity management and protection and is recognised as being efficient and effective with the resources available. The biodiversity outcomes able to be achieved by the Trust, working in partnership with CCC, ECAN and other Trusts, agencies, organisations and landowners, are limited by the available funds.

2050 Ecological Vision for Banks Peninsula (including the Port Hills)

In 2017 BPCT led the development of, and launched, the Banks Peninsula/Te Pātaka o Rākaihautū (including the Port Hills) Ecological Vision 2050 www.bpct.org.nz/bpct-2050-ecological-vision. A range of organisations and agencies (including CCC) work together to support **eight Ecological Goals** set out in this Vision. The eight Goals are aspirational but achievable and are being used to guide ecological restoration work to result in a substantial improvement in the state of indigenous biodiversity on Banks Peninsula/Te Pātaka o Rākaihautū by 2050. The Goals build on and seek to implement Environment Canterbury's Regional Biodiversity Strategy (2008), the Christchurch City Council's Biodiversity Strategy 2008 – 2035, the Mahaanui Iwi Management Plan 2013, and the Banks Peninsula Zone Implementation Plan (2013).

All 8 Goals are interrelated and together contribute a significant improvement in the protection and enhancement of indigenous terrestrial, freshwater, and marine biodiversity on Banks Peninsula that align with the biodiversity priorities outlined in Draft Climate Change Strategy and Long-term Plan

The 8 Goals

Goal 1: All old growth remnants (more than 1ha in area) of Banks Peninsula Forest are protected and appropriately managed.

Goal 2: Rare ecosystems are protected and appropriately managed.

Goal 3: The connections between land, freshwater and marine habitats are managed to support viable populations of species that depend on them.

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Goal 4: Four core indigenous forest areas of more than 1000ha each have been protected.

Goal 5: Land and freshwater primarily used for production and for settlement also supports thriving indigenous biodiversity.

Goal 6: Rare and common indigenous flora and fauna of Banks Peninsula are increasingly abundant.

Goal 7: At least 2 locally extinct species have been reintroduced.

Goal 8: Banks Peninsula is effectively free of pests.

2.1 Delivering the 2050 Ecological Vision

The BPCT aligns all of its activities to delivering the 8 goals in the 2050 Ecological Vision including:

Habitat Protection Progress

- The Trust's habitat protection programme is contributing towards achieving these goals. This programme has a long history of working with landowners to protect and enhance biodiversity through a range of voluntary protection mechanisms. The most powerful of these is a **perpetual conservation covenant** that requires current and future landowners to manage the covenant for conservation purposes.
- A well-managed covenant results in high value biodiversity being not only protected but enhanced. Indigenous habitat quality quickly improves on the exclusion of stock, weed and animal pests are reduced with good management, and soil and water quality are improved. A conservation covenant is a priceless gift by current landowners to future generations. We currently have 89 covenants in place protecting over 1500ha, and a full programme of new covenanting projects in progress. Landowner demand for the Trust's support is high, and our rate of progress towards achieving these habitat protection and enhancement goals is limited by the shortage of funds available to carry out this work.

Te Kākahu Kahukura

Te Kākahu Kahukura particularly supports Goal 4 which is to protect four core areas of indigenous forest of more than 1000 ha each and is included as a priority area for control in the Pest Free Banks Peninsula Strategy.

This is a voluntary landowner and community initiative. It includes private land owners, agencies councils and aligned organisations. It aims to facilitate and co-ordinate native forest revegetation and restoration on the Southern Port Hills. Around the core area of regenerating forest, landowners are encouraged to plant native trees and carry out pest control in a way that supports a thriving indigenous forest plant community and allows native birds and other native fauna to move through the landscape.

The Wildside

Heard Submissions Alongside LTP

The Wildside Project is a large-scale collaboration of landowners, Christchurch City Council, Department of Conservation, Environment Canterbury, and BPCT for the protection of a variety of endemic, threatened, and iconic species.

The project began for the protection of breeding sites of pelagic bird species such as the endemic white-flipped little blue penguin, the only titi (sooty shearwater) colony in Canterbury, and yellow-eyed penguin at their northern breeding range. The Wildside has also been recognised internationally in the IUCN Invertebrate Red Data Book (1983) for a place of high invertebrate endemism. Other iconic and threatened species outcomes include the protection of jewelled gecko, spotted skink, the Banks Peninsula tree weta and Akaroa daisy (both found only on the Wildside).

The Wildside is a nationally significant area for the protection of seabird breeding. There are two marine reserves, Pohatu and the Akaroa Marine Reserves. The largest penguin colony on mainland New Zealand is at at Pohatu Flea Bay.

The Wildside covers 13,500ha and focuses on habitat protection, **with 25% of the Wildside held in private or public reserve.**

Pest Free Banks Peninsula

In November 2018, the Council was one of 14 foundation signatories to the Pest Free Banks Peninsula / Te Pātaka o Rākaihautū Memorandum of Understanding. This formalised the community led programme to protect and enhance biodiversity on the Peninsula through the widespread eradication of animal pests.

Substantial progress has been made on this project which supports Goal 8. With funding support from the Department of Conservation and Environment Canterbury, we now have a \$10M, 5-year programme, employing 13 staff and targeting eradication programmes for Kaitorete and the Extended Wildside (20,000ha on the south-eastern Banks Peninsula). These are the first areas in a progressive programme to eradicate animal pests, such as possums, rats, stoats and feral cats from the Peninsula. Alongside this there is a programme to remove feral goats from the Peninsula and a substantial work programme to engage with households and community-based groups for local trapping programmes.

For the last two years, the Council has helped the community-based predator control programmes around the Port Hills and adjacent areas. The \$60,000 provided for each of the last two years has enabled substantial progress towards our goals and supported animal pest control in the Te Kāhahu Kahukura area.

- ***The community-based trapping programme***

The purpose of this programme is to complement the eradication programmes (which are mainly undertaken with paid staff or skilled volunteers) with a programme for local households and community groups across Banks Peninsula and the Port Hills. Throughout New Zealand, there is a rapidly growing interest in the vision of being predator free. Here in Christchurch, we continue to see growing interest and participation. We are on track to meet our target of 4,000 participating households on the Port Hills alone, with many more across the rest of the City and Banks Peninsula.

Experiences in other centres across Aotearoa New Zealand have demonstrated this demand will continue to grow rapidly. In Wellington, for example, there is now extensive coverage of these groups across the city and a Wellington City Council survey found 92 percent of rate payers

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supported the initiative. We want to stay ahead of this high level of demand and have the systems in place to coordinate and support these community-based efforts for effective eradication of pests and enhancement of native wildlife.

There are many willing volunteers, but they need knowledge and organisation to make their efforts rewarding and effective. The funding requested would enable us to provide that. This support is provided collaboratively with a number of other community groups such as the Summit Road Society/Predator Free Port Hills, Banks Peninsula Conservation Trust, community-based trap libraries and other groups across the Peninsula.

- ***Goat Eradication – the goal of eradication of feral goats from Banks Peninsula by 2021***

Past efforts have demonstrated this is an achievable goal with dramatic benefits for biodiversity, the economy and carbon sequestration. This programme is a genuinely collaborative effort, with widespread community input and support across the Peninsula, and supported by staff from the Department of Conservation, Council rangers and the Banks Peninsula Conservation Trust. The 2019 programme removed over 300 goats from Little Akaloa. The programme was disrupted due to COVID last year, but we were on-track to more than double that number in 2021, targeting areas around Mt Evans and south of Little River.

BEFORE AND AFTER REMOVING FERAL GOATS

The photos to the right show before and after the removal of goats. This demonstrates the biodiversity and climate change (carbon sequestration) benefits, which remain persistent and urgent issues that are widely supported by the community and require continued and sustained effort.



Excluding staff time, the cost of this year's goat programme is \$220,000 across all the partners. A substantial component of this utilised financial reserves built up for this purpose by the Banks Peninsula Conservation Trust, but which are now exhausted. The \$40,000 sought from the Council will enable the programme to continue and sits alongside similar contributions from the Department of Conservation and Environment Canterbury.

3: Supporting landowners on Banks Peninsula

Programme 5 *Carbon removal and natural restoration CCC pg 23*

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We support the focus areas described in Programme 5 targeted to help carbon capture while benefiting natural ecosystems and biodiversity.

- *Develop an approach to measure, reduce, and offset our emissions.*
- *Increase carbon sequestration through planting and natural regeneration of indigenous, and more fire-resistant forest across Banks Peninsula.*
- *Identify, protect and restore areas of significant indigenous biodiversity.*
- *Naturalise waterways and introduce wetlands across the city.*
- *Restore coastal ecosystems.*
- *Create natural corridors between key forest/planted areas in Christchurch and Banks Peninsula to encourage biodiversity.*
- *Increase tree canopy cover in the city.*

Banks Peninsula is approximately 115,000 ha. Prior to European settlement, most of this land was covered in a dense native forest, which today in places is rapidly and naturally returning. The combination of the terrain, climate, existing seed sources and the birds to spread them, creates a haven for the natural regeneration. 15% of the Peninsula is now dominated by regenerating indigenous vegetation, naturally recovering from its low point of less than 1%.

Landowners on Banks Peninsula, in some cases over several generations, have carefully managed the balance of enhancing ecological restoration on their land through the natural regeneration of native forest, alongside their need to make a living. There is, however, currently a disincentive for landowners to continue this practice under the current ETS. As it stands, the ETS provides a financial incentive for landowners to earn money quickly by planting forests (mainly introduced conifers) to sequester carbon in the short term. There is a real concern that this will result in widescale planting of monocultures, which while making short term economic sense, would have detrimental environmental and biodiversity impacts in the long term. Spray clearing areas of regenerating native bush to prepare for plantations further reduces biodiversity. **What is needed is a change whereby landowners could earn ETS credits for permanent native vegetation regeneration which would incentivise fencing off areas for this purpose.**

Until the ETS is changed we believe that in the short term the solution lies in the creation of a voluntary carbon and biodiversity market. Individuals and businesses are keen to offset their total footprint, not just what is required by regulations. Landowners are keen to find a long term solution to their “problem” of low return paddocks. Often these are areas that are constantly trying to regenerate.

We ask the Council to discuss this opportunity with us and the many other organisations that have been working on developing a voluntary market for carbon and other ecosystem service credits.

We also believe that pursuing optimal environmental outcomes is best done, not at the farm, community or other man-made boundary but that planning should be at the landscape level, as determined by nature, looking ahead for the next 50 years. Planning by catchment area is a good example of this approach. Increasingly landowners are realising this change in approach is needed. They have come to see the limitations of the farm plans they have been providing. However, they have no one to convene them, to provide expertise and coordinate the project.

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We are entering a new era on Banks Peninsula and in New Zealand where 'Ecological Aspirations' and 'Farm Land and Water Management' are intersecting. No longer is good land and water management a nice to have, it will become the expectation. It will also not be limited to 'pockets' of a property but integrated across the entire farm boundary and beyond. Today's landowners need independent support on Land and Water Management to assist them through changing environmental regulations and facilitating the planning and implementation of the future vision they have for their properties and wider community.

Alignment to **2050 BPCT Ecological Vision**: *The BPCT Ecological Vision Goal 5: Land primarily used for production and for settlement also supports thriving indigenous biodiversity which facilitates carbon capture. Land managers are aware of and protect ecosystems and biodiversity as a matter of course. Periodic mapping and imaging demonstrates that there is an increase in indigenous biodiversity cover across the Peninsula. The whole community is actively involved in projects to enhance biodiversity, the facilitation and support of good land and water management with rural landowners will provide a trickle down.*

4. Recommendations

4.1 Collaboration and partnership

- **Leverage and expand current collaborative projects** (described in section 1) by working with the Trust to build on existing partnerships involved in enhancing biodiversity outcomes on Banks Peninsula.

4.2 Supporting BP landowners

- Work with BPCT to address the concerns about the ETS which currently incentivises the planting of monocultures.
- Explore ways of providing independent support and advice to landowners to assist them to respond quickly to changing national environmental and biodiversity regulatory environment.

4.3 Carbon sequestration and carbon credits

- Work with the Council to explore opportunities for developing a voluntary market for carbon and other ecosystem service credits.
- Explore avenues for changing the ETS to support credits for native regeneration.

4.4 Financial alignment with CCC Long-term plan 2021-2031

- **Extend BPCT's MOU with CCC by a further 10 years** with \$50k per year of operational support funding (ideally with an inflation adjustment built in annually).
- Agree to a significant **increase to the Biodiversity funding** to include \$400,000 for the 2021/2022 financial year and a continuation of this for the life of the LTP.

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- **15% of the \$13.1 million allocated for planting across the city for the purposes of ecological restoration, be allocated to the Te Kākahu Kahukura project** <https://www.tekakahu.org.nz>

- Support for **Pest Free Banks Peninsula** including:

(a) \$120,000 for the 2021/2022 financial year to continue the current initiatives already underway for locally led pest control activities and Te Kākahu Kahukura. An expansion of this funding to \$200,000 in 2022/23 and a continuation of this for the life of the LTP. This will enable the extension of this programme across the Peninsula and into adjacent suburbs of Christchurch.

(b) Funding of \$40,000 per year until the year ending June 2024 to support the goal of eradicating feral goats from the Peninsula by 2024. This is an important, collaborative initiative lead by the rural community on the Peninsula and supported by Council staff, the Department of Conservation and Environment Canterbury. It has significant biodiversity, economic and carbon sequestration benefits.

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
158	39768	Nicky	Snoyink	Forest and Bird	Regional Manager Canterbury/W est Coast	Please see attachment	Yes

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25 April 2021

Christchurch City Council
Te Hononga Civic Offices

BY EMAIL:

Feedback on Draft Ōtautahi Christchurch Climate Change Strategy

Introduction

1. Forest & Bird is New Zealand's leading independent conservation organisation. We have played an important role in preserving Aotearoa New Zealand's environment and native species since 1923. We are independently funded by private subscription, donations, and bequests. Our mission is to protect and preserve New Zealand's unique ecological values, flora and fauna, and natural habitats.
2. Forest & Bird has for many years advocated for robust national climate policy and are delighted that Aotearoa New Zealand finally has a Zero Carbon Act. The hard work now begins to develop and implement a pathway toward reducing emissions and meeting international obligations.
3. Climate change is central and overarching to Forest & Bird national strategic objectives which are:

Climate Centred: Aotearoa New Zealand is resilient to the impacts of climate change. Activities or developments in the region must actively mitigate their contribution to climate change. People understand the threat and urgency of climate change and are supported in climate change practices.

Economy that Supports Nature: Aotearoa New Zealand's economy and nature are interconnected. Unhealthy nature equals an unhealthy economy.

Vibrant Landscapes: Aotearoa New Zealand's terrestrial native flora and fauna are protected and enhanced in urban and rural areas. Landscapes are free from pests. Development can occur without clearing and destroying landscapes and their respective natural ecosystems.

Oceans Alive: Aotearoa New Zealand's people recognise the health of the marine environment is a direct result of on-land activities. The regions harbours return to

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their original, healthy states. Fishing and aquaculture activities follow ecosystem-based management principles. Thirty percent of Aotearoa New Zealand's marine environment is protected through a network of no-take marine protected areas.

Energised Water, Rivers and Wetlands: Aotearoa New Zealand's rivers and streams are clean, healthy and teeming with life. Wetlands are protected and enhanced.

4. Forest & Bird consider the following principles should underpin any climate change strategy:

Doing our fair share: We must make a stronger global commitment to cutting our emissions and helping developing countries. New Zealand's targets should reflect our economic status, ability to take action, and high current and historical per-capita emissions. This means the Christchurch City Council needs to do everything it can to cut emissions.

Cutting emissions first: A commitment to faster emissions reductions must come ahead of removing carbon dioxide from the atmosphere. We need a transformation to a clean green economy, and that means producing and consuming things without generating greenhouse gases.

Nature-first emission reductions: The methods used to cut emissions must protect our native plants and animals. The council should ensure that all infrastructure to support a low carbon future is located in places and constructed in ways that don't harm nature.

Better land use: Marginal and erodible land needs to be returned to native forests and shrublands, regenerative farming is needed to cut emissions, and there should be fewer cows. The city should look for the potential to store carbon in permanent native forests and restored wetlands within the city boundaries, including on Banks Peninsula.

Help nature help us: Once emissions are reduced, we will still need to remove carbon dioxide from the air to stabilise the climate. Nature can help us do this, but only if we protect it. The Council must strengthen protection for remaining in-situ native vegetation, support pest control and native forest restoration.

Helping each other: We need a just transition that helps communities and workforces to adjust, makes sure vulnerable people are not left behind, ensures new technology and ways of working are available to all, and gives effect to the Treaty of Waitangi.

5. Forest & Bird congratulates the Christchurch City Council on the draft Ōtautahi Christchurch Climate Change Strategy, and we are pleased for the opportunity to provide feedback.
6. As the South Island's largest city, Ōtautahi Christchurch can contribute significantly to ensuring Aotearoa New Zealand is on track to meet its national targets and its international climate obligations. A climate change strategy, with action plans for different sectors including achievable time bound milestones and targets will help provide a climate safe future for Ōtautahi Christchurch's people and nature.
7. Forest & Bird agrees with the Council's statement that:

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“Climate change is the biggest challenge of our time. It is already affecting our weather, health and wellbeing, natural environment, taonga species, mahinga kai, food production, biosecurity, infrastructure, and the economy.”

8. Forest & Bird supports the strategy goals and the ten action programs. Clearly the council is on the right track and there are many initiatives underway.
9. However, while the draft strategy is strong on what it broadly wants to achieve in the longer term¹, it is vague on how, how much and by when. The strategy lacks a detailed pathway with achievable, timebound milestones. Short-, medium- and long-term targets and milestones are critical to monitoring progress, measuring success and whether goals are on track to be met. These are vital aspects of a good strategy.
10. Without a pathway to the goals there is no real accountability. Milestones need to be frequent enough so that the councillors can be held accountable at elections, and the temptation to postpone action is limited.
11. Forest & Bird recommends developing targets and milestones for the council as an entity in and of itself; and for the ten action programs the council has proposed for the broader Ōtautahi Christchurch area. This will strengthen the strategy considerably. Periodic review is also recommended to ensure the strategy remains fit for purpose over time.
12. The goals, actions and milestones need to be integrated into the council's long-term plan. The council's long term work program needs to complement its broader climate change obligations and goals.
13. Finally, Ōtautahi Christchurch and Aotearoa New Zealand needs to commit to helping its Pacific neighbours who despite a low carbon footprint, will pay a much higher cost, sooner.
14. We hope that our suggestions have been helpful and that they will be reflected in the final Ōtautahi Christchurch Climate Change Strategy.

Thank you for the opportunity to provide feedback.

Nicky Snoyink
Regional Manager Canterbury/West Coast,
Royal Forest & Bird Protection Society of New Zealand Inc.

¹ Council has set the target of achieving net zero greenhouse emissions by 2045 (excluding methane), and to halve emissions by 2030, from 2016-17 levels.

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#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
164	39774	Suky	Thompson	Rod Donald Banks Peninsula Trust	Trust Manager	Please see attachment	Yes

Trust behalf of: Manager
Te Mahere Rautaki Kaurera - Our Draft Long Term Plan 2021-31 from Thompson, Suky organisation: Rod Donald Banks Peninsula
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Te Mahere Rautaki Kaurera - Our Draft Long Term Plan 2021-31

Submitter Details

First name: Suky Last name: Thompson

Organisation name, if you are submitting on
behalf of the organisation:

Rod Donald Banks Peninsula Trust

Your role in the organisation: Manager

Would you like to present your submission in person at a hearing? (if yes, you must provide a contact phone number)

☒ Yes

☐ I do NOT wish to speak in support of my submission and ask that the following submission be fully considered.

Additional requirements for hearing:

Attached Documents

File
RDBPT CCC LTP 2021-31 and Climate Change Strategy submission V3-1 submitted

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Submission to

Ōtautahi Christchurch
Climate Change Strategy
Draft 2021

and

Te Mahere Rautaki Kaurera
Our Draft Long Term Plan

Rod Donald Banks Peninsula Trust

We wish to be heard in support of our submission at hearings
for both consultations.

Contact details: Suky Thompson, Trust Manager,
Postal address:
Organisation role: Conservation and recreation on Banks Peninsula

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Submission summary

The Rod Donald Banks Peninsula Trust is a Christchurch City Council controlled organisation founded in 2010 for the benefit of Banks Peninsula/Te Pātaka o Rākaihautū residents and visitors.

We strongly support the Council's draft Climate Change Strategy and urge funding for it to be included in the Long Term Plan 2021-31, coming on stream from FY22.

We offer positive and innovative ideas that contribute to climate solutions for Christchurch and can be implemented immediately. We focus on areas identified in Programme 5 *Carbon removal and natural restoration*. Our ideas can be implemented cost effectively through existing budgets and channels. We suggest that the relatively minor costs are funded through the Long Term Plan either by adjustments to other budgets –another review using the climate change lens may well identify less-cost effective uses – or through an increase in rates or borrowing if none can be found.

The Climate Change Commission has made it clear that work must start now to achieve the transformational and lasting change across society and the economy needed. Harvesting the low hanging fruit on Banks Peninsula presents a win-win for biodiversity, climate and the economy.

The changes we suggest will further the Trust vision of:

Ko te whakawhanake kaitiaki taiao nā te whakahōu ara hīkoi, ara paihikara, te whakaniko rerenga rauropi, te whakamana mātauranga me te mahi tahi ki ngā tāngata e kaingākau kaha ana ki Te Pātaka o Rākaihautū hoki.

Developing environmental guardians of the future through improved public walking and biking access, enhancing biodiversity, promoting knowledge and working in partnership with others who share our commitment to Banks Peninsula.

The Trust works in partnership with Banks Peninsula Conservation Trust, Department of Conservation, Pest Free Banks Peninsula, mana whenua, local communities, organisations and authorities, landowners, and the Christchurch City Council on projects that support its pillars of access, biodiversity and knowledge.

The Rod Donald Banks Peninsula Trust strongly supports:

- The new funding in the LTP for the Rod Donald Banks Peninsula Trust via two capital injections and an annual operating grant. This will enable the Trust to continue serving the Peninsula and the Council and delivering our strategic plan.
- Continued funding for Banks Peninsula Conservation Trust, the Biodiversity Fund, and the programmes delivered via the Regional and Community Parks teams that support our vision.

The Rod Donald Banks Peninsula Trust seeks in addition:

- A financial contribution toward the capital and operating costs of the new Te Ahu Pātiki conservation park. We suggest \$50,000 capital and \$10,000 annually.
- Funding for Enviro Schools to be re-instated and increased to at least \$100k per annum.
- More public funding to purchase land for biodiversity and low carbon recreation
- Integration of Banks Peninsula Ecological Vision into the Council's biodiversity work
- Increased support for other groups and organisations that work together to deliver biodiversity and climate change outcomes, including slow tourism
- Retention of public land that has biodiversity, carbon sequestration and recreational benefits.

We act as the convenor for the Banks Peninsula Native Forest Climate Change group and support the measures in its submission to enact Programme 5 of the new Climate Change Strategy through.

- Increased funding for Banks Peninsula Conservation Trust and the programmes it supports
- Increased budget for the Biodiversity Fund
- Land purchase for conservation
- Improved regulatory and compliance framework.

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1 Climate and biodiversity funding needed urgently now

In 2019 the Christchurch City Council declared a Climate and Ecological Emergency and then adopted ambitious greenhouse gas emissions targets for our district. However, a full two years later, the 10 year funding program outlined in its 2021-31 LTP remains directed toward high carbon footprint activities based on the resumption of tourism in its previous form once Covid-19 travel restrictions are lifted, while the funding for biodiversity, carbon sequestration and low- carbon recreational activities that will enact the Climate Change Strategy remain tiny by comparison and are in some cases is even being cut.

We appreciate that substantial funding is going into the cycleway program within the city, but apart from that, we are concerned that unless the Council really changes the activities it funds to actively incentivise low-carbon travel and recreation and maximise sequestration, then emissions will continue to rise rather than reduce in the coming years, and what remains of our once rich biodiversity will further reduce.

Whilst we greatly appreciate funding for the Rod Donald Trust and this will be a great help to the Trust achieving its objectives for the Peninsula and for the Council, and whilst this includes significant environmental education, biodiversity and climate change outcomes, this is only a part of what is required to make the difference needed. Additional funding for these activities is required over the life of the plan and starting in year one.

We are therefore asking the Council to take a hard look at its LTP and to find funding to support projects that lead to genuine emissions reduction, carbon sequestration in tandem with biodiversity enhancement and changes in attitudes and behaviour of the population toward low-carbon recreation that have begun as a result of Covid-19.

Our submission focusses on ways we think the Council could achieve this using the natural attributes and existing initiatives on Banks Peninsula. Banks Peninsula represents 75% of the total land area of Christchurch City and although the population of the area is small, it is highly dedicated to the restoration of biodiversity and has many excellent initiatives underway that could achieve much more, with relatively small injections of funding. There is no need to wait until detailed programmes are worked up under the Climate Change Strategy – there are many things that can be done immediately – and where relatively small amounts of funding will make a huge difference.

2 Recognise Banks Peninsula's role in achieving climate and biodiversity goals and public education

The Trust seeks a greater recognition in the LTP for the unique role that Banks Peninsula provides for Christchurch as a biodiversity hotspot and vessel for carbon sequestration through natural regeneration, and how this can build community engagement and action through low-carbon recreational opportunities.

Banks Peninsula is approximately 115,000ha in size, much of which is steep marginal land used for pastoral farming. Prior to European settlement, most of this land was covered in a dense native forest, and wherever the touch of humans is light, this native forest is rapidly and naturally returning. The combination of the terrain, climate, existing seed sources, and the birds to spread them, creates a haven for natural regeneration. 15% of the Peninsula is now dominated by regenerating indigenous vegetation, naturally recovering from its low point of less than 1%.

The Peninsula therefore provides “low-hanging fruit” for Christchurch to achieve its Climate Change Strategy Goal 4 *We are guardians of our natural environment and taonga*, and Programme 5 *Carbon removal and natural restoration*.

We would like to see this achieved on Banks Peninsula through greater funding for biodiversity to create further public regional parks, greater incentives to private landowners to protect biodiversity, more assistance with pest control and more rigorous enforcement when native biodiversity is cleared. We would like to see a greater recognition of the role of native biodiversity in both mitigating and assisting adaptation to climate change. We would like to see more opportunities for people, including children and young

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people, to get out into these areas through low-carbon activities such as walking, cycling and tramping, and to learn more about the environment when they do.

2.1 Restoring Te Pātaka o Rākaihautū/Banks Peninsula

Environment Canterbury recently funded the Environmental Defence Society case study *Restoring Te Pātaka o Rākaihautū/Banks Peninsula*. This is an excellent report which identifies that the current regulatory and financial incentives encourage landowners to establish new exotic forestry plantations on Banks Peninsula along with the significant threat this poses to native biodiversity and the landscape.

The report makes key recommendations¹ relevant to the Christchurch City Council LTP including:

- Supporting initiatives of the Rod Donald Banks Peninsula Trust, Te Pātaka o Rākaihautū/Banks Peninsula GeoPark Trust, Banks Peninsula Conservation Trust and the work of others involved in covenanting and facilitating landscape-scale restoration projects
- Develop a tourism destination management plan for the Akaroa area which prioritises slow tourism and deeper engagement of visitors in the cultural, historical and natural landscape.
- Continue to support the work of the Banks Peninsula Conservation Trust and others in covenanting and facilitating broader landscape-scale restoration projects
- Review the Christchurch District Plan, following active engagement with the community, to ensure it fully recognises cultural and natural landscapes including more comprehensively mapping the Outstanding Natural Landscape (ONL) areas
- Continue community engagement on the assessment and status of Sites of Ecological Significance (SEs) in Schedule B of the District Plan.

We urge the Council to read this report and implement its recommendations. We provide suggestions on how this can be achieved throughout this submission.

2.2 Now is the time for slow tourism

Covid-19 has demonstrated the desire of people to get out and explore their backyard and that this has by and large been beneficial to tourism on Banks Peninsula. Akaroa, for example, is in a much healthier state than when conventional international tourism was at its height, and the town was overwhelmed by short stay international cruise visitors.

We submit that low carbon recreation needs to be the focus for the tourism industry. In practice this means retaining as much local and domestic tourism as possible and providing slow low-carbon activities for visitors.

Banks Peninsula provides an ideal place to increase opportunities for tramping, walking and cycling through its beautiful natural environment, and to encourage international tourists to stay for longer in the area.

3 Funding for Rod Donald Banks Peninsula Trust – an excellent start

The Rod Donald Banks Peninsula Trust was founded by the Council in 2010. It was provided with an initial capital grant derived from the sale of farms that had belonged to the Banks Peninsula District Council and its predecessor Councils since the 19th century. The funds have been used in an extremely cost-effective manner to further the Council's Public Open Space and Biodiversity Strategies. As a CCO, the Trust has proved sufficiently nimble to be able to seize opportunities for public and environmental good where the Council itself is too constrained. To date this has included securing over 1000ha for biodiversity reserves in conjunction with public access, developing and promoting the many low-carbon walking and cycling

¹ Peart, Raewyn and Woodhouse, Cordelia, Environmental Defence Society, *Restoring Te Pātaka o Rākaihautū/Banks Peninsula*, February 2021 p72

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opportunities on the Peninsula, seed funding biodiversity initiatives and building partnerships across the spectrum with community organisations and Papitipu runanga.

The Trust is pleased that the Council has recognised its success through awarding it further capital funding and an operational grant through the LTP. We strongly support this new funding commencing in FY24 which will enable the Trust to continue to operate and to achieve its strategic plan “Striding Forward | Hikoa Whakamua 2020-2030”.

We do however ask that the Council make provision in its LTP for an additional grant to support the Te Ahu Pātiki conservation park project and consider bringing the capital grants to the Trust forward.

3.1 Financially support the Te Ahu Pātiki purchase with a \$50,000 grant

The Trust will settle the purchase of Te Ahu Pātiki on 1 July 2021. This will create a new 500ha conservation park protecting the two highest peaks in Christchurch, Mt Herbert and Mt Bradley, for biodiversity to regenerate and with full public access. The new park will be highly visible from everywhere in the Whakaraupō/Lyttelton Harbour basin, the peaks are visible from much of the city, and the new park will provide an exemplar for biodiversity restoration and protect access on Te Ara Pātaka, the highly popular and premier tramping network in the Christchurch area.

The Trust is putting in a substantial amount of its current capital into the project. Orton Bradley Park is also making a significant financial contribution. The Trust has been crowd-funding since November 2020 and has now attracted over \$435,000 in donations from over 400 donors – demonstrating the popularity of the project. The Trust is currently \$150k short of its fundraising target and **invites Christchurch City Council to become a Tōtara level sponsor for the project by contributing \$50,000 directly toward the purchase** through an additional grant in this LTP.

The project is supported by the Banks Peninsula Zone Committee, Te Hapū o Ngāti Wheke, who hold mana whenua over the area, and the Whaka-Ora Healthy Harbour group. We attach letters of support from these organisations to our submission.

3.2 Consider bringing the Trust capital grants forward

The LTP lists two capital injections to the Rod Donald Trust of \$1.35m each, the first in FY24, the second in FY27. These grants have been allocated subsequent to the Trust informing the Council in 2019 that it expected its capital reserves to be depleted below a level where it could continue to function once it had completed the Te Ahu Pātiki purchase. This was followed by an intensive Joint Working Party that reviewed the achievements of the Trust during its first 9 years of operation and the extent to which its Strategic Plan “Striding Forward | Hikoi Whakamua” would achieve Council goals for Public Open Space and Biodiversity.

We are most grateful for the new grants that recognise the value of the Trust’s work.

Given the new focus on Climate Change, the needs of Banks Peninsula and the opportunities it offers to the Council to create a large carbon sink for the future through biodiversity restoration, we ask the Council to consider bringing forward the capital grants by one or two years so that the first injection occurs on July 2021 if possible or July 2022. This is because the Te Ahu Pātiki purchase which settles on 1 July 2021 will deplete the Trust’s capital reserve to below \$1 million considerably curtailing its ability to seize opportunities for major projects in the next two years.

This is already impacting our effectiveness. For instance, the Trust was not in a financial position to make a bid recently when a property ideal for the combination of biodiversity restoration and low-carbon recreation came on the market.

As the submission from the Banks Peninsula Native Forest Climate Change group makes clear, the current regulatory framework means that biodiversity on Banks Peninsula is under threat, particularly because the new permissive National Environmental Standards for Plantation Forestry (NESPF) mean exotic rotational forestry is now a permitted activity on most of the Peninsula. This means that when properties with high biodiversity values come on the market, they are at high risk of purchase for the purpose of pine forestry, with all the associated negative impacts on the landscape, wilding control, soil erosion and biodiversity. It is

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critical that there is funding to secure such properties in these circumstances so that biodiversity may come first.

4 Increase funding for biodiversity initiatives already underway

The Banks Peninsula Native Forest Climate Change (BPNFCC) group submission describes the potential for Banks Peninsula to sequester carbon on a landscape scale in tandem with biodiversity enhancement through facilitating rather than fighting the natural regeneration process – as has been so aptly demonstrated at Hinewai Reserve. The submission advocates for an increase in several funding programmes and community initiatives underway that support the Council's Climate Change Strategy, would not create extra work for the Council and could be ramped up immediately with increases to the very modest levels of funding they currently receive.

We support and agree with the submission from this group for:

- Increased funding for Banks Peninsula Conservation Trust and the programmes it supports, including incorporation of the Banks Peninsula Ecological Vision into the Council's strategies, and the work of Pest Free Banks Peninsula.
- Increased budget for the Biodiversity Fund to support private landowners who protect biodiversity for philanthropic reasons
- Establish a land purchase for conservation, or achieving further land purchase via an increased grant to the Rod Donald Banks Peninsula Trust
- Improved regulatory and compliance framework to protect biodiversity. Particularly with regards to consents to clear land of native vegetation.

We agree with and support the reasoning in that group's submission and therefore do not repeat it here.

4.1 Retain Diamond Harbour land as a regional park

A large block of Council owned land in Diamond Harbour is earmarked for disposal. The land is intersected by several gullies which host waterways and native biodiversity and are used for recreational walking, including the track leading to the summit of Mt Herbert/Te Ahu Pātiki and the Te Ara Pātaka network, and the School Track which enables children to walk safely to school instead of being driven by their parents.

Our preference is that this be revegetated in native forest for carbon sequestration and retained with a new status as a regional park. Selling it would be entirely contrary to our view that the Council should obtain more regional parks for sequestration. It is essential that the bush gullies and the walking tracks are protected. Although the Trust generally favours natural regeneration, this land, right in the centre of an urban area, would be ideal for planting, and would provide an excellent place for a climate change community engagement project.

5 Support public education and low-carbon recreation activities

Banks Peninsula offers wonderful low-carbon recreation and tourism activities to Christchurch. We encourage the Council to support the development of these in tandem with new carbon sinks for based around biodiversity regeneration. The two are a natural fit. Getting more people into the environment through low-carbon recreation such as walking, tramping and cycling provides the opportunity for education, changing attitudes and developing environmental guardians of the future – when this is done in tandem with biodiversity restoration.

We agree with the Environmental Defence Society recommendation that the Council

- *Develop a tourism destination management plan for the Akaroa area which prioritises slow tourism and deeper engagement of visitors in the cultural, historical and natural landscape.*

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We go further and suggest that a tourism and visitor destination management plan prioritizing slow tourism and deeper engagement of visitors is developed for the whole Peninsula.

As tourism recovers from Covid-19 it is critical that it does not return to the previous uncontrolled mass-tourism model based on extremely high short-stay visitor numbers. This uncontrolled tourism was seriously damaging the social licence for tourism and causing environmental damage.

In our work we encountered this on virtually every project. For instance, landowners were at times reluctant to create walking easements over private property for fear of uncontrolled visitor numbers. There were concerns over human waste on tracks and at car park areas. At the same time there was a great reluctance to introduce public toilets (such as pit toilets) in busy locations on the basis that this would encourage further misuse through uncontrolled freedom camping.

Fire risk in remote areas was an ongoing concern of landowners which many associated with unrestrained freedom camping. The Climate Change Strategy has clearly identified that Banks Peninsula will be at a greater risk from fire due to the increased droughts expected under climate change. Drought conditions already prevail with little rain since 2020 and water shortages in communities such as Akaroa and Duvauchelle. Fire presents a huge threat to biodiversity on Banks Peninsula.

The Covid-19 pandemic has demonstrated that having fewer visitors who spend more is much better for communities and the environment. It has also shown how much people in Christchurch enjoy getting out walking and cycling and exploring their back yard.

The moment is right to harness Banks Peninsula as a place for environmental education through low-carbon activities.

Our specific funding requests are:

5.1 Re-instate funding for Enviro-schools

Encouraging young minds to be more environmentally conscious and aware is critical to our society's ability to survive the climate crisis ahead. We are therefore taken aback to see that the small amount of funding, \$50k per annum, allocated to the Enviro-schools programme, is to be discontinued.

This cut is a mistake. The Enviro-schools programme not only needs to be maintained, it needs to be increased. We ask that the funding is reinstated and increased to at least \$100k per annum.

5.2 Support Orton Bradley Park

We understand that Orton Bradley Park receives a small annual grant from the Council. We ask that this is increased to enable the park to remove its gate entrance fee. The gate fee is currently essential to help the Park cover its operating costs, but it acts as a barrier to some visitors, and there are costs associated with its collection.

Orton Bradley Park will provide the future gateway to the new Te Ahu Pātiki park. The Trust believes that free public access to this new park using the existing tracks through Orton Bradley Park will encourage more people from Christchurch to visit Te Ahu Pātiki.

Orton Bradley Park provides a superb low-carbon recreational resource to the people of Christchurch, with its low-cost camping areas, walking tracks, mountain biking for kids and protected stream for them to play in.

Although it is owned and managed by a private trust, the land is protected in perpetuity for public benefit, and we would like it to have free access in the same way as for the regional parks provided by the Council.

We suggest that its current grant is increased by \$40k per annum to enable the gate fee to be withdrawn.

5.3 Support Te Pātaka o Rākaihautū/Banks Peninsula GeoPark Trust

Te Pātaka o Rākaihautū/Banks Peninsula GeoPark is a new initiative supported by the Trust and many other groups and agencies. Its aim is to promote Banks Peninsula as a slow tourism destination by providing in depth and interesting information to the public at a series of Geosites and GeoTrails – and to interpret how

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the geology underpinning each site has affected the biodiversity that has subsequently developed there, and the human cultures layered on top.

The Rod Donald Trust has granted seed funding to the GeoPark Trust to create the first GeoSite at Governors Bay this year. That seed funding has been augmented by a further grant from the Rata Foundation.

We suggest that Christchurch City Council gets behind the GeoPark initiative with a grant of at least \$50k per annum for the next 10 years to cover basic costs for ½ FTE and enable the Trust to roll out its programme. This will help make Banks Peninsula a more popular slow tourism destination.

6 Conclusion

The Climate and Ecological Emergency has been recognized at both the national level and by Christchurch City. It is indeed an emergency, because if we do not make huge changes to our behavior and priorities, the planetary eco-systems supporting life as we know it are going to change drastically and for the worse. We must take drastic action now to make such changes in the short window left to limit global heating.

The Climate Change Commission has made it clear that work must start now to achieve the transformational and lasting change need across society and the economy. Harvesting the low hanging fruit on Banks Peninsula presents Christchurch City Council with a win-win for biodiversity, climate change and the economy.

We seek funding and recognition for the role that Banks Peninsula can play if the regulatory and incentive framework shifts towards one of accelerating regeneration and building community engagement. We are calling on Christchurch City Council to begin the immediate implementation of Programme 5 in its Climate Change Strategy through minor changes to its LTP.

The only thing stopping Banks Peninsula becoming cloaked once again in native forest is human activity. With appropriate support from Christchurch City, a shift from pastoral farming and exotic forestry to native forest regeneration on marginal land could be rapidly achieved and on a landscape scale on both private and public land.

The Peninsula is situated close to the majority of the Canterbury population. This proximity presents an incredible opportunity to achieve the transformations sought in the Climate Change Strategy. Underpinning this is the Council's increased support for the Peninsula's regenerating native forests via regional conservation parks that have enduring public access, along with improved funding for community groups who provide, manage and maintain public conservation areas. Public education and support for their health and wellbeing are key social outcomes of these transformations.

We ask that the climate change lens is re-applied to the LTP and funds are reallocated so that the potential of Banks Peninsula to assist the City with its climate change goals can be realized. Banks Peninsula provides the ideal place to accelerate regeneration of the natural environment combined with building community engagement and action in a cost-effective manner.

We wish to be heard in support of our submission.

Heard Submissions Alongside LTP



11 September 2020

To Whom It May Concern:

LETTER OF SUPPORT – ROD DONALD BANKS PENINSULA TRUST TE AHU PĀTIKI PURCHASE

The Banks Peninsula Community Board fully supports the purchase of Te Ahu Pātiki by the Rod Donald Banks Peninsula Trust which plans to create a conservation park, with full public access, to protect and restore native biodiversity.

The purchase of this land by the Trust will secure public access on Te Ara Pātaka, the Ōtautahi to Akaroa tramping network, providing additional opportunities for walking and mountain biking, including new access to the Mt Bradley summit.

It will also fill a gap to create 1700ha of continuous land protected for biodiversity, fulfilling a goal of the Banks Peninsula Conservation Trust's Ecological Vision. The natural regeneration of the land will protect the Te Wharau stream from summit to sea and improve water quality in the Te Waiake stream, thus also supporting the vision of Whaka Ora – Healthy Harbour, the Lyttelton catchment management plan.

The outstanding achievements to date of the Rod Donald Banks Peninsula Trust, working in partnership with a number of like-minded organisations, have proven its expertise in the valuable work it does protecting and restoring land and encouraging both locals and tourists to enjoy access to the stunningly beautiful Banks Peninsula playground.

The Board is delighted to support this project which will provide enormous benefit to the environment, further opportunities for the adventurous and multiple advantages for local communities.

If you have any questions about this letter please do not hesitate to get in touch.

Yours faithfully



Tori Peden

Chairperson
Banks Peninsula Community Board

Akaroa Service Centre

Heard Submissions Alongside LTP

Harry Ell Summit Road Memorial Trust

Leave a lasting legacy for future generations to enjoy the Port Hills.



8 July 2020

John Goodrich

Harry Ell Summit Road Memorial Trust

Dear Trustees of the Rod Donald Banks Peninsula Trust

We were delighted to hear that you are negotiating for the purchase of Loudon Farm including the summits of Mt Bradley and Mt Herbert.

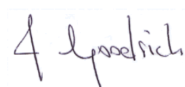
Harry Ell dreamed of a route between Gebbies Pass and Hilltop. Te Ara Pātaka is the fulfilment of this dream. Loudon Farm is the last remaining section of Te Ara Pātaka held within private ownership. Its purchase would ensure that public access to this historical route is protected for future generations and that this land can be managed for biodiversity purposes, restoring our native vegetation, birds, lizards and invertebrates.

The Harry Ell Summit Road Memorial Trust was set up in 2002 to further the work of the Summit Road Society and in particular to ensure Harry Ell's vision for protecting and preserving the Port Hills and providing for public access.

We are pleased to pledge a donation of \$5000 towards the purchase of Loudon Farm. The Harry Ell Summit Road Memorial Trust sees this purchase as a once in a lifetime opportunity. It will fulfil Harry Ell's vision for the Port Hills and Banks Peninsula and enable the creation of a contiguous corridor of 1700ha of protected land. We commend the Rod Donald Banks Peninsula Trust for your work in getting to this point.

We are in full support of this purchase and hope that our pledge will assist in making this vision a reality.

Regards,

A handwritten signature in blue ink that reads "J Goodrich".

John Goodrich
Chairperson

Heard Submissions Alongside LTP

Banks Peninsula Water Zone Committee

Suky Thompson
Manager
Rod Donald Banks Peninsula Trust

Dear Suky

At the 21 July 2020 Banks Peninsula Zone Committee meeting, the Committee agreed to endorse the Te Ahu Pātiki project led by the Rod Donald Banks Peninsula Trust.

The Zone Committee supports the Trust in its application for funding to assist with the land purchase and other costs.

The full text of the minutes on this item are below:

- 11. Te Ahu Pātiki Project Led by the Rod Donald Banks Peninsula Trust**
- 1.1 At the Committee's 30 June 2020 workshop a presentation was given by members of the Rod Donald Banks Peninsula Trust about the Te Ahu Pātiki project for creation of a conservation park in the upper Te Wharau catchment basin and part of the Te Waiake catchment.
- 1.2 The Trust requested the support of the Zone Committee, and of the Trust's application for funding to assist with the land purchase and other costs related to this project.

Committee Resolved BPZC/2020/00018

That the Banks Peninsula Water Management Zone Committee:

1. Endorses the Te Ahu Pātiki project led by the Rod Donald Banks Peninsula Trust to secure the upper Te Wharau catchment basin between Mt Herbert/Te Ahu Pātiki and Mt Bradley and part of the Te Waiake catchment, to create a conservation park for public benefit and withdrawing grazing cattle. (Refer Note 1)
2. The Zone Committee supports the Trust in its application for funding to assist with the land purchase and other costs. (Refer Note 2)
Note 1: The project aligns well with progress towards the Zone Committee's outcomes for Ki Uta Ki Tai, improved water quality, enhanced biodiversity and reduced sedimentation. It will help deliver the Whakaraupō/Lyttelton Harbour Catchment Management Plan.
Note 2: The Zone Committee anticipates it may become more directly involved in the project once the land has been secured, for example if catchment planting or other biodiversity protection and enhancement actions are identified in the resulting management plan.

Paula Smith/Dr Benita Wakefield **Carried**

The Zone Committee wishes the Rod Donald Trust well with this project. Please keep the Committee informed of significant progress such as once the land has been secured. Please

The Banks Peninsula Water Zone Committee is a community led committee supported by councils.

 [fb.com/canterburywater](https://www.facebook.com/canterburywater)

Christchurch
City Council 

 **Environment
Canterbury
Regional Council**
Kaunihera Taiao ki Waitaha

Heard Submissions Alongside LTP

Banks Peninsula Water Zone Committee

get in touch with the Committee when we can be of more assistance or if you have any questions.

Ngā mihi,



Dr Benita Wakefield
Chairperson, Banks Peninsula Zone Committee

*The Banks Peninsula Water Zone Committee is a
community led committee supported by councils.*

 [fb.com/canterburywater](https://www.facebook.com/canterburywater)

Christchurch
City Council 

 **Environment
Canterbury
Regional Council**
Kaunihera Taiao ki Waitaha

Heard Submissions Alongside LTP



a passion for the Port Hills

Summit Road Society

13 July 2020

Dear Trustees of the Rod Donald Banks Peninsula Trust,

We are writing to affirm our support for the proposed purchase of Loudon Farm, including the summits of Mt Bradley and Mt Herbert.

The Summit Road Society was formed in 1948 to further the vision of Harry Ell to protect and preserve the Port Hills and to provide for public access. Our Mission Statement is "Working to enhance, preserve and protect the natural environment, beauty and open character of the Port Hills of Banks Peninsula for people to enjoy".

We own four reserves on the Port Hills. Our focus is on providing opportunities for recreational access and protecting and enhancing the native biodiversity of our reserves through planting, native regeneration and weed, pest and predator control. We also lead a large community project Predator Free Port Hills which aims to eradicate predators from the Port Hills by 2050.

John Jameson founded the Summit Road Society in 1948. John's grandfather, Harry Ell, dedicated much of his life to preserving the last remnants of native bush on the Port Hills and establishing rest houses for those walking along the Summit Road. Harry Ell dreamed of a route between Gebbies Pass and Hilltop. He walked this route, as did many others from Christchurch staying at the Sign of the Packhorse and tramping onwards to Akaroa. A road was never completed and the route became essentially impassable. However, in 2016, Te Ara Pātaka, the Summit Walkway, was opened. We see this route as the fulfilment of Harry Ell's vision. The purchase of Loudon Farm would ensure public access for the last remaining section of private land on the Te Ara Pātaka walkway. Most importantly, this access would be protected for future generations.

The Board of the Summit Road Society supports and endorses this purchase. It fulfils Harry Ell's dream for public access across Banks Peninsula and the Port Hills. It is a rare opportunity to acquire a further 500 ha and, in turn, create a contiguous corridor of 1700 ha of protected land. It will also provide a link from the iconic Sign of the Packhorse down into Charteris Bay (Orton Bradley Park). We see this new reserve as key to achieving our vision of a Predator Free Port Hills and, in turn, Pest Free Banks Peninsula.

The Society's finances are committed to the maintenance and protection of our reserves and to Predator Free Port Hills. Nonetheless, we view this purchase as a once in a lifetime opportunity. We therefore asked the Harry Ell Summit Road Memorial Trust to make a donation towards the purchase. We are delighted that the Trust has pledged to donate \$5000.

We wholeheartedly support your efforts to acquire this property.

Yours sincerely,

Bill Woods
President

Heard Submissions Alongside LTP



13 July 2020

Suky Thompson
Manager
Rod Donald Banks Peninsula Trust

Kia ora Suky,

Endorsement of the Te Ahu Pātiki project

On behalf of the Whaka-Ora, Healthy Harbour Governance Group, we would like to endorse the Te Ahu Pātiki project led by the Rod Donald Banks Peninsula Trust.

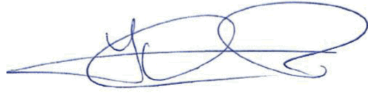
The project will secure the high slopes, summits and gully heads of Te Ahu Pātiki/Mt Herbert and Mt Bradley as a conservation park for public benefit and biodiversity enhancement. Grazing cattle will be withdrawn to facilitate natural regeneration of native biodiversity and improve stream health for the upper catchment basin of Te Wharau stream and part of the Te Waiake catchment. Public access on the Te Ara Pātaka/Summit Walkway will be secured.

The project will result in ki uta kit tai (summit to sea) protection for the Te Wharau stream, as below the Te Ahu Pātiki block it is already protected through neighbouring Orton Bradley Park until it reaches the sea. Stock are excluded from the stream through the park and side catchments protected by QEII covenants.

Whaka-Ora, Healthy Harbour strongly supports the Trust in its applications for funding to assist with the land purchase and other costs, as this projects actions several of our key focus areas, including Erosion and sedimentation, Pollution (through stock removal), Terrestrial Indigenous Biodiversity, and Marine Indigenous Biodiversity (through cleaner streams).

Nga mihi nui

Heard Submissions Alongside LTP



Yvette Couch-Lewis
Co-Chair, Whaka-ora, Healthy Harbour



Roger Gray
Co-Chair, Whaka-ora, Healthy Harbour

On behalf of Whaka-Ora Healthy Harbour Governance Group:

Cr Andrew Turner, Christchurch City Council
Cr Lan Pham, Environment Canterbury
Trudy Heath, Te Rūnanga o Ngāi Tahu

Heard Submissions Alongside LTP

TE HAPŪ O NGĀTI WHEKE INCORPORATED

12 June 2020

Rod Donald Banks Peninsula Trust
c/o Richard Suggate

Tēnā koe Richard

Re: Purchase of part of Loudon Farm

Te Hapū o Ngāti Wheke understands the Rod Donald Banks Peninsula Trust is proposing to purchase upper parts of Loudon Farm for the purpose of creating a park and removing stock to encourage indigenous vegetation regeneration.

We also understand the land the Trust intend to purchase includes the northern faces and summits of Te Ahu Pātiki, a maunga that has a long historic association with our people. Given this significance we would like to support the project by agreeing to you using the name *Te Ahu Pātiki* for the park. This will be fitting given your initiative will help us work together to restore the mana and the mauri not only of Te Ahu Pātiki itself but also its connection to Whakaraupō.

Given our intergenerational relationship with this land, we know that questions of long-term protection and ownership are also important. We would therefore note at this time our serious concerns at the idea of handing control of the land to CCC or DOC, and we would want to work in partnership with you to determine a long-term ownership model that would best protect the mauri of Te Ahu Patiki.

We look forward to continuing to build our long-term working relationship with you, led by the Chair of our Natural Resources Portfolio, Yvette Couch-Lewis, who we know will represent the interests of our hapū well.



Manaia Rehu
Chair, Te Hapū o Ngāti Wheke Inc

Heard Submissions Alongside LTP

#	SubID	First name	Last name	Name of organisation	Your role within organisation	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
165	39775	Suky	Thompson	Banks Peninsula Native Forest/Climate Change group	Rod Donald Banks Peninsula Trust Manager	Please see attachment	Yes

2045

Heard Submissions Alongside LTP

Submission to
Christchurch City Council

**Ōtautahi Christchurch
Climate Change Strategy
Draft 2021**

and

**Te Mahere Rautaki Kaurera
Our Draft Long Term Plan**

Submitted by
**Banks Peninsula Native Forest/Climate Change
group**

Comprised of representatives from
Banks Peninsula Conservation Trust
Lucas Associates
Manaaki Whenua / Landcare Research
Maurice White Native Forest Trust (Hinewai Reserve)
QEII National Trust
Rod Donald Banks Peninsula Trust
Orion New Zealand Ltd

18 April 2021

Attachment D Item 5

2045

Heard Submissions Alongside LTP

Preface

The Banks Peninsula Native Forest/Climate Change group is an informal inter-agency alliance seeking to improve opportunities for biodiversity through native forest restoration on Banks Peninsula.

Group members involved in preparing this submission are:*

Organisation	Representative	Role/Qualifications
Banks Peninsula Conservation Trust	Maree Burnett	General Manager
Lucas Associates	Di Lucas	Director, Landscape Planner
Manaaki Whenua / Landcare Research	Larry Burrows	Forest Ecologist
Maurice White Native Forest Trust (Hinewai Reserve)	Bruce Hansen Hugh Wilson	Trustee Trustee and Manager
QEII National Trust	Alice Shanks	Central Canterbury Representative
Rod Donald Banks Peninsula Trust	Suky Thompson	Trust Manager
	Bob Webster	Trustee – Landowner participating in ETS/1BT
	Bryan Storey	Trustee – Geologist
Orion New Zealand Limited	Clayton Wallwork	Forest and Biodiversity Lead

We wish to make an oral submission in support of our written submission.

Address for service

Banks Peninsula Native Forest/Climate Change group
c/o Suky Thompson
Rod Donald Banks Peninsula Trust Manager

**Other local scientists/experts who have been consulted and involved in the group include Nick Head, Christchurch City Council Senior Ecologist and Helen Greenep, Environment Canterbury Biodiversity Officer for Banks Peninsula.*

1 Introduction

The Banks Peninsula Native Forest/Climate Change group is a collaboration of experts from organisations and agencies with knowledge of, an interest in, and/or responsibility for the protection and enhancement of native biodiversity and natural landscapes on Banks Peninsula.

The group formed in 2019 to explore the interface between native forest regeneration and carbon sequestration and to find ways to incentivise a change in marginal land use from farming to native forest, in particular through improvements to the Emissions Trading Scheme, so that setting land aside for sequestering carbon in permanent native forests becomes a financially viable alternative to pastoral farming and rotational forestry..

We have since made substantial submissions to the Climate Change Response (Emissions Trading Scheme) Amendment Bill, the Climate Change (Forestry Sector) Regulations 2008, the associated Select Committee process and more recently to the Climate Change Commission's draft advice (Feb 2021) and the Environment Canterbury LTP (April 2021).

We strongly support the Council's draft Climate Change Strategy and urge that funding to begin implementing it is added to the Long Term Plan 2021-31, coming on stream from FY22.

We offer positive and innovative ideas that contribute to climate solutions for Christchurch and can be implemented immediately. We focus on areas identified in the *Programme 5 Carbon removal and natural restoration*. We submit that these ideas can be implemented cost effectively through existing budgets and community channels by giving greater support to initiatives that are already underway.

The Climate Change Commission has made it clear that work must start now to achieve the transformational and lasting change needed across society and the economy. Harvesting the low hanging fruit on Banks Peninsula presents Christchurch City Council with a win-win for biodiversity, climate change and the economy.

We appreciate the funding proposed in the LTP for the Rod Donald Trust, Banks Peninsula Conservation Trust, Biodiversity Fund and Regional Parks. However, the funding allocated will only serve to support current levels of progress at best, not the step-change required to meet the transformational changes identified in the Climate Change Strategy. We therefore request that the Council makes the following changes to the LTP to enable implementation of Programme 5 as follows:

- Increase funding for the Banks Peninsula Conservation Trust - it is leading the core initiatives needed for landscape scale change for biodiversity on Banks Peninsula, implementing the Banks Peninsula Ecological Vision and Pest Free Banks Peninsula.
- Increase the Biodiversity Fund to support private landowners setting aside land for biodiversity.
- Allocate funding to support purchase of land for carbon sequestration in native forest, principally for natural native regeneration, potentially with additional grants to Rod Donald Trust.
- Improve planning regulations and compliance to support biodiversity and incentivise native regeneration and the attendant carbon sequestration, discourage native clearance and pine forestry, and support reduced stocking.

Most of the funding requested above involves outsourcing work to community organisations and private landowners who are already working on these projects, so does not increase the Council's own workload.

We request that the funding needed is sourced through re-applying the climate change lens to some of the LTP big ticket projects comparing the value delivered by making the modest changes suggested above to speed up initiation of the Climate Change Strategy. We submit that all of the

above can be achieved with minimal impact on the overall budget of \$13.1 billion proposed in the LTP and will deliver runs on the board and very good value for the Climate Change strategy.

Banks Peninsula presents the Council with an opportunity to sequester large amounts of carbon in permanent native forest, and to create a massive sink by 2050 when the City must meet its zero emissions targets.

2 Why we support the draft Climate Change Strategy

We support the draft Climate Change Strategy because the world now has less than 10 years to make transformative changes toward minimising global warming and the restoration of natural environments.

The Council declared its Climate and Ecological Emergency two years ago. It has developed a good strategy and we agree with the goals, principles and programmes that the Council has identified.

We suggest that the final principle for responding to climate change listed in the strategy is amended to show the Council's commitment to addressing the Climate and Ecological emergency by including a commitment to funding as follows:



We will support **and fund** positive and innovative ideas that contribute to climate solutions for Christchurch.

The thrust of our submission is that funding needs to be allocated **now** in the LTP so that existing initiatives by community groups and the private sector can be rapidly expanded. There is no need to wait for further strategy. The work is already in progress, is making a difference, but is held back by limited funding.

What we are suggesting are relatively minor funding changes relative to the total LTP spending, and that will deliver immediate and certain gains toward unlocking the vast carbon sequestration and biodiversity potential of Banks Peninsula.

3 Restoring Te Pātaka o Rākaihautū/Banks Peninsula

Environment Canterbury recently funded the Environmental Defence Society case study *Restoring Te Pātaka o Rākaihautū/Banks Peninsula*. This is an excellent report which identifies that the current regulatory and financial incentives pose threat to native biodiversity and the landscape and makes key recommendations¹ relevant to the Christchurch City Council LTP about how this can be turned around:

- Supporting initiatives of the Rod Donald Banks Peninsula Trust, Te Pātaka o Rākaihautū/Banks Peninsula GeoPark Trust, Banks Peninsula Conservation Trust and the work of others involved in covenanting and facilitating landscape-scale restoration and recovery projects
- Continue to support the work of the BPCT and others in covenanting and facilitating broader landscape-scale restoration and recovery projects
- Review the Christchurch District Plan, following active engagement with the community, to

¹ Peart, Raewyn and Woodhouse, Cordelia, Environmental Defence Society, *Restoring Te Pātaka o Rākaihautū/Banks Peninsula*, February 2021 p72

Heard Submissions Alongside LTP

ensure it fully recognises cultural and natural landscapes including more comprehensively mapping the Outstanding Natural Landscape (ONL) areas

- Continue community engagement on the assessment and status of Sites of Ecological Significance (SEs) in Schedule B of the District Plan.

Our detailed requests are explained below

4 Focus on natural regeneration for Banks Peninsula

We seek greater recognition in the LTP for the unique role that Banks Peninsula can play for Christchurch as a biodiversity hotspot and vessel for carbon sequestration through natural regeneration.

Banks Peninsula is approximately 115,000ha much of which is steep marginal land. Prior to European settlement, most of this land was covered in a dense native forest, and wherever the touch of humans is light, this native forest is rapidly and naturally returning. The combination of the terrain climate, existing seed sources and the birds to spread them, creates a haven for natural regeneration. 15% of the Peninsula is now dominated by regenerating indigenous vegetation, naturally recovering from its low point of less than 1%.

The Peninsula therefore provides “low-hanging fruit” for Christchurch to achieve its goal of accelerating regeneration of the natural environment – ***through harnessing the natural process of regeneration and reduced stock numbers to reduce and offset emissions.***

We are pleased that the Climate Change Strategy has identified a focus area for Programme 5 as:

Increase carbon sequestration through planting and natural regeneration of indigenous, and more fire resistant forest across Banks Peninsula.

We are pleased that the opportunity to achieve sequestration through indigenous forest and particularly through natural regeneration of indigenous forest on Banks Peninsula has been recognized. We encourage the Council to continue to make a clear distinction between the activity of planting and the natural process of regeneration in its biodiversity and climate work. Having clarity between these two different activities will be critical to getting new incentives and programmes right.

4.1 Planting native forests

- Planting a native forest means that humans are in charge.
- Seedlings are grown in nurseries, certain species selected for planting and then planted out.
- Planting a native forest is not in this sense different from planting an exotic forest. It is a human construct with defined and documented parameters that can be easily measured by human tools.

4.2 Natural Regeneration

- Natural regeneration, also known as rewilding or reversion means that nature is in charge.
- This is a completely different construct and not so easily measured by human tools.
- Seeds are spread by birds, wind and water in an apparently random way, meaning the species mix can be much more complex and diverse.
- Regeneration happens gradually as the conditions become right for seed germination and survival.
- Regenerating forests gradually spread out from existing nodes or margins rather than happening all at once, and typically follow a succession pattern.

- Species such as bracken, bush lawyer, poroporo, tutu, mātā and pohuehue may appear first in grasslands, and once they have broken the sward, then sub-canopy tree species such as mahoe or kanuka follow.
- The role of humans is to assist nature, not to control the process

4.3 Natural regeneration is more cost effective

Revegetation through the planting of native seedlings is much more labour intensive and expensive than planting exotics such as pines or eucalypts. The native seedlings are more expensive to propagate and will generally involve diversity, not a monoculture. The area to be planted must be well fenced to exclude grazing stock. Prior to planting competing vegetation such as grass must be completely removed or sprayed in advance. Then good holes need to be dug, the trees planted gently and with care, and mulches or weed mats applied to reduce grass and weed competition, and hare guards staked in place as most native species are highly palatable.

The planted natives then require quite extensive aftercare to ensure ongoing releasing from competing grasses and weeds for two to three years until a canopy is established. Even once the canopy is established, pest control to deal with browsers such as deer may be needed, and to achieve the full biodiversity benefits. Fences must be maintained to dissuade neighbouring grazing stock from entering and damaging the forest.

All of these costs and issues are exacerbated on steep marginal land which is hard to work on and often hard to get labour too.

Care must be taken to use eco-sourced native plants to avoid pollution of the local genetic resource through the introduction of non-endemic varieties.

As we have already described, on Banks Peninsula natural regeneration occurs rapidly wherever nature is given a chance with seed nearby, once human action to remove it (such as spraying, cutting or grazing with goats) ceases. Regeneration of non-palatable species that can tolerate some grass competition happens even in pasture provided that it is near to seed sources and not subjected to human clearance.

Natural regeneration is therefore much more cost effective than planting (estimated at \$1,500 per hectare for natural regeneration compared to \$15,000 - \$50,000 per hectare for planted native forest), as nature does the bulk of the work – growing the seeds and distributing them – obviating the need for expensive human labour. Seedlings that thrive in any particular environment are those best suited to that environment, and a highly diverse species mix is likely to eventuate through natural regeneration, once grazing stock have been removed.

Aiming to afforest marginal land further tips the balance in favour of natural regeneration.

Pest and weed control and fencing are needed regardless of whether native afforestation occurs as a result of planting or natural regeneration, so these ongoing costs are similar for both methods.

For these reasons, we consider that natural regeneration should be the principal method by which Programme 5 aims to remove carbon and restore the natural environment.

Planting native forest should be principally seen as a tool to engage people and communities on easy front country projects or sites with no available seed sources.

There may be also be some situations where limited enrichment planting could speed the process of natural regeneration, and further research on this would be useful.

This is a link to a successful natural regeneration approach by the Hinewai Reserve as an example of how this can be achieved - <https://www.youtube.com/watch?v=3VZSJKbzyMc>

4.4 Action is needed now

The Climate Change Strategy identifies that:

On Banks Peninsula, increased drought conditions will place the surface and drinking water supply under increasing strain, increase the risk of wildfires, and increase the erosion of soils, making revegetation more difficult.

Whereas pine forest significantly reduces water yield, having more native forests on Banks Peninsula will support water retention, help to reduce the impact on water supplies, all of which are stream or spring fed and reduce the risk of fire and erosion. As the Strategy identifies, revegetation will get more difficult as droughts bite further. This creates an imperative to speed up and increase forest cover urgently through regeneration before it too gets more difficult.

5 Increase support for the Banks Peninsula Conservation Trust and biodiversity initiatives it leads

Banks Peninsula Conservation Trust has been working since 2001 to support private landowners who philanthropically protect biodiversity on their property through conservation covenant. These covenants help to sequester carbon and to provide seed sources that further accelerate the natural regeneration process.

The role of Banks Peninsula Conservation Trust has now grown from private land owner support to to one of leading and coordinating biodiversity and conservation initiatives across the Peninsula, by implementing the Banks Peninsula Ecological Vision it developed in 2016. We seek greater support for Banks Peninsula Conservation Trust including Pest Free Banks Peninsula.

5.1 Increase the direct funding grant

Banks Peninsula Conservation Trust runs extremely efficiently, but staff still need to divert effort into the time-consuming and frustrating exercise of finding funding to support salaries and operational costs. A small increase in annual funding for the Banks Peninsula Conservation Trust would further increase the conservation gains it is making.

We support the current grant proposed of \$50,000 to the Banks Peninsula Conservation Trust, and ask that this is increased to \$100,000.

5.2 Integrate the Ecological Vision 2050 for Banks Peninsula/Te Pātaka o Rākaihautū into the Biodiversity Strategy

The Minister of Conservation launched the Ecological Vision 2050 for Banks Peninsula on November 2016. The Vision, first developed by the Banks Peninsula Conservation Trust, has met with wide acceptance and has been approved by a range of both Councils, and, organisations, agencies and trusts working across the Peninsula.

We submit that the Ecological Vision 2050 for Banks Peninsula/Te Pātaka o Rākaihautū is now integrated into the Climate Change Strategy and Council biodiversity planning and funding is allocated to assist with achieving the eight goals it sets out for Banks Peninsula.²

5.3 Reinstate funding for Pest Free Banks Peninsula

Controlling and eventually eliminating pests is another 2050 goal for New Zealand, and one that directly supports improved outcomes for biodiversity and increased sequestration as a result.

The previous grant of \$60,000 per annum to Pest Free Banks Peninsula should be reinstated for each year of the LTP and increased.

Pest Free Banks Peninsula is one of the finest examples of effective multi-agency and community co-operation, and is employing a growing number of people providing new jobs that are focused on

² Banks Peninsula Conservation Trust, 2050 Ecological Vision for Banks Peninsula/ Te Pātaka o Rākaihautū including Port Hills

Heard Submissions Alongside LTP

the transformative changes needed rather than propping up business as usual activities. Christchurch City Council should continue contributing this modest level of funding to it.

6 Increase support for conservation on private land through the Biodiversity Fund

The best and cheapest way to increase the area under conservation management is to partner with private landowners and covenanting agencies.

We are shocked to realise that although Programme 5 in the identifies the Christchurch Biodiversity Fund as one of the principal examples of what is happening already, **funding for the Biodiversity Fund has actually been cut in the LTP**, from the already miniscule sum of \$200k per annum to \$190k per annum.

As Programme 5 identifies, the fund provides grants to private landowners to protect and enhance sites of ecological significance. It is primarily used for fencing around covenants.

Fencing to exclude grazing stock is the biggest single up-front cost facing landowners wishing to set aside land as permanent native forest. On Banks Peninsula fencing is difficult and expensive due to the steep rock hillside with numerous springs and streams, with a median cost of \$28-\$30 per metre. Most covenants protect waterways and bush in linear gullies. The \$200,000 previously allocated to the Christchurch Biodiversity Fund per annum only pays for 50%-60% of 14 km of fencing. That is 4-5 covenants per year.

The funds are efficiently distributed with Christchurch City Council and Environment Canterbury co-operating with the two covenanting authorities, BPCT and QEII Trust. However, the funds available are insufficient, hotly contested, and fail to cope with the current demand of voluntary covenanting. Both covenanting agencies have waiting lists.

The most efficient way to achieve Programme 5 would be to support more covenanting on private land. We therefore recommend that the grant to the Biodiversity Fund is at a minimum doubled in FY22 to \$400k and increases each year thereafter.

7 Allocate funding to support the purchase of land for carbon sequestration via native forest

Programme 5 lists focus areas to:

- *Identify, protect and restore areas of significant indigenous biodiversity, and*
- *Create natural corridors between key forest/planted areas in Christchurch and Banks Peninsula to encourage biodiversity.*

Hinewai Reserve is identified as an example of what is already happening on Banks Peninsula. Hinewai exists solely because of private philanthropy, and we believe that the time has come when conservation needs to be a mainstream activity – carried out for financial purposes and for public benefit such as offsetting hard to eliminate emissions from organisations such as the Council.

7.1 Establish a Land acquisition fund

We believe Christchurch City Council should be purchasing or contributing to the purchase of land on Banks Peninsula for the purpose of creating more regional conservation parks – more places like Hinewai. These would be places where native biodiversity flourishes and regenerates and where the public are enabled to visit and enjoy low-carbon recreation in a way that respects the biodiversity and engages them in learning and guardianship.

We do not mean by this that the Council would necessarily own such parks. Instead, to reduce the land-owning risk and costs to the Council we suggest it sets up a land-acquisition fund as part of its

Banks Peninsula Native Forest Climate Change group submission to CCC Long Term Plan 2021-31 and draft Climate Change Strategy 7

support for biodiversity protection. The fund would be available for land purchases by conservation organizations for the benefit of biodiversity, landscape and recreation. The Nature Heritage Fund has not been open for applications from Canterbury for two years (the next funding round has not been advised). This has left landowners who wish to sell land with high biodiversity values on their farms with no option but to sell for continued farming or exotic forestry, as at this stage conservation land rarely brings in an income.

There are known opportunities of land on Banks Peninsula with high biodiversity values that require the catalyst of funding from the Council. This would enable local Trusts to acquire such land for the public good and public enjoyment and education, and landowners who would like to exit from land knowing that conservation and carbon sequestration is the best land use.

7.1.1 Additional support for Rod Donald Trust

Another efficient way to do support land acquisition would be to bring forward and increase the capital injections to CCO Rod Donald Banks Peninsula Trust.

This independent Trust has delivered excellent value for money over its 10 year existence to date and proved nimble when it comes to seizing land purchase opportunities in a way that the Council itself, constrained by the Local Government Act, cannot equal.

Christchurch City Council is planning to inject further funds into the Trust from FY 24 through its LTP, but these will only be sufficient to enable it to continue operating as it has done to date. Increased funding would give the Trust a large capital based and increase its ability to secure land for biodiversity and carbon sequestration in tandem with building community engagement and action through non-motorised public recreational access.

We suggest that the Council start with a contribution toward the Te Ahu Pātiki park that the Trust is currently crowd-funding for. This would enable it to notch up an immediate win, as the land is to come into the ownership of the Trust on 1 July 2021, the first day of the new LTP. This would provide a way for the Council to signal its commitment to biodiversity and carbon sequestration and be directly associated with a new highly visible and popular regional park, without the ongoing responsibility of ownership.

8 Support for Regional Parks

We support the funding for the Regional Parks team. This group does an excellent job of supporting biodiversity initiatives in the area, but is always constrained by funding. Further funding would enable more weed control initiatives and the more rapid development of the Misty Peaks and Te Oka Reserves

9 Improve the regulatory and compliance framework

Earlier we stated that native forest is rapidly and naturally returning on the Peninsula. The changes we have described above are those that support people to work with nature to support this regeneration.

The changes we request under the regulatory and compliance framework are for Christchurch City Council to ensure its regulations adequately protect native vegetation and that deliberate destruction of established native vegetation contrary to the regulations is identified and penalties imposed.

Recently there has been a disturbing trend of spraying large stands of native vegetation to improve pasture. This is counter-productive to the goals set out in the Climate Change Strategy and LTP. We share the concerns of the Environmental Defence Society that the permissive new standards introduced through the National Environmental Standards for Plantation Forestry (NESPF) present a threat to the landscape and biodiversity on Banks Peninsula.

2045

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We support the recommendation of the Environmental Defence Society that the Council:

- Review the Christchurch District Plan, following active engagement with the community, to ensure it fully recognises cultural and natural landscapes including more comprehensively mapping the ONL areas
- Continue community engagement on the assessment and status of SESs in Schedule B of the District Plan

We ask that these matters are funded through the LTP.

We also ask that the Council advocates to central government for improvements to the Emissions Trading Scheme to make the registration of naturally regenerating areas easier. This is key to unlocking the huge potential for Banks Peninsula land use to shift from pastoral farming and exotic rotational forestry to carbon sequestration in permanent native forest to create a massive sink for Christchurch by 2050 when it must meet its zero emissions targets.

We ask too that the Council advocates to central government to amend the NES PF to prevent less appropriate pine forestry.

10 Conclusion

The Climate and Ecological emergency has been recognized at both the national and Canterbury level.

The Banks Peninsula Native Forest Climate Change Group asks Christchurch City Council to recognize the role that Banks Peninsula can play as it shifts the regulatory and incentive framework toward one that supports carbon removal and natural restoration and to help fund this change.

The only thing stopping Banks Peninsula becoming cloaked once again in native forest is human activity.

The Banks Peninsula Native Forest Climate Change group supports the Council's draft Climate Change Strategy and urges the Council to start implementing it now through increased funding to initiatives and programs already underway on Banks Peninsula.

With appropriate support from Christchurch City Council a shift from pastoral farming and exotic forestry to native forest regeneration on marginal land could be rapidly achieved and on a landscape scale, creating massive gains for biodiversity, climate change mitigation and adaptation, and drought resilience. This would position the Council well to meet its Climate Change targets, particularly the need to deal with those residual emissions that cannot be eliminated through reductions by 2050.

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Submission on
Christchurch City Council
Draft Ōtautahi Christchurch Climate Change Strategy
Francis Johnson
April 25, 2021

1 Introduction

There is a lot of excellent material in the Draft Report. I am pleased that the Council's targets (page 12) are more ambitious than those in the Zero Carbon Act, and that the Council's own operations are to be carbon neutral by 2030. However, these goals are not enough. There are compelling reasons (explained in Section 2 below) why the Council must aim for zero *gross* emissions in addition to carbon removals that would then together result in *negative* net emissions. Such a radical change would take time, yet we are in a climate emergency where every day's delay is making the situation worse. Therefore, two branches of the strategy are needed:

- A) Make immediate changes that will rapidly reduce our emissions.
- B) Start planning now for a city where gross emissions are permanently zero.

The Council's strategy document goes some of the way towards addressing part A, but appears to have missed part B. I have commented on these two parts in Sections 3 and 4 below.

2 Emissions Targets

2.1 Why net emissions should be negative

Every day that we continue to emit greenhouse gases we are adding to deaths, hunger, disease, and loss of land overseas, as well as to hardship in Aotearoa. As high per-capita emitters, we have a moral obligation to take responsibility for the pain and suffering we are inflicting on the world's most vulnerable people. There are two ways that we can and must do this: (1) stop further emissions as soon as possible; and (2) reduce the harm caused by the emissions we have already released. Our past emissions have increased the atmospheric concentration of greenhouse gases and these gases are continuing to cause harm through their ongoing warming effect. We can reduce this harm by carbon removals (e.g. planting trees). As people living in a developed country, we do not have a right to inflict death and destruction on vulnerable people. We therefore have a moral obligation to remove, where possible, the carbon we have put into the atmosphere, before it causes further harm. Carbon removal must not be seen as a way of justifying further emissions.

2.2 Long Term Thinking

We must take responsibility for the harm we are causing, and our emissions will cause harm to future generations far into the future. Our thinking must be as long-term as the effects of our emissions – and that is an awfully long time. Our CO₂ emissions will stay in the

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atmosphere for centuries to millennia, melted ice will not be replaced for even longer, and species extinction is forever.

The Report's statement of principle under the heading "Think Long Term" on page 9 is too vague to capture the importance of this principle. None of us are psychologically wired to think in terms of the extremely long times necessary, and so in the absence of an explanation, "long term" will generally be given an interpretation that is far too short. Climate change will affect our grandchildren badly, but stopping there is missing an important point: climate change will affect our grandchildren's grandchildren's ... (and so on) ... grandchildren unimaginably far into the future.

2.3 Why gross emissions (of long-lived gases) should be zero

It is not possible to remove more and more CO₂ from the atmosphere indefinitely to compensate for ongoing emissions. Such removals by planting trees would require an ever-increasing area of land. Even with a very low rate of ongoing emissions, the land will run out eventually. Given that we must think in terms of centuries and millennia at least, our ongoing gross emissions must be extremely small – for practical purposes, zero.

This type of thinking is probably unfamiliar. However, the challenge of climate change is unprecedented, and we must adjust our thinking to the reality of the situation, which is that what we do today will have effects thousands of years into the future.

2.4 Urgency: Why we must start reducing emissions *now*

Climate change is already causing deaths and a great deal of human suffering from hunger, disease, failed crops, extreme weather, and coastal inundation. Our per-capita emissions are high by world standards, and every day that things stay that way we are adding to death and misery throughout the world. We can never identify our victims; we can never, for example, say that this car ride caused that person to die in a storm. Nevertheless, there is a direct causal link: our continued emissions are adding to death and misery around the world. Business as usual is unconscionable. We must respond to the emergency, as we did for COVID-19, and do whatever is necessary, even things we would have previously thought to be impossible or extreme.

Oxfam NZ has made the case that a just emissions reduction target for New Zealand would be at least 80% reduction in emissions by 2030¹. I urge the Council to do the right thing and adopt that target for Ōtautahi Christchurch.

3 A. Reducing Our Emissions Now

The Council has made a very good start towards the short-to-medium-term goal of rapid emissions reductions. Every one of the principles on page 9 is excellent, except that the "Think Long Term" principle should spell out the need to consider the effects of our actions hundreds and thousands of years into the future, as explained in Section 2.2 above.

However, the pace of change must be stepped up to achieve more ambitious targets. For example, cycling infrastructure and free low-emissions public transport must be urgently ramped up so they are an attractive option for most trips made within Christchurch within a year or two.

¹ Oxfam New Zealand (2020). "A Fair 2030 Target for Aotearoa". Oxfam Briefing Paper. www.oxfam.org.nz.

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3.1 Transitioning away from Animal-sourced foods

A very direct way to achieve rapid emissions reductions is by changing our diets to reduce or eliminate animal-sourced foods. The Strategy Report states on page 7 that agriculture comprises 15.3% of Otautahi's emissions. While not stated, I assume this is based on a GWP₁₀₀ comparison². Due to the short lifetime of methane in the atmosphere (a mean time of about 12 years), the opportunity for prompt reduction in radiative forcing due to reducing methane emissions is much greater than the GWP₁₀₀ figure suggests. Hence reducing consumption of dairy, beef and lamb is a highly effective way of reducing our short-term impact on the climate. Personally, I stopped consuming these products eight years ago and my health has improved as a result. The Council should take advantage of this short-term mitigation opportunity and do whatever it can to reduce consumption of meat and dairy in Christchurch. It should also encourage and support land use change away from dairy, in conjunction with ECan and central government.

4 B. Planning for a zero-gross-emissions Christchurch

As explained above, the long-term goal for Otautahi must be zero gross emissions. This is an extremely challenging – though utterly necessary – goal that will have far-reaching consequences for the way we live our lives. A major weakness of the Draft Report is that it lacks a vision of what a zero-carbon future would be like. Such a vision is vital, and we must start planning for our zero-carbon future now.

To clarify, our zero-gross-emissions target must include “embodied emissions”³ – emissions that occurred in the manufacture and transport of the goods we consume – even if those emissions occurred outside Christchurch. Including such emissions is a necessary part of taking responsibility for the impact of our behaviour on the rest of the world. Our city's path to zero gross emissions will entail eliminating our own emissions as well as eliminating embodied emissions in goods from outside Christchurch. The latter will entail changing supply chains or putting pressure on supply chains to decarbonise.

The “low-emissions economy” the Report refers to under Goal 3 (page 14) is not acceptable as a long-term goal because it is not sustainable (as I explained in Section 2.2 above). We must have a *zero-emissions* economy.

It is great that

“Christchurch City Holdings Ltd is working to get all Council-owned companies to be net carbon neutral in their operations by 2030.” (page 24).

However, in some cases this misses the point. Air travel – especially at the scale it occurs in Aotearoa – is incompatible with immediately reducing our emissions and is incompatible with zero-gross emissions in the long term. Therefore, the Council should (a) stop supporting the proposed airport at Tarras; and (b) as controller-owner of Christchurch International Airport, require changes that greatly reduce emissions from aircraft. Efficiency improvements in aircraft are nowhere near enough to achieve the emissions cuts necessary.

² That is the “Global Warming Potential” over a 100-year period, as is widely used (including by the IPCC) for this type of comparison.

³ The Strategy report calls these “embodied carbon”, but see my comments in Section 5.

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The Council should therefore actively work to greatly reduce passenger numbers. It should support the tourist industry over this change by encouraging local people to use local (zero-emission or low-emission) services.

Electric and biofuel-powered vehicles (including cars and aircraft) should not be considered as long-term alternatives to fossil-fuel vehicles unless it has been rigorously demonstrated that they are zero-emissions, considering the entire supply chain. Biofuels compete with food-growing for land use: therefore, they should be used only for a small range of purposes that are important for people's well-being and for which there are not alternatives.

Planning for a zero-carbon future is not merely about eliminating emissions-producing activities, it is also about actively promoting naturally zero-emission activities that benefit human well-being. Examples are teaching, elder care, and creative activities that are not resource intensive.

5 A Comment on Terminology

In several places the Draft Strategy uses the phrase "embodied carbon" to refer to emissions that occurred in the production and transportation of goods. This terminology is misleading, as the phrase "embodied carbon" is more applicable to carbon that is held in objects instead of being in the atmosphere, for example the carbon in wooden buildings. The term "embodied emissions" would convey the Council's meaning here, and this usage would be consistent with the IPPC's definition. See, for example, IPCC Special Report on Climate and Land (2019), Glossary, page I-20.

6 Conclusions and Closing Remarks

Many of the points made in this submission are demanding. However, we are at a critical time in history where our actions will set the direction for the world's future for centuries to come. The climate emergency calls for bold leadership and decisive action. The Council must work together with regional and central government to achieve these goals. Funding must not be an obstacle. I would happily pay more rates or taxes to fund climate mitigation measures. A just response and just transition require that the Council and central government obtain funding as necessary through rates and taxation that are progressive so that the burden is carried by those who can best afford it. Mitigation measures should not be funded by borrowing; future generations already have more than enough on their plate.

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Ōtautahi Christchurch Climate Change Strategy - draft 2021

Submission from John Gould,

Thank you for the opportunity to submit on the Ōtautahi Christchurch Climate Change Strategy - Draft 2021

Overall I feel the strategy and the broad consultation around its development is an important first step and I applaud all those who have been involved in its development. All that effort will however come to little if the strategy is not fully implemented and backed up by the sought of swift and comprehensive action that a "Climate and Ecological Emergency" deserves. There are numerous opportunities to address both of these urgent issues together and in a holistic manner which obviously I urge the CCC to do.

Below are comments on the four climate goals for Christchurch, and the 10 climate action programmes the CCC believes are needed to achieve these goals.

Goal 1: Net Zero Emissions Christchurch

In my view this needs to be much more ambitious, if the declared "Climate and Ecological Emergency" is not just rhetoric. Look at the way NZ has responded to Covid19 yet in 20 years time like the Pandemic of 1918 that killed 50 million worldwide it will be relegated to the history books. The "Climate and Ecological Emergency" is something far, far more serious. The last time atmospheric CO2 exceeded 400ppm, over 3.5million years ago the sea level was 10-20m higher than today. This is a scientific fact not some piece of "fake news" ...which we ignore at our peril! So

Why not aim for NET Zero GHG emissions by 2035 and a 50% reduction by 2027?

If the CCC were to commit to halve emissions by 2027 then it is clear that transport emissions have to be a prime focus as they currently comprise 54% of total emissions. Therefore Programme 7 should be explicitly prioritised. See suggested strategy under Programme 7 below.

Goal 2: We understand and are preparing for the ongoing impacts of climate change

What the CCC seems not to have fully grasped is that the "Climate and Ecological Emergency" is a global phenomenon ! The strategy seems to ignore the likely impacts of the worldwide disruption that will occur as first millions, then tens of millions and eventually hundreds of millions of climate change refugees are forced to move due to sea level rise, water shortages (as glacial fed rivers like the Ganges and most major rivers in East and South Asia can no longer support irrigation systems on which 2 billion people depend!).

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Consider the impact of just a few million refugees on the politics in Europe over the past several years as a tiny taster of what we will likely experience in just a few decades from now. It is not just a few hundred thousand climate refugees from low lying atolls in the Pacific that will be on the move.

As the scale of the crisis is realized the younger generation especially are likely to quickly transition away from diets dominated by meat and dairy products, and avoid non-essential long haul air travel.

Goal 3: We have a just transition to an innovative, low emission economy

This goal if implemented does make a lot of sense.

Goal 4: We are guardians of our natural environment and taonga.

This goal if implemented does make a lot of sense.

It is vital not to forget the huge importance of restoring ecosystems as this will help to avert the “ecological emergency” we are also facing.

The proposal for transitioning from Ōtautahi Christchurch “Garden City” to Ōtautahi Christchurch the world’s first “Urban Eco National Park” suggested by _____ and others should be given very serious consideration.

Programme 1: Building the foundation

Building the foundation - partnerships and resourcing

Our commitment: Meeting Christchurch's climate challenge will require the support of the whole community/ By harnessing the leadership and resources of Ngāi Tahu Papatipu Rūnanga, organisations, businesses and networks across our city and district, we can develop our response to climate change together.

Next step for the Council: Establish a climate leadership group with key stakeholder representatives to implement the strategy.

This all sounds quite straight-forward when summarized this way, but while society remains trapped in our current “endless growth paradigm” still being promoted and actively supported by numerous council policies and investments, will the challenge of seriously tackling climate change have any chance of success?

Consider the recent extension of the motorways north and south of the city, the Tarras airport plans and the expansion of new satellite settlements like Rolleston and endless rural without any serious consideration to more sustainable transport options. See programme 7 below.

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Programme 2: Understanding local effects of climate change

Understanding the local effects of climate change

Our commitment: Climate change affects local communities in different ways. We will gather local data to understand the implications across our district - for our people, our infrastructure, our economy and our environment - and share this information with our communities so we can plan for the future.

Next step for Council: To complete Christchurch's climate change risk assessment, including environmental, social, cultural and economic impacts.

What the CCC seems not to have fully grasped is that the "[Climate and Ecological Emergency](#)" is a global phenomenon! This programme is fine but the strategy completely ignores the likely impacts of the worldwide disruption that will occur as first millions and eventually hundreds of millions of climate change refugees are forced to move due to sea level rise, super-cyclones, floods, droughts, wild fires, water shortages (as major river systems around the world can no longer support the growing demands from irrigation and the growing number of mega-cities sucking their hinterlands dry!

How many climate refugees is NZ and indeed Christchurch willing to accept in the decades ahead? Hundreds, thousands, tens of thousands! Much broader thinking on all these questions is needed.

Programme 3: Proactive climate planning

Proactive climate planning with communities

Our commitment: Supporting communities to plan for and adapt to future climate change challenges empowers them to use their own knowledge and social networks to take action. Change is an opportunity for innovation, and for our communities to have a say in shaping their future. We will help communities to thrive by identifying our shared values, and the local changes we need to make together.

Next step for Council: Engage with communities to raise awareness of coastal hazards, and seek feedback on the strategic adaptation framework to ensure that it meets the expectations of Christchurch communities and is fit for purpose.

It is good to see the CCC has begun "[climate change education](#)" at some schools, but **why not ALL Schools?**

Indeed, the CCC should urgently launch a climate change education campaign aimed at all communities and every age group. We are all in this together. Although, we all created this mess, about which many of us have been in denial for over 30 years, it is still within our powers to rapidly implement the solutions. We already have most of the knowledge and technology we need, it is mainly the political will and human inertia which are holding us back. Strong and decisive leadership at community, local and national government and global levels are critically needed, like never before.

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Programme 4: Adapting and greening infrastructure

Adapting and greening infrastructure systems

Our commitment: Our buildings and infrastructure are increasingly coming under threat due to the impact of climate change. Infrastructure supports our quality of life, and represents one of the biggest investment decisions in Christchurch. We will ensure our infrastructure can cope with the changing climate conditions in the future, while still delivering the services our communities need.

Next step for the Council: Create a series of ponds, wetlands, intertidal habitat and stormwater treatments in Bexley (Ōtākaro Avon River Corridor Regeneration Area), to filter surface water naturally, support biodiversity, enhance flood management and improve amenity.

This all makes good sense.

However, please see my suggestions regard the use of rainwater harvesting and the promotion of water conservation outlined below.

Promote Water Conservation and Rainwater Harvesting

In response to the Programme 4 stated focus areas, it is good to see the phrase “Promote sustainable water use” and great the new developments now require stormwater management through “swales, rain gardens and retention basins”.

As a specialist in rainwater harvesting with over 35 years experience in this field, I would strongly recommend that the council conduct a feasibility study (including cost-benefit analysis) into the potential benefits of introducing rainwater harvesting at household level through the provision of at least one 1m³ (1000 litre) roof tank for every household (or two for larger homes). A \$1000 grant per household to provide the following package might be considered. This would include a tank, its proper installation and some technical advice on, for example, how to ensure the collected rainwater remains safe to drink (in case of earthquakes, floods, fires or other emergencies) through the addition of a leaf slide, floating water intake etc. While such a scheme if introduced over 5 years might cost the council around \$60m per year, it would result in multiple benefits including:

- An emergency water supply for every household for up to 2 weeks
- Water for gardening and essential use during any future water restriction (consider recent difficulties with water supply Auckland has been facing)
- Reduced flooding during big storms as rainwater tanks retain runoff until filled (residents could even be asked to empty their tanks prior to predicted heavy rainfalls).
- Huge savings in reduced stormwater network capacity requirements.
- Research also suggested that the awareness created from individual management of household rainwater supplies instils a water conservation ethic amongst the population at large, resulting in significant financial savings and less energy used to pump water around the network.

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There are many precedents for local governments around the world providing subsidies for rainwater tanks, due to the above benefits eg. Osnabruck, Germany provide subsidies of between US\$600 – 1200, as long ago as the early 1990s.

I would be more than happy to meet with CCC staff and discuss these opportunities (as a voluntary contribution to addressing the "Climate and Ecological Emergency" if invited to do so – contact:-

Programme 5: Carbon removal and restoration

Carbon removal and natural restoration

Our commitment: Our biodiversity and ecosystems will be increasingly threatened by climate change. By protecting and expanding natural areas in our district, we will help capture carbon dioxide, while benefiting natural ecosystems and biodiversity.

Next step for the Council: Identify sites where partnership opportunities could increase indigenous planting across Christchurch and Banks Peninsula.

In my view this is one of the best sections, but could go further and help benefit efforts around carbon sequestration at a national and even international level.

In the Hinewai Reserve near Akaroa, CCC has a perfect example of what should be happening throughout NZ and indeed the world. Hugh Wilson's 30+ year "experiment" has proven beyond doubt that nature is potentially our greatest ally when it come to restoring and regenerating the native forest which only a few centuries ago covered 80% of NZ. If only a fraction of this could be re-established, this would surely go a long way to hitting the target of becoming "a net zero GHG emissions" council long before 2045 and ideally before 2035.

A 30 minute documentary about the Hinewai Project can be found and viewed free on YouTube search for "Fools and Dreamers" – this should (in my view) be required viewing for every child (and adult??) in Aotearoa.

Once armed with the evidence of what is possible if nature is gently assisted in reasserting her control of marginal uplands, CCC should vigorously lobby central government to promote the conversion of unprofitable high country grazing land into a valuable asset through carbon farming. As the price of sequestering carbon goes up, as it surely inevitably will, the benefits to the landowner (preferably DOC or local communities) will also go up.

CCC should invite Jacinda Ardern and relevant Ministers, James Shaw etc. to visit Hinewai and listen to its story direct from the mouth of its architect Dr Hugh Wilson.

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Programme 6: Economic transformation and innovation

Economic transformation and innovation

Our commitment: To reach our goal of net zero greenhouse gas emissions, we need innovative climate solutions and an economic transformation to move away from resource intensive, high emission industries.

Next step for the Council: Work with ChristchurchNZ, the Canterbury Employers' Chamber of Commerce and other stakeholders to deliver a series of events and activities to highlight and drive climate innovation in Christchurch.

CCC needs to urgently review its investment and interest in the development of a new International Airport in Tarras. This development runs completely counter to the Climate Change Strategy being proposed and makes a mockery out of the CCC declaration in 2019 of a "Climate and Ecological Emergency".

The mayor recently told the School Strike 4 Climate protesters, in response to a question on Tarras Airport, that it is the responsibility of the "Airlines to Decarbonize". Is that why CCC recently supported the display of a small electric plane with a range of a few hundred kms in Turanga library. Is the CCC really under the illusion that there will be long-haul flights to Europe, Asia and N.America in hydrogen fuelled or electric planes before 2035? While technology can sometimes move fast eg. from the first powered flight (Richard Pease NZ 1903 to the Moon just 66 years later) ... we haven't managed to get back to the Moon in 50 years and the history of Concorde is a reminder that technological leaps are intermittent.

What message does this send to our children and grandchildren? Which planet are you on? Clearly not this one! ... "Planet Madness" perhaps?

Programme 7: Low-emission transport system

Low-emission transport system

Our commitment: Road transport is the biggest single contributor to Christchurch's emission footprint. The transport sector contributes 54 per cent of our district's greenhouse gas emissions, with 36 per cent coming from road transport. Reducing transport emissions is essential to achieve our greenhouse gas emissions targets. Christchurch has high levels of private car use and low level use of public transport.

Next step for the Council: Complete the Christchurch Transport Plan to understand pathways to reduce emissions and identify a progressive series of options to achieve the level of reductions we are seeking.

If the CCC was to commit to halve emissions by 2027 then it is clear that transport emissions have to be a prime focus as they currently comprise 54% of total emissions. Therefore Programme 7 should be explicitly prioritised.

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Rapid reductions in transport could be achieved virtually overnight by encouraging:

- Carpooling through introducing carpooling lanes during rush hour as they do in Auckland with T2 and T3 lanes.
- Encourage buses to run full not empty with \$1 everywhere fares (or free buses for all) – especially the under 25s.
- Encourage more active transport walking, cycling, scooters and ebikes.
- Light rail to Rolleston etc.
- More EV charging opportunities.
- Cycling training for ALL school children

Programme 8: Energy efficient homes and buildings

Energy efficient homes and buildings

Our commitment: Our homes, buildings, businesses and infrastructure consume large amounts of resources such as energy, water and materials to build, operate, maintain, repair and replace.

We will design our homes, businesses, buildings and infrastructure to be more energy and resource efficient, and powered by affordable, renewable energy. This will lower emissions, reduce costs, deliver healthier buildings, create businesses that are more efficient and conserve our precious resources.

Next step for the Council: Promote awareness of resources available to communities and businesses to assist with energy efficiency efforts.

This all makes good sense, we just need to go further and faster, given the emergency we are facing.

Please note my suggestions regard the use of rainwater harvesting and the promotion of water conservation outlined under Programme 4 above.

Programme 9: Towards zero waste

Towards zero waste

Our commitment: Generally, our society buys things, uses them, then throws them away. About 9 per cent of Christchurch's greenhouse gas emissions come from our waste. However, approximately 40 per cent of waste currently going to landfill in Christchurch has the potential to be recycled or composted, using the services currently available.

Next step for the Council: Implement the Council's Waste Management and Minimisation Plan.

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Some of this makes good sense, we just need to go further and faster, given the emergency we are facing.

CCC needs to mount a campaign to ban organic matter from Red bins completely and offer an alternative means of disposing of meat and waste food, much of which could be composed in back gardens or newly developed community composing facilities.

Programme 10: Sustainable food system

Sustainable food system

Our commitment: the production, distribution, consumption and disposal of food generates significant greenhouse gas emissions. we will support sustainable food production to improve people's health and wellbeing, while restoring the natural environment.

Next step for the Council: Support the planting for 500 fruit trees in schools and community locations in Christchurch.

Some of this makes good sense, we just need to go further and faster, given the emergency we are facing.

CCC should launch major campaigns to :

1. encourage more fruit and vegetables to be grown in back yards, increasing this from 59% to 90% in 3 years, by supporting households by giving away seedlings for veges and fruit trees.
2. Reduce food waste along the "Love Food, Hate Waste" theme.

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#	SubID	First name	Last name	Comments - Please be as specific as possible to help us understand your views	I'd like to speak
9	39101	Matthew	Seren-Grace	<p>My name is Matt Seren-Grace, I have lived in Christchurch or the greater Christchurch area for 21 out of 25 years of life. I have a passion for urban planning, life in the city, and climate change.</p> <p>I wholeheartedly support the premise of this climate change strategy, the goals it wishes to achieve, and the plans to engage with diverse communities and stakeholders. However, I do not think that this document is a sufficient plan for the council, and does not go into enough depth. For example, there are no deadlines outlined for any of the goals listed, nor any listed dates for when they council will come back to the community and report on its progress towards these goals.</p> <p>I support the council's wish to increase indigenous plantings across Christchurch and Banks Peninsula, as well as the building of efficient homes and buildings. Although, I do not believe that this plan is going to do enough to have any significant impact, as it relies on opt-in plans which are completely voluntary rather than any kind of regulation. Furthermore, this voluntary basis is more likely to have an impact on the richer areas of Christchurch which have more resources available to them, rather than some of the more deprived areas of the city. Additionally, I support the council's wish to promote awareness of resources to assist in energy efficiency efforts, there is no mention at all on increasing resources, whether it is in the form of a subsidy for solar panels, rain collection tanks, or something else.</p> <p>Lastly the plan also mentions decreasing the emissions of transport within Christchurch, however, there is no mention of planning to increasing density within the city. Which would reduce further costs to operating public transport within the city as it would decrease the number of routes required to be run. Additionally, it would increase walkability within the city, and promote cycling. Furthermore, as someone who used the bus system within Christchurch, and the greater Christchurch area, the current bus system is not efficient and often requires multiple buses to reach destinations that are not that far away in physical distance. I would fully support Christchurch's bus systems either be brought wholly under either Ecan, or more preferably Christchurch City Council.</p> <p>In short, the goals of this plan are admirable, and I understand that this plan is more of a framework in which future decisions are to be made through, and that while I understand it is hard to take action within a culture that has not fully come to terms with the issue that is climate change, but, I believe that the climate emergency requires more concrete action. I would support a plan that:</p> <p>Has more concrete actions that the council will take detailed within it.</p>	Yes

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				<p>A time frame for said action to be taken.</p> <p>Contains plans for actual regulations to combat climate change.</p> <p>I hope you find this submission useful in your planning process.</p>	
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