

From: Resilient Carterton
191 Belvedere Road
Carterton

To: Carterton District Council
via email: submissions@cdc.govt.nz

Submission on Annual Plan 2019/20 Consultation Document

This is the submission from Resilient Carterton on the Annual Plan 2019/20. We wish to speak at the feedback session on 29 May 2019.

The global challenges facing our community (the 4 Es)

A resilient community will be better able to maintain the well-being of its people in the face of the 21st century's global challenges:

Ecological—water, food, climate disruption, ecological services, biodiversity loss, pollution, disease

Energy—declining resources and cost increases, climate change impacts, eg supply disruptions

Economic—debt, fragile global economy, effects of droughts and storm events (especially with regards to our farmers) and the flow-on effect for local business, employment, and council rates

Equity—worsening inequality, lack of resources and engagement, impacts of climate change on deprived and displaced populations.

These issues and the actions needed are inter-related. Resilient Carterton's submission this year focuses on:

- climate change and its effects
- rainwater harvest by urban residents.

Climate change—scale and urgency

Climate change—its mitigation (reducing greenhouse gas emissions) and managing the impacts of climate change—is the most important issue facing the Council and the District’s residents.

A full understanding by Council of the problem will ensure recognition of the urgency and scale of the response needed.

This submission lists a number of actions to be taken by Council as soon as possible. In summary these are:

- Review the commitments made under the Mayoral Declaration on Climate Change, as signed and re-signed by Mayor John Booth.

Council Commitments	Local Government Leaders’ Climate Change Declaration
For our part we commit to:	
<ol style="list-style-type: none"> 1. Develop and implement ambitious action plans that reduce greenhouse gas emissions and support resilience within our own councils and for our local communities. These plans will: <ol style="list-style-type: none"> a. promote walking, cycling, public transport and other low carbon transport options; b. work to improve the resource efficiency and health of homes, businesses and infrastructure in our district; and c. support the use of renewable energy and uptake of electric vehicles. 2. Work with our communities to understand, prepare for and respond to the physical impacts of climate change. 3. Work with central government to deliver on national emission reduction targets and support resilience in our communities. 	

- Measure and report regularly on the carbon emissions of Council and of its key suppliers such as Fulton Hogan.
- Set a target and actions to reduce those carbon emissions.
- Include climate change implications (emissions and risks) in every paper to Council meetings, committees, and advisory groups, and as a separate component of Annual Plans and Ten Year Plans.
- Ensure that a connected, informed, and sustainable community is maintained so that it will be more resilient to cope with the impacts of climate change.

Our current prosperity is based on energy from fossil fuels. Supply is declining, prices are trending upwards, and the Emissions Trading Scheme (or future equivalent) will add cost to carbon-emitting activities.

It will never be cheaper or easier to take action to mitigate or prepare for climate change than now. So don't delay. Do it while still possible.

Proposals

As a result of informal discussion with the Mayor and Deputy, we were asked to provide you with suggestions on what you could do. Here is a starting list of around 40 specific and practicable actions, many of which involve little cost, all of which need to be done.

We ask that Council commit to the following actions, set dates and assign resources for each to be achieved, and report progress to the community.

Governance actions

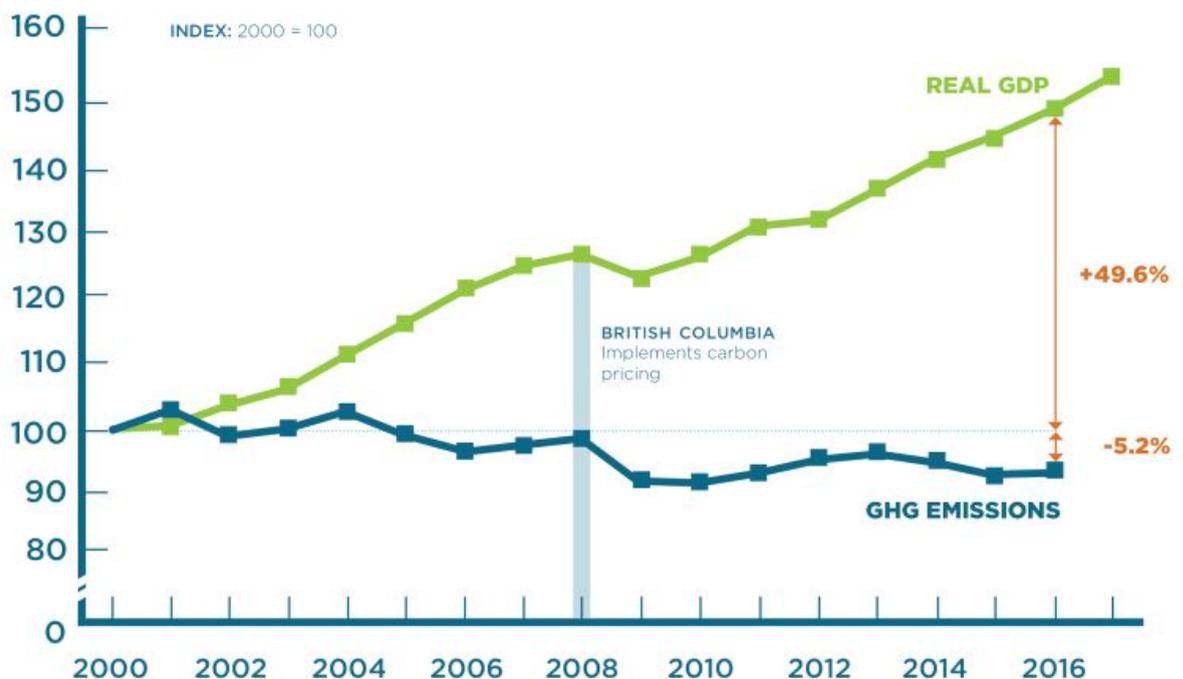
1. Create a Climate Change Sub-committee of Council to review and monitor Council's actions, processes, and policies that impact their climate change response.
2. Review and report progress against commitments made under the Mayoral Declaration on Climate Change.
3. Measure and report on Council's emissions of carbon dioxide, methane, and nitrous oxide gases.
4. Set a target, for example a 20% net reduction by 2022 (the end of the next triennium) and net zero emissions by 2030.
5. Develop ambitious action plans to meet targets (set under 4 above), starting immediately.
6. Publish the water demand/conservation strategy that has been developed over the past two years and undertake public engagement.
7. Include climate change implications (emissions and risks) in every paper to Council meetings, committees, and advisory groups, and as a separate component of Annual Plans and Ten Year Plans.
8. Brand the next annual plan as the first to start to deal with our number one risk.
9. Include climate change/fossil fuel ethical criteria in Council investment policies.
10. Adopt broad measures of well-being (rather than GDP or consumption) for reporting the general well-being of the District's residents.
11. Lobby central government and local MPs for better and effective mitigation policies.

12. Lobby Regional Council to align long distance public transport schedules to its local public transport services schedules.
13. Support domestic tourism rather than international tourism. Reducing flying is one of the most effective ways to reduce carbon footprints. The global comprehensive footprint of tourism-related greenhouse gas emissions is about four times greater than previous estimates, is growing faster than international trade, and is already responsible for almost 1/10 of global greenhouse gases.
14. Reconsider Wairarapa Economic Development Strategy Action Plan (WEDSAP) and the pursuit of economic growth in the context of climate change. Council should require the WEDSAP project to demonstrate how it will be lowering greenhouse gas emissions while delivering its stated aims before supplying it with more funding.

WEDSAP mentions climate change as having impacts upon economic development but does not articulate anywhere how the strategy will provide economic growth while lowering the region’s carbon footprint.

Regions such as British Columbia have decoupled economic growth from greenhouse gas emissions. It would be inconsistent to support a strategy that increases emissions in the region when the Council has a commitment to ambitious plans to reduce greenhouse gas emissions.

Whilst British Columbia may have instituted carbon pricing as their incentive to lower emissions, it’s clearly possible to lower emissions and achieve economic growth.



15. Sign up to Global Covenant of Mayors for Climate and Energy. Be the first small town in NZ to do so!
16. Include climate change as a standing separate item on every Council meeting agenda.
17. Be the exemplar for the community, providing education and awareness on climate change action, and telling your stories about what actions you have taken.

Infrastructure and operations actions

18. Lower the carbon footprint of Council events.
19. Incorporate green infrastructure (such as rain gardens, street trees, and bioswales to absorb stormwater) in the District Plan for new subdivisions, and investigate their implementation in existing urban areas.
20. Improve the energy and resource efficiency of infrastructure.
21. Replace Mayor's and all Council vehicles with electric or hybrid vehicles as they come due for replacement.
22. Ensure urban design and population growth plans capture all opportunities to minimise carbon emissions of community.
23. Plant lots more trees and design streets to allow for them.
24. Provide trees for others to plant.
25. Implement solar PV arrays at Council facilities, eg Events Centre, offices, Daleton Farm, pool. Any excess could be fed back to the grid.
26. Ensure there is explicit consideration of climate change impacts in the next review of the Council Infrastructure Strategy. Given the uncertainties predicting these impacts, best practice is to consider multiple futures and multiple time horizons. Planning needs to go beyond just engineering considerations but also include explicit consideration of social equity in infrastructure design and choices, and of biodiversity implications.
27. Install renewable energy sources (eg wind, solar, in-pipe hydro turbines) for council usage.
28. Ensure stormwater capacity is adequate for increased storm events.
29. Review points in the infrastructure at risk from flooding and address where practicable.

30. Ensure operational plans cater for local risks, eg drought, localised flash flood, flood, high winds.
31. Top and prune trees at risk from high winds, especially ones too close to power and communications lines.
32. Stop transporting our waste out of the District.

Actions to strengthen community resilience

33. Share Council's experiences as examples that households could implement.
34. Promote walking, cycling, public transport, and other low carbon or active mode transport options.
35. Promote and support the use of renewable energy in the community and tell the Council's own story.
36. Support the uptake of electric vehicles by encouraging more charging stations in Carterton and remove barriers to private businesses installing them..
37. Promote local economy and local production of goods and services to reduce transport emissions and create local jobs. Spending locally has six times the multiplier effect for the local economy than spending elsewhere.
38. Support local currencies, which would be spent locally, supporting local businesses; the ultimate loyalty scheme.
39. Promote carbon assessment tools for businesses and households.
40. Provide public campaign on how individuals can reduce their carbon footprint, including website, information, tools, and workshops.
41. Promote waste reduction programmes using the 6 Rs: refuse, redesign, reduce, reuse, repair, recycle.
42. Assist community to understand, prepare for, and respond to the physical, social, and cultural impacts of climate change, for example supporting workshops on 'How to deal with climate change impacts'.
43. Promote household resilience including food, water, health—emphasising local and small-scale. For example, encouraging home gardens, community gardens, public fruit and nut trees, cycle culture, and active lifestyles.
44. Support better insulation of existing buildings.

45. Promote frequent community feel-good celebration events.
46. Promote passive solar, healthy, and energy efficient house design.
47. Promote household water tanks (see section below).
48. Promote community resilience and allow opportunities for contribution and leadership, by encouraging democratic participation and political engagement, especially around climate change matters.

All of these actions are inter-related and reduce emissions or improve resilience to cope with climate risks. Many achieve both. There are likely many more actions that Council could commit to, but the key is to recognise the scale and urgency of the response needed and to engage the whole community.

Onsite water harvesting and storage by urban residents and businesses

In Resilient Carterton's submission last year to the Ten Year Plan, we urged Council to consider again supporting the on-site harvesting and storage of rainwater by urban residents. The response was that it would be considered as part of the planned Water Demand Strategy. This does not seem to have happened, so we re-submit our thoughts below.

What we set out below will:

- reduce or possibly eliminate the need or scale of a new water source
- alleviate pressure on the existing water take (especially over the summer period when traditionally demand is high and supply is restricted)
- provide some more options to consider in the Water Demand Strategy.

In 2019/20 Council plans to search for an additional source of water supply for the town's residents, including spending millions of dollars over the next ten years. It may be that this expense could, at least in part, be avoided.

In previous years a number of residents have presented to council annual plan and long term plan hearings on rainwater tanks on individual properties. Some councillors and the Mayor himself have spoken in favour of it in public. The usual response to these submissions is that it will be looked into, and then nothing else is seen to be done on the matter.

With the council now predicting the need for action to avoid inadequate water supply and a solution involving a staggering level of debt, it would be sensible to consider a wider range of options in their Water Demand Strategy and to demonstrate innovative, practical thinking.

With climbing Council debt in the tenth year of the ten year plan due mainly to the search for a new source of water for Carterton, we propose a large scale roll-out of individual rainwater tanks. This will alleviate some of the demand pressure, not only from the continuing growth of Carterton, but also the drier summers expected from the effects of worsening climate change on the natural water cycle.

We propose that:

- All **new** buildings should have as mandatory a rainwater tank of 10,000–25,000 litres depending on the section size and shape. (With Wairarapa's long dry summers, tank storage capacity would need to be larger than the 5,000–10,000 litres required in Kāpiti. Devan tanks calculator suggests 15,000 for 100m² roof. See www.devan.co.nz).

- For **existing** buildings, offer an interest-free loan scheme where a certain number of residents a year can get an interest-free loan of up to \$5,000 for up to five years to help cover the cost and installation of rainwater tanks.
- The ratepayers could also benefit from Council bulk purchasing water tanks, ancillary equipment, and installation services.
- The system installed would need a switch between town and tank supply on each building so that water could be stored in spring (when tanks are full) for summer when the demand is higher. Alternatively, tank water could be directed to laundry, toilet flushing, and garden taps leaving town supply for drinking, washing, and cooking.
- A rates rebate could be given for those who use only their tanks during summer (peak period) or conversely charge more for summer water use.

The implementation of rainwater harvesting should be supplemented with changes to the pricing regime for town water.

The annual 'allowance' should be changed to quarterly or even monthly 'allowances' so that households cannot 'save' their yearly allowance for the high-demand summer period. This will encourage conservative behaviour.

The volumetric charge for water above the allowance should be higher over summer. This will reflect scarcity of water availability but will also encourage water conservation.

Advantages of such a proposal include:

- Spreading some of the cost of providing more water over a number of years, not the majority in year ten, as well as potentially severely reducing the long term cost of providing water to urban Carterton.
- Under such a scheme any new water source, if needed at all, would need a lower peak capacity, as the demand would be much alleviated by the majority of the urban houses switching over to tank.
- The continuing growth of Carterton would not put undue pressure on future water supplies due to all new houses having tanks as part of their build.
- With the Council only having to meet the interest cost of on-lending interest-free, this may well end up being a very cost-effective way of supplying for future water rather than having a larger, more costly, and more centralised water supply.
- Water resilience following an earthquake or extreme weather event (as has happened recently) would mean any failure of supply from Kaipaitangata would have far less effect on residents because the storage capacity is spread throughout the town.

- Rainwater is collected in the tanks, so reduces stormwater runoff and flood events, which are an increased risk with climate change.
- Using tanks for a lot of the year also reduces the volume of water that Council needs to treat, and reduces the associated treatment and reticulation costs.
- Some or all of the capital expenditure could be unnecessary:
 - \$521,500 Kaipaitangata mains duplication and \$3,528,800 additional timber storage tanks could be avoided. In time there would be adequate storage throughout town to meet emergency needs.
 - The \$10 million on implementing an additional water source may not be needed, or at least significantly downsized.

Financial example

The table below illustrates the potential scale of costs for the scheme proposed. We have assumed:

- 2,500 properties in Carterton (virtually all ratepayers)
- Lending to 250 existing houses pa in each of 10 years.
- 5-year interest-free loans to households of up to \$5,000
- Funded by Council borrowing at an interest rate of 5% pa
- The interest costs would peak between years 5 and 10 as loans are repaid by households, and then tail off.
- Costs would be offset by savings in the treatment of potable water and reduced capital and ongoing operating costs.

Year	New loans	Repayments	Loan balance	Interest cost
1	1,250,000	-125,000	1,125,000	28,125
2	1,250,000	-375,000	2,000,000	78,125
3	1,250,000	-625,000	2,625,000	115,625
4	1,250,000	-875,000	3,000,000	140,625
5	1,250,000	-1,125,000	3,125,000	153,125
6	1,250,000	-1,250,000	3,125,000	156,250
7	1,250,000	-1,250,000	3,125,000	156,250
8	1,250,000	-1,250,000	3,125,000	156,250

9	1,250,000	-1,250,000	3,125,000	156,250
10	1,250,000	-1,250,000	3,125,000	156,250
11		-1,125,000	2,000,000	128,125
12		-875,000	1,125,000	78,125
13		-625,000	500,000	40,625
14		-375,000	125,000	15,625
15		-125,000	0	3,125
Total	\$ 12,500,000	-\$ 12,500,000		\$ 1,562,500

At \$1.6 million, this is about one tenth of the planned capital spend.

(A radical alternative to Council borrowing and on-lending (and at less cost) could be to support the establishment of multiple buying clubs (aka savings pools see livingeconomies.nz/solutions/savings-pools) to finance participating members.)

Initially uptake would likely be from the more affluent households. But this would give Council time to work out ways in which to make the scheme more affordable for the lower income ratepayers, such as increasing the loan period from 5 years to 10.

Stan Abbott from Massey University has done a lot of research on rainwater harvesting. Some of the examples he uses is with 5,000–20,000 litre tanks, although he does note that a longer drier summer period would need a larger water tank to increase the water storage capacity.

Modelling by Ian Rabbitts of Harrison Grierson also shows that tank size is important. Small tanks are not adequate in long dry periods because the water tank runs out during the period of low rainfall. In our opinion in that case it is probably better to just switch to and use the town water supply as needed until normal supply resumes. It is important that homeowners do not refill tanks from town supply during this period. Rabbitts provides a number of other factors to consider, including stormwater attenuation, rainfall patterns, and of course demand patterns, and overall demand for water.

Public consultation, expert advice, the investigation of other options (eg Stan Abbott's scenarios applied to Wairarapa) and a lot of education around water conservation are necessary. If the water is to be used for potable consumption, education will also be needed on good health practices.

The next conversation

We would be pleased to talk with you about our submission. The new approach by Council to have conversations with submitters rather than formal hearing is applauded and we look forward to a constructive conversation as the Plan is developed.

Resilient Carterton

16 May 2019