

BRCT submission on Dunedin's 10 year plan 2018 - 28



23 April 2018

The Chief Executive Officer
Dunedin City Council
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Submission on Dunedin's 10 year plan 2018 – 28

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Table of contents

1	Overview	2
2	Blueskin Bay	3
2.0	Vulnerability to rising seas and more frequent flooding	3
2.1	Vulnerability of our transport network	4
2.2	Adapting our built environment to our dynamic environment	5
3	Place Based Groups	6
3.0	Investing in Place Based Groups	6
4	New and Major Projects	8
4.0	Guiding Principles	8
4.1	District Heating Scheme	9
4.2	Pedestrianisation, active transport and integrated transport	10
4.3	Energy Plan 2.0	10
5	Financial Strategy	12
5.0	Proposed expenditure	12
5.1	Sale of assets	12
6	Conclusion	13

BRCT submission on Dunedin's 10 year plan 2018 - 28

1 Overview

Thank you for this opportunity to submit to the Dunedin's **10 year plan 2018 - 28**.

The Blueskin Resilient Communities Trust (BRCT) is a registered charitable trust formed in 2008 to collaboratively work on local climate solutions. We work as a legal body to provide a public benefit and achieve the long-term objective of building community resilience. Jeanette Fitzsimons is our patron and we are governed by a volunteer board of community leaders representing different networks and skills. We are represented by Craig Marshall (Chair), Charles Abraham (Treasurer), Ross Johnston (Secretary), Jacinta Ruru, Anna Marsich and Dell McLeod (Trustees).

We commend the Council for attractively and clearly setting out the LTP. We believe however that there are some important gaps in the LTP, particularly in relation to our place, Blueskin Bay and a need for some strategic investment. We cannot tell from the budget papers how much has been allocated for climate change adaptation. We do recognise an ambition to address climate impacts and to reduce emissions with the aim of becoming a zero carbon city by 2050 and we suggest providing adequate resourcing to achieve this ambition.

In our submission we focus on our place, Blueskin Bay, and only touch in a general way on existing and new project areas covered in the consultation document. However we do make a special point about the importance of significant investment in place-based groups and we do seek a serious approach to our energy future.

We are living in a changing environment with a rapidly changing climate. While collectively we make preparations for unpredictable events like fires and earthquakes, we are poor, as a city and as a society at investing in solutions for the very predictable Long Emergency of climate change despite accepting that it is real and it is happening now. Our changing world requires us to innovate and be creative and we offer our support to the DCC in addressing the challenges ahead.

BRCT submission on the Dunedin's 10 year plan 2018 - 28

2 Blueskin Bay

2.0 *Vulnerability to rising seas and more frequent flooding*

Our settlements are already being affected by rising seas and more frequent flood events. Our community is particularly exposed to hazards and our settlements at risk with houses and the built environment in many cases situated on low-lying coastal land. Waitati, the 'hub' Blueskin settlement, is mostly located on the alluvial flood plain and its commercial zone, fire station, hall, library and even the Waitati school are all vulnerable to flooding. Flood hazard is only one risk however. A more immediate risk to human health and wellbeing is the rising ground water levels combined with increased frequency of flooding. The specific risk to human health is related to the waste water infrastructure in the settlements of Waitati and Long Beach in particular. Residents in these settlements as well as Purakaunui and Osborne have household sewerage disposal in a variety of forms: septic tanks, composting toilets and bucket toilets with no centralised sewerage scheme. Septic tanks in particular are not intended to be located in saturated ground and when this happens, as is occurring with greater regularity, waste water can easily flow to the surface. In other words, because of a higher water table as a result of rising sea levels, conventional septic systems are no longer fully effective at removing harmful bacteria and nutrients. Septic systems rely on the soil and its microbes for effective treatment.

At Warrington, the waste water settling and treatment pond is located on the Warrington Spit, which is a dynamic coastal environment.



Flooded Waitati House in April 2006. *BRCT file photos.*

BRCT submission on the Dunedin's 10 year plan 2018 - 28

Recommendation 1:

- Invest \$100, 000 in a 'Vulnerability and Scoping Assessment of Waste Water Systems' for the settlements of Warrington, Waitati and Long Beach to be completed by 2020. The scoping part of the assessment should consider solutions to reduce risk from insanitary conditions. It should also cover both protection and retreat options and should use the Dynamic Adaptive Pathway Planning methodology. BRCT is available to help design the parameters of the assessment.

2.1 Vulnerability of our transport network

Climate impacts are not limited to flooding property: extreme weather events have a number of different and cascading impacts. Our transport network connects our settlements to each other and keeps us 'connected' people in vibrant and cohesive communities. Yet storm events can lead to slips, particularly on Coast Road between Evansdale and Karitane, and Blueskin Road connecting Waitati to Purakaunui, Osborne and Long Beach. Flooding too damaged SH1 in 2017 and is more frequently flooding Doctors Point Road by Blacks Bridge.



Doctors Point Road near Blacks Bridge under. BRCT file photo.

Recommendation 2:

- Invest \$50, 000 in a 'Vulnerability and Scoping Assessment of Roding infrastructure' connecting the settlements of Karitane, Seacliff, Warrington, Evansdale, Waitati , Purakaunui, Osborne and Long Beach to be completed by

BRCT submission on the Dunedin's 10 year plan 2018 - 28

2020. The scoping part of the assessment should consider alternative routes including evaluation of existing paper roads and their potential as alternative routes. It should use the Dynamic Adaptive Pathway Planning methodology and it would be helpful to work in with Transit NZ, and again BRCT is available to help advise.

2.2 Adapting our built environment to our dynamic environment

The impacts on property and residents from flooding are growing in intensity as adverse events increase in frequency. We know that by 2040 – 2060 what are now 100 year flood events will likely become monthly flood events and around 4000 households in Otago are at risk. In the latest 2017 floods, many properties in Blueskin were inundated and some severely flooded. Climate impacts such as flooding over time, without adaptation, will make homes unliveable and could possibly result in 'climate ghettos' – areas that as prices drop (and insurance is lost) are sold to the more vulnerable members of our community who are unable to cope well with an increased frequency of flood events. Further unpredictable cascading impacts are likely.

We cannot tell from the LTP documentation what budget if any has been allocated for climate change adaptation work, however our position is that adaptation to climate change impacts is essential work and it is crucial that this work is funded sufficiently so that we can see meaningful progress.

Our particular concern is with the areas in our settlements most at risk and the vulnerable households who are increasingly financially and emotionally affected as each adverse event places them in a more precarious situation.



2017 exhibition of climate safe house designs. BRCT file photo.

BRCT submission on the Dunedin's 10 year plan 2018 - 28

Our [Climate Safe House project](#) is a community-led project to plan for and implement adaptation to climate impacts. It is about maintaining vibrant and cohesive communities rather than climate ghettos. It is about responding to environmental changes while demonstrating warm and healthy homes and adaptable housing options. We have a number of partner relationships and are seeking further partnerships and investment in, the design and construction a New Zealand Blueprint of climate safe housing.

Currently the Climate Safe House project has sponsorship commitment from Enphase for approximately \$50, 000 worth of home energy management systems (PV solar, battery bank and behind-the-meter clean tech) and we are in partnership discussion with the Otago Polytech. In 2017 Council provided a grant that enabled research and early stage design. Our existing partner relationships (i.e. with BRANZ, EECA, the Akina Foundation, the Community Energy Network) could help us leverage greater impact with the Climate Safe House project if the project receives development investment. We can only unlock existing and further sponsorship once a core funder is found.

Recommendation 3:

- We recommend committing investment to the Climate Safe House project, a concrete and public example of adaptable housing. This investment should take into account the multiplier effect of assisting the Climate Safe House project with Council core funding of ideally \$100, 000 per annum over three years, to bring on board additional sponsors. Deliverables and goals are to be determined jointly by BRCT and Council staff. The arrangement will be evaluated for extension after three years. Please contact us directly for further discussion. In addition, we suggest the Council anticipates contracting the Climate Safe House project to include a number of climate safe homes in the Council's social housing portfolio, once the first climate safe house has been built and evaluated.

3 Place Based Groups

3.0 Investing in Place Based Groups

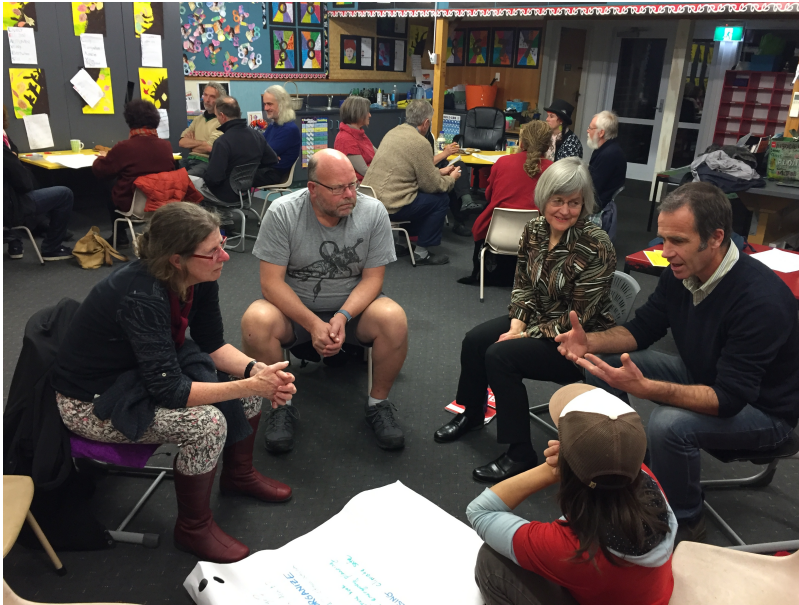
We belong to a collective of Dunedin based Place-based Community-led Development groups. We commend Council for listening to our collective voices and for the resolution to consider investment in place-based groups. The current funding environment wastes our communities' resources as too much effort is put into surviving rather than thriving and yet collectively we are critical in ensuring Dunedin is comprised of thriving and connected communities. Please bear in mind that while a \$300 000 investment per year

BRCT submission on the Dunedin's 10 year plan 2018 - 28

would be a useful investment, a more productive investment, in our opinion, would be \$500 000 per annum.

We would like to see a commitment to ongoing funding so our communities can plan for the future, and that this investment is considered 'core-funding'. We hope to see this investment as a beginning point to how we want Dunedin to look in the future - a first step towards genuine investment in our local communities.

We congratulate the council for taking a significant step towards genuine investment in place-based groups city wide. This investment signifies a responsive Council – a Council willing to listen to community voices and which understands the importance of community-led development to social wellbeing and economic development.



BRCT's 'Building Community Resilience' workshop, 2017. BRCT file photos.

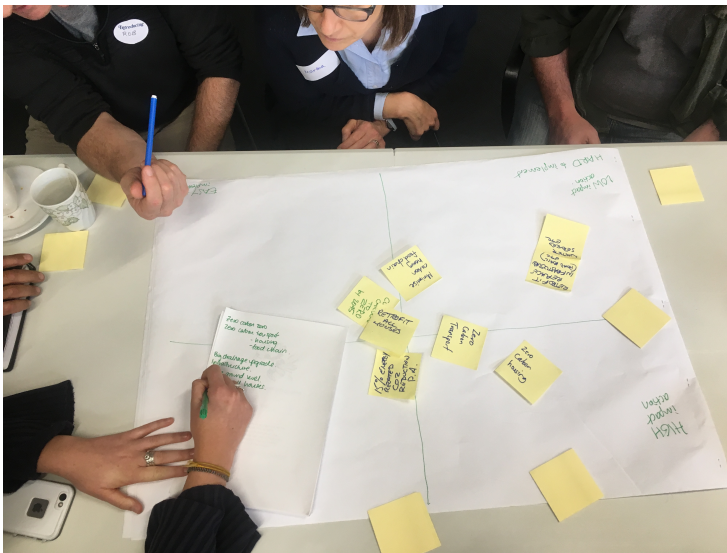
Recommendation 4:

- Invest a minimum of \$300, 000 and an ideal sum of \$500, 000 in a new Place-Based Community Grants Scheme for the next 10 years. Once established we ask that over the next three years a relationship is developed with the Place-based Groups – to allow the co-design of the place based investment fund and for greater reach and impact. We would like to have in place by 2021 a Council-Community place based funding steering group established, which would have shared responsibility from that point onwards. The steering group would ideally look to increase the funding pool by drawing on central government funding over time.

4 New and Major Projects

4.0 Guiding Principles

Major new expenditure on new and major projects is being proposed. We have few comments to make in relation to this proposed expenditure but request that Council employs the Dynamic Adaptive Pathway Planning approach to planning. This approach, proposed by the MfE "identifies ways forward (*pathways*) despite uncertainty, while remaining responsive to change should this be needed (*dynamic*). [...] Pathways are mapped that will best manage, reduce or avoid risk. A plan is developed, with short-term options, and includes pre-defined points (triggers) where decisions can be revisited. This flexibility allows the agreed course of action to change if the need arises - such as, if new climate change information becomes available. By accommodating future change at the outset, this approach helps avoid locking in investments that could make future adjustments difficult and costly"¹.



BRCT's "Our City, Our Climate" workshop, March 2018. BRCT file photo.

Recommendation 5:

- Employ the Dynamic Adaptive Pathways Planning approach to evaluate new projects and major projects. This should include a vulnerability assessment with: "1. A sensitivity analysis for the systems associated with the planning area; 2. An evaluation of the adaptive capacity of the system; 3. An assessment of how vulnerable the system is to the effects of climate change"².

¹ 2017. Preparing for coast change. A summary of coastal hazards and climate change guidance for local government. MfE [accessed at www.mfe.govt.nz]. Pp. 5.

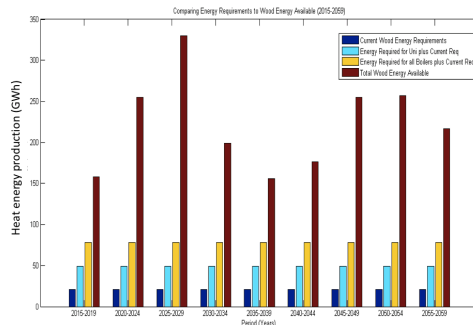
² Ibid. Pp. 24.

BRCT submission on the Dunedin's 10 year plan 2018 - 28

4.1 District Heating Scheme

With the proposal of the Central city upgrade and Tertiary precinct (new projects), along with the soon to be revealed new hospital development, there is a unique opportunity to complete a partnered feasibility study with central government support of a district heating scheme to service three cornerstone customers (University of Otago, SDHB and Council) and potentially a number of inner city energy users. Internationally district heating is regarded as a sustainable, low-cost method of supplying heat when burning biomass. The development of a District Heating Scheme based on biomass would eliminate 13,000 tonnes of coal consumption, which currently releases 27, 000 tonnes of CO₂ per year which is half of the CO₂ emissions from coal in Dunedin. In contrast, wood fuel has zero CO₂ emissions (as long as all trees are replanted). All CO₂ is reabsorbed by growing trees³.

Wood fuel availability



Based on historic plantings, more than enough sustainably-managed plantation wood waste available for fuel in the Dunedin area (estimates include only cost-effective landing site recovery)

Slide from the summer project by Ella Oberschneider. *Ella Oberschneider*

Recommendation 6:

- Work with city partners the University of Otago and SDHB and central government to complete a full feasibility study for a District Heating Scheme in a timely manner. Should a District Heating Scheme be viable, work with city partners to enable the development of the scheme through such agreements as long term contracts for energy with the scheme owner/developer.

³ Results from a summer project by Ella Oberschneider, Supervised by Michael Jack, Physics Department, University of Otago.

BRCT submission on the Dunedin's 10 year plan 2018 - 28

4.2 *Pedestrianisation, active transport and integrated transport*

We support all initiatives which increase walking, active transport and an integrated transport network.



E-bike commute. BRCT file photo

Recommendation 7:

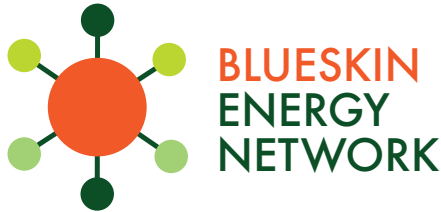
- We support the Bus Users Support Group Otepoti-Dunedin request which “asks the Dunedin City Council to negotiate and develop a model of shared management and funding of the Dunedin bus network with the Otago Regional Council for consultation and implementation as part of both councils' 2019 Annual Plan process”.
- We support pedestrian trials in the Octagon and lower Stuart St with an investment of \$150, 000 over the next two years, as proposed by the Dunedin City Council's planning and environment committee.

4.3 *Energy Plan 2.0*

It is clear that the Energy Plan 1.0 is overdue for a reboot. While the key goals in Energy Plan 1.0 are excellent, it is far from clear whether the listed project areas are appropriate to deliver on the goals and whether there is adequate resourcing to ensure success in these project areas or whether these project areas are influential. As noted in the Dunedin Energy Study 2016/2017, the “city’s aspirations to improve efficiency, increase renewables and decrease greenhouse gas emissions will not be realised until

BRCT submission on the Dunedin's 10 year plan 2018 - 28

significant changes start to occur⁴". It is critical that Council continues to work towards a zero carbon economy and the Energy Plan should be the vehicle to do this. Therefore it must be upgraded and adequately powered. We wish to see an Energy Plan 2.0 developed promptly, building on previous work and securing adequate resourcing to ensure progress. We also seek an investment in meaningful project areas that will help reduce greenhouse gas emissions, increase the supply of renewables, and increase both energy security and resilience in our city energy supply and distribution.



Blueskin Energy Network logo. BRCT file photo

Recommendation 8:

- We request that Council explicitly supports and facilitates the development of Smart Grid initiatives, such as New Zealand's first community-led Smart Grid development, the Blueskin Energy Network.
- We ask that the opportunity to capture and utilise the carbon emissions from organic waste using existing expertise and technology is given serious attention.
- While 4% of Dunedin electricity supply comes from locally embedded generation (Waipori hydro and Mahinerangi wind – both outside city limits but feeding into the Dunedin network)⁵ we know of at least one viable wind farm site within Dunedin City boundaries and anticipate there are more. We request that Council actively work with local developers such as Blueskin Energy Ltd to evaluate potential wind farm sites with a contribution of up to \$150, 000 of co-funding over five years to enable evaluation.
- Easy progress in reducing emissions can be made through the electrification of transport. We generally support the submission from the Otago Electric Vehicle Society and the Dunedin EV group and request that Council does all it can to support the electrification of our whole land based transport system, including public transport.

⁴ 2018. Fitzgerald, W. *Dunedin Energy Use Study 2016/2017*. Centre for Sustainability, prepared for the Dunedin City Council. Pp.40

⁵ Ibid. Pp. 4

BRCT submission on the Dunedin's 10 year plan 2018 - 28

5 Financial Strategy

5.0 Proposed expenditure

The Long Term Plan outlines an ambitious investment plan (\$864 million on capital projects over the next ten years). We recognize the value of investment to maintain and improve the livability of our city and acknowledge there is a substantial cost to simply standing still. For this reason we do support an increase in rates to support an increase in expenditure.

Recommendation 9:

- We ask that a thorough risk assessment of investment decisions is made following the guidance provided by MfE's report on "Preparing for coastal change" prior to any project commencing.
- We seek a new investment of about \$450, 000 over three years in climate change adaptation in Blueskin. We believe this modest investment in climate change adaptation will have significant benefit for the whole city of Dunedin and compares favourably in terms of value with the cost of major and new projects as set out in the draft Long Term Plan.

5.1 Sale of assets

We recognise the need to reduce the impact of increase costs on residents and the wide portfolio of assets owned by Council.

Recommendation 10:

- We ask that no strategic assets be sold, i.e. City Forests, Aurora, Delta.
- We ask that all unwanted Council owned land holdings in the Blueskin area be considered as community assets with collective value. BRCT is available to advise the Council on what value particular landholdings in Blueskin might have in relation to future developments in climate safe housing or other projects.

BRCT submission on the Dunedin's 10 year plan 2018 - 28

6 Conclusion

We thank you for the opportunity to make a submission and to be heard. We value the improvements to community engagement through a more inclusive approach to consultation. Thank you for your attention to this submission

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Scott Willis', is written over a faint, light blue circular stamp or watermark.

Scott Willis