27 April 2021

SUBMISSION ON

HAWKE'S BAY REGIONAL COUNCIL'S LONG TERM PLAN

Emailed to:

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From:

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STRUCTURE OF SUBMISSION

1. Comments on the Long Term Plan are provided in this submission as follows:

INTRODUCTION

2. Forest & Bird wish to be heard in support of this submission.

3. This submission is made to Hawke's Bay Regional Council (HBRC) on behalf of the national office and the local branches of the Royal Forest and Bird Protection Society New Zealand Incorporated (viz. the Central Hawke's Bay (CHB), Napier, and Hastings/Havelock North branches).

4. Forest & Bird is New Zealand's leading independent conservation organisation. We have played an important role in preserving New Zealand's environment and native species for almost 100 years, since 1923. We are independently funded by private subscription, donations, and bequests. Our mission is to protect and restore New Zealand's unique ecological values, flora and fauna, and natural habitat through the sustainable management of indigenous biodiversity, natural landscapes, rivers, lakes, and coastal environments.

5. Forest & Bird has three branches and a long history of conservation in the Hawke's Bay region. We have contributed significantly—and continue to contribute significantly—to conservation in the area as an advocate for the environment through national, regional, and local planning processes; as an educator through our Kiwi Conservation Club; and in action through on-the-ground conservation work within our community. Our reserves and projects you might know of include the Pukahu Project, Blowhard Bush, Poukawa Stream, and a Native Plant Nursery (Hastings Branch); Waitangi Reserve, Lake Tūtira, and Ahuriri Estuary projects, as well as Little Bush Reserve (Napier Branch); and Lindsay Bush, and the protection of an endangered bittern colony living on Lake Hatuma (CHB Branch).

6. HBRC has the responsibility of sustainably managing the natural and physical resources in its region to meet the reasonably foreseeable needs of future generations; to safeguard the life-supporting capacity of air, water, soil, and ecosystems; and to avoid, remedy, or mitigate any adverse effects of activities on the environment.

7. In this regard, the needs and wants of future generations are increasingly being made known. Aotearoa's youth are calling on society's decision-makers to act with their interests at heart—and with their livelihoods very much at stake. Students are marching across the country to reiterate these calls, with Mike Joy writing[1] immediately after the most recent strike:

> The school strikes for the climate are not a fad and they're not going away. They should be a wake-up call. The kids are telling us they have had enough, that we "grown-ups" aren't grown-up enough to do anything real about a planetary-level threat to future generations.
>
> While emissions of all pollutants inexorably rise and we waltz past tipping point after tipping point, we continue to talk and talk and set up working groups and commissions and expert panels. We commission reports … and we monitor impacts, and we survey people. We do nothing real.

[1] https://www.rnz.co.nz/news/on-the-inside/440120/polluted-waterways-why-are-we-subsidising-environmental-harm

8. We, as a society and as decision-makers, understand what needs to be done to turn things around and we have the ability and authority to rapidly change if we decide to—Aotearoa's response to COVID-19 has been a clear illustrator of this.

9. We appreciate HBRC's in-principle position on these issues and agree with the comments in the introduction to the Long Term Plan (LTP) that "Hawke's Bay has a legacy of environmental issues and a changing climate". We also supported the declaration of a climate emergency and HBRC's statement that climate change "is at the heart of everything [they] do". However, we cannot stress enough how critical it is for HBRC to act with urgency and ambition to reduce its contribution to climate change and to become resilient to the impacts of climate change for the long-term.

10. We stress that Before people arrived in Aotearoa New Zealand, 80% of the land was covered in dense forest. Now only 24% remains. It's the same for wetlands, with over 90% degraded or lost; for vertebrate species, with 79% threatened with or at risk of extinction; and for freshwater fish, with 76% threatened with or at risk of extinction. We continue to lose these ecosystems and species at an alarming rate, as reiterated by the Ministry for the Environment's 'Our Land' 2021 report[2]. It is important to understand these ecosystems and species are not 'nice to haves'—these are vital components of our world, which we are inherently connected to and without which we cannot survive. We cannot emphasise this enough.

11. In his article following the School Strike for Climate, Mike Joy also wrote:

> I was one of tens of thousands of scientists who signed up to a series of 'World Scientists' Warnings to Humanity'. These are warnings about everything from the collapse of food-webs and micro-organisms to freshwater biodiversity declines. Their common conclusion is, "If human behaviour the world over doesn't change soon there will be catastrophic biodiversity loss and untold amounts of human misery".
>
> Read that sentence again. When a scientist says "catastrophic biodiversity loss", it doesn't mean "we might lose a panda". It means roughly "head for the lifeboats", except that planets don't have lifeboats. We can either make hard changes or we can go down with the ship.
>
> Earlier this year another critical paper authored by 17 leading scientists was published, based on 150 studies, under the provocative title: Underestimating the Challenges of Avoiding a Ghastly Future. It outlined how close we are to collapsing the life-supporting capacity of this planet, unless we radically change how we live.
>
> Contrast that title with the daily headlines about travel bubbles and "getting back to normal". No wonder the kids are marching.
>
> One quote from the 'ghastly future' paper struck a chord with me: "Humanity is running an ecological Ponzi scheme in which society robs nature and future generations to pay for boosting incomes in the short term".

[2] https://environment.govt.nz/assets/Publications/Environmental-Reporting/our-land-summary-english.pdf

12. As HBRC know, these concerns and conclusions are shared by the vast majority of people—though perhaps we don't all understand the scale and significance of the looming catastrophe.

13. In 2019, a survey of youth mental health and worries in Aotearoa[3] picked up concerning feelings in this regard from our youth:

> Many students saw the future as bleak and felt that their generation was inheriting a broken world. Climate change was a strong theme… Some expressed a sense of facing a hostile world with insufficient adult support. Others felt older generations had created a mess and were leaving it to young people to find solutions.
>
> Young people want action for a brighter future including… Action to address climate change and other urgent environmental issues.
>
> …we consider that this data about youth mental and emotional health needs is concerning and attention to address long term causes and current needs is required. Increases in distress over the last decade have been reported in many developed nations. There are multiple hypotheses or theories about why this is. These ideas include… [the] climate crisis…

14. One response to a question in the survey, "What do you think should be changed to support young people in New Zealand better?" was "The climate and how polluted the environment is, I feel like this is what is making our country toxic and you can't really be happy if the environment is sad." (Pacifica female, decile 1 school, age 15).

15. We, again, cannot emphasise enough the significance of the global biodiversity crisis, the climate change crisis, and the scale and seriousness of the issues our children will face within their lifetimes as a consequence. We hope HBRC appreciate this.

16. While the crisis is serious, that is not cause for inaction. We can be part of the solution—and HBRC seems willing to be. We also know that when we take collective action, based on science and sound advice from experts, we can make significant progress in extremely short timeframes. Aotearoa's response to COVID-19, and rapid the global development of several vaccines, is testament to this.

17. When nature thrives, our communities thrive. Healthy native forests, wetlands, and rivers sequester carbon, provide habitat for native species, filter freshwater, and protect us from floods and droughts. They also contribute significantly to our happiness and health.[4]

18. It's not long ago that nature thrived in Aotearoa New Zealand. We need to bring back nature—and HBRC has a critical role in that restoration.

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[3] https://www.youth19.ac.nz/publications

[4] See Catherine Knight, Nature and Wellbeing in Aotearoa New Zealand. https://www.catherineknight.nz/nature-wellbeing

19. HBRC has made many commitments to the community on protecting and restoring nature, on minimising our contribution to and effects of climate change, and enhancing community wellbeing. It has a strong mandate to follow through with those commitments in this long term planning round.

20. We appreciate the proposals in the proposed LTP for how these commitments can be delivered. We have suggestions as to how more can be achieved, and on what needs to be adjusted to ensure progress on the commitments isn't compromised.

21. Our vision for the region is as follows, which ties into Forest & Bird's national strategic objectives:

    - **Climate Centred:** Hawke's Bay is resilient to the impacts of climate change. Any 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:** Hawke's Bay's local economy and nature are interconnected. Unhealthy nature equals an unhealthy economy. Infinite growth (of local production, population, or the economy) is not sustainable and not possible.

    - **Vibrant Landscapes:** Hawke's Bay'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 ecosystems.

    - **Oceans Alive:** Hawke's Bay residents recognise the health of the marine environment is a direct result of on-land activities. Coastlines return to their original, healthy states. Fishing and aquaculture activities follow ecosystem-based management principles. Thirty percent of Hawke's Bay's marine environment is protected through a network of no-take marine protected areas.

    - **Energised Water, Rivers, and Wetlands:** Hawke's Bay's rivers and streams are clean, healthy, and teeming with life. Wetlands are protected and enhanced.

22. We hope HBRC shares this vision, and implore you to take the community a step closer to it through this LTP.

SUBMISSION

Me mahi ināianei hai tiaki I te anamata / Action now to protect our future (p. 3 of LTP)

23. Forest & Bird agree with the sentiment of 'acting now to protect our future', and that Hawke's Bay "has a legacy of environmental issues and a changing climate" and "the task before us is huge".

24. We also agree the natural surroundings "have seen too little investment for too long", however would add that they have been, and in many cases continue to be, **actively exploited and degraded**.

25. We are extremely supportive of the use of te reo Māori in the LTP documents and implore HBRC to increase its use of te reo in other documentation.

26. We support the idea that increased funding for "expert advice from our Tangata Whenua partners" is valuable. We implore HBRC to ensure this is genuine and inclusive engagement, and that advice is listened to and **acted upon**.

Ngā mea hou / What's new (p. 4 of LTP)

27. While it is difficult to ascertain the specifics of the projects, in principle we:

    - **Support** funding for 'Monitoring, gathering and processing of real-time data remotely $130,000'.
    - **Have concerns** about the proposed approach for delivering a 'Greater capability to deliver flood and environment protection' (addressed later in our submission, under 'What we've achieved' and 'Upper Tukituki Gravel', para. 48-63, 79-83).
    - **Support** funding the listed 'Integrated Catchment Management' projects and would support HBRC increasing the scale and speed of these projects. **However, we emphasise the need for HBRC to treat the cause of catchment environmental issues, such as over-allocation of water quantity and diffuse pollution, not just treat the problem**. Much of the attention from regional councils across Aotearoa has been on farm plans, 'efficient irrigation', 'restoration' projects (at significant cost)[5], or Good Management Practice (GMP). However, these will not (and do not) drive improved environmental outcomes unless the approach taken starts at the level of the environmental limits of the catchment, and that catchment's ecological and community values.
    - **Support** funding for Policy and Regulation, particularly to increase compliance, monitoring, and enforcement work; and to give effect to the 'Essential Freshwater' reform (NPS 2020 etc.). However, we emphasise a need for this work to be driven from

[5] e.g. HBRC's Tukipo wetland project https://www.hbrc.govt.nz/home/article/1054/-large-wetland-being-constructed-in-tukipo-central-hawkes-bay?t=featured&s=1 – we note "it is 37 times more costly to remove nitrogen from lakes once it is there than to not put it on land in the first place" (https://waterqualitynz.info/myths-of-agricultural-intensification/myth-it-costs-too-much-to-reduce-leaching/)

the catchment limits up, not from the interests of industry down. The policy team needs to be courageous in its work to address environmental issues in Hawke's Bay and should be given this mandate.

- **Support** the expansion of a Māori partnerships team.
- **Support** the funding of a climate change ambassador and essential freshwater expert advice (though we wonder why this advice could not be attained/developed in-house: is there a reason?). We note while this 'climate ambassador' might focus on what individual actions ratepayers can make in the region, the only way we will address climate change issues is if we see large scale action from industry and government—i.e. we cannot make action only a question of individual responsibility.

Ā mātau whakatututkingia I ngā tau e 3 kua hori / What we've achieved – the last 3 years
(p. 8 of the LTP)

General Comments

28. We are glad there has been recognition that ratepayers "wanted [HBRC] to do much more to protect and restore our environment, particularly our rivers, streams, and lakes... and… to do more to protect our region from pests and the growing effects of climate change."

29. We agree the "issues we face to reverse the historic damage done to our land, water, and biodiversity, and now the added challenge of responding to the climate crisis, are immense."

30. We acknowledge that HBRC "recognised that to meet these challenges [it] needed to act with urgency," though we disagree with the statement that HBRC "could not wait to clean up our freshwater". If this was in fact the case, we consider HBRC would not, to date, have spent over $1,000,000 of ratepayer money[6] on opposing the case for a WCO order on the lower Ngaruroro River, and would have instead spent this on much more productive work to restore freshwater in the region, or at least not opposed the recognition of a section river with such extraordinary characteristics and values.

31. We are also concerned that current work by HBRC to address issues with water quantity, in particular the Managed Aquifer Recharge (MAR) and Heretaunga water storage projects, will result in HBRC spending significant funds on trying to treat the **effect** of the over-allocation problem and not the **cause**. HBRC must take policy steps to address the cause of the over-allocation issue (i.e. too much water has been allocated, inappropriate land uses, a lack of recognition of environmental limits, and a lack of acknowledgement that economic growth cannot continue unabated) and treat the cause of the problem, lest HBRC waste a significant amount of money to achieve very little, if nothing at all, while subsidising polluters in the meantime.

[6] This is the official value provided to Forest & Bird from HBRC through a LGOIMA information request. The actual figure to March 2021 is $1,056,613, and $849,923 of that has been on external consultants/lawyers etc. This does not include invoices yet to come in or costs associated with the remainder of the Environment Court hearing, scheduled for later this year.

Lake Tūtira

32. We are impressed and appreciative of HBRC's efforts to make Lake Tūtira 'swimmable' again (though we note there are still issues, perhaps unavoidable to an extent, with 'duck itch'; and there is much work to be done to ensure the lake remains swimmable).

New Policies and Rules

33. In regard to the new policies and rules:

    a. We appreciate the work that has gone into consenting farmers in the Tukituki catchment. We are now very interested in the trends in water quality in the Tukituki and determining whether improvements are starting to be realised. As above, we have concerns that FEMPs and GMP will not work without clear rules and limits to protect the values in the catchment.
    b. The policies being finalised for the Heretaunga area (which we assume to be in the TANK plan change) are, in our opinion, insufficient to "protect rural and urban waterways". For example, there is no framework to allocate diffuse nutrient pollution across the catchments within environmental limits. There is also significant work to be done to ensure consistency with the NPS Freshwater 2020. This is covered in our submission on the TANK plan change[7].
    c. We support urgent work to give effect to the NPS 2020 in the Mohaka and Wairoa catchments. In particular, we are concerned about nitrogen pollution from the Taharua catchment, which continues to degrade[8]. We urge HBRC to finance this work and give effect to the NPSFM 2020 in full as soon as possible, and not in stages. We also urge HBRC to finance work with farmers and landowners in these catchments to stop degradation and start restoration well before the plan changes are completed.

Compliance Team

34. We support the growth of the compliance team and are encouraged to hear prosecutions have increased, though we feel there is a long way to go. Aotearoa has an extremely poor track record on compliance, monitoring, and enforcement and this has been a key point of frustration for Forest & Bird.[9] We implore HBRC to increase funding for this work, particularly given the requirements to implement the 'Essential Freshwater' package, which includes rules with immediate effect in the NES and Stock Exclusion Regulations (which need to be enforced).

[7] Submitter 210, https://www.hbrc.govt.nz/assets/Document-Library/TANK/Submissions/Part-6-Submitters-201-241.pdf
[8] https://www.lawa.org.nz/explore-data/hawkes-bay-region/river-quality/mohaka-river/taharua-rv-at-twin-culv-wrights/
[9] We have produced two reports on the subject of compliance, monitoring, and enforcement in recent years: https://www.forestandbird.org.nz/resources/major-report-highlights-failure-councils-protect-environment-dairying and https://www.forestandbird.org.nz/resources/see-no-evil-biodiversity-loss-private-land

Future Farming Trust

35. We are supportive of some of the work of the Future Farming Trust and would support more resourcing and promotion of their work by HBRC. In particular, we are extremely supportive of the work the trust is doing with local farm systems modeller, Barrie Ridler, and his 'Enviro-Economic Model' (E2M). Forest & Bird highlighted some of this work several years ago,[10] which was commissioned by HBRC to investigate how farmers in the Ruataniwha basin could farm more efficiently and without irrigation, while maintaining profits. E2M was used by Lincoln University Dairy Farm, which,

> …through a reduction in external inputs and the size of its herd (from 630 to 560 cows), increased its production (from 400kgMS to over 500kgMS per cow) and profitability, while decreasing its nitrogen leaching (by 30%). This (approximately) 11% reduction in herd size would have resulted in a significant reduction in CO2 and methane emissions in line with the target reductions currently being discussed by the Climate Commission—all achieved without any adverse impact on farm operations or profitability, and all without expensive mitigation technology.
>
> (from E2M Technical Foreword, Appendix 1)

36. We have included the updated 'Technical Foreword' to E2M as an appendix to this submission because it provides what we consider to be an extremely valuable explanation of the difference between farming to maximise profitability and farming to maximise production. Environmental limits are often exceeded when farming to maximise for production, and we implore HBRC to discourage this approach from landowners and industry. The work of the FFT is promising in this regard. It would be good to see HBRC take this approach publicly with all landowners and industry (i.e. promote the idea that production cannot just keep increasing, and there are limits to growth).

37. We also support the work of the trust to promote more regenerative agriculture.

38. We would support more work from the trust and HBRC to look at moving away from high-impact land uses in the long term, such as animal agriculture and production that relies heavily on synthetic fertilisers and chemical sprays, which both contribute to soil contamination and pollution with metals such as cadmium, zinc, and copper[11].

39. We urge HBRC to investigate, if it isn't already, what it can do to promote more efficient horticultural and viticultural systems, given these are also huge land uses in the region. And to investigate how it can assist land owners to 'roll back' over-commitment to some land uses (e.g. high-water-using dairy farming, or apple growing) and invest in lower impact, lower water use, land uses.

[10] https://www.forestandbird.org.nz/resources/councils-ignore-expert-reports-irrigation-impacts
[11] https://environment.govt.nz/assets/Publications/our-land-2021.pdf

FEMPs

40. We support in-part the rollout of FEMPs in the Tukituki catchment, the initiation of catchment groups, and the work with landowners around Tūtira, Whakakī, and the Ahuriri Estuary, though (as above) we consider strong rule frameworks are needed alongside these projects. Forest & Bird has consistently expressed concern with the use of FEMPs for managing environmental impacts and consider rules and limits a vital component of any system that uses FEMPs. This is where HBRC policy and planning, and compliance/monitoring/enforcement funding is critical. Ecological values and limits for catchments also need to be urgently identified and frameworks developed to work within them (e.g. the Taupō and Rotorua catchment nitrogen limits that were introduced to manage diffuse pollution within the catchments capacity to assimilate that pollution).

'Plant Thru Winter' and Enviroschools

41. We support the 'plant thru winter' and the Enviroschools projects, and urge HBRC to continue funding them.

Biodiversity Team

42. We support the 'boosting' of the biodiversity team and the associated projects. HBRC should continue to look to leverage off 'Jobs for Nature' and PF2050 funding to support this work (and we understand it has done this). HBRC should also ensure all work and priorities are in accordance with the Aotearoa New Zealand Biodiversity Strategy.[12] We note that while the Biodiversity Foundation can play a valuable role in biodiversity restoration, it is not a substitute for HBRC management of reserves and other ecosystems, and must be supported by strong regional/coastal plan frameworks to protect existing and regenerating biodiversity.

Environmental Data Collection

43. We support the funding of environmental data collection and would support an increase in this program (e.g. to increase the occurrence of water quality monitoring, the recalibration of flow monitoring sites, to increase the number of flow monitoring sites, and to increase physical habitat monitoring).

Aquifer mapping

44. We support the 3D aquifer mapping project and implore HBRC to make this data as soon as possible to inform the development of plans under the NPS FM 2020, in particular to shed light on water allocation issues, groundwater levels, and stream depletion effects. This is vital information for addressing allocation issues and it needs to be public.

[12] https://www.doc.govt.nz/nature/biodiversity/aotearoa-new-zealand-biodiversity-strategy/

Sustainable Homes Programme

45. We support the ongoing funding of the 'Sustainable Homes Programme' and would support the extension of this project. We note again while the cumulative impact of these individual household changes is not insignificant, it must be accompanied by changes from industry and government, and HBRC can drive these changes through regulation and enforcement.

Cycleways

46. We support the extension of cycleways to connect the region. We hope HBRC is working with local councils to connect these to local networks to improve cycling for commuters in the region, thereby reducing emissions.

Planting

47. We support the funding of planting work by HBRC. We note the work of Forest & Bird's Napier branch at Waitangi Park in this regard, and the Hastings branch near the Pekapeka wetland and the Karamū Stream, among other locations.

Flood Protection Infrastructure / Climate Change

48. We have serious concerns with HBRC's 'acceleration' of the work to "ensure flood protection infrastructure can meet the challenges of more frequent and heavier rainfall". While we appreciate the need for this work to protect the safety of communities, we consider it will not make us safer in the long term, and will not provide real resilience to the impacts of climate change.

49. We strongly feel that 'engineering' our way to resilience against the impacts of climate change through the expansion or strengthening of flood protection infrastructure isn't going to work. This is a view that is supported by river geomorphologists and academic experts across Aotearoa[13] and internationally[14].

50. Trying to reinforce a riverbank just enables erosion elsewhere—usually on the other side of the river or downstream, if not immediately around or under the reinforcement. While this 'reinforcement' might give us some time before a river bank erodes to a road, in the end the river will 'get the better of' the engineering. This creates significant ongoing maintenance costs and can create safety risks when failure of reinforcement eventually occurs.

51. With higher and more frequent flood flows predicted with climate change, the pressure on riverbank reinforcements (including stopbanks) will only increase, and when the reinforcement eventually fails the consequences will be greater. We saw this in 2019 with the Rangitata River overwhelming flood 'protection' and jumping into its southern branch (Figure 1), where it had not flowed for 24 years; with the Waiho River tearing down a bridge and cutting off communities; and with the Fox River opening up a landfill and spreading rubbish across West

[13] https://theconversation.com/why-we-should-release-new-zealands-strangled-rivers-to-lessen-the-impact-of-future-floods-153077
[14] https://pearl.plymouth.ac.uk/handle/10026.1/13225

Coast beaches up to 100km away. Not to mention Edgecumbe in 2017, or the Whanganui River in 2015.

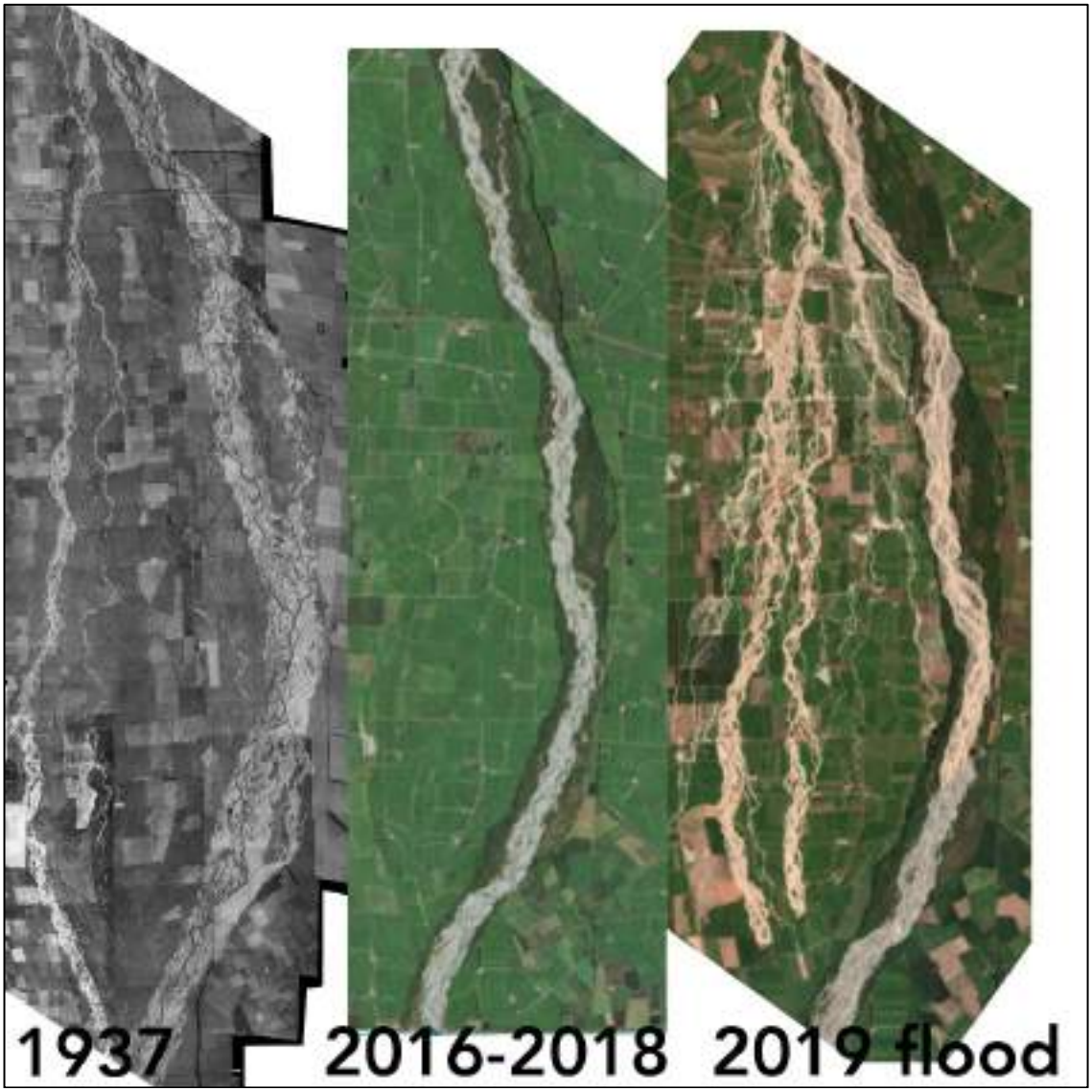

Figure 1: Rangitata River in 1937, 2018-2018, and during the 2019 flood. Note the similarity of the 2019 'flood' channel form with the 'natural' channel form in 1937. If the river had not been so constrained and encroached upon it is likely the impacts of flooding would not have been as significant.

52. We note in the 2019 flood of the Rangitata River[15]:

- There were three flood 'peaks'. The highest was 2307 m^3/s – "35 times more flow than usual"
- "During the third high flow – on 8 December – the flow stayed over 2000 cumecs for 10 hours – an extremely intense flow for the river."
- The flood protection scheme was only designed for flows around 1500 m^3/s

[15] Information from: https://www.ecan.govt.nz/get-involved/news-and-events/2019/rangitata-river-why-did-it-flood-and-what-happens-now/

- There were several 'breakout' points where the river overwhelmed 'flood protection' infrastructure
- "The south branch temporarily became the dominant river flow channel as the main river flow dropped - meaning there was more water flowing in the south branch than the usual Rangitata main branch."

53. These sorts of anomalies of flow are likely to become more regular as an impact of climate change.

54. Note in Figure 1 the similarity of the 2019 Rangitata 'flood' channel form with the more 'natural' channel form in 1937. Had the river not been encroached upon so much over the last 80-100 years, the damage done by the flooding to flood protection, farm, and road infrastructure would have undoubtedly been much lower (and thereby not done so much economic damage). There would also be much more river habitat available and a much wider active gravel riverbed for things like (natural) aquifer recharge.

55. In Aotearoa, including Hawke's Bay, we have tried to straighten and contain rivers in an effort to stabilise them, but that has potentially increased the risks we face from flooding, particularly when considering the size of flood flows with climate change. It has also destroyed habitat for birds and fish, removed areas of riverbed that may have recharged our aquifers, and reduced our ability to connect to these beautiful places that we're inherently connected to. A section of the Ngaruroro River (Figure 2) illustrates this impact.

56. We consider council needs to change the way it thinks about the climate resilience of its flood protection infrastructure and the rivers it manages.

57. The reality is rivers are most stable when they are given room to move—when they can safely flood and dissipate their energy and can adjust their course within their channel. We shouldn't be surprised when a river floods or erodes a bank—that's just a river being a river. We've created an issue by encroaching so tightly on rivers, but what we really need to do is provide 'room' for the rivers.

58. Aotearoa's approach to 'river management' is archaic—we're still trying to contain rivers or put them in ever-narrowing fixed channels. This is illustrated in Hawke's Bay in Figure 3, where HBRC has tried to plant willows in the active bed of the Ngaruroro River.

59. Internationally, providing 'room for the river' is becoming standard practice (and some councils, such as Horizons and Wellington, are starting to implement this approach). Creating room for a river doesn't just increase its flood capacity and reduce the frequency of flooding either—it also increases the area of habitat for fish and birds, creates more room for riparian wetlands, reduces the costs of flood maintenance work and engineering, and opens up spaces for recreation. It's a win all-round.

60. Several of Aotearoa's river experts have recently called on decision makers to work with rivers, rather than against them, giving them space to move and allowing channels to adjust.[16] This call has grown to the extent that the Engineering NZ 'Rivers Group' will focus their entire 2021 conference on this topic.[17]

[16] https://theconversation.com/why-we-should-release-new-zealands-strangled-rivers-to-lessen-the-impact-of-future-floods-153077
[17] https://riversgroup.org.nz/event/nz-rivers-group-conference-2021/

61. HBRC needs to think about these sorts of ‘natural’ solutions to mitigating the risks of climate change and look at how it can transition its investment in flood protection towards an approach that provides room for our rivers.

62. In the long term this will provide the best economic, environmental, and wellbeing outcomes.

63. Similar considerations are required in regard to Coastal hazard management.

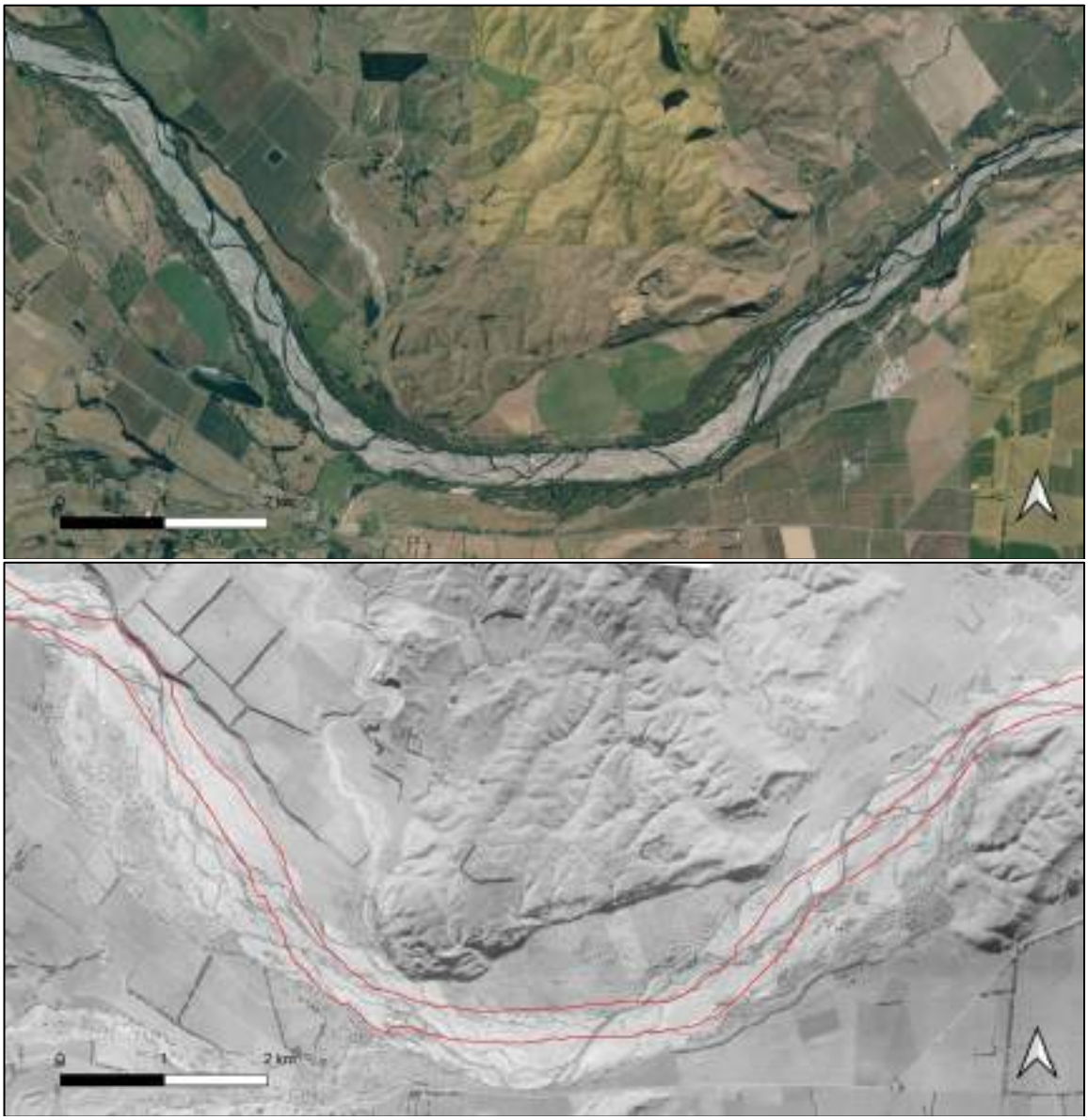

Figure 2: The Ngaruroro River at Maraekakaho, in 2020 (top), and 1937 (bottom) with the 2020 active channel laid over the 1937 channel in red (bottom). Note the significant channel constriction, which reduces available habitat and significantly narrows the floodplain (limiting its ability to hold water or assimilate floodwater energy).

Figure 3: HBRC 'flood protection' 'edge' planting in the active Ngaruroro riverbed. This is a prime example of trying to further channelise a river—destroying braided river habitat in the process. Forest & Bird wrote to HBRC on 14 August 2020 expressing extreme concern with this planting. HBRC's response was that it is a permitted activity under the regional plan (which we contest).

E panoni haere ana tō tātau āhuarangi / Our climate is changing

64. We agree the risks to the region from climate change are serious, and agree with the bullet points noted in the LTP consultation document. However, we note the risk to biodiversity and natural systems has been missed and is also serious. We cannot forget that ecosystems and species, such as our wetlands, groundwater, birds, and fish, are all at risk of collapse as a result of climate change. Any collapse of those systems or populations will have serious consequences for us (for example, the collapse of bee populations, which are in decline[18]; or the collapse of fisheries).

65. We support the declaration of a climate emergency, and hope HBRC is genuine in stating that climate change is "at the heart of everything [they] do".

66. We note the comment about "water storage and use" being the main suggested area for council improvement in regard to climate change. We emphasise 'water use' is critical to address, and without addressing existing allocation issues water storage will do very little to solve environmental problems, at least not without creating more issues. i.e. (again) HBRC must treat the cause, not just the problem.

[18] https://www.rnz.co.nz/news/country/440041/bee-deaths-rise-nearly-100-000-colonies-estimated-lost-last-winter

CONSULTATION TOPICS

Right Tree Right Place

67. We support **Option 1**.

68. We ask that council expand and accelerate this work as soon as possible following confirmation of its efficacy.

69. We ask that there be a focus on establishing native trees.

70. We note the numerous other benefits of planting up the hillsides of Hawke's Bay, which weren't noted in the LTP document, including:

    - Flood peak attenuation because runoff is reduced
    - Increased groundwater infiltration (and aquifer recharge)
    - Habitat provision for native species
    - Carbon sequestration
    - Reduced temperatures (through shading, evapotranspiration, etc.)
    - Amenity and landscape values

Future water use

71. In principle, we support **Option 1**. However, it is unclear what the option entails in full.

72. We cannot stress enough that this program *must* be supported by work to address over-allocation issues in Hawke's Bay catchments. We cannot just "focus on water conservation and water use efficiency".

73. Working with landowners to have 'efficient irrigation' mightn't make the difference that is needed to achieve an environmental outcome if that catchment remains over-allocated, or they live in a catchment where any irrigation is going to have a negative or irreversible impact on a waterway. HBRC needs to be honest with the community and landowners and help them understand that being 'efficient' might not be enough to reach required environmental outcomes. Some 'clawing back' of allocation might be required. HBRC needs to front-foot this work.

74. We agree that "water is absolutely critical in our natural environment" and "it underpins the health of our people".

75. We note that, while we do have *access* to "too much water at times of the year we don't need it, and too little at the times of year that we do", that surplus of water plays a vital role in processes like aquifer recharge through winter, and river channel development through floods (which remove weeds and shift gravel in riverbeds). **Water that flows to the sea IS NOT 'wasted'.**

76. We agree freshwater is "under pressure" (in part because it's over-allocated) and "we can't wait to act". That is why addressing over-allocation, as well as policy development with strong rules, limits, and a focus on 'Te Mana o te Wai' is critical.

77. Conversations with the community about suitable land uses for the region, environmental limits, and limits to production and/or economic growth will be required, and should be resourced. These will be difficult and HBRC needs to be strong and not give in to industry pressure on these issues.

78. We would like to see funding for fish passage remediation somewhere in HBRC's freshwater work, if it is not there already. This would be consistent with meeting NPS FM requirements, and matches the work of other regional councils, e.g. Horizons[19].

Upper Tukituki Gravel

79. Forest & Bird struggles to take a position on this issue. We see the decision at hand as somewhat short-sighted and would like to see HBRC invest in a more 'modern' approach to river management and food protection. Namely, giving rivers more room to move and increasing the width of 'erodible corridors'. We discuss this at length in at paragraphs 48-63.

80. Providing more room for rivers to safely flood is an extremely difficult issue to address, because a long-term solution likely involves 'retreating' from the edges of the river. There are then issues of compensation to address—i.e. would HBRC buy land back along the edge of the river to increase its channel size, and if so, who should pay? While 'buying back' the floodplain might seem like an expensive proposal, in the long term it could cost less than continued gravel extraction, riverbank reinforcement, willow planting, and stopbank maintenance. International research suggests this sort of approach to 'river management' is cheaper than an engineering based approach[20]

81. We note again the Engineering NZ Rivers Group 2021 conference will focus on the 'how' of 'Making Room for Rivers'.[21] We would support HBRC resourcing the attendance of its flood protection / drainage / river management team at the conference to learn about how to give effect to this approach in the region.

82. I have provided several aerial maps/images of what the Tuktiukti riverbed used to be like in the section of the river being consulted on below (Figures 4-7), to provide an indication of what a wider channel might look like (in the sense that this more reflective of the 'stable' form the river wants to take), and illustrate the issues with constantly trying to 'fight' the river back into this confined channel.

[19] http://www.horizons.govt.nz/news/jobs-for-nature-fish-passage-project-well-underway
[20] https://theconversation.com/why-we-should-release-new-zealands-strangled-rivers-to-lessen-the-impact-of-future-floods-153077
[21] https://www.riversconference2021.co.nz/

83. We iterate that New Zealand experts agree[22] our long-term approach to river resilience needs to be different:

> International studies show that allowing a river to self-adjust is cheaper and more effective than active interventions that force a river into a particular place.
>
> Europe and Japan have a long history of confining rivers. Once management practices start on this path, they become locked into progressively building more and more expensive hard engineering structures. Many rivers in Aotearoa New Zealand are less modified than those in other parts of the world. Changing management practices now can have a significant positive effect…
>
> Working with the processes that create and rework a river channel and its floodplain will reduce the impacts of future disasters. Recognising the links between sections of a river and the whole catchment will help us assess how likely it is that the river will adjust to accommodate larger and more frequent future floods.
>
> An honest discussion now could save us the direct and indirect costs of future clean-up and repair. Reanimating rivers seeks to respect the rights of healthy, living rivers that erode and flood in the right place and at the right rate.

[22] https://theconversation.com/why-we-should-release-new-zealands-strangled-rivers-to-lessen-the-impact-of-future-floods-153077

Figure 4a: Tukituki River at SH50 in 1943. River flows from left to right of page.

Figure 4b: Tukituki River at SH50 c. 2020. River flows from left to right of page. Note significant channel constriction compared to 1943 (Figure 4a).

Figure 5a: Tukituki River below SH50 in 1943. River flows from left to right of page.

Figure 5b: Tukituki River below SH50 c. 2020. River flows from left to right of page. Note significant channel constriction compared to 1943 (Figure 5a).

Figure 6a: Tukituki River below SH50 in 1943. River flows from left to right of page.

Figure 6b: Tukituki River below SH50 c. 2020. River flows from left to right of page. Note significant channel constriction compared to 1943 (Figure 6a).

Figure 7a: Tukituki River at Waipukurau in 1943. River flows from left to right of page.

Figure 7b: Tukituki River at Waipukurau c. 2020. River flows from left to right of page. Note significant channel constriction compared to 1943 (Figure 7a).

Clive River Dredging

84. Forest & Bird also struggles to take a position on this issue. It is unclear from the LTP document what the consequences of the options are and whether dredging the river is in fact the best option for the ecology of the river. HBRC should provide more information to the community before a decision is made.

85. We want to see a future-focused approach to these kinds of issues. Is this solution future-focused? What is the long term solution? Will we still be dredging the river in 20 years, and how can we avoid that situation? Will the ecology of the river improve as a result of the dredging in the long term?

86. Ideally, we would see some sort of restoration towards what the river and Waitangi Estuary used to be like. We have not done the work to investigate how this should be achieved but provide maps (Figure 8) of the area just prior to the flood engineering diversion (1937) compared to now (c. 2020) so councillors can appreciate the extent of change that has been created here, and the impact that has had on ecology and cultural values.

87. In regard to the inset in the document on 'River Management', we reiterate our earlier comments about taking an approach to river management that provides 'room for the river'.

On-demand public transport

88. We support on-demand public transport in principle, but have some concerns, particularly:

    - Will this require all bus users to have smartphones with an app? Or will it use some sort of remote 'button' at stops? The LTP document is not at all clear on this and how the system would actually work (and it should have been). Many bus users are on lower incomes or are older, therefore mightn't have a high-functioning smartphone and a data plan, or mightn't have the skills to operate an app. They might be put off using public transport as a result, and the plan could 'backfire'. HBRC needs to be considering these issues.

Ahuriri Regional Park

89. We support **Option 1**, the establishment of a Regional Park. We would support even more investment and work to 'fast track' restoration and protection of the estuary.

90. At one stage, Napier City Council was considering expanding the aquarium. We want to emphasise that Napier residents have an incredible 'real life' aquarium 'in their backyard' in estuary. Investment should be made in restoring and protecting this incredible ecosystem, rather than putting money into 'built' environments. Ahuriri Estuary could be Napier's equivalent to Wellington's Zealandia—full of sea birds and migrating fish, all on Napier's doorstep.

Figure 8: Ngaruroro and Karamū/Clive Rivers prior to diversion in 1937 (above), and following diversion in 2020 (below). Note where the main stem of the Ngaruroro used to flow past Clive and how it no longer has the capacity to do this, instead flowing through an extremely straight 'flood channel'.

91. We agree that Ahuriri Estuary is “in a sad state”.

92. We agree the issues stated are the cause of that “sad state”. We consider urgent changes need to be made to the stormwater network to ensure stormwater is treated before it enters the estuary, and changes are urgently required to prevent any further trade waste or municipal wastewater overflows into the estuary. These occur regularly and are simply not acceptable. It’s archaic.

93. As with many other issues, we consider a strong framework of regulations and environmental limits is needed to ensure degradation of the estuary does not continue. As with other issues, HBRC must treat the cause, not just the problem.

94. HBRC also needs to fund compliance, monitoring, and enforcement work to ensure those degrading the estuary and prosecuted, and future degradation is discouraged.

95. Below (Figure 9) we present an image of Ahuriri Estuary in 1938-1943 compared to now (c. 2020), to illustrate the extent of change and habitat loss that has occurred, in particular through encroachment around the yacht club and Pandora industrial area. Encroachment has been illustrated in red.

REGIONAL UPDATES

Changes to the way three water are delivered

96. We support the approach proposed in regard to three waters reform.

97. We emphasise the need to protect ‘source water’ for human consumption, particularly from nitrate pollution. Nitrates at high levels in drinking water can cause ‘blue baby syndrome’[23], and there is increasingly strong evidence that nitrates at very low levels in drinking water can increase the risk of developing some types of cancer[24]. We note that nitrates are extremely difficult to remove from water, and cannot simply be ‘filtered’ out. Hence the importance of protecting drinking water sources, in particular aquifers, from nitrate pollution.

Coastal Hazards Strategy

98. Forest & Bird consider an approach similar to that suggested for river management and flood protection is needed in response to coastal hazards. That is, the coast will need to be given ‘more room’ and managed retreat will be necessary. Fighting back with sea walls and reinforcement is not a sustainable, economic, or safe long term option. Resource should be put into developing a strategy for this to occur.

[23] https://www.rnz.co.nz/news/top/341701/concerns-raised-over-nitrates-effects-on-babies
[24] https://www.rnz.co.nz/news/national/436879/up-to-800-000-new-zealanders-may-have-increased-bowel-cancer-risk-due-to-nitrates-in-water

Figure 9: The lower part of Ahuriri Estuary ('Pandora Pond') c. 1938-1943 compared to now (c. 2020). The area of modern urban/industrial development has been laid over the 1938-1943 image in red to illustrate the extent of encroachment.

99. HBRC should also be considering how sea level rise and high tide changes will affect roosts and breeding areas for native birds, for example in the Ahuriri Estuary (though relevant for any coastal area).

100. We ask that HBRC fund, if it has not already, GIS mapping of predicted sea level rise and the impact on areas where coastal birds roost and nest, and look at what needs to be provided in the future (e.g. protection of these areas from dogs and people so there is no disturbance, and have pest control). This could occur alongside mapping for residential risks of sea level rise.

Economic Development Agency

101. We have little to say on this matter, except:

- We implore HBRC to move away from 'traditional' measures of economic performance such as GDP, and instead start measuring wellbeing indicators and measures of natural capital, happiness, and environmental health.
- We implore HBRC to publicly recognise that continued expansion of industry, increases in production, and ongoing increases in profit are not sustainable, and simply cannot continue unabated into the future.
- HBRC must recognise that "there are no jobs on a dead planet".
- Collective, science-based action in response to a crisis is possible—NZ's COVID-19 response is an example of that.
- A 'slower' economy is not a bad thing—the quiet streets, time with loved ones, reduced carbon emissions, cleaner air, and return of 'nature' and birdsong to cities during NZ's 'lockdown' is testament to this (recognising this was the privilege of many, and not all were in this situation).

Te rautaki hanganga 30-tau / 30 Year Infrastructure Strategy

102. In regard to assets and infrastructure, there appears to be a significant proportion of 'Drainage Channels', 'Structures and Culverts', 'Pumping Stations', 'Stopbanks', and 'River Management' assets. **We implore council to direct funding for these assets towards 'modern' approaches to environmental and hazard management. That is:**

- Providing funding for fish passage remediation work on 'Drainage Channels', 'Structures and Culverts', and 'Pumping Stations'. Pumping stations are particularly problematic and destructive for native fish, with recent operation of pumps in Te Tai Tokerau / Northland killing hundreds, if not thousands, of tuna (eel).[25]
- Focusing 'River Management' on the concept of Te Mana o te Wai, integrated management (ki uta ki tai), and addressing issues with water quantity (i.e. over-allocation).
- Focusing funding on 'River Management' and 'Stopbanks' on modern approaches to flood management that look to provide 'room for the rivers'. As discussed earlier (para.

[25] https://www.newsroom.co.nz/a-plea-to-better-protect-native-fish

48-63 and 79-83), this is the most cost-effective, safest, and most environmentally sound model of flood management in the long term.[26]

103. We'd like to see investment in regional parks and planting, and significant investment in pest control, including the control of weeds—in particular (alongside DOC and MPI), controlling the spread of wilding pines in the area around the Kaweka ranges and the Ngaruroro riverbed at Whanawhana. This is a significant issue which continues to worsen.

104. In terms of the 'issues identified':

- We agree **Climate change** considerations need to be at the core of every HBRC decision
- We consider **Growth and development** cannot continue unabated and this needs to be substantially re-thought. It is very unlikely that further growth or development of industry in Hawke's Bay is possible within environmental limits.
- We agree that **Land use changes** are important. It is clear, as concluded by a recent MfE report, that existing land use trends are unsustainable and causing extensive environmental damage, as well as limiting our ability to live more sustainably (e.g. productive soils are being turned into sprawling developments).[27] HBRC must consider how it can use its resources to drive an increase in the density of urban areas to preserve natural ecosystems and productive land, and to move away from land uses that will not be sustainable in the region in the long term (e.g. intensive dairy).
- We feel more nature-based solutions to **Managing risks of natural hazards** are required. For example, managed retreat from coastlines and giving rivers 'room to move' (as discussed earlier, para. 48-63 and 79-83).
- We support HBRC working fast to resource adjustments to local planning documents to give effect to national **Legislative changes** that provide greater protection for the environment.

105. In regard to the Heretaunga Plains Flood Control Scheme, we urge HBRC to fund a modern approach to river management that provides 'room for the river' (again, see para. 48-63 and 79-83). HBRC cannot continue with its archaic approach, which has included further channelisation of rivers (Figures 2, 3, 4-7, and 8).

Major Works in the Pipeline

106. In regard to the 'major works in the pipeline':

- **Upper Tukituki Flood Control Scheme**

  As above (para. 48-63, 79-83, and 102), we feel land in the flood protection area should be used to provide 'room for the rivers'. We support the

[26] https://theconversation.com/why-we-should-release-new-zealands-strangled-rivers-to-lessen-the-impact-of-future-floods-153077
[27] https://environment.govt.nz/publications/our-land-2021/

development of this land for public use and recreation, and for biodiversity (e.g. wetlands), where it is consistent with a modern approach to flood management. Ideally this land should not be used for production, unless it is clear to the land user that it is part of a flood scheme, is part of an erodible corridor, and any lease rights are short-term. There would also need to be limits on activities in that area, given its proximity to a waterbody.

We consider investment is needed to move to a modern approach to river management that provides 'room for the river' and an erodible corridor.

- **Heretaunga Plains Flood Control Scheme**

  As noted earlier (para. 48-63, 79-83, and 102), we consider investment is needed to move to a modern approach to river management that provides 'room for the river' and an erodible corridor, rather than the extension or raising of stopbanks.

  As above, we feel land in the flood protection area should be used to provide 'room for the rivers'. We support the development of this land for public use and recreation, and for biodiversity (e.g. wetlands), where it is consistent with a modern approach to flood management. Ideally this land should not be used for production, unless it is clear to the land user that it is part of a flood scheme, is part of an erodible corridor, and any lease rights are short-term. There would also need to be limits on activities in that area, given its proximity to a waterbody.

  We support the provision of fish passage at pump stations.

- **Open Spaces**

  We support the work at Waitangi Park, and note the valuable input of Forest & Bird's Napier branch in this work. We would support this work being extended further.

  We support the development of Ahuriri Regional Park, noting our comments earlier (para. 89-95).

  We support the Karamū enhancement work, noting our comments earlier about the need to treat the cause of environmental issues, not just the problem (para. 27, bullet 3).

  We support regional cycling development.

Summary of the Finance Strategy

107. In regard to HBRC finances and financial measures, Forest & Bird's thoughts are made clear in para. 101. Essentially, we implore HBRC to move away from 'traditional' measures of economic performance such as GDP, and instead start measuring wellbeing indicators and measures of natural capital, happiness, and environmental health

WE'RE ALSO TALKING TO PEOPLE ABOUT

Freshwater science and monitoring cost recovery charges / Fees and Charges changes

108. In principle (without analysed in detail the amendment to charges), we support the proposed changes to 'cost recovery' and the 'Fees and Charges' changes.

SUBMISSION ENDS

APPENDIX PROVIDED AS AN ATTACHED DOCUMENT.