6 April 2023

Panel for the Ministry Inquiry into Land Use

via email to: landuse.inquiry@mfe.govt.nz

Submission on the Ministerial Inquiry into Land Use in the Wairoa and Gisborne districts

1. We appreciate the opportunity to make a submission on this important Inquiry.
2. Our feedback is intended to assist the Panel's work. Our feedback builds on decades of extensive programmes of work by HBRC and predecessors. Some of our recent work relevant to the Inquiry have been documented in published reports. Rather than repeat that material, our feedback provides weblinks to those online publications or copies are attached to this submission.
3. To further assist the Panel, we have assembled an interactive online mapping tool. Our intention is that this mapping tool enables Panel members to view and interrogate a number of spatial datasets held by HBRC. We believe this tool will be far more valuable to the Panel than static maps appended to our written feedback. We are happy to provide a basic demonstration to assist Panel members and your advisors understand the tool's features and functionality. Details of user permissions will be provided to the Panel separately following the Easter Break after preliminary user testing.

Part A - Introduction

4. Ex-Cyclone Gabrielle inflicted significant destruction and damage across large areas of the North Island on the 12th, 13th and 14th of February 2023. It resulted in the declaration of a National State of Emergency and the mobilisation of large-scale resources to help communities respond to the impacts of the emergency event. The impacts of the event were particularly hard-hitting in Hawke's Bay and Tairawhiti regions. The true extent of the impacts are still being identified some six weeks on. Tragically, lives were lost. Homes, marae, businesses, orchards, vineyards, farms and forestry assets were damaged or destroyed. Impacts on the economy and people's wellbeing and prosperity are still being assessed but are significant. Major damage was done to infrastructure, with power supply and telecommunications cut-off for varying periods of time, electricity and rail infrastructure destroyed, and roads and bridges destroyed or damaged, isolating a number of communities and disrupting essential economic and lifeline transport routes. A range of other community infrastructure was also disrupted or impacted, with attendant impacts on community life.
5. Like much of the North Island's East Coast, the Hawke's Bay region has a prevalence of soft sedimentary geology underlying its hill country, particularly so in the Wairoa district. The combined historical land clearance has driven high rates of erosion resulting in detrimental levels of sediment in many of our waterways and near-shore environment. Both land use type and soil type determine how sediment moves off the land, into waterways and out to the coast. Many key environmental issues in Hawke's Bay are a consequence of land use that contributes to erosion and discharge of nutrients to waterways.
6. While sediment loss and erosion are a natural feature of the landscape, the rate of sediment loss has increased because of changes in land use. Sediment load lost from the Wairoa catchments averages

just over 3 million tonnes per year, estimated to be approximately 240% more than before human arrival.

7. In February 2022, HBRC presented a report to the Minister for the Environment which responded to a number of questions posed by the Minister asking how HBRC manages sediment losses in Hawke's Bay. Some of the general content of that report features in this submission. Refer Attachment B for a full copy of that February 2022 report.

8. In 2017, we submitted to MFE and MPI that there [was approximately] 130,000 hectares under pines within the Hawke's Bay region. The annual harvested area in the region will double in the next few years. The additional harvested area is largely in erodible hill country.

9. In 2022, HBRC published its State of the Environment Report spanning the 2018-2021 period. Sections of the SOE report are published by catchment area while others are in terms of the region as a whole. In terms of Wairoa District, the catchment 'chapters' in the SOE report are the Wairoa/Northern catchment and Mohaka catchment. Figure 1 and Figure 2 below are extracts from that report to assist as helpful context-setting for our submission.

Figure 1 - Land cover in the Wairoa/Northern catchments, 2018-2021 SOE Report

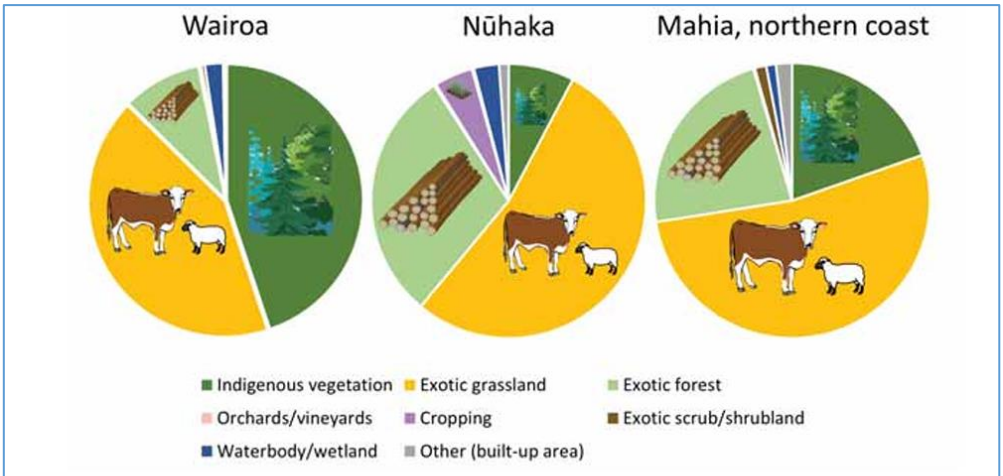


Figure 15-1. Land cover in the Wairoa/Northern catchment. The 'other' category includes built-up areas (settlements, urban parkland, and transport infrastructure) and bare surfaces such as bare soil, gravel, and rock.

Figure 2 - Land cover change in the Wairoa/Northern catchments between 2001 and 2018, 2018-2021 SOE Report6

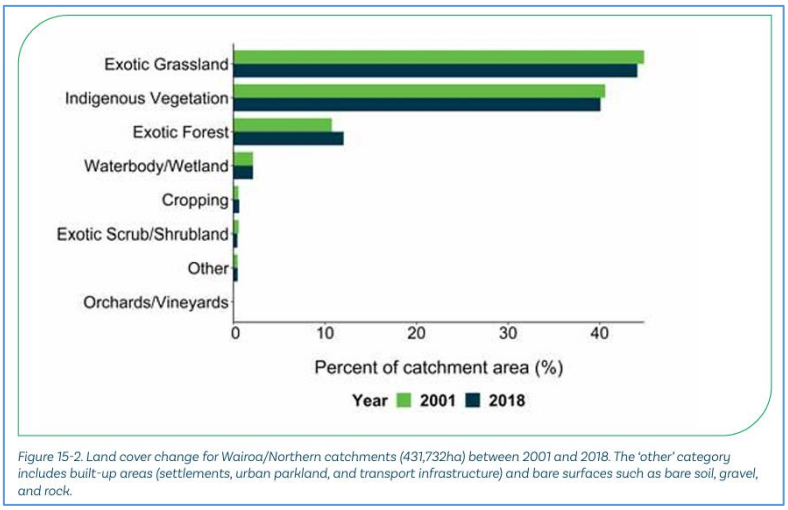


Figure 15-2. Land cover change for Wairoa/Northern catchments (431,732ha) between 2001 and 2018. The 'other' category includes built-up areas (settlements, urban parkland, and transport infrastructure) and bare surfaces such as bare soil, gravel, and rock.

10. The state of our region's fresh waterbodies and coastal waters is noticeably impacted by sediment. HBRC has an extensive programme of works to reduce the impacts of sediment on our aquatic environments (see Attachment B).

Climate science

11. There are no clear trends in the long-term rainfall record for Wairoa catchments. However data does indicate that lower-than-average rainfall from 2018-2021 contributed to lower flows in many of the Wairoa/Northern Hawke's Bay river systems.

12. In Part B of this submission, the key characteristics of climatic conditions immediately preceding and during Cyclone Gabrielle are outlined.

13. Our submission focusses on the following in terms of the Wairoa district:

Part B - Key contributors to woody debris and sediment and observed effects of Cyclone Gabrielle

Part C - Current land management practices for forestry and extent of regulatory oversight

Part D – Recommendations.

Part B - Key contributors to woody debris and sediment and observed effects of Cyclone Gabrielle

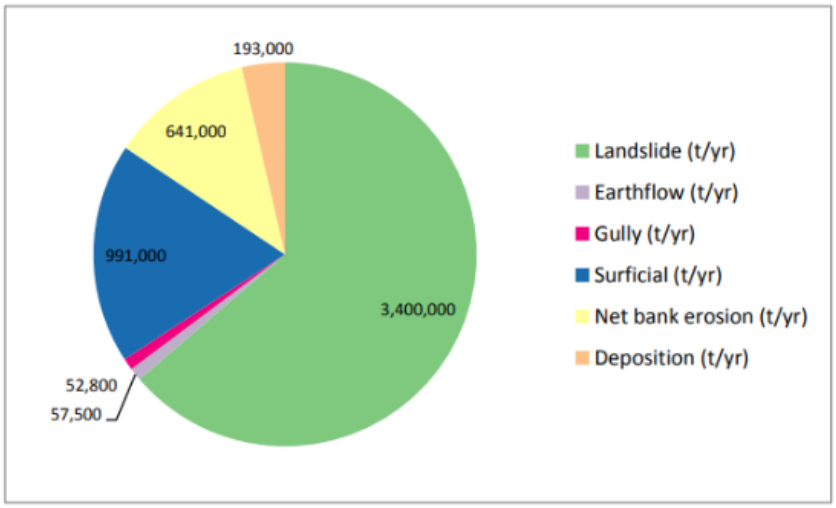
14. The movement of sediment across the region's landscape is a natural process. Modification of the landscape by humans, in many places, can accelerate that movement. While natural processes contribute to woody debris and sediment runoff, it is clear that human's use of land has, and continues, to exacerbate the impacts of woody debris and sediment runoff.

15. Fundamentally, it is land instability that is the key contributor to woody debris and sediment loss from hill country.

16. SedNetNZ modelling in the Northern Hawke's Bay catchments[1] (approximating to the Wairoa district) shows the key sources of sediment (refer Figure 3 for breakdown of sources). Total suspended sediment load for the Northern Hawke's Bay region is 4,950,000t per annum. Instability of the banks of rivers and streams is a large contributor to sediment loads in waterways in the Wairoa district. But landslides are clearly the primary contributor of sediment to waterways.

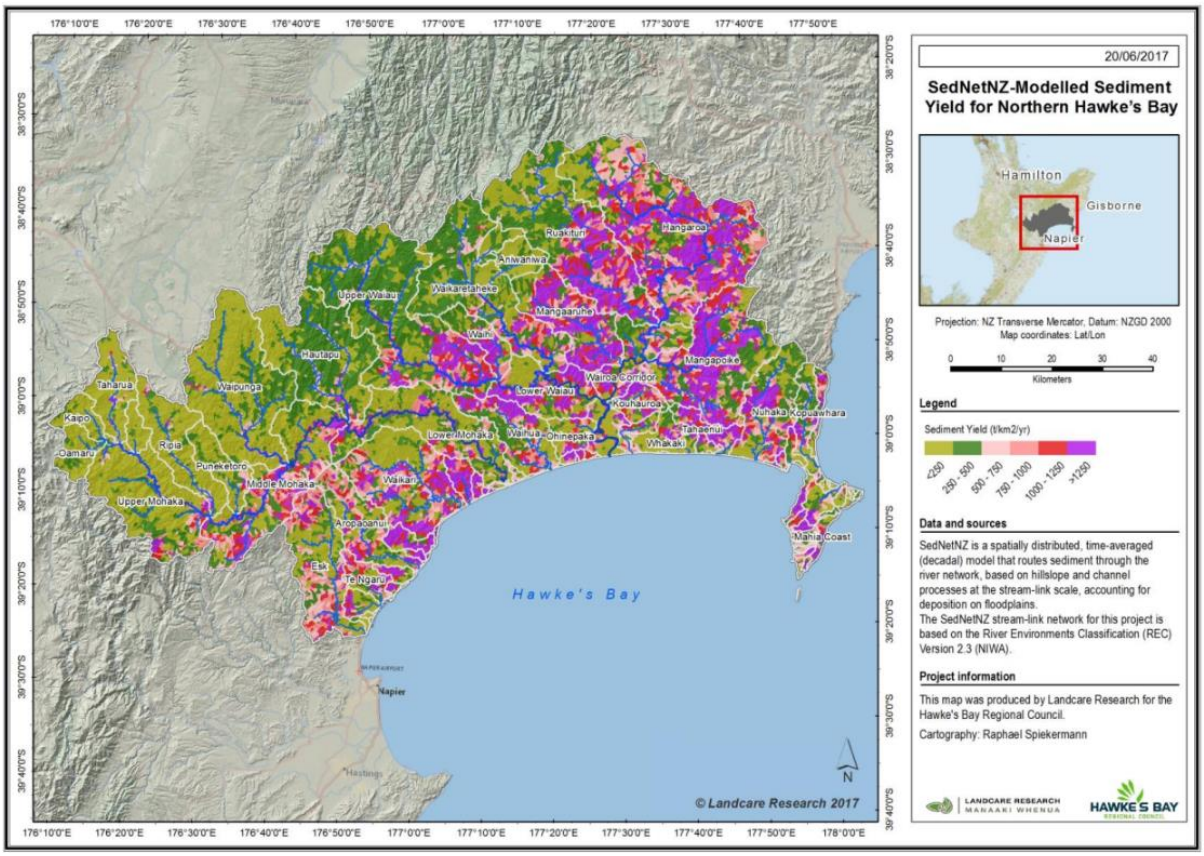
[1] SedNetNZ modelling of sediment sources and loads in the Northern Hawke's Bay region, June 2017, HBRC Report Number RM18-17 – 5001. Accessed at: https://hbrc.sharepoint.com/sites/Publications/HBRC%20Publications/Forms/AllItems.aspx?id=%2Fsites%2FPublications%2FHBRC%20Publications%2F5001%5FSedNetNZ%5FModelling%5FSediment%5FSources%5FNorthern%5FHB%5F010617%2Epdf&parent=%2Fsites%2FPublications%2FHBRC%20Publications&p=true&ga=1

Figure 3 - Sediment load (tonnes per annum) by erosion process in Northern Hawke's Bay using SedNetNZ modelling



17. The SedNetNZ modelling report (at Figure 11, reproduced as Figure 4 below) provides an overview for identifying hot-spots of particularly high rates of erosion and therefore sediment yields for each REC-2 watershed.

Figure 4 - SedNetNZ modelled sediment yield for Northern Hawke's Bay catchments



18. In Part C of this submission, we outline a number of programmes that HBRC leads or is involved with that are intended to address significant sediment losses into waterways.

Climatic and ground conditions preceding Cyclone Gabrielle and during the Cyclone

19. Leading up to the arrival of Cyclone Gabrielle in Hawke's Bay, the area had experienced more than double its average January rainfall and had received above average rainfall in consecutive months since August 2022. Soil moisture levels were well above normal for the time of year and appeared saturated at the Cricklewood Climate site prior to the event. Soils in the area that weren't at field capacity at the start of the storm quickly reached it during the event (refer Attachment C for February 2023 Regional Soil Moisture Report).

20. The highest rainfall in the Wairoa area, (which includes the Wairoa, Nuhaka and Mahia catchments) was by its eastern border, where over 500 mm was recorded at Pukeorapa Station and Fairview. Totals were also relatively high in the west of the area, at Aniwaniwa by Lake Waikaremoana, which received 317 mm. At all three sites, more than half of the total fell within 12 hours. This represents about double the average February rainfall. The rainfall rate at Pukeorapa peaked at 38 mm/h. Sites located in the central southern part of the catchment had 100 mm or less and were relatively sheltered from the rain compared to most of the region.

21. Rainfall at the eastern sites set new records for intervals from 3 hours to 2.5 days, including a doubling of Fairview's previous highest 24-hour total and a 45% increase on Pukeorapa's total for the same period. However, the records for these sites only extend back to the late 1990s. Sites in the north and west hit new high totals across the 6 to 24-hour intervals, though mainly small increases on the previous record totals.

22. The estimated return period of Fairview's rainfall exceeded 100 years across intervals from 3 hours to 48 hours, as did Pukeorapa's rainfall for the 1 and 2-day totals. The 6 to 18-hour totals at Aniwaniwa had return periods over 30 years but a nearby site, Nga Tuhoe, topped 80 years for its 18-hour total and Bushy Knoll, a little further north, also neared 80 years. Four sites in the area existed in the days of Cyclone Bola. Three of those sites, namely Bushy Knoll, Nga Tuhoe and Hangaroa River at Doneraille Park, experienced higher rainfall from Cyclone Gabrielle for time intervals up to 1-day. Cyclone Bola did however deliver more rain over two days. Cyclone Bola delivered higher 1 and 2-day rainfall to the Kopuawhara rainfall site, just north of the Mahia Peninsula, but Cyclone Gabrielle delivered higher intensity rainfall over short timeframes, i.e. intervals from 3 to 18 hours.

23. Winds were mainly from an east-southeast direction during the 13th and 14th February 2023. Wind gusts peaked at 120 km/h at the Pukeorapa Climate Station and 148 km/h at MetService's Mahia Radar site.

Post-cyclone woody debris survey

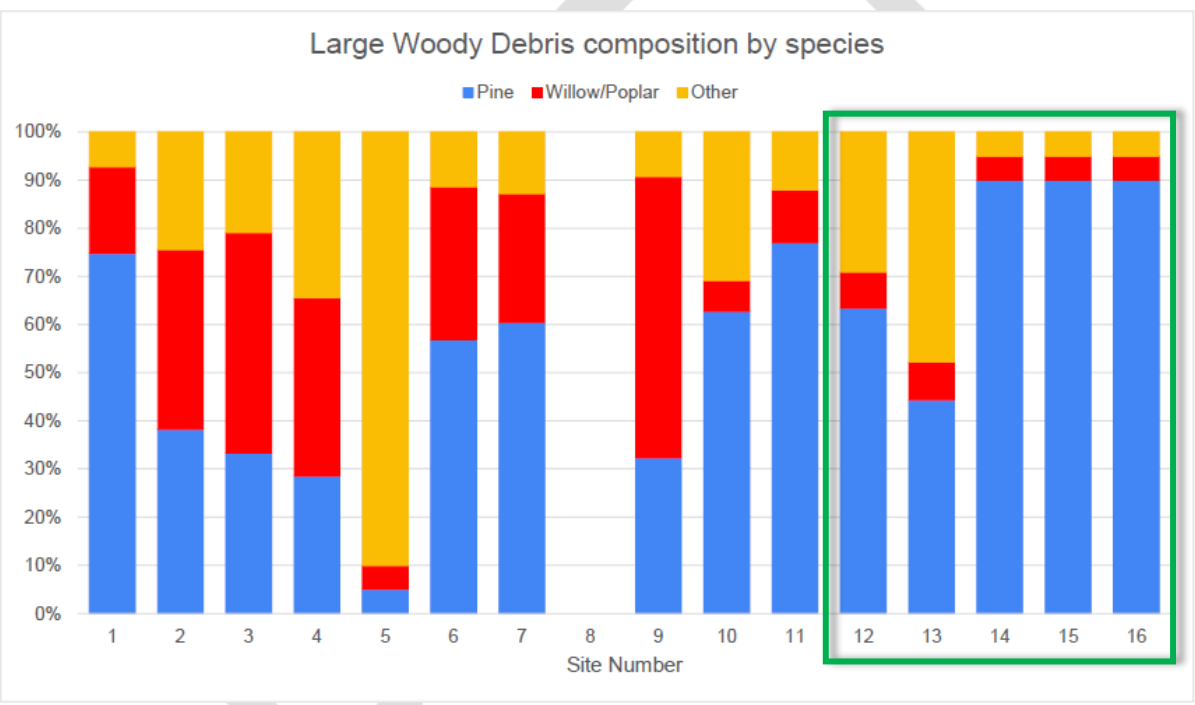
24. We are aware that in a number of contexts, the terms 'slash' and 'woody debris' have been used by commentators casually and interchangeably. We prefer to use the term 'woody debris' to describe all types and forms of solid vegetative matter debris along waterways and coastlines. Whereas 'forestry slash' is a particular sub-type unique to production forestry. We think our interpretation better aligns with the Panel's terms of reference where it refers to *"mobilisation of **woody debris (including forestry slash)** and sediment."*

25. In the first few days of the post-cyclone response, HBRC commissioned a survey of woody debris. This was a rapid survey completed within tight timeframes prior to volumes of woody debris being

moved and chipped. Seventeen sites were visited (eleven river sites and six beach sites in total, four of those in the Wairoa district[2]). Refer Attachment D for draft version of full survey report.

26. Figure 5 summarises the large woody debris composition at surveyed sites. Surveyed sites in Wairoa district appear in green square.

Figure 5 - Post-Cyclone Gabrielle survey of large woody debris composition by species at surveyed sites



27. We understand the Hawke's Bay Forestry Group has commissioned a similar woody debris survey but it applied a slightly different methodology. We also understand that the Group intends to present their survey findings to the Panel as part of its submission to the Inquiry.

Post-cyclone aerial and ground observations

28. A number of reconnaissance helicopter flights over the region were done in the days and weeks immediately following Cyclone Gabrielle by several senior staff from HBRC (including Iain Maxwell, Group Manager Integrated Catchment Management at HBRC). Several of those flights have traversed the Wairoa district. In a number of locations, tours by land have augmented those aerial observations. Those key senior staff have observed a number of features, incidents and consequently surmised several key contributors to mobilisation of woody debris and sediment in the Wairoa district. In short, our advice to the Panel at this time is that key contributing factors and effects observed in the Wairoa district include:

    1. those factors are **not** universally the same as those observed further north in Tairawhiti/Gisborne

[2] Five sites surveyed in the Wairoa district were the Mohaka River mouth, Mahia beach, Wairoa River mouth, Waikari River mouth and Mangapoike River at Tiniroto Road bridge.

2. beds and banks of many streams have been eroded. Sediment has been deposited on the upper banks of rivers and streams and downstream receiving environments
3. travelling northwards along the coastline, the incidence of large logs, trees and other woody debris on beaches increases. Surveys identify that not all are pinus radiata species.
4. pine plantings of approximately less than four years old suffered similar hillside failures as pastured land
5. older plantings (5+ years) were not completely immune from damages either
6. forestry 'infrastructure' generally remains intact. There were no failures observed of landing/skid sites
7. mid-slope failures were common. These mid-slope failures certainly mobilised large volumes of sediment on rural land. On production forestry sites, mid-slope failures were also observed although extent was variable by planting age, aspect and land characteristics
8. most operators post-harvest leave slash and other woody remnants laying on slopes. Those remnants become mobilised with slope failures.
9. in some locations, entire standing trees (i.e. tip to toe) have been levelled and mobilised downhill, and in some cases, then downstream.
10. pre-cyclone soil moisture levels, coupled with exceptionally rainfall intensities and very strong winds have, in combination, contributed to mobilisation of significant volumes of sediment and woody debris. We are unable to determine what woody debris was windthrow and what was mobilised by other mechanisms
11. non-pine tree species have also been mobilised, for example, willows and poplars growing in riparian margins. Some of those may have been wildings and others part of deliberate riparian edge enhancement projects by landowners, community groups and others
12. small-sized culverts may have contributed to flooding and exacerbated 'debris dams'
13. structures in beds of rivers and streams (such as culverts and bridge piles and abutments) have intercepted larger-sized woody debris in waterways; debris dams have built-up behind these structures, further impeding floodwaters.

<u>Analysis of post-cyclone intelligence</u>

29. For the purposes of the Panel's Inquiry into land use associated with mobilisation of woody debris in the Wairoa district, we have endeavoured to provide the Panel with our most recent understanding and compilation of information available relevant to the Panel's terms of reference.

30. HBRC continues to compile intelligence from a wide range of sources on the events and impacts of Cyclone Gabrielle. That intelligence continues to grow day by day. The data and information gathered will inform various reviews that HBRC will undertake into its operations and future activities. The data and information may also inform reviews that other groups and agencies might decide to commit to.

31. There are third-parties also undertaking analysis of post-cyclone data. For example, Ministry for the Environment has commissioned Manaaki Whenua Land Care Research to undertake a preliminary analysis of steep bare land exposure as a result of Cyclone Gabrielle. We respectfully suggest that

the Panel request that work from Ministry for the Environment as at time of writing this submission, HBRC does not permission to share that material.

Part C - Current land management practices for forestry and extent of regulatory oversight

32. The Hawke's Bay Regional Council and the Hawke's Bay Catchment Board prior, have a long history of working with landowners to address soil loss. The 1941 Soil Conservation and Rivers Control Act came about following a major weather event in 1938 that caused massive erosion and sedimentation of waterways in Hawke's Bay, and action to address soil conservation in our region has been underway since.

33. HBRC believe that the work we have done and are continuing to do with our communities is making a difference but acknowledge there is still a long way to go to improve current practices in production forestry and agriculture. The scale of the challenge is significant and HBRC has a coordinated strategy of engagement, education, encouragement, and enforcement with all sectors, to bring about step change in outcomes. This is not unique to only the Wairoa district.

34. The Hawke's Bay Regional Council's strategy to address these issues has been to build the information base to inform the best interventions. Using SedNetNZ landscape modelling[3] and Land Use Capability (LUC) mapping, both of which have benefitted from the region being the first in the country to be comprehensively S-Mapped and most recently fully LiDAR surveyed (with co-funding from LINZ), HBRC has identified high risk landscapes for erosion and sediment loss to model the potential sediment loss to waterways, therefore ensuring that we target the most effective and appropriate interventions.

Science and sediment monitoring

35. In addition to regular State of the Environment monitoring sites, HBRC oversees a network of automated sediment sampling stations (ISCOs) on a selection of rivers and streams across the region. Once activated, the ISCOs take a series of time-stamped water samples over the course of a high flow event. These can be correlated with flow gauging to quantify the volume of sediment transported during a flood event. The ISCOs have been strategically located in catchments with known sediment issues and priorities for soil-conservation works. This will allow us to detect and monitor the long-term results of land use change, planting programmes and other interventions over time.

36. ISCO data known to have been recorded during Cyclone Gabrielle is currently being analysed but due to limited access, ISCO sites in Wairoa district have not yet been checked for data capture and operational state.

Catchment management

37. The HBRC Catchment Management Team is tasked with providing advice and helping facilitate non-regulatory sustainable land management, including soil conservation and erosion mitigation on privately owned land. The team has grown from eight land management advisors in 2005 to 14

[3] SedNetNZ is based on the original Australian SedNet model, modified to account for erosion processes that occur in the New Zealand environment. SedNetNZ is a spatially distributed, time-averaged (decadal) model that routes sediment through the river network, based on a relatively simple physical representation of hillslope and channel processes at the stream link scale and deposition on floodplains and in the channel.

Catchment advisors plus administration support in 2021. This is an $18 million ratepayer funded investment over the last 14 years.

38. As well as providing an advisory extension service, HBRC continues to support landowners financially to undertake soil conservation works. Grants are available to assist with such activities as space planted poplar and willow planting, riparian management, and retirement and/or reversion of severely eroding land.

39. Prior to 2018, erosion control works on farmland were funded through the Regional Landcare Scheme (RLS), with an annual budget of $800,000 which was allocated as a 50% grant toward eligible works. The RLS has been replaced by the Erosion Control Scheme (ECS) to which HBRC has committed $30m over 10 years, the majority of which will be administered through a grant scheme to support on-ground erosion/sediment control works. The ECS is a region-wide programme, but does have particular focus in the Wairoa district given the highly erodible land in that area.

40. Riparian management is usually the most effective way to stabilise stream banks, reduce *E. coli*, and improve ecosystem health. Riparian planting provides shade, lowers river temperatures, limits periphyton and macrophyte growth, regulates dissolved oxygen, filters sediment run-off, and provides adult insect habitat. Targeted erosion control and excluding stock from riverbanks also reduces bank erosion and prevents sediment from entering waterways, as well as reducing direct faecal contamination.

41. The Resource Management (Stock Exclusion) Regulations 2020 require farmers to keep cattle, deer, and pigs out of waterways in low-slope areas by July 2025. The proportion of stream length covered by these regulations will vary among catchments depending on their topographies. HBRC does not currently have any additional rules requiring stock exclusion fencing of rivers and streams in the Wairoa district.

<u>'Land for Life' scheme</u>

42. HBRC and global environmental organisation The Nature Conservancy, have been working in partnership to establish an impact investment programme for the pastoral farming sector.

43. The programme now known as 'Land for Life' (previously 'Right Tree Right Place'), involves HBRC working with the farming community to plant trees on marginal land that can earn a return and enhance regenerative farming practices. If taken up at scale, this programme will significantly reduce sediment load into the waterways and improve freshwater health.[4]

<u>Soil conservation reserves and forest parks</u>

44. HBRC manages 1,805ha of erosion-prone land in the Tangoio / Tūtira area primarily for the purposes of soil conservation. Those areas are not within the Wairoa District.

<u>Forestry activities</u>

45. Over 90% of forestry activity in the Hawke's Bay region is undertaken by six main companies, all of whom are members of the Hawke's Bay Forestry Group (HBFG). Through the HBFG these companies have made it clear to HBRC that they want and expect to see council staff on the ground. Through regular contact with the HBFG and individual forest managers, a positive relationship has been

[4] For further information about the 'Land for Life' or 'Right Tree Right Place' scheme, see https://www.hbrc.govt.nz/environment/farmers-hub/right-tree-right-place/

developed between industry and council officers. This relationship had led to a number of collective initiatives, including:

- establishment of an environmental sub-committee within the HBFG to address forestry compliance issues in relation to the NES-PF across the region as they arise
- continuation of the Pakuratahi paired catchment land use joint study[5] into a second rotation that assesses sediment load and water quality over the forest's life cycle.

Flood control schemes

46. HBRC provides 23 flood control and drainage schemes in Hawke's Bay to reduce the risk of flood and erosion damage. There are two major flood control schemes on the Heretaunga Plains and in the Upper Tukituki River. HBRC has established and maintains twelve smaller individual flood protection and/or drainage schemes in the region. These are funded primarily through targeted rates by landowners directly or indirectly benefitting from the scheme. In the Wairoa district, the smaller schemes are:

Kopuawhara Stream Flood Control Scheme - this scheme covers the Kopuawhara Stream in Wairoa District from the railway bridge to 4.7km downstream and includes 4.5km of stopbanks. The gravity system scheme was established in 2000 to alleviate the effects of flooding and bank erosion on adjacent land and to reduce the closure of adjacent access roads. Following large storms, funding may be insufficient to meet the cost of major repair work, and a special meeting and agreement may be required with the community to levy additional funds.

Ohuia-Whakaki Drainage Scheme - this scheme drains 1,100ha of intensively farmed and cropped coastal plains east of Wairoa township. The scheme was established in 1966 and uses a combination of detention and gravity drains plus controlled pump discharges, to enable landowners to improve production. Flooding outside of the channels is still likely in places.

Opoho Drainage Scheme - this scheme drains approximately 200ha of low lying, productive land to the east of the Opoho Stream near Nuhaka. The scheme is based primarily on gravity drainage; however when the stream is in flood, the floodgate on the outlet of the drain closes, activating the pump station to take flood waters from the drain into the stream. The scheme and assets were established in the 1970's but have been added to and altered to meet changing demands and land uses.

Paeroa Drainage Scheme - this scheme uses a gravity system to more rapidly drain surface water from productive land near the Awatere Stream north of Wairoa town. The scheme was constructed 1953-1958. It includes the last 6.9km of the Awatere Stream and 12.18km of its drainage channels, and is intended to contain water in its channels in a 2 - 5 year rainfall event. The scheme reduces damage to properties and improves production from the land.

47. The broader Wairoa Rivers and Streams Scheme is established to look after river catchment maintenance to reduce risk of flooding and help manage flooding in the Wairoa District. The work includes flood forecasting and early warning, removal of unwanted vegetation from channels and banks, and the purchase of land adjacent to waterways where public ownership would be an

[5] The original Pakuratahi Land Use Study Report (published June 2006) can be viewed online here: https://hbrc.sharepoint.com/:b:/s/Publications/EYoHqPVPJF1BsC-gaefg6sYBZI1tdUuD_uT9OvnkkWOiwg

advantage. Funding levels for this scheme are considerably less than what is paid by those landowners benefitting from the much larger Heretaunga Plains and Upper Tukituki River Schemes.

48. HBRC has adopted an Environmental Code of Practice which provides clear standards of practice for river control and drainage works by, or on behalf of, HBRC. The Code of Practice also documents the environmental enhancement or conservation protection; identifies areas for public access and recreation; and identifies future enhancement or protection requirements. The current version was adopted in 2017 which is the Code's fourth edition.

Compliance monitoring and enforcement

49. Until the recent amendment to the Resource Management Act under the Resource Legislation Amendment Act, councils have not had the ability to charge for monitoring permitted activities. As such, Hawke's Bay councils typically have not routinely monitored permitted activities under the current regional and district plans. There are exceptions such as when a council is made aware of an activity that is not complying with the appropriate permitted activity rules. This then can become an enforcement issue where costs/fines can be imposed, but this not a substitute for recovery of costs for monitoring performance of activities (e.g. forestry operations) against the relevant rules in regional and district plans. The absence of monitoring permitted activities (generally) is primarily a consequence of a lack of financial and subsequently human resource.

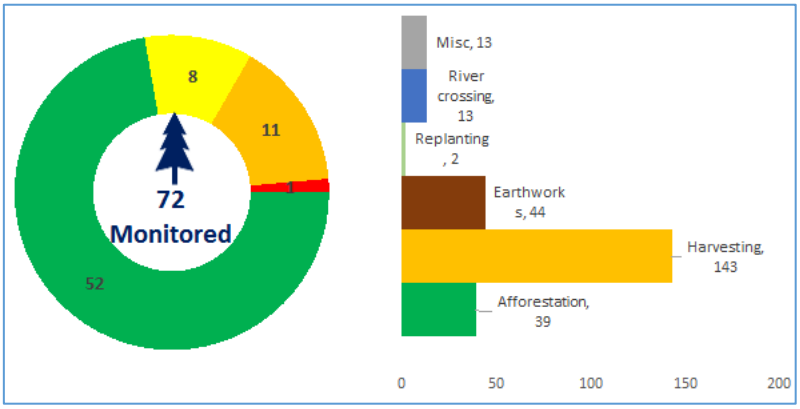
50. Notwithstanding this, over the past five years HBRC has made significant investments into scaling up our compliance monitoring and enforcement activities in relation to plantation forestry. HBRC currently employs 2.5 full time equivalent positions dedicated to forestry compliance activities. One FTE position is 50:50 funded by Hastings District Council. The 2.5 FTE figure does not count HBRC's consenting staff who process consent applications for plantation forestry-related activities.

51. During the 2021-22 period, HBRC received 148 notifications[6] for forestry activities such as earthworks, harvesting, afforestation and river crossings. Activities were dominated by harvesting and associated earthworks (see Figure 6). All notifications were assessed for the potential environmental risk against several the NES-PF national tools and other parameters and awarded a monitoring priority which determined the frequency of required site visits. Priorities are awarded from (1) for very high-risk consents to (5) for low-risk permitted activities. The number of site visits undertaken is also determined by the permitted activities that are chargeable under the regulations, namely earthworks, river crossings, quarrying and harvesting only. Site visits were undertaken for all high-risk sites and many medium-risk sites.

52. The compliance grading for the 2012-2022 period presented in Figure 6 shows that 72% (52) of all monitored consents and permitted activities achieved full compliance, 11% (8) were graded low-risk non-compliant, 15% (11) were graded moderately non-compliant and <1% (1) held by FMNZ was graded significantly non-compliant for a sediment discharge resulting in abatement and infringement notices.

[6] A notification can be for more than one activity such as Earthworks and Harvesting.

Figure 6 - Overall grading of monitored forestry consents and permitted activities (left) and breakdown of forestry activities (right) during 2021-22 period



53. It is worth noting that nearly all non-compliance relates to earthworks and sediment issues and very little non-compliance relates to poor 'slash' management. The non-compliance relates predominantly to either inadequate installation or maintenance of erosion and sediment control measures. Moderately non-compliant levels have been elevated by a few under-performing earthwork contractors not adhering to best practice (who were previously under enforcement action).

54. Education of the smaller forestry companies is on-going to achieve consistent standards of work. The appointment of specialist environmental managers within the larger companies is benefiting Council to help relay expected environmental outcomes.

55. Regional policy statements and regional plans under the RMA

56. We understand officials from the Ministry for the Environment (and other Ministries) are supporting the Panel with its Inquiry work. We understand MFE officials are compiling advice on the 'history' of relevant key policy and planning instruments as referenced in section 12.3.5 of the Panel's Terms of Reference.

57. Key regional planning documents prepared under the Resource Management Act 1991 (RMA) are listed in Table 1. Digital copies of the superseded documents can be provided to the Panel upon request. The two current documents can be viewed online (see links below). Panel members may already be well aware that under the RMA, mandatory regional planning documents are the regional policy statement and the regional coastal plan. Any other type of regional plan (by issue or combination of matters) is something that each regional council or unitary authority has self-determining discretion over.

Table 1 - Hawke's Bay regional planning documents prepared under the RMA (excluding plan changes and variations)

Current documents	
Hawke's Bay Regional Resource Management Plan (RRMP) incorporating the Regional Policy Statement [weblink]	Operative date: 28 Aug 2006 Public notification date: April 2000
Hawke's Bay Regional Coastal Environment Plan (RCEP) [weblink]	Operative date: 8 Nov 2014 Public notification date: 30 Aug 2006
Superseded documents	
Regional Policy Statement	Operative date: 7 Oct 1995

	Public notification: May 1993
Regional Coastal Plan	Operative date: 28 June 1999 Public notification date: Oct 1994
Regional Air Plan	Operative date: 26 Jan 1998 Public notification date: 17 Dec 1997
Regional River Bed Gravel Extraction Plan	Operative date: 8 Aug 1994
Regional Waste and Hazardous Substances Management Plan	Operative date: 10 April 1995
Proposed Regional Hill Country Erosion Control Plan	Publicly notified: Sept 1993 (NB: not progressed to operative. Instead, superseded and incorporated into RRMP)

National Environmental Standard for Plantation Forestry (NES-PF)

58. The NES-PF provides a set of national standards that address plantation forestry matters specifically. It is a form of national regulation made under Subpart 1 of Part 5 of the RMA and came into effect on 1 May 2018. The submission by LGNZ provides a good summary of relevant provisions of the NES-PF so we do not repeat that here.

59. Based on senior HBRC staff members' practical experiences, including in the field observations, there are a number of improvements that could be done to enhance effectiveness of the NES-PF. These include the following:

    1. A number of the key tools referenced in the NES-PF are too coarse for site-specific controls and mitigations. The 'ESC' is one prime example of this. HBRC considers that regional scale land use capability lacks sufficient detail as a tool to underpin national regulations permitting broad-scale forestry across the landscape. Certain bedrock types at certain slopes are just not suited to short rotation forestry or non-coppicing tree species. This variability is not readily picked up by the 1:50,000 scale ESC tool.
    2. Five metre setbacks near waterways are insufficient if harvested trees are likely to crush the 'buffer'
    3. The flooding parameters currently specified in the NES-PF are totally insufficient. For example, Regulation 20 for slash permitted activity conditions requires *"Slash from pruning and thinning to waste must not be deposited into a water body, onto the land that would be covered by water during a 5% AEP event, or into coastal water."* The permitted 5% AEP condition needs to be raised in many clauses throughout the NES-PF.
    4. Pinus radiata is a relatively low-value timber species with end-uses that are typically temporary and/or require chemical treatment to be used for trade purposes. Low-value products limit financial reward and incentives to "take more care" or "spend more time" on performing best practice forest management or utilising more woody biomass.
    5. 'Slash' currently does not include windfall, prunings or stems broken during harvest. Limiting 'slash' to only cut material fails to ensure significant volumes of other woody biomass from forestry operations are appropriately regulated.
    6. The degree of permissiveness throughout the NES-PF is concerning and is setting up future problems. For example, permissive afforestation that in several decades time will pose

challenges and largely uncontrolled threats to land instability and woody debris movement during and after harvest.

7. Greater controls (e.g. though consenting pathways) are needed not only for Class 8 land, but also other highly erodible land types. The consent authority for forestry activities on erodible land should remain within the roles and responsibilities of regional councils and unitary authorities and not be split partly with territorial authorities and partly regional councils.
8. Plantation forestry operations are already meant to have quite comprehensive earthworks and harvest management plans in place. By and large we find these plans to be too generic to be auditable, perhaps due to the scale and nature of forestry and the way companies plan their work. Forestry operators don't always know too far in advance exactly what they will do in detail in each setting, but refined ESC and LUC information would serve to better inform decisions to tailor their practices.
9. A 'forest management plan' regime (possible akin to the Freshwater Farm Plan Regulations under the RMA) would prompt plantation forester AND carbon foresters to carefully think about the whole life-cycle of their activities, the timing, the places and the management interventions required to "take more care" and "spend more time" on performing good or best practice forest management. We note LGNZ's submission recommends 'forest management planning' and we support that recommendation.

60. We understand LGNZ's submission to the Panel is likely to identify a range of other similar and related matters. LGNZ and HBRC continue to call for the NES-PF to be amended to apply to not only plantation or production forests, but also carbon forests.

Part D - Recommendations

A. Amend NES-PF and associated instruments as necessary to address concerns in paragraph 59 above.

B. Government policies be adapted or introduced that provide far greater incentives and support for the 'right tree in the right place.' This would necessitate significant Crown funding sustained over decades – not just a short injection for limited period time.

ATTACHMENTS

A – Additional helpful web links

B – HBRC Regional Sediment Management Report, February 2022

C – HBRC's regional soil moisture report for February 2023

D –Post-Cyclone Gabrielle large woody debris survey report (Draft) commissioned by HBRC, March 2023

Thank you for the opportunity to make this submission.

Ngā mihi nui,

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ATTACHMENT A – Further additional weblinks

HBRC's submission on MPI and MFE national direction for plantation and exotic carbon afforestation (November 2022)

HB councils' joint submission on proposal to amend NES-PF enabling councils to charge to monitor permitted activities (June 2017)

HBRC's submission on proposed National Environmental Standard for Plantation Forestry (June 2015)

HBRC's State of the Environment Report 2018-2021

HBRC's Environmental Code of Practice for River Control and Waterway Works (February 2017), 4th ed.

SedNetNZ modelling of sediment sources and loads in the Northern Hawke's Bay Region (June 2017)

Soil Quality of Exotic and Indigenous Forests in Hawke's Bay 2015/2016 (August 2016)

Hawke's Bay Waterway Guidelines – Erosion and Sediment Control, HBRC (April 2009)

The Pakuratahi Land Use Study Report (June 2006) HBRC, Pan Pac, Carter Holt and Juken Nissho

Our Land and Water National Science Challenge – Whitiwhiti Ora Land Use Opportunities