AGENDA

GISBORNE DISTRICT COUNCIL

P O Box 747, Gisborne, Ph 06 867 2049 Fax 06 867 8076
Email service@gdc.govt.nz Web www.gdc.govt.nz

MEMBERSHIP: Her Worship the Mayor Rehette Stoltz (Chair), Josh Wharehinga (Deputy Chair), Meredith Akuhata-Brown, Bill Burdett, Andy Cranston, Shannon Dowsing, Sandra Faulkner, Larry Foster, Debbie Gregory, Isaac Hughes, Tony Robinson, Pat Seymour, Terry Sheldrake and Kerry Worsnop

SUSTAINABLE TAIRAWHITI Committee

DATE: Thursday 2 June 2022

TIME: 9:00AM

AT: Te Ruma Kaunihera (Council Chambers), Awarua, Fitzherbert Street, Gisborne

AGENDA – OPEN SECTION

Sustainable Tairāwhiti

Reports to:	Council
Chairperson:	Mayor Stoltz
Deputy Chairperson:	Cr Wharehinga
Membership:	Mayor and Councillors
Quorum:	Half of the members when the number is even and a majority when the membership is uneven.
Meeting frequency:	Six weekly (or as required).

Purpose

To develop, approve, review and recommend to Council (where applicable) statutory and non-statutory policy, plans, bylaws and strategies to:

- Develop a vision and a pathway for the future of the district.
- Sustainably manage resources in the region.
- Identify and promote community aspirations.
- Define and deliver on Council's roles.
- Integrate an all-of-wellbeing approach to strategy, plan and policy development.
- Have effective statutory plans and bylaws to protect community and environmental needs.

Terms of Reference

- To develop and review Resource Management Act 1991 and Local Government Act 2002 strategies, plans and policies across the Council relating to community, environment, and infrastructure.
- Make recommendations to Council to ensure the effective implementation of plans, processes, research, monitoring and enforcement to satisfy the requirements of the Resource Management Act 1991, National Policy Statements, National Environmental Standards and associated legislation.
- To lead the development of Council's draft Long Term Plan and Annual Plan and all other policies required to be included in the Long Term Plan as specified in the Local Government Act 2002 (including but not limited to the Infrastructure Strategy and Financial Strategy) for recommendation to Council.
- Hear submissions to Council's Long Term Plan or amendments.
- Oversee the development and review of Council's Resource Management Act 1991 plans.

- Oversee any development of unitary/spatial plan, integrated plans or major catchment plans.
- Consider and recommend to Council strategies, policies, rules and other methods for inclusion into the Tairāwhiti Resource Management Plan and other associated plans.
- Monitor and report on environmental performance trends and the effectiveness of and compliance with Council's resource management responsibilities and activities associated with policy implementation.
- Review State of the Environment reports to assist in future activity planning and policy development.
- Develop, review and recommend bylaws to Council for consultation and adoption.
- Receive reporting from state of the environment monitoring.
- Establish, implement and review the operational policy and planning framework for decision making that will assist in achieving the strategic priorities and outcomes
- Monitor, review and develop Council responses, strategies, plans and policy in relation to Iwi and Maori commitments.
- Prepare submissions on any matter that is within its rationale and terms of reference for Council.

Power to Act

To make all decisions necessary to fulfil the role and scope of the Committee subject to the limitations imposed.

To establish subcommittees, working parties and forums as required.

To appoint non-voting Tangata Whenua representatives and/or advisory members to assist the Committee.

Power to Recommend

To Council and/or any standing committee as it deems appropriate.

MINUTES

Draft & Unconfirmed

GISBORNE DISTRICT COUNCIL

P O Box 747, Gisborne, Ph 867 2049 Fax 867 8076
Email service@gdc.govt.nz Web www.gdc.govt.nz

MEMBERSHIP: Her Worship the Mayor Rehette Stoltz (Chair), Josh Wharehinga (Deputy Chair), Meredith Akuhata-Brown, Bill Burdett, Andy Cranston, Shannon Dowsing, Sandra Faulkner, Larry Foster, Debbie Gregory, Isaac Hughes, Tony Robinson, Pat Seymour, Terry Sheldrake and Kerry Worsnop

---

MINUTES of the SUSTAINABLE TAIRĀWHITI Committee

Held in Te Ruma Kaunihera (Council Chambers), Awarua, Fitzherbert Street, Gisborne on Thursday 28 April 2022 at 9:00AM.

PRESENT:

Her Worship the Mayor Rehette Stoltz, Deputy Mayor Josh Wharehinga, Meredith Akuhata-Brown, Bill Burdett, Andy Cranston, Shannon Dowsing, Sandra Faulkner, Larry Foster, Debbie Gregory, Isaac Hughes, Tony Robinson, Pat Seymour, Terry Sheldrake and Kerry Worsnop.

IN ATTENDANCE:

Chief Executive Nedine Thatcher Swann, Acting Director Liveable Communities De-Arne Sutherland, Director Environmental Services & Protection Helen Montgomery, Chief Financial Officer Pauline Foreman, Chief of Strategy & Science Jo Noble, Democracy & Support Services Manager Heather Kohn and Committee Secretary Jill Simpson.

The meeting commenced with a karakia.

Secretarial Note: Director Environmental Services & Protection Helen Montgomery attended via audio visual link.

1. Apologies

There were no apologies.

2. Declarations of Interest

There were no interests declared.

3. Confirmation of non-confidential Minutes 10 March 2022

3.1 Confirmation of non-confidential Minutes 10 March 2022

MOVED by Cr Faulkner, seconded by Cr Burdett

That the Minutes of 10 March 2022 be accepted subject to amendments. **CARRIED**

3.2 Action Sheet

Noted.

4. Leave of Absence

There were no leaves of absence.

5. Acknowledgements and Tributes

Councillors stood for a minute silence to remember the life of Nanny Maude Brown and Mrs Corrie Kirikiri (Uawa).

6. Public Input and Petitions

There were no public input or petitions

7. Extraordinary Business

There was no extraordinary business.

8. Notices of Motion

There were no notices of motion.

9. Adjourned Business

There was no adjourned business.

10. Reports of the Chief Executive and Staff for DECISION

10.1 22-27 Traffic and Parking Bylaw 2021: First Resolution Register Update and Option to Establish a Transport Sub-Committee

Chris Gilmour attended via audio visual link and answered the following questions of clarification:

- As a sub-committee it will still be open to the public. The sub-committee would meet more frequently and/or as required, allowing for flexibility and transparency.
- It is anticipated there will be an increase in speed and traffic related decisions in the future and is difficult to make decisions in a timely manner due to the normal Sustainable Tairāwhiti Committee meeting rotation.
- In terms of legality the Sub Committee needs to be at a Governance level with at least two members not necessarily elected members. It was thought that for a new initiative like this a mix of staff and elected members would be best.
- The previous Bylaw required a full formal review and consultation with the community should there be any changes. The new Bylaw can now be more agile and flexible.

MOVED by Cr Seymour, seconded by Cr Sheldrake

That the Sustainable Tairāwhiti:

1. Resolves that pursuant to clause 7(1)(a) of the Gisborne District Council Traffic and Parking Bylaw 2021, the stopping, standing, or parking of any vehicle is prohibited at all times in the part(s) of Joanne Street as indicated on the network by broken yellow 'no stopping lines' and as indicated in figure 1 of this report forming part of the resolution.
2. Resolves that pursuant to clause 7(1)(a) of the Gisborne District Council Traffic and Parking Bylaw 2021, the stopping, standing, or parking of any vehicle is prohibited at all times in the part(s) of Ruru Avenue as indicated on the network by broken yellow 'no stopping lines' and as indicated in figure 2 of this report forming part of the resolution.

CARRIED

MOVED by Cr Wharehinga, seconded by Cr Foster

That the Sustainable Tairāwhiti:

3. Appoints a Traffic and Parking Subcommittee.
4. Approves and adopts the draft Terms of Reference for the Traffic and Parking Subcommittee (Attachment 2).
5 Appoints sub-committee members in accordance with the adopted Terms of Reference.

Voting by Division:

For:	**Against**
Cr Wharehinga	Cr Akuhata-Brown
Cr Foster	Cr Seymour
Cr Faulkner	Cr Sheldrake
Cr Worsnop	Cr Burdett
Cr Stoltz	Cr Cranston
Cr Gregory	Cr Robinson
Cr Hughes	Cr Dowsing

Casting vote by Mayor Stoltz. **CARRIED**

It was agreed that the Sub-Committee consist of Her Worship the Mayor and Cr Seymour.

11. Reports of the Chief Executive and Staff for INFORMATION

11.1 22-54 TRMP Review Programme - Quarterly Update

Senior Programme Manager, Strategy & Science Dr Graeme Card and Principal Advisor Environmental Services & Protection Shane McGhie attended and answered questions of clarification:

- Discussions will be had with the Technical Roopu to ensure our hapu groups are aware of the process regarding the Waiapu Catchment Plan.
- Once the Future Development Strategy is released some weight can be given in the consenting decision-making process.
- Methodology is being developed for ground-truthing the wetland mapping. The best approach would be to work with catchment groups as each catchment plan area is developed. Mapping can be done quickly however ground truthing will take time and resourcing. The timeframe of 30 June for the regional wetland mapping will be met.
- The Housing and Business Capacity Assessment identified the demand of approximately 5,000 new dwellings in the next 30 years.
- There has been a period of low growth and it was managed by being responsive to infrastructure. During a period of medium to high growth, the infrastructure will be most efficiently provided where the infrastructure leads development. The developer is responsible for providing the infrastructure within their development area, but the Council has the responsibility for providing the infrastructure to the development (trunk infrastructure).
- Once the Future Development Strategy is completed, the Infrastructure Strategy will be reviewed prior to the 2024 Long Term Plan. The Government has stated that Council is required to provide the level of capacity that is projected along with deciding on how it will be serviced by infrastructure. Planning well for growth including having infrastructure in place at the right time, will ensure effective and efficient cities.
- In identifying the area of projected growth Awapuni Road and the existing urban areas will be looked at in detail to determine which is appropriate. Existing use rights still exist following a zone change. A further part of the workstream is looking at how the central city may be revitalised. The National Policy Statement on Urban Development 2020 identifies the provision of intensification of residential development within the CBD and the areas around it.
- The Government has released a document regarding managed retreat with regard to climate change.

MOVED by Cr Dowsing, seconded by Cr Hughes

That the Sustainable Tairāwhiti Committee:

1. Notes the contents of this report.

CARRIED

Secretarial Note: The meeting adjourned at 10.10am and reconvened at 10.26am.

11.2 22-84 Tairāwhiti Sports Facilities Business Case

Acting Liveable Communities De-Arne Sutherland attended and acknowledged the work of Council staff and partners to get to this point including Sport Gisborne Tairāwhiti and Trust Tairāwhiti and answered the following questions of clarification:

- The overall investment programme of $118m was to implement the business case and a portion towards the indoor facilities, outdoor facilities and the regional park on the East Coast.
- Discussions are happening with central government and progress reports will be reported to Councillors.
- There will be a share of resources and facilities not only across Gisborne but on the coast as well.

Mayor Stoltz congratulated all involved in the work to pull this together and acknowledged that it not only focused on the city but the entire Tairāwhiti region.

MOVED by Cr Cranston, seconded by Cr Burdett

That the Sustainable Tairāwhiti Committee:

1. Notes the contents of this report.

CARRIED

11.3 22-85 Representation Review Determination 2022

MOVED by Cr Robinson, seconded by Cr Akuhata-Brown

That the Sustainable Tairāwhiti Committee:

1. Notes the contents of this report.

CARRIED

12. Public Excluded Business

Secretarial Note: These Minutes include a public excluded section. They have been separated for receipt in Section 12 Public Excluded Business of Council.

13. READMITTANCE OF THE PUBLIC

MOVED by Cr Burdett, seconded by Cr Sheldrake

That:

1. The Council re-admits the public.

CARRIED

14. Close of Meeting

There being no further business, the meeting concluded at 12.25 pm.

Rehette Stoltz
MAYOR

3.2. Action Sheet

Meeting Date	Item No.	Item	Status	Action Required	Assignee/s	Action Taken	Due Date
10/03/2022	10.1	22-30 Additional Information for Emissions Reduction Targets	Not yet started	Provide Councillors with cost implications to ratepayers when setting a 2030 net zero target.	Magnus Abraham-Dukuma	**11/04/2022 Magnus Abraham-Dukuma** May 2022 will be premature. The plan is to present the cost information in November alongside the full report after we complete the work underway.	25/10/2022

3.3. Governance Work Plan

SUSTAINABLE TAIRĀWHITI - COMMITTEE OF THE WHOLE							Meeting Dates				
Group Activity	Activity	Name of agenda item	Purpose	Significance L/M/H	Report type	Owner	28-Apr	2-Jun	28-Jul	8-Sep	17-Nov
Liveable communities	Liveable Spaces	Makorori Master Plan		M	Information (I)	Tyler Kirk					
Liveable communities	Liveable Spaces	Elgin Neighbourhood Play System Report		L	Information (I)	Tyler Kirk					
Liveable communities	Community Projects	Waingake Transformation Programme 29% Reforestation Report	Will include commercial info relating to the Licence to Occupy Agreement with ELandNZ	M (P.excl.)	Decision (D)	Amy England					
Liveable communities	Community Projects	Tairawhiti Sports Facilities Business Case	Updating Councillors on the progress of the Tairawhiit Sports Facilities prepared in partnership between Trust Tairawhiti, Sport Gisborne-Tairawhiti and Gisborne District Council	L	Information (I)	Abbe Banks					
Liveable communities	Principal Scientist	Hikurangi Subduction Zone - Research Update (to check with Ben)			Decision (D)	Murry to advise					
Liveable communities	Principal Scientist	Tairawhiti and Hawke's Bay Climate Change Implications Report			Information (I)	Murry to advise					
Liveable communities	Principal Scientist	Turihaua Freedom Camping Update			Information (I)	Murry to advise					
Liveable communities	Principal Scientist	Completion of the Defining Tairawhiti LIDAR Acquisition Project			Information (I)	Murry to advise					
Liveable communities	Principal Scientist	Tokomaru Bay Transfer Station Location			Decision (D)	Murry to advise					
Strategy and Science	Strategy and Science	TRMP Review - UGD Workstream update on FDS		L	Information (I)	Shane McGhie					

SUSTAINABLE TAIRĀWHITI - COMMITTEE OF THE WHOLE							Meeting Dates				
Group Activity	Activity	Name of agenda item	Purpose	Significance L/M/H	Report type	Owner	28-Apr	2-Jun	28-Jul	8-Sep	17-Nov
Strategy and Science	Strategy and Science	Climate Change Update Report	Including an update on CRA and Decision Report on the GDC 2050 Climate Change Roadmap	M	decision (D)	Dr Magnus Abraham-Dukuma					
Strategy and Science	Strategy and Science	TRMP Review - UGD Workstream update on FDS		L	Information (I)	Shane McGhie					
Strategy and Science	Strategy and Science	Navigation & Safety Bylaw Review	Reports to the Chief Executive and Staff	M	Decision (D)	Charlotte Knight					
Strategy and Science	Strategy and Science	TRMP Review - UGD Workstream update on FDS		L	Information (I)	Shane McGhie					
Strategy and Science	Strategy and Science	MyImprint Report	MyImprint final report on our net-zero journey.	L	Information (I)	Dr Magnus Abraham-Dukuma					
Strategy and Science	Strategy and Science	TRMP Review Programme - Quarterly Update		L	Information (I)	Dr Graeme Card					
Strategy and Science	Strategy and Science	Climate Change Update Report		L	Information (I)	Dr Magnus Abraham-Dukuma					
		TRMP Review - UGD Workstream progress update		L	Information (I)	Dr Graeme Card/Shane McGhie					
Strategy and Science	Strategy and Science	TRMP Review Programme - Quarterly Update		L	Information (I)	Dr Graeme Card					

10. Reports of the Chief Executive and Staff for DECISION

GISBORNE DISTRICT COUNCIL

22-110

Title:	**22-110 Navigation and Safety Bylaw Review**
Section:	Strategy
Prepared by:	Charlotte Knight - Strategic Planning Manager
Meeting Date:	Thursday 2 June 2022

Legal: Yes	Financial: No	Significance: **Low**

Report to SUSTAINABLE TAIRAWHITI Committee for decision

PURPOSE

The purpose of this report is to approve the review of the Navigation and Safety Bylaw 2012.

SUMMARY

Council has a statutory role in ensuring maritime safety in its district by developing a navigational safety bylaw under s33M of the Maritime Transport Act (MTA) 1994. The Gisborne District Council Navigation and Safety Bylaw 2012 is in place to minimise the risk of fatalities, injuries, nuisance, accidents, collision and damage in Tairāwhiti waters.

The bylaw was amended in 2018 (**Report 18-190**); however, a full review was not undertaken. The Local Government Act 2022 requires Council to undertake a comprehensive review of a bylaw 10 years after it was last reviewed; and within a two-year timeframe from that review date. When reviewing a bylaw, Council must determine whether the bylaw is the most appropriate way of regulating the matters addressed by the bylaw.

Staff have identified several possible amendments to the bylaw, including:

- Updating definitions for clarity and to align with current best practice or to be consistent with maritime safety wording.
- Updating the life jacket requirement to require every person on board a recreational craft of six metres or less to wear a personal flotation device at all times.
- Added provision to prevent the discharge of cargo into navigable waters.
- Added provisions for the Harbourmaster to provide directions to boat users in accordance with the MTA.
- Added provisions in relation to oil spill contingency plans being required for the transfer of liquids, as well as notification to the Council in advance.
- Updating of the maps to ensure all areas covered by the bylaw are correctly identified.
- Other minor wording amendments.

Council's options are:

- Review the bylaw (preferred option)
- Do not review the bylaw.

The decisions or matters in this report are considered to be of **Low** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS

That the Sustainable Tairawhiti Committee:

1. **Approves the review of the Navigation and Safety Bylaw 2012.**
2. **Determines that the Navigation and Safety Bylaw 2012 should be amended, and that a bylaw is the most appropriate way of regulating navigational safety.**

Authorised by:

Helen Montgomery - Director Environmental Services & Protection
Joanna Noble - Chief of Strategy & Science

Keywords: navigation safety, bylaw review, maritime, determination

BACKGROUND

1. Council's navigation safety functions are set out in the Maritime Transport Act 1994 (MTA). The authority to make bylaws comes from s33M MTA, which sets out the scope of matters that can be included in the bylaw. The MTA (s33F) also gives Harbourmasters the authority to act to ensure maritime safety, and enforce secondary legislation, including bylaws.
2. The matters that the bylaw can address are set out in s33M MTA. In general, these are:
    a) Regulate and control the use or management of ships
    b) Regulate the placing and maintenance of moorings and maritime facilities
    c) Prevent nuisances arising from the use of ships and sea planes or arising from the actions of persons and things in or on the water
    d) Reserve areas and regulate events
    e) Specify requirements for life jackets, personal watercraft (jet ski) identification.
3. The bylaw can only address matters in respect to navigation safety. It cannot be inconsistent with the RMA and cannot be used to control environmental matters that should be addressed through the RMA processes.
4. Examples of the type of matters which cannot be addressed through the Bylaw include:
    a) Swimming, except when in conflict with vessels (such as swimming around wharves)
    b) Noise
    c) Biodiversity issues, including shellfish or fishing
    d) Erosion
    e) Pollution/ litter
    f) Occupation of space
    g) Any other RMA matters, for example allocation of space, or structures.
5. The MTA requires that navigation bylaws are made by regional councils in consultation with the Director of Maritime New Zealand (MNZ). Staff have identified this as a key step in the project plan and will be in communication with the Maritime New Zealand Director to arrange a review of the draft bylaw prior to public consultation.
6. The current bylaw aims to ensure the safety of all users on the waterways of the Gisborne district. It sets out requirements for safe operations for people using the lakes, rivers, harbours and coastal waters for towing, boating, kayaking or other water activities, and seeks to reduce the conflicts between different activities.
7. The process of reviewing navigation bylaws is detailed in the Local Government Act 2002 (LGA) – s159 states a local authority must review a bylaw made by it under the Local Government Act 2002 or Maritime Transport Act 1994, no later than ten years after it was last reviewed.

8. The bylaw expires on 4 December 2022; however, the LGA s160A determines that a bylaw that is not reviewed under s159, is revoked on the date that is two years after the last date on which the bylaw should have been reviewed – meaning the bylaw can continue to be enforced in its current form until 4 December 2024.

9. The Harbourmaster is tasked with the execution of the bylaw and has suggested several changes. These changes will help to bring the bylaw in line with best practice based on other councils throughout New Zealand, as well as provide additional clarity for current and future users of the bylaw.

2018 Amendment

10. In May 2018, staff presented amendments to the Navigation and Safety Bylaw 2012 to the Environmental Planning and Regulations Committee (**Report 18-190**). The amendments were proposed because the Maritime Transport Amendment Act 2013 had moved administration of the bylaw from the Local Government Act 1974 to the MTA.

11. Section 87 of the Maritime Transport Amendment Act 2013 enabled the bylaw to continue as if it "*had been made, and are deemed where necessary to have been made, under the corresponding provisions of the Maritime Transport Act 1994*". The amendments were proposed for clarity to bylaw users and to make some other minor amendments for clarity.

12. Several minor amendments were made, to correct references to the previous enabling legislation (Local Government Act 1974), formatting corrections, and some other minor wording changes. As these changes were not material, there was no requirement for consultation.

13. Council endorsed the recommendation of the Committee (**Report 18-236**) in its resolution at the May 2018 Council meeting "*That the Gisborne District Navigation and Safety Bylaw 2012 be amended as per Appendix 1 with clarification with respect to* 2.2.1".

14. S156(2) of the LGA allows a local authority to make minor changes to, or correct errors in, a bylaw by way of publicly notified resolution if the changes or corrections do not affect an existing right, interest, title, immunity, or duty of any person to whom the bylaw applies, or an existing status or capacity of any person to whom the bylaw applies. The changes in **Report 18-190** were considered minor and did not have any impact other than directing bylaw users to the MTA for interpretation of the bylaw content.

DISCUSSION and OPTIONS

15. This report is seeking a decision from Council to review the Navigation and Safety Bylaw 2012. Council has two options to consider as outlined in Table 1:

Table 1: Options for Council

	Benefits	Costs
Review Bylaw (preferred option)	• Ensure alignment with current legislation • Ensure the safety of people in local waters when using these for water activities • Provide greater clarity for water activity users.	• Due to current staff shortages this work will be undertaken by consultants estimated to cost approximately $30,000. This is funded from within existing budgets.
Do not review bylaw	• Frees up budget for other work.	• If not reviewed in the next two years Council will not have a bylaw that is enforceable. • Some areas of the bylaw require clarification which may make implementation difficult. • May impact Council's reputation.

16. If the review is approved, the process includes:
    a) Stakeholder pre-engagement
    b) Workshop with Council
    c) Review by Navigational Safety Special Interest Group
    d) Review by Maritime New Zealand Director
    e) Council Decision: Adoption of draft bylaw for consultation
    f) Formal consultation
    g) Hearings
    h) Consideration by Council for resolution adopting the bylaw.

17. Staff have identified several potential changes to the bylaw, which Council can choose to proceed with, or keep the existing rules. These changes include:
    a) Extending the coverage of the bylaw to all navigable waters in the district, allowing for consistent rules throughout the district
    b) Update the name of the bylaw to Navigational Safety Bylaw
    c) Updating definitions for clarity and to align with current best practice or to be consistent with maritime safety wording
    d) Added provision to prevent the discharge of cargo into navigable waters
    e) Added provisions to provide for the Harbour Master to provide directions to boat users in accordance with the MTA
    f) Added provisions in relation to oil spill contingency plans being required for the transfer of liquids, as well as notification to the Council in advance
    g) Updating of the maps to ensure all areas covered by the bylaw are correctly identified
    h) Other minor wording amendments.

18. Staff are also proposing a change to the provision for wearing life jackets. Several options are available to council as outlined in Table 2. This provision relates to recreational crafts of six metres or less.

Table 2: Options for provision on wearing of life jackets

Option	Explanation
1. Life jackets available on board and worn in adverse conditions.	**Minimum requirement as per the MTA** As a skipper, you must carry a correctly sized lifejacket for each person on board and ensure that lifejackets are worn in circumstances where tides, river flows, visibility, rough seas, adverse weather, emergencies or other situations cause danger or a risk to the safety of person on board.
2. Life jackets required to be worn when the vessel is making way.	Minimum requirement as per the MTA; and Life jackets must be worn when the vessel is being propelled by an engine, oars, sails, or other instrument.
3. Life jackets required to be worn when the vessel is under way.	**Staff preferred option** Minimum requirement as per the MTA; and Life jackets must be worn when the vessel is not at anchor, moored, made fast to a structure or the shore, or aground.
4. Life jackets to be worn at all times.	Minimum requirement as per the MTA; and Life jackets must be worn at all times.

19. Feedback from Council on the issues identified to date, the options for the provision of wearing a life jacket, and any other potential matters which should be considered by staff in the bylaw review will be sought at the workshop in June 2022.

ASSESSMENT of SIGNIFICANCE

Consideration of consistency with and impact on the Regional Land Transport Plan and its implementation
Overall Process: **Low** Significance
This Report: **Low** Significance

Impacts on Council's delivery of its Financial Strategy and Long Term Plan
Overall Process: **Low** Significance
This Report: **Low** Significance

Inconsistency with Council's current strategy and policy
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on all or a large part of the Gisborne district
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on individuals or specific communities
Overall Process: **Medium** Significance
This Report: **Low** Significance

The level or history of public interest in the matter or issue
Overall Process: **Medium** Significance
This Report: **Low** Significance

20. The decisions or matters in this report are considered to be of **Low** significance in accordance with Council's Significance and Engagement Policy.

21. There is a legislative requirement to consult on the draft bylaw under the LGA. The changes could impact on specific individuals and groups throughout the community, who should be provided with an opportunity to have their say on the proposed changes.

TANGATA WHENUA/MĀORI ENGAGEMENT

22. Staff plan to engage with tangata whenua during pre-consultation, with staff seeking feedback on the current bylaw, and again during formal consultation on the revised draft bylaw.

COMMUNITY ENGAGEMENT

23. Staff plan to contact a wide range of stakeholders including marina and berth holders, fishing and yachting clubs, the Port and Coastguard. All parties will be notified of the review, provided an opportunity to offer early input into changes they would like to see reflected in the reviewed bylaw, and informed of the process from here forward.

24. Under s156 of the LGA, Council is required to use the special consultative procedure when amending a bylaw, if the matters are identified as being of significant interest or if there is a significant impact on the public due to the proposed changes.

CLIMATE CHANGE – Impacts / Implications

25. There are no identified climate change impacts or implications generated by this bylaw.

CONSIDERATIONS

Financial/Budget

26. The bylaw review, and subsequent amendments and adoptions, are likely to generate financial implications for Council. There will be one-off costs to Council due to the use of consultants to undertake the review and the special consultative procedure. These costs can be met within existing budgets. The ongoing compliance and enforcement costs come under the Environmental Services and Protection operating budgets.

Legal

27. The LGA specifies that a territorial authority can make bylaws for its district in order to:
    a) Protect the public from nuisance
    b) Protect, promote, and maintain public safety
    c) Minimise the potential for offensive behaviour in public places.

28. The Navigation and Safety Bylaw is attempting to achieve both a) and b) above, and therefore aligns with legislation.

29. s160a of the LGA determines that a bylaw that is not reviewed under s159, is revoked on the date that is two years after the last date on which the bylaw should have been reviewed (its expiry date). Initiating the review of the bylaw prior to its expiry date, and the intention to consult on the reviewed bylaw later using the special consultative procedure, and subsequently adopt a new bylaw within the two-year review period, meets the requirements of the LGA.

30. When making or reviewing bylaws, Council is required by s155 of the Local Government Act 2002 to make three determinations to ensure that the bylaw:
    a) is the most appropriate way of addressing the perceived problem
    b) is in the most appropriate form of a bylaw, and
    c) is not inconsistent with the New Zealand Bill of Rights Act 1990 (the Bill of Rights).

31. The determinations made when approving the review are noted in the recommendations and include:
    a) ***Determine whether a bylaw is the most appropriate way of dealing with the perceived problem or issue:*** A bylaw is determined to be the most appropriate way to regulate navigational safety in the district as this is the current regulatory mechanism and there are no alternatives.
    b) ***Determine whether the bylaw is in the most appropriate form:*** Council considers amending the existing bylaw is the most appropriate form of the bylaw.
    c) ***Determine whether it gives rise to any implications under the New Zealand Bill of Rights Act 1990. If there are implications under that Act, the bylaw must be amended to remove any inconsistencies:*** Council considers that the proposed bylaw is neither inconsistent with nor raises any implications with the New Zealand Bill of Rights Act 1990 as the proposed changes are reasonable, not overly restrictive, or impractical.

32. There are no legal consequences for taking this course of action. This would be the normal course of action for a review recommending changes such as this.

POLICY and PLANNING IMPLICATIONS

33. The Navigational Safety Bylaw review and report have no policy and planning implications for Council beyond those discussed in this report.

RISKS

34. The key risks identified for this project are:
    a) **Public safety**: The public's safety will be at risk if the bylaw is not reviewed, and the review period lapses. To mitigate this staff are proposing to begin the bylaw review.
    b) **Reputation**: Council's reputation could be impacted if processes are not followed to an adequate standard and/or if stakeholders are not appropriately engaged with. To mitigate this, staff have developed a project plan that ensures the legislative process is followed correctly and have developed a communications plan to identify and engage with interested parties.

NEXT STEPS

Date	Action/Milestone	Comments
May – September 2022	Engage tangata whenua and stakeholders in pre-consultation.	Most of this work will occur before June.
June 2022	Workshop with Council.	To gather ideas and thoughts from the current Council on amendments that should be considered in the bylaw review.
September 2022	Review of the draft bylaw by the Regional Harbourmasters Special Interest Group.	This group of Harbourmasters can provide comment and suggestions regarding best practice.
October 2022	Review of the draft bylaw by the Maritime New Zealand Director.	This is a requirement of the MTA.
16/17 December 2022	Council to adopt the draft Statement of Proposal and draft Bylaw for consultation.	This meeting is after the local body elections. If required, a workshop will be held with the new Council to run through the bylaw review process to date and options for consultation.
Late January – Early March	Formal consultation.	
March 2023	Hearings.	Meeting date TBC.
April 2023	Consideration by Council for resolution adopting the bylaw.	Meeting date TBC.

GISBORNE DISTRICT COUNCIL

22-112

Title:	**22-112 Gisborne District Council Draft Submission on the National Adaptation Plan Consultation**
Section:	Strategy
Prepared by:	Magnus Abraham-Dukuma - Senior Policy Advisor - Climate Change Focus
Meeting Date:	Thursday 2 June 2022

Legal: No	Financial: No	Significance: **Medium**

Report to SUSTAINABLE TAIRAWHITI Committee for decision

PURPOSE

This report is for Council to approve a submission to the Ministry for the Environment on Government's draft National Adaptation Plan.

SUMMARY

Late last month, the Ministry for the Environment (MfE) released the draft National Adaptation Plan (NAP) and Government's initial thoughts on managed retreat for consultation. This is in line with Government's legal obligation under the Climate Change Response Act and comes two years after the first National Climate Change Risk Assessment (NCCRA) was completed for New Zealand. The draft NAP captures current/ongoing and planned measures to manage the climate change risks New Zealand faces, with immediate focus on 10 prioritised risks across various domains.

The draft NAP contains numerous actions focusing on three areas:

- **Focus area one:** Reforming institutions to be fit for a changing climate.
- **Focus area two:** Providing data, information, tools, and guidance to allow everyone to assess and reduce their own climate risks.
- **Focus area three:** Embedding climate resilience across Government strategies/policies.

In addition to the focus areas, Government seeks feedback on the roles of asset owners, business, local government, iwi/Māori, and the wider public in adaptation and managed retreat. Government also wants to know about how the risks and costs for adaptation and managed retreat can be shared by all stakeholders, and how to address issues specific to Māori during managed retreat.

The draft Council submission supports the three focus areas and actions contained in the NAP as they align with our aspiration for a climate resilient Tairāwhiti and the work staff are doing to inform Council's adaptation planning.

Staff have drawn on a rich evidence base to suggest a logical approach for Government to take regarding adaptation planning and national resilience-building. We have outlined how roles and costs can be borne by Central Government and the other stakeholders in adaptation and managed retreat, and the important role insurance can play in discouraging development in high-risk areas. Staff have also used the submission to emphasise the exposure and vulnerability of Tairāwhiti to climate impacts and the need for significant Government support in our regional climate change response.

The decisions or matters in this report are of **medium** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS

That the Sustainable Tairawhiti Committee:

1. **Endorses the submission to the Ministry for the Environment, subject to suggested edits.**

Authorised by:

Joanna Noble - Chief of Strategy & Science

Keywords: Climate change, Ministry for the Environment, National Adaptation Plan, managed retreat, submission.

BACKGROUND

1. New Zealand's first National Climate Change Risk Assessment (NCCRA) was completed in 2020 as required by the Climate Change Response Act (CCRA). The NCCRA identified 43 climate change risks the country faces across five key domains — the natural environment, human, economy, built environment and governance.

2. Ten of the 43 risks were prioritised as areas needing urgent adaptation action. These are shown in Figure 1.

Natural	Human	Economy	Built	Governance
Risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea-level rise and extreme weather events.	Risks to social cohesion and community wellbeing from displacement of individuals, families and communities due to climate change impacts. ✸	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	Risks to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise. ✸	Risks of maladaptation across all domains due to the application of practices, processes and tools that do not account for uncertainty and change over long timeframes.
Risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.	Risks of exacerbating existing inequities and creating new and additional inequities due to differential distribution of climate change impacts. ✸	Risks to the financial system from instability due to extreme weather events and ongoing, gradual changes.	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise. ✸	Risks that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for climate change adaptation.

Figure 1: The 10 most significant climate risks New Zealand faces from 2020–26 (NCCRA 2020).

3. The CCRA requires Government to design a National Adaptation Plan (NAP) to manage the climate change risks identified by the NCCRA.

4. Last month, the Ministry for the Environment released the draft NAP[1] and Government's initial thoughts on managed retreat[2] **[Attachment 1]** for consultation. **Attachment 2** is a summary of these documents.

5. The draft NAP focuses on the 10 most significant risks identified in the NCCRA. It includes central government's current and proposed climate change adaptation actions and focuses on three areas:

    - **Focus area one:** Reforming institutions to be fit for a changing climate. New Zealand's institutions will need to be repositioned and better equipped to manage natural resources, infrastructure and effectively respond to the natural hazards and climate impacts we face in current times.

[1] See the full document here.
[2] Just 'initial thoughts' because the proposed Climate Change Act expected late 2023/24 will be the legislative framework for addressing the complex governance and financial issues surrounding managed retreat.

The consultation document does not provide clarity as to which institutions are to be reformed — whether only Central Government agencies and ministries, or whether the local government sector is captured. Council's draft submission has noted the need for Government to integrate the future of local government reform programme into the institutional reform, considering that the local government sector is at the forefront of climate action.

- **Focus area two:** Providing data, information, tools, and guidance to allow everyone to assess and reduce their own climate risks. This is on the basis that all New Zealanders need access to the right information to individually adapt to climate change in a way that supports Government's agenda.
- **Focus area three:** Embedding climate resilience across Government strategies and policies. This means integrating resilience-building and adaptation thinking in central government decision making and national direction.

6. The draft NAP also seeks feedback on how the risks, roles, and costs of adaptation and managed retreat can be shared in an equitable manner among all stakeholders — including Central Government, local government, asset owners, the business sector, and the wider public.

7. The outcomes and objectives of the draft NAP are summarised in Figure 2 below.

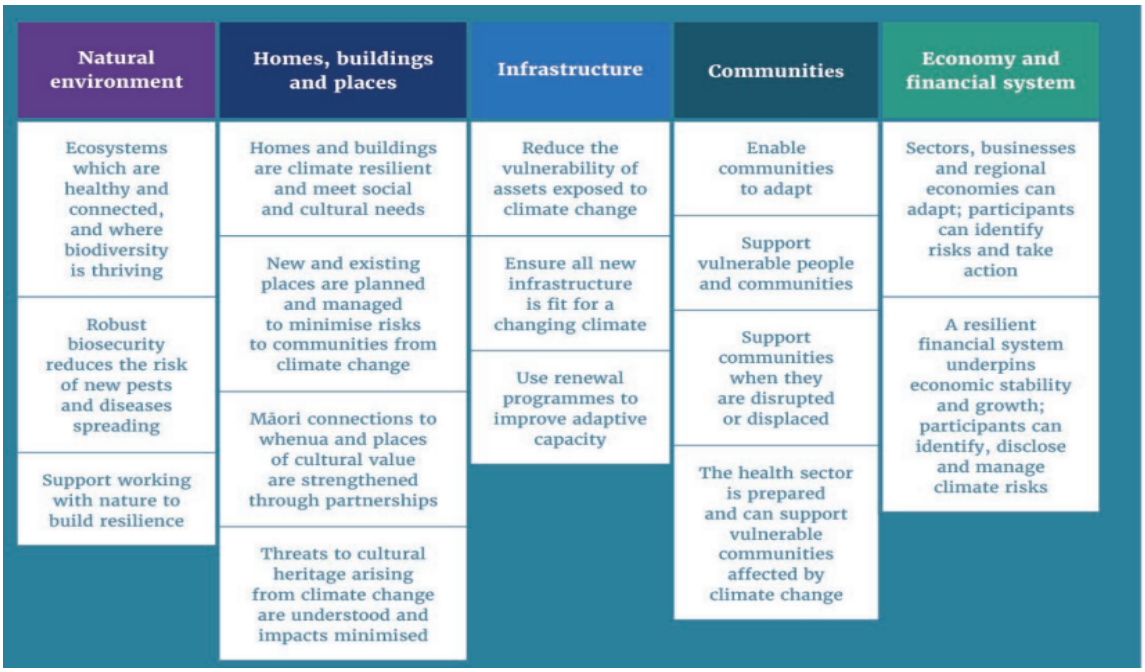


Figure 2: Outcomes and objectives of the draft NAP

8. In the period leading to 2050, Government will complete five more NCCRA and design five more NAPs.

9. Central government's initial thoughts on managed retreat **[Attachment 1]** contain questions requesting public feedback on the process for managing the retreat of coastal assets highly exposed and vulnerable to climate impacts, working together (roles and responsibilities for Central Government, local government, business, the financial sector, and treaty partners), property transfer, implications for Māori and insurance issues.

10. Consultation opened on 27 April 2022 and closes 3 June 2022.

11. Staff have drafted a submission for Council **[Attachment 3]**, which will be submitted to MfE, subject to edits suggested by elected members.

DISCUSSION and OPTIONS

Council's key general submission points

12. The draft submission **[Attachment 3]** focuses on the key considerations that should inform Government's approach to adaptation planning rather than responding all 72 questions in the consultation documents. This is because many of the questions require either a "Yes" or "No" answer and structured in a way that leads to repetition of similar ideas across various sections.

13. The draft submission **[Attachment 3]** also states Council's support for most of the cross-cutting actions for national adaptation included in the draft NAP. Staff believe that the urgent actions Government should focus on are the ones that promote legislative certainty for planning purposes, minimise the burden of adapting to climate change (including managed retreat) on communities, working closely with, and supporting tangata whenua, funding support, and ongoing technical assistance for adaptation planning. They include:

    - Completing the reform of the resource management system.
    - Passing legislation to support managed retreat as soon as possible.
    - Establishing a foundation to work with Māori on climate actions.
    - Setting a national direction on natural hazard risk management and climate adaptation through the National Planning Framework.
    - Completing case study/studies to explore co-investment for flood protection.
    - Exploring additional interventions to mobilise investments into resilience-building.
    - Public investment in climate change initiatives.
    - Ensuring minimum regulatory requirements for buildings to consider future climate data.
    - Scoping a resilience standard or code for infrastructure.
    - Investing hugely in public transport and active transport.
    - Expanding current funding channels for proactive community resilience.
    - Supporting Māori small business in resilience-building and transitioning to the future.
    - Establishing innovation grants, such as project grants tailored towards resilience-building.

14. Other generic matters discussed in Council's draft submission **[Attachment 3]** include:

    - Speeding up adaptation funding and projects nationally.
    - Facilitating robust public-private partnerships for adaptation projects.
    - Leveraging public financing through Government green bonds and other channels.
    - Facilitating local action for identifying region-specific adaptation needs.
    - Ensuring region-specific actions as adaptation is site-specific in principle and practice.
    - Advocating for robust equity considerations to avoid unintended consequences/impacts on highly vulnerable groups and regions.

Submission points of particular interest to Council and Tairāwhiti

15. The draft submission **[Attachment 3]** emphasises Tairāwhiti's exposure and high vulnerability to adverse environmental hazards, which will be intensified or worsened by climate change.

16. Specific examples have been presented of the recent severe weather events in the region leading to floods, landslides, property and infrastructure damage and the socio-economic disruptions to Council, our community and the entire Tairāwhiti.

17. Staff have used Council's draft submission **[Attachment 3]** to reiterate the need for significant Government funding, partnership and technical support in our adaptation planning as well as other regional climate change actions in Tairāwhiti.

18. The case for significant Government funding support is based on the enormity of the adverse environmental events we always put up with, our low-income population with the inequitable option of increasing rates, and Council's budgetary constraints.

19. Council has a role to play in adaptation planning and climate action, as required by law. **Attachment 3** acknowledges this fact and states Council's willingness to work closely with Government to action region-specific interventions and tackle the complex issues around managed retreat in Tairāwhiti.

20. Council's draft submission outlines roles and costs all stakeholders should bear in adaptation and managed retreat, including how insurance premiums/signals can be used to discourage development in high-risk areas.

21. Staff have also emphasised the need for Government to work closely with Māori on the management of Whenua Māori retreated from all areas of cultural and spiritual significance. **Attachment 3** makes a case for Government to allow ownership of Whenua Māori retreated from to remain with Māori and avoid de facto land confiscation by the Crown.

ASSESSMENT of SIGNIFICANCE

Consideration of consistency with and impact on the Regional Land Transport Plan and its implementation
Overall Process: **Low** Significance
This Report: **Low** Significance

Impacts on Council's delivery of its Financial Strategy and Long Term Plan
This Report: **Low** Significance

Inconsistency with Council's current strategy and policy
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on all or a large part of the Gisborne district
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on individuals or specific communities
Overall Process: **Low** Significance
This Report: **Low** Significance

The level or history of public interest in the matter or issue
Overall Process: **Medium** Significance
This Report: **Medium** Significance

22. The decisions or matters in this report are of **medium** significance in accordance with Council's Significance and Engagement Policy.

TANGATA WHENUA/MĀORI ENGAGEMENT

23. There has been no engagement on the draft submission.

COMMUNITY ENGAGEMENT

24. There has been no engagement on the draft submission.

CLIMATE CHANGE – Impacts / Implications

25. There are no climate change impacts of submitting on the draft NAP.

CONSIDERATIONS

Financial/Budget

26. There are no financial implications for submitting on the draft NAP.

Legal

27. There are no legal considerations when submitting on the draft NAP.

POLICY and PLANNING IMPLICATIONS

28. There are no policy and planning considerations when submitting on the draft NAP.

RISKS

29. There are no major risks associated with submitting on the draft NAP.

NEXT STEPS

Date	Action/Milestone	Comments
August 2022	Final National Adaptation Plan to be published by Government.	Final NAP to be made public.

ATTACHMENTS

1. Attachment 1 - Adapt and Thrive: Consultation Document on Managed Retreat [**22-112.1** - 34 pages]
2. Attachment 2 - Summary of the Consultation Documents [**22-112.2** - 7 pages]
3. Attachment 3 - Draft GDC Submission on the NAP and Managed Retreat [**22-112.3** - 23 pages]

Consultation document

Kia urutau, kia ora: Kia āhuarangi rite a Aotearoa

Adapt and thrive: Building a climate-resilient New Zealand

Draft national adaptation plan

Managed retreat

Ministry for the Environment
Manatū Mō Te Taiao

Te Kāwanatanga o Aotearoa
New Zealand Government

Disclaimer

The information in this publication is, according to the Ministry for the Environment's best efforts, accurate at the time of publication. The Ministry will make every reasonable effort to keep it current and accurate. However, users of this publication are advised of the following.

- The information does not alter the laws of New Zealand, other official guidelines, or requirements.
- It does not constitute legal advice, and users should take specific advice from qualified professionals before taking any action based on information in this publication.
- The Ministry does not accept any responsibility or liability whatsoever whether in contract, tort, equity, or otherwise for any action taken as a result of reading, or reliance placed on this publication because of having read any part, or all, of the information in this publication or for any error, or inadequacy, deficiency, flaw in, or omission from the information in this publication.
- All references to websites, organisations or people not within the Ministry are for convenience only and should not be taken as endorsement of those websites or information contained in those websites nor of organisations or people referred to.

This document may be cited as: Ministry for the Environment. 2022. *Adapt and thrive: Building a climate-resilient New Zealand*. Wellington: Ministry for the Environment.

Published in April 2022 by the
Ministry for the Environment
Manatū Mō Te Taiao
PO Box 10362, Wellington 6143, New Zealand

ISBN: 978-1-99-102518-0 (online)

Publication number: ME 1636

This document is available on the Ministry for the Environment website: www.mfe.govt.nz.

Contents

Tables

Figures

Why we are consulting

We are seeking your input on a number of government proposals to address the risks Aotearoa New Zealand faces from climate change. Within this consultation package you will find:

- information on the early development of a managed retreat system for Aotearoa New Zealand, emerging issues relating to residential home insurance for flood risk, and questions related to these issues
- a full list of questions related to the draft national adaptation plan and managed retreat and flood insurance.

The full draft national adaptation plan is published separately.

What we hear through consultation will be considered in the finalisation of the national adaptation plan, which will be published in August 2022.

Your feedback on managed retreat and flood insurance will inform initial stages of policy development for the Climate Adaptation Act, which is one of the key actions included with the draft national adaptation plan.

The responses to this consultation will be published on the Ministry for the Environment website, alongside submissions made.

Timeframes

This consultation **starts on 28 April 2022 and ends on 3 June 2022**. When the consultation period has ended, officials will analyse submissions and provide advice to the Government about the views received on the strategies and policies to include in the national adaptation plan.

How to provide feedback

The questions included in this document seek your responses to two consultations (the draft national adaptation plan and managed retreat) These questions are a guide only, and all comments are welcome.

- You may wish to respond to one consultation or both. You do not have to answer all the questions.
- To ensure your point of view is clearly understood, you should explain your rationale and provide supporting evidence where appropriate.

There are two ways you can make a submission:

- Via Citizen Space, our consultation hub, at https://consult.environment.govt.nz/climate/national-adaptation-plan
- Write your own submission.

If you want to send your own written submission you can provide this as an uploaded file in Citizen Space.

We request that you don't email or post submissions, as this makes analysis more difficult. However, if you need to, please send written submissions to *National adaptation plan consultation, Ministry for the Environment, PO Box 10362, Wellington 6143* and include:

- your name or organisation
- your postal address
- your telephone number
- your email address.

If you are emailing your feedback, send it to adaptation@mfe.govt.nz as a:

- PDF, or
- Microsoft Word document (2003 or later version).

Submissions close at 11.59pm, 3 June 2022.

More information

Please send any queries to:

Email: adaptation@mfe.govt.nz

Post: National adaptation plan consultation, Ministry for the Environment, PO Box 10362, Wellington 6143

Publishing and releasing submissions

All or part of any written submission (including names of submitters), may be published on the Ministry for the Environment's website, environment.govt.nz. Unless you clearly specify otherwise in your submission, the Ministry will consider that you have consented to website posting of both your submission and your name.

Contents of submissions may be released to the public under the Official Information Act 1982 following requests to the Ministry for the Environment (including via email). Please advise if you have any objection to the release of any information contained in a submission and, in particular, which part(s) you consider should be withheld, together with the reason(s) for withholding the information. We will take into account all such objections when responding to requests for copies of, and information on, submissions to this document under the Official Information Act.

The Privacy Act 2020 applies certain principles about the collection, use and disclosure of information about individuals by various agencies, including the Ministry for the Environment. It governs access by individuals to information about themselves held by agencies. Any personal information you supply to the Ministry in the course of making a submission will be used by agencies working on the national adaptation plan (the Ministry for the Environment; Ministry of Business, Innovation, and Employment; Ministry of Transport; Ministry of Primary Industries; Ministry of Housing and Urban Development; Te Puni Kōkiri; Treasury; Te Arawhiti; Te Waihanga) only in relation to developing the national adaptation plan, including assessing policies within the plan. Please clearly indicate in your submission if you do not wish your name to be included in any summary of submissions that the Ministry for the Environment may publish.

Draft national adaptation plan

This is a plan for all New Zealanders. Climate change affects us all and we all have a role to play. Impacts will be felt by different people and regions in different ways. We are releasing this draft national adaptation plan now so that you have an opportunity to shape it.

The national adaptation plan will set the direction for how as a nation we will:

- adapt to the unavoidable impacts of climate change, and
- address key climate risks up to 2028.

It does this by outlining the Government's objectives to address these risks, and the strategies, policies, and proposals New Zealand will take over the next six years to adapt to priority risks from climate change.

Actions in this first national adaptation plan are centred around:

- Focus area one: Reform institutions to be fit for a changing climate.
- Focus area two: Provide data, information and guidance to enable everyone to assess and reduce their own climate risks.
- Focus area three: Embed climate resilience across government strategies and policies.

We are asking for your feedback in general as well as the actions across these main areas:

- System-wide actions
- The natural environment
- Homes, buildings and places
- Infrastructure
- Communities
- Economy and financial system

Read the full draft national adaptation plan

Read the full list of questions on the draft national adaptation plan

Are you already taking action to adapt to climate change?

We know that there are already great initiatives taking place across the country to build resilience to climate change within our communities, businesses and organisations. As part of this consultation, we would like to hear about the action you are taking to address climate risks to include in the national adaptation plan in August 2022.

If there is a climate change adaptation initiative taking place within your community, business or organisation that you want to tell us about, please send information through to **adaptation@mfe.govt.nz** by 11.59pm, 3 June 2022.

Managed retreat

Context

How does this link to the national adaptation plan?

This work relates to the following **critical actions** within the national adaptation plan:

- reform the Resource Management System
- pass legislation to support managed retreat
- develop options for home flood insurance issues.

This section of the consultation material outlines the specific problem in relation to managed retreat and flood insurance, and the key policy issues this work will need to address.

What is the problem?

Due to its geography and location, New Zealand is prone to a range of natural hazards, including earthquakes, volcanoes, erosion, landslides and extreme weather events. The effects of climate change mean the intensity and frequency of extreme weather events is only going to increase. We are already experiencing flooding and coastal erosion that threaten our essential infrastructure, valuable ecosystems and the safety of whole communities.

Most of our major urban centres and population are located on the coast or on floodplains of major rivers. This also makes us vulnerable. For example, if sea levels rise by half a metre, 36,000 buildings, 350 square kilometres of land and an extra 48,900 people would be exposed to flooding during extreme events[1] – that's around the population of Nelson.

Over the last ten years, climate change related floods have cost the New Zealand economy at least $120 million for privately insured damages. Economic losses from droughts have cost a further $720 million.[2]There will also be costs associated with adapting to climate change. The Government has not yet decided on a preferred policy option to address this problem. Central government will not bear every risk and cost of climate change, including climate change adaptation. Risk and cost will fall across different parts of society, including asset or property owners, their insurance companies, their banks, local government and central government. The Government has choices about the role it plays and how it influences the way these costs and risks fall. Care will need to be taken to manage any perverse or unintended outcomes such as moral hazard (that is, inappropriate incentives to continue developing in at-risk areas).

---

1 Paulik R, Stephens S, Wadhwa S, Bell R, Popovich B, Robinson B. 2019. *Coastal Flooding Exposure Under Future Sea-level Rise for New Zealand*. Wellington: NIWA.

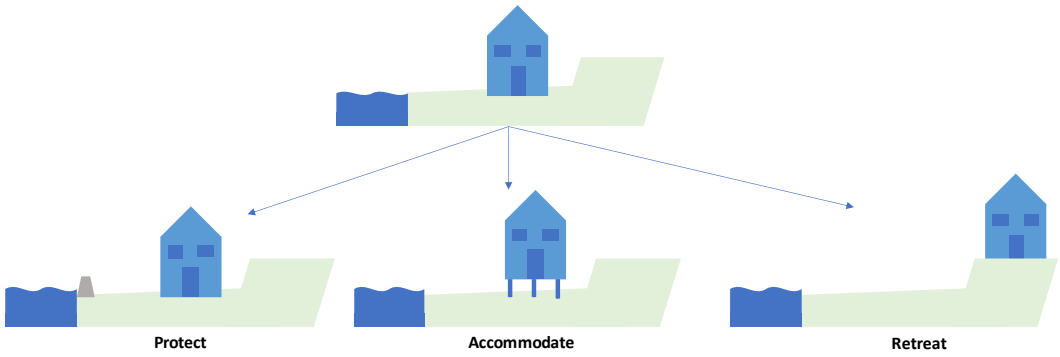
2 Frame D, Rosier S, Carey-Smith T, Harrington L, Dean S, Noy I. 2018. *Estimating Financial Costs of Climate Change in New Zealand: An Estimate of Climate Change-Related Weather Event Costs*. New Zealand Climate Change Institute and NIWA.

What is managed retreat?

Managed retreat is an approach to reduce or eliminate exposure to intolerable risk. It includes the idea of strategically relocating assets, activities and sites of cultural significance (to Māori and non-Māori) away from at-risk areas within a planned period of time. Managed retreat might be used in response to any climate change impact or natural hazard, whether or not that hazard is caused or exacerbated by climate change. It is an option that may be considered throughout Aotearoa.

Retreating from at risk areas is one way of managing the risks of climate change and natural hazards. This option will need to be considered alongside other approaches, including those to increase the resilience of assets in situ. Actions in the national adaptation plan and resource management reforms will help support these other options.

Figure 1: Adaptation options



Why do we need legislation?

Managed retreat raises unprecedented governance issues and complex policy and funding challenges. These cannot be adequately addressed as part of other legislation. Given the scale of the issues (geographic, economic and social), these challenges also require central government involvement. Currently there are no dedicated tools or processes to guide how individual households or communities might permanently shift away from areas of intolerable risk. While there have been some instances where people have been supported to retreat, these have often come with significant costs.

Different processes and legislation have been used to respond after natural disasters. For example, after the Canterbury earthquakes special legislation was introduced to support the recovery and rebuilding. However, after an extreme weather event caused significant damage in Matatā, managed retreat was achieved through voluntary acceptance of purchase offers with supporting changes to regional and district plans.

Managed retreat at Matatā is now largely complete, 16 years after the original debris flow event. It has come at a total cost of approximately $16.8 million and has caused years of stress and uncertainty for the community. It required cooperation and funding from Whakatane District Council, Bay of Plenty Regional Council and central government. The Matatā experience highlighted the need for a national framework for managed retreat, with clearly defined roles and responsibilities for individuals, central and local government (including a consistent approach to central and local government cooperation), national direction and changes to existing land use protections.

The proposed Natural and Built Environments Act (NBA) and Strategic Planning Act (SPA) will help enable long-term, proactive planning for managed retreat. In most cases, much of the planning process that could result in a managed retreat will be done through the NBA and SPA processes.

Separate legislation, currently being referred to as the Climate Adaptation Act (CAA), is intended to provide tools and processes to plan and implement managed retreats. For example, additional powers and processes will be needed to address issues of ownership of property that is retreated from. See the *system wide actions* chapter for more detail on these proposed Acts.

Policy considerations

Aspects of a managed retreat system

The matters outlined below make up a high-level framework for a managed retreat system. The Government has not yet decided on a preferred policy option for a managed retreat system. This material outlines key policy issues that are being considered. Your feedback will help inform the more detailed policy work that will follow this consultation.

Objectives and principles

We have identified five key objectives and six principles to guide the development of legislation.

Table 1: Objectives and principles of legislation

Managed retreat	
Objectives	• To set clear roles, responsibilities and processes for managed retreat from areas of intolerable risk • To provide stronger tools for councils to modify or extinguish existing uses of land • To provide clarity on tools and processes for acquiring land and related compensation • To clarify local government liability for decision-making on managed retreat, and the role of the courts • To provide clear criteria for when central government will intervene (or not) in a managed retreat process
Principles	• Managed retreat processes are efficient, fair, open and transparent • Communities are actively engaged in conversations about risk and in determining and implementing options for risk management • Social and cultural connections to community and place are maintained as much as possible • There is flexibility as to how managed retreat processes play out in different contexts • Iwi/Māori are represented in governance and management and have direct input and influence in managed retreat processes, and outcomes for Iwi/Māori are supported • Protection of the natural environment and the use of nature-based solutions are prioritised

We have identified four key objectives and nine principles to guide our approach to funding issues, including central government's funding responsibilities.

Table 2: Objectives and principles of funding responsibilities

Funding and financing adaptation	
Objectives	• To reduce hardship due to the impacts of climate change • To incentivise better long-term investment decisions concerning climate change risk • To reduce liabilities, including contingent liabilities to the Crown • To support the role of banking and insurance in facilitating risk management
Principles	• Limit Crown's fiscal exposure • Minimise moral hazard • Solutions are designed to be as simple as possible • Ensure fairness and equity for and between communities, including across generations • Beneficiaries of risk mitigation should contribute to costs • Minimise cost over time by providing as much advance notice as possible • Solutions support system coherence and the overall adaptation system response • Risks and responsibilities are appropriately shared across parties including property owners, local government, central government, and banking and insurance industries

Questions: (questions 1–51 are within the draft national adaptation plan)

52. Do you agree with the proposed principles and objectives for the Climate Adaptation Act? Please explain why or why not.

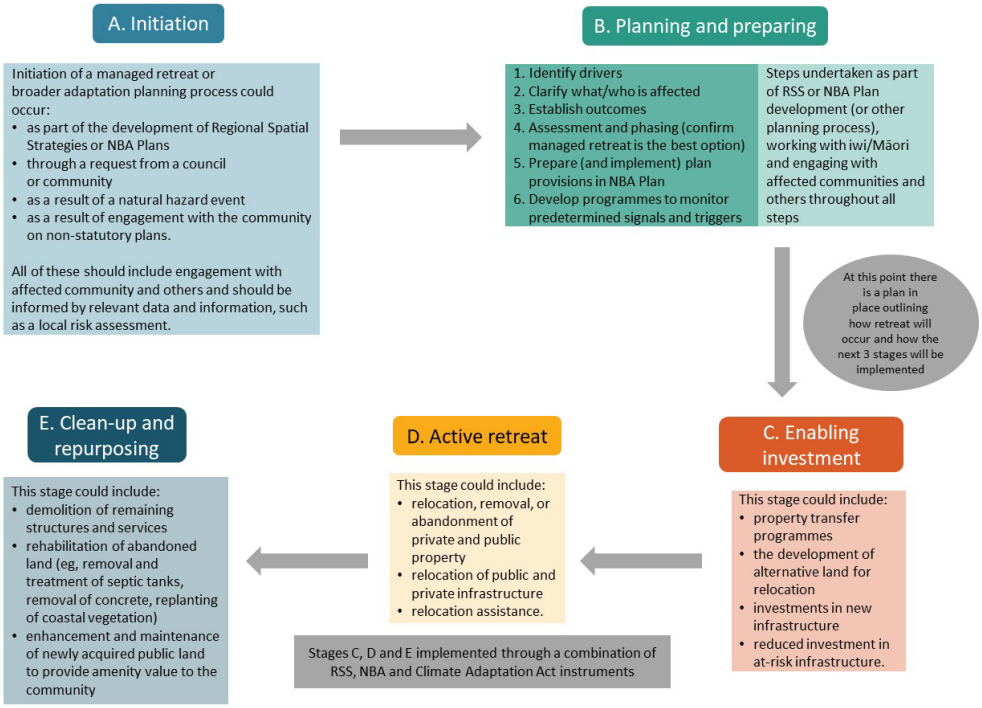
53. Are there any other principles or objectives you think would be useful? Please explain why.

Establishing a process for managed retreat

Figure 2 below outlines the possible stages of a managed retreat process and how they might link to different parts of the proposed resource management system.

We do not expect the process to be identical for every retreat. For example, a retreat that responds to a natural hazard event (eg, a severe flood) is likely to differ from a retreat that is planned to avoid a future natural hazard or gradual changes that will make an area unsafe in the future. In these scenarios, the various stages – including the timing and sequencing of individual steps – may look quite different.

Figure 2: Stages of a managed retreat process



To illustrate how this could play out – councils in a region undertake a risk assessment and gather other data and information to inform regional spatial strategy (RSS) development. The RSS:

- shows different levels of risk throughout the region
- identifies areas which are at high risk from flooding (or other natural hazards) and where adaptation actions, such as managed retreat, are likely to be needed in the future
- identifies low-risk areas where development could occur, including to accommodate communities that may need to retreat.

The councils, iwi/Māori, the community in the affected area and the wider community can then explore options for reducing risk in the area. Together they would determine when certain properties would need to retreat – either at a particular time or when a particular threshold is reached – and develop a plan.

Planning for retreat could include:

- provisions in the NBA Plan restricting what can be done on the properties before retreat
- plans to develop new low-risk areas for people to retreat to
- processes and mechanisms to transfer property and provide assistance to those who have to retreat
- agreements as to what will happen with the area after retreat and who will be responsible for it.

Questions:

54. Do you agree with the process outlined and what would be required to make it most effective?

55. What do you think should trigger the process? What data and information would be needed?

56. What other processes do you think might be needed, and in what circumstances?

How can we work together?

Climate change will affect all New Zealanders. Everyone needs to assess and manage their risk and consider what climate change might mean for them. The government can't bear all of the risks and costs, so we will have to work out how these can be shared across a range of different groups. There are several groups who each have responsibilities for adaptation, such as asset owners, banks, insurers, the private sector, local government and central government.

Early investment in resilience can, in many cases, reduce the need for more challenging adaptive responses like managed retreat. The benefits of greater resilience will be shared across society, so we should work together to share the costs fairly too.

Roles and responsibilities

There are several groups of actors who will have responsibilities and costs in a managed retreat system. Currently, homeowners and asset owners are responsible for managing their own risks.

Local government has various statutory roles in managing the risks of natural hazards and climate change, for example:

a) The Local Government Act 2002 requires local government to provide long-term infrastructure strategies that identify and manage natural hazard risk

b) The Resource Management Act 1991 requires local government to control land uses and their effects

c) The Civil Defence Emergency Management Act 2002 requires local government to manage the risks of hazards from communities and, in particular, to plan for and manage response to and recovery from emergencies.

d) The Building Act 2004 makes local government responsible for permits and consents, which requires certain natural hazards to be taken into account when determining whether to grant a building consent.

In practice, large events have involved central government playing an ad hoc role. As case studies (including one from Hawke's Bay[3]) show, there is some uncertainty around the specific roles of district councils and regional councils and how adaptation responses are funded. This uncertainty can stall councils' ability to make and implement decisions.

We will develop a managed retreat system with more clearly defined roles and responsibilities.

In many cases, it is likely that local government will continue to play a leading role in managed retreat. In others, however, central government may need to be involved, for example where a large area is affected, there is a high level of risk, the area is facing particular urgency, or there is significant hardship. This does not mean that it is appropriate for central government to fund managed retreat processes or local infrastructure. Clarity on when central government will intervene (or not) in a managed retreat process can help guide this.

Iwi/Māori and affected communities, individuals and businesses will also have roles to play in a managed retreat. These roles could include providing data and information as well as leading, or contributing to, local risk assessments. and taking all practicable steps to manage or reduce their own risks. The role of insurance in managed retreat is discussed below.

There will be a range of costs associated with managed retreat which different parties will face. It is important that a managed retreat system does not create financial or economic incentives that would stop individuals from taking action to reduce their risks.

Well before a retreat process is initiated, the different groups mentioned above should also share the costs of taking steps to reduce risks and build resilience. This is particularly important where they may benefit from those investments through increased asset values and avoiding retreat.

Questions:

57. What roles and responsibilities do you think central government, local government, iwi/Māori, affected communities, individuals, businesses and the wider public should have:
    a) in a managed retreat process?
    b) sharing the costs of managed retreat?

58. What support may be needed to help iwi/Māori, affected communities, individuals, businesses and the wider public participate in a managed retreat process?

59. A typical managed retreat will have many costs, including those arising from preparation (including gathering data and information), the need to participate in the process, relocating costs and the costs of looking after the land post-retreat. In light of your feedback on roles and responsibilities (question 6), who do you think should be responsible for or contribute to these costs?

[3] Ministry for the Environment and Hawke's Bay Regional Council partnership project. 2020. *Case study: Challenges with implementing the Clifton to Tangoio Coastal Hazards Strategy 2120*.

60. What do you consider the key criteria for central government involvement in managed retreat?

61. There may be fewer options for homes and community buildings (eg, schools, churches, community halls) to move than businesses (eg, retail and office buildings, factories, utilities) for financial, social, emotional and cultural reasons. That may suggest a different process for retreat, and different roles and responsibilities for these actors. Should commercial properties/areas and residential properties/areas be treated differently in the managed retreat process? Please explain why or why not.

62. Even in areas where communities are safe, local services and infrastructure such as roads, power lines and pipes may become damaged more frequently and be more expensive to maintain because of erosion or increases in storms and rainfall. Local councils may decide to stop maintaining these services. Are there circumstances in which people shouldn't be able to stay in an area after community services are withdrawn?

Property transfer

In many circumstances, managed retreat will require the transfer of land. While planning rules can stipulate that the current use of land cannot continue (for example, residential use), this is not likely to be sufficient. This could create practical issues relating to access, rates, public health and ongoing management of the land (including responsibility and liability for harm caused by structures left on the land or inadequate clean-up of existing soil contamination).

Careful consideration should be given to Māori land (as described under Te Ture Whenua Māori Act) and land acquired through Treaty settlement processes. Preventing the use of these lands could be viewed by Māori as land confiscation and a serious breach of Te Tiriti by the Crown.

Separate processes providing for Māori land and Treaty settlement land may need to be considered to ensure these unique legislative arrangements are protected and the Crown's Te Tiriti obligations are upheld.

Consideration should also be given to other land with historical, cultural, social or religious significance (eg, cemeteries or churches) to recognise their value to communities.

This raises several issues which will be worked through as part of detailed policy development for the Climate Adaptation Act. Your feedback on the questions below will help inform this work.

Questions:

63. In what situations do you think it would be fair for you to be required to move from where you live?

64. Many residential communities are made up of a combination of renters, owner-occupiers and people who own a property and use it as a second/holiday house. Do you think there are reasons for these groups to have different levels of involvement in a managed retreat process?

65. It is not always obvious that an area is at high risk from natural hazards or the impacts of climate change. However, council risk assessments and increased data and information should make these risks clearer. Do you think different approaches should be taken for those who purchased properties before a risk was identified (or the extent or severity of the risk was known) and those who bought after the risk became clear?

66. Under what circumstances do you think it would be fair or necessary for government to take approaches with a greater or lesser degree of intervention or support?

67. How do you think land with historical, cultural, social or religious significance (eg, cemeteries or churches) should be treated?

Implications for Māori

Māori, whānau, hapū, iwi, communities and business entities have unique economic, social, and cultural systems that are strongly connected to the land and natural environment.

The broader social, economic, and cultural impacts of natural hazards and climate change on Māori communities are also expected to be disproportionate, due to the remote location and the economic status of many communities.

Many coastal Māori communities will be vulnerable to climate change impacts such as sea-level rise, high tides, and widespread coastal inundation as well as natural hazards including earthquakes, volcanic eruptions, flooding, landslides, storms and drought.

These changes will result in the erosion or loss of coastal infrastructure (eg, roads, homes and utilities) and the loss of inter-tidal food gathering areas and sacred places (eg, urupā and marae situated close to the coast).

There is the need to seek perspectives from Māori to understand more about how managed retreat will impact many of the Māori businesses and communities that rely on land, water, and natural resources for economic, social and cultural reasons.

Further understanding on how Māori see a managed retreat system working for Māori, and what partnership means in this context, is important for future policy work and for ensuring the Crown's Te Tiriti obligations are upheld.

Questions:

68. Some Māori communities have needed to relocate as a result of events (including natural disasters) that have impacted their marae and wāhi tapu. These examples show that Māori communities are aware of the ways that climate change is affecting their marae, papa kāinga and wāhi tapu, and how relocation can be approached as a community, with engagement from iwi, hapū and whānau. The examples also demonstrate that climate change and natural hazard events are impacting coastal communities as well as inland communities located closer to rivers and lakes. How do you think managed retreat would affect Māori?

69. Managed retreat has rarely occurred in Aotearoa, especially within Māori communities. However, there are examples of Māori proactively working to protect their marae, papa kāinga and wāhi tapu by either relocating or protecting and developing their current sites. In these instances, the focus was on protecting and preserving their taonga for future generations. What do you see as being most important in developing a managed retreat system for Māori?

70. Māori land and Treaty settlement land have unique legislative arrangements. Restrictions and protections are placed on Māori land to meet a clear set of principles and objectives that recognise the cultural connection Māori have with the land and focus on land retention and use. Land that has been acquired through Treaty settlement processes is most likely to have cultural significance to a particular iwi or hapū and used to support the aspirations of their people. How do you think Māori land (including Treaty settlement land) should be treated?

The interaction with insurance

Insurance currently plays an important role in supporting New Zealand's resilience and recovery from natural hazards. However, sea level rise and increasing extreme weather due to climate change are likely to affect the ability to insure assets (particularly residential buildings). This may lead to 'insurance retreat' in some cases, which can include higher premiums, reduced quality (eg, higher excesses or lower cover limits), and ultimately loss of access to insurance.

As described earlier, managed retreat is a process to strategically relocate assets, activities and sites of cultural significance away from at-risk areas within a planned period of time.

We seek feedback on how insurance could interact with a managed retreat policy. The interaction between insurance and managed retreat may differ depending on whether a retreat is pre-emptive or in response to a natural disaster.

Post-disaster managed retreat and the interaction with insurance

Insurance payments compensate parties for loss or damage resulting from an event covered by their insurance policy. While there may also be an opportunity for these payments to support a managed retreat, insurance payments typically only cover the value of the loss or damage to the building. This means that insurance may not cover the full cost of a managed retreat. Climate change may also exacerbate insurance retreat, in turn reducing the opportunity for insurance to support managed retreat post-event.

Insurers generally do not put restrictions on how claimants use insurance payments. This may enable insurance payments to be used to fund post-event managed retreat. However, insurers may limit their liability (eg, refuse future cover) if a property is highly likely to suffer similar damage again. Options for managed retreat may be limited if an insurer decides to manage repairs for a property.

Question:

71. How do you think post-event insurance payments could support managed retreat?

Pre-emptive managed retreat and the interaction with insurance

As insurance becomes increasingly expensive or unavailable in at-risk locations, it may provide an important signal to better manage the underlying risk. Accordingly, insurance premiums and availability could influence decisions about managed retreat and may also encourage relocation decisions by individuals and communities outside the managed retreat process. However, as insurance contracts are typically for only one year, insurance premiums and availability may not provide a useful signal about increasing risks in the future.

Question:

72. Should insurability be a factor in considering the option of managed retreat from an area?

Full list of questions

You can answer as many or as few questions as you wish.

National adaptation plan

General questions

1. Climate change is already impacting New Zealanders. Some examples include extreme weather events such as storms, heatwaves and heavy rainfall which affects lives, livelihoods, health and wellbeing, ecosystems and species, economic, social and cultural assets, services (including ecosystem services) and infrastructure. How is climate change impacting you? This could be within your community and/or hapū and iwi, and/or your business/organisation, and/or your region.

2. The national adaptation plan focuses on three key areas. Please indicate which area is most important for you (tick box).

   ☐ focus area one: reform institutions to be fit for a changing climate. This means updating the legislative settings so that those who are responsible for preparing for and reducing exposure to changing climate risk will be better equipped.

   ☐ focus area two: provide data, information and guidance to enable everyone to assess and reduce their own climate risks. This means that all New Zealanders will have access to information about the climate risks that are relevant to them

   ☐ focus area three: embed climate resilience across government strategies and policies. This means that Government agencies will be considering climate risks in their strategies and proposals.

   ☐ other? Please explain.

3. We all have a role to play in building resilience to climate change, but some New Zealanders may be more affected and less able to respond. There is a risk that climate change could exacerbate existing inequities for different groups in society. Appendix 3 sets out the full list of actions in this national adaptation plan.

   a) What are the key actions that are essential to help you adapt? Please list them.

   b) Which actions do you consider to be most urgent? Please list them.

   c) Are there any actions that would help ensure that existing inequities are not exacerbated? Please list them.

d) Are there any actions not included in this draft national adaptation plan that would enable you to assess your risk and help you adapt?

4. Central government cannot bear all the risks and costs of adaptation. What role do you think asset owners, banks and insurers, the private sector, local government and central government should play in:

   a) improving resilience to the future impacts of climate change?

   b) sharing the costs of adaptation?

5. The National Climate Change Risk Assessment recognised that there may be economic opportunities in adapting to a changing climate.

   a) What opportunities do you think could exist for your community or sector?

   b) What role could central government play in harnessing those opportunities?

System-wide actions

6. Do you agree with the objectives in this chapter?

   ☐ Yes

   ☐ No

   ☐ Partially

   Please explain your answer.

7. What else should guide the whole-of-government approach to help New Zealand adapt and build resilience to a changing climate?

8. Do you agree that the new tools, guidance and methodologies set out in this chapter will be useful for you, your community and/or iwi and hapū, business or organisation to assess climate risks and plan for adaptation?

   ☐ Yes

   ☐ No

   ☐ Partially

   Please explain your answer.

9. Are there other actions central government should consider to:

   a) enable you to access and understand the information you need to adapt to climate change?

      ☐ Yes

- ☐ No
- ☐ Unsure

Please explain your answer.

b) provide further tools, guidance and methodologies to assist you to adapt to climate change?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

c) remove barriers to greater investment in climate resilience?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

d) support local planning and risk reduction measures while the resource management and emergency management system reforms progress?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

10. What actions do you think will have the most widespread and long-term benefit for New Zealand?

11. Are there additional actions that would strengthen climate resilience?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

12. There are several Government reform programmes underway that can address some barriers to adaptation, including the Resource Management (RM) reform. Are there any additional actions that we could include in the national adaptation plan that would help to address barriers in the short-term before we transition to a new resource management system?

13. In addition to clarifying roles and providing data, information, tools and guidance, how can central government unlock greater investment in resilience?

    a) Would a taxonomy of 'green activities' for New Zealand help to unlock investment for climate resilience?

    ☐ Yes
    ☐ No
    ☐ Unsure

    Please explain your answer.

The natural environment

14. Do you agree with the actions set out in this chapter?

    ☐ Yes
    ☐ No
    ☐ Unsure

    Please explain your answer.

15. What else should guide central government's actions to address risks to the natural environment from a changing climate?

16. Are there other actions central government should consider to:

    a) support you, your community, iwi and hapū, business and/or organisation to build the natural environment's climate resilience?

    ☐ Yes
    ☐ No
    ☐ Unsure

    Please explain your answer.

b) strengthen biosecurity in the face of climate change?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

c) identify and support New Zealand's most vulnerable ecosystems and species in a changing climate?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

17. What do you identify as the most important actions that will come from outside of central government (eg, local government, the private sector or other asset owners, iwi, hāpu and/or other Māori groupings such as: business, forestry, fisheries, tourism, urban Māori, the private sector) to build the natural environment's resilience to the impacts of climate change?

18. Are there additional actions that would advance the role of Māori as kaitiaki in a changing climate?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

Homes, buildings and places

19. Do you agree with the outcome and objectives in this chapter?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

20. What else should guide central government's actions to increase the resilience of our homes, buildings and places?

21. Do you agree with the actions set out in this chapter?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

22. Are there other actions central government should consider to:

a) better promote the use of mātauranga Māori and Māori urban design principles to support adaptation of homes, buildings and places?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

b) ensure these actions support adaptation measures targeted to different places and respond to local social, cultural, economic and environmental characteristics?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

c) understand and minimise the impacts to cultural heritage arising from climate change?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

The following questions are about existing buildings. These can include housing, communal residential (hotels, retirement village), communal non-residential (church, public swimming pools), commercial (library, offices, restaurant), industrial (factory, warehouse).

23. Do you think that there is a role for government in supporting actions to make existing homes and/or buildings more resilient to future climate hazards?

- ☐ Yes
- ☐ No
- ☐ Unsure

If yes, what type of support would be effective?

24. From the proposed actions for buildings, what groups are likely to be most impacted and what actions or policies could help reduce these impacts?

25. What are some of the current barriers you have observed or experienced to increasing buildings' resilience to climate change impacts?

Infrastructure

26. Do you agree with the outcome and objectives in this chapter?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

27. What else should guide central government's actions to prepare infrastructure for a changing climate?

28. Do you agree with the actions set out in this chapter?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

29. The national adaptation plan has identified several actions to support adaptation in all infrastructure types and all regions of Aotearoa.

a) Do you see potential for further aligning actions across local government, central government and private sector asset owners?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

b) Do you see any further opportunities to include local mana whenua perspectives and mātauranga Māori in infrastructure adaptation decision-making?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

c) Do you see any further opportunities to include local community perspectives in infrastructure adaptation decision-making?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

d) Do you see any further opportunities to ensure that groups who may be disproportionally impacted by climate change, or who are less able to adapt (such as those on low incomes, beneficiaries, disabled people, women, older people, youth, migrant communities) have continued and improved access to infrastructure services as we adapt?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

e) Do you think we have prioritized the right tools and guidance to help infrastructure asset owners understand and manage climate risk?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

30. Are there additional infrastructure actions that would help to strengthen Māori climate resilience?

- ☐ Yes

- [ ] No
- [ ] Unsure

Please explain your answer.

31. Are there any other tools or data that would help infrastructure asset owners make better decisions?

Communities

32. Do you agree with the outcome and objectives in this chapter?

- [ ] Yes
- [ ] No
- [ ] Partially

Please explain your answer.

33. Do you agree with the actions set out in this chapter?

- [ ] Yes
- [ ] No
- [ ] Partially

Please explain your answer.

34. What actions will provide the greatest opportunities for you and your community to build climate resilience?

35. Are there additional actions central government should consider to:

a) support your health and wellbeing in the face of climate change?

- [ ] Yes
- [ ] No
- [ ] Unsure

Please explain your answer.

b) promote an inclusive response to climate change?

- [ ] Yes

- ☐ No
- ☐ Unsure

Please explain your answer.

c) target support to the most vulnerable and those disproportionately impacted?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

36. What do you think are the most important actions that will come from outside of central government (eg, local government, the private sector or other asset owners, iwi, hāpu, non-government organisations, community groups) to strengthen community resilience in the face of climate change?

37. Are there additional actions could be included in the national adaptation plan to help strengthen climate resilience for iwi, hāpu and whānau?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

The economy and financial system

38. Do you agree with the outcome and objectives in this chapter?

- ☐ Yes
- ☐ No
- ☐ Partially

Please explain your answer.

39. What else should central government do to realise a productive, sustainable and inclusive economy that adapts and builds resilience to a changing climate?

40. Do you agree with the actions set out in this chapter?

- ☐ Yes

☐ No

☐ Partially

Please explain your answer.

41. Are there other actions central government should consider to:

a) support sectors, businesses and regional economies to identify climate risks and adapt?

☐ Yes

☐ No

☐ Unsure

Please explain your answer.

b) promote a resilient financial system in the face of climate change?

☐ Yes

☐ No

☐ Unsure

Please explain your answer.

42. What do you think are the most important actions that will come from outside of central government (eg, local government, the private sector or other asset owners, iwi, hāpu and/or other Māori groupings such as: business, forestry, fisheries, tourism, urban Māori, the private sector) to reduce the economic and financial risk they face from climate change?

43. Are there additional actions within the financial system that would help strengthen Māori climate resilience?

☐ Yes

☐ No

☐ Unsure

Please explain your answer.

44. In the context of other risk management options (eg, flood barriers, retreat from high-risk areas), what role should insurance have as a response to flood risk? Please explain your answer.

45. Should the Government have a role in supporting flood insurance as climate change risks cause private insurance retreat?

- ☐ Yes
- ☐ No
- ☐ Unsure

Please explain your answer.

a) Does your answer to the above question depend on the circumstances? (For example, who the owner is (eg, low income), the nature and characteristics of the asset (eg, residential or commercial property, contents and vehicles), what other risk management options are available and their cost/benefit, and where the asset is located?) Please explain your answer.

46. If you think the Government should have a role in supporting flood insurance as climate change risks cause private insurance retreat, how do you envision the Government's role, and how is this best achieved (eg, direct support and/or indirect support such as reducing underlying flood risk)?

47. If the Government were to directly support flood insurance:

a) what is the best way to provide this direct support?

b) should the Government's focus be to support availability or affordability of insurance, or both?

c) how should the costs of that support be funded, and by whom?

d) what are the benefits and downsides of this approach?

e) should this support be temporary or permanent?

f) if temporary, what additional measures, if any, do you think would be needed to eventually withdraw this support (eg, undertaking wider flood protection work)?

g) what would the risks or benefits be of also including non-residential property, such as commercial property?

h) what design features or complementary policies are needed so any flood insurance intervention retains incentives for sound flood-risk management (eg, discouraging development in high-risk locations)?

48. How effective do you think the insurance "price signal" (eg, higher premiums or loss of insurance) is for providing incentives to reduce flood risk?

49. In your view, should a scheme similar to Flood Re in New Zealand be used to address current and future access and affordability issues for flood insurance? Why or why not?

50. How do you think a scheme similar to Flood Re in New Zealand could support or hinder climate change adaptation initiatives in New Zealand?

Closing general question

51. Do you have any other thoughts about the draft national adaptation plan that you would like to share?

Managed retreat

52. Do you agree with the proposed principles and objectives for managed retreat? Please explain why or why not.

53. Do you agree with the process outlined and what would be required to make it most effective?

54. Are there other principles and objectives you think would be useful? Please explain why.

55. Do you agree with the process outlined and what would be required to make it most effective?

56. What do you think could trigger the process? What data and information would be needed?

57. What roles and responsibilities do you think central government, local government, iwi/Māori, affected communities, individuals, businesses, and the wider public should have in

a) a managed retreat process?

b) sharing the costs of managed retreat?

58. What support may be needed to help iwi/Māori, affected communities, individuals, businesses and the wider public participate in a managed retreat process?

59. A typical managed retreat will have many costs, including those arising from preparation (including gathering data and information), the need to participate in the process, relocating costs and the costs of looking after the land post-retreat. In light of your feedback on roles and responsibilities (Q7), who do you think should be responsible for or contribute to these costs?

60. What do you consider the key criteria for central government involvement in managed retreat?

61. There may be fewer options for homes and community buildings (eg, schools, churches, community halls) to move than businesses (eg, retail and office buildings, factories, utilities) for financial, social, emotional and cultural reasons. That may suggest a different process for retreat, and different roles and responsibilities for these actors. Should commercial properties/areas and residential properties/areas be treated differently in the managed retreat process? Please explain why.

62. Even in areas where communities are safe, local services and infrastructure, such as roads, power lines and pipes may become damaged more frequently and be more expensive to maintain because of erosion or increases in storms and rainfall, for example. Local councils may decide to stop maintaining these services. Are there circumstances in which people shouldn't be able to stay in an area after community services are withdrawn?

63. In what situations do you think it would be fair for you to be required to move from where you live?

64. Many residential communities are made up of a combination of renters, owner/occupiers and people who own a property and use it as a second/holiday house. Do you think there are reasons for these groups to have different levels of involvement in a managed retreat process?

65. It is not always obvious that an area is at high risk from natural hazards or the impacts of climate change. However, council risk assessments and increased data and information should make these risks clearer. Do you think there different approaches should be taken

for those who purchased properties before a risk was identified (or the extent or severity of the risk was known) and those who bought after the risk became clear?

66. Under what circumstances do you think it would be fair or necessary for government to take different approaches with a greater or lesser degree of intervention or support?

67. How do you think land with historical, cultural, social or religious significance (eg, cemeteries or churches) should be treated?

68. Some Māori communities, both inland and coastal, have needed to relocate as a result of events (including natural disasters) that have impacted their marae and wāhi tapu. These examples show that Māori communities are aware of the ways that climate change is affecting their marae, papa kāinga and wāhi tapu, and how relocation can be approached as a community, with engagement from iwi, hapū, and whānau. The examples also demonstrate that climate change is impacting coastal communities as well as inland communities located closer to rivers and lakes. How do you think managed retreat would affect Māori?

69. Managed retreat has rarely occurred in Aotearoa, especially within Māori communities. However, there are examples of Māori proactively working to protect their marae, papa kāinga and wāhi tapu by either relocating or protecting and developing their current sites. In these instances, the focus was on protecting and preserving their taonga for future generations. What do you see as being most important in developing a managed retreat system for iwi/hapū/Māori?

70. Māori land and Treaty settlement land have unique legislative arrangements. Restrictions and protections are placed on Māori land to meet a clear set of principles and objectives that recognise the cultural connection Māori have with the land and a specific focus on land retention and utilisation. Treaty settlement land that has been acquired through Treaty settlement processes is most likely to have cultural significance to a particular iwi or hapū and used to support the aspirations of their people. How do you think Māori land (including Treaty settlement land) should be treated?

71. How do you think post event insurance payments could help support managed retreat?

72. Should insurability be a factor in considering whether the Government should initiate managed retreat from an area?

Snapshot of the Consultation

Kia urutau, kia ora: Kia āhuarangi rite a Aotearoa

Adapt and thrive: Building a climate-resilient New Zealand

Draft national adaptation plan · Managed retreat

Ministry for the Environment
Manatū Mō Te Taiao

Te Kāwanatanga o Aotearoa
New Zealand Government

We're consulting on a national adaptation plan to help Aotearoa New Zealand adapt to and minimise the harmful impacts of climate change

This is New Zealand's first national adaptation plan. It aims to build the foundation for adaptation action so that all sectors and communities are able to live and thrive in a changing climate.

Together, we can adapt to the locked-in impacts of climate change, protecting our homes, businesses, livelihoods, and natural and cultural taonga. By understanding the risks we face we are able to adapt.

The sooner we act, the more effective that action will be.

The draft national adaptation plan outlines the actions the government will take over the next six years to build climate resilience. It's a response to the priority climate-related risks identified in the National Climate Change Risk Assessment, released in August 2020.

How our climate has changed

Over the last 110 years, Aotearoa New Zealand's climate has warmed by 1.1°C. These changes have been gradual, but we're starting to feel the effects. We're seeing rising sea levels, more frequent flooding, erosion and drought, and more turbulent and unpredictable weather events.

We must change how we do things so we can thrive in a changing and different climate to the one we've had in the past. We need to prepare for future impacts, rather than respond to events as they occur.

Adapt and reduce

The national adaptation plan focuses on the actions New Zealand will take over the next six years to address the impacts of climate change that can't be reversed. At the same time, reducing emissions and limiting the severity of future climate change is just as important. This work is set out in the first emissions reduction plan, to be released in May 2022.

The first step in a clear direction

The draft national adaptation plan is the first step in a clear direction for how we'll adapt to the irreversible impacts of and manage the uncertainty that comes with climate change.

It includes a mix of current actions and proposed programmes ranging from providing access to information to assess climate risk, to supporting climate resilience in community housing, to developing mātauranga Māori climate indicators. Several actions involve substantial legislative reform.

The actions within the national adaptation plan aim to help you, your organisation and your community understand the risks you face from climate change and actions you can take to adapt and build resilience. Collectively the actions will help you understand your risks from climate change, what it means to adapt, and explain what information and tools are available to help. This includes ensuring governance frameworks are fit for purpose and ensuring coordination among government, iwi/Māori, communities and businesses.

Climate impacts affect all New Zealanders – but some people may be more affected and face greater barriers to adapt. These include:

- Māori, Pasifika peoples, and ethnic minority groups
- rural communities, and people whose livelihoods are based on industries such as agriculture, horticulture, fishing, tourism or forestry
- people living in remote or disadvantaged areas, or areas that are prone to flood or drought, especially along the coast
- older and young New Zealanders
- disabled people or people with long-term illnesses.

What's in the plan: New Zealand's first national adaptation plan focuses on three areas

1

Reform institutions to be fit for a changing climate

Existing systems and institutions that underpin how we plan for and manage hazards, resources and infrastructure were designed for a climate of the past. They need to better reflect increased and changing climate impacts.

We will reform institutions to fit a changing climate. These changes will be designed to ensure decisions about how we manage our resources and consider the future climate. Doing this now will mean we have the right foundation in place to address climate risks. Actions related to this focus include system-wide reforms.

2

Data, information and guidance to enable everyone to assess and reduce their own climate risks

All New Zealanders need to adapt to the impacts of climate change. The first step is to understand and assess the risks you face. Critical actions within this plan include developing an Adaptation Information Portal and delivering a programme of targeted guidance across different sectors.

3

Embed climate resilience across government strategies and policies

Natural environment addresses the pressure climate change is putting on our land, marine and freshwater ecosystems, and the impacts on our cultural, economic and spiritual wellbeing. Critical actions include implementing the Department of Conservation's Climate Change Adaptation Action Plan and delivering a collection of actions run by Biosecurity New Zealand.

Homes, buildings and places addresses the risks climate change presents to the durability, safety, and cultural and personal value of our homes, marae, urban environments, community spaces and sites of significance such as urupā. Critical actions include building resilience at the property level by supporting households and businesses to assess and respond to climate-related risks; and supporting kaitiaki communities to adapt and conserve taonga/cultural assets.

Infrastructure addresses risks to services we depend on such as energy, telecommunications, transport, water and waste to help asset owners manage climate risks and continue to deliver the services we depend on as our climate changes. Critical actions include integrating adaptation into the Treasury's investment decision-making processes for infrastructure.

Communities addresses the risks climate change presents to communities, who may be impacted in different ways. Some are more exposed because of where they are, while others are less able to take action to adapt. Critical actions include ensuring information and advice on disaster resilience is available, accessible, and usable to everyone in our communities, including Māori and Pasifika, disabled people, people with English as a second language, and people in hard-to-reach areas. Another critical action is developing a Health National Adaptation Plan.

Economy and financial systems addresses the potential economic cost of climate change to Aotearoa New Zealand, and the risks presented to sectors and businesses, particularly our primary industries, tourism, and distribution networks. Actions to address these issues include supporting high-quality implementation of climate-related financial disclosures and delivering fisheries system reform.

Related work:
managed retreat

Managed retreat enables people to carefully plan the relocation of homes and other assets, activities and sites of significance away from at risk areas. It is one option communities may need to consider when deciding how to adapt. Work to develop a legislative framework for managed retreat is a critical action within the national adaptation plan and will help local and central government and communities deal with the complex issues that are part of deciding to retreat.

Related work:
flood insurance

Insurance currently plays an important role in supporting New Zealand's resilience and recovery from natural hazards, including through post-event payments and by sending risk signals through premiums and availability. However, climate change poses challenges for the insurability of assets, such as residential buildings and homes. Climate change will make floods more severe, frequent and costly, while the availability and quality of information, data, and modelling regarding flood risk and climate change is increasing over time. The Government has choices about how it responds to these challenges. As flooding is New Zealand's most frequent hazard, our primary focus is on flood insurance for residential buildings.

Working with Māori as Treaty partners

In developing this plan, the Government acknowledges an indigenous worldview of climate change. As a government plan, the national adaptation plan draws on key concepts of the indigenous worldview.

Whenua ora, tangata ora, mauri ora recognise that the land, people and associated life forces are interconnected. In this way, a well land is a well people and so too are the life forces of these components of the world. Kaitiakitanga is implicit within this approach, where Māori continue to strengthen their stewardship role within the environmental space.

These concepts will support and strengthen the Crown–Māori relationship as the national adaptation plan is implemented. Actions in the plan to support Māori to adapt include establishing a foundation to work with Māori on climate actions.

Make your voice count

Join the kōrero and have your say:

- @environmentgovtnz
- @environmentgvnz
- facebook.com/environmentgovtnz
- linkedin.com/company/environmentgovtnz

We want your views on the draft national adaptation plan

Please share your thoughts on this draft plan. It's important that we're all engaged and involved in the work to adapt and thrive in a different climate.

- Read the draft national adaptation plan
- Read the full consultation document
- Attend an online workshop

You can provide a submission through Citizen Space, our consultation hub, by either following the feedback form or by uploading your own written submission.

We request that you don't email or post submissions as this makes analysis more difficult. However, if you need to, please send written submissions to National adaptation plan, Ministry for the Environment, PO Box 10362, Wellington 6143.

If you are emailing your feedback, have pātai, or require additional information, email adaptation@mfe.govt.nz.

Submissions are open from 27 April and close at 11.59 pm, 3 June 2022.

What happens next

This consultation starts on 27 April 2022 and closes on 3 June 2022.

The Ministry for the Environment will consider submissions as it finalises the national adaptation plan. The final plan will be published in August 2022.

Reporting on this plan

Every two years, the Climate Change Commission will provide the Minister of Climate Change with a report on the implementation and effectiveness of the plan. The Minister must respond to the Climate Change Commission reports within six months of receiving the reports. This provides an opportunity for the government to adjust the actions and manage changing uncertainty and risk. We also have international commitments to report on New Zealand's progress building resilience.

Ministry for the Environment
Manatū Mō Te Taiao

Te Kāwanatanga o Aotearoa
New Zealand Government

Published by the Ministry for the Environment
April 2022

INFO 1045

Te Kaunihera o Te Tairāwhiti
Gisborne District Council

National Adaptation Plan Submission

3 June 2022

Te Kaunihera o Te Tairāwhiti
GISBORNE
DISTRICT COUNCIL

A2542145

Te Kaunihera o Te Tairāwhiti
GISBORNE
DISTRICT COUNCIL

3 June 2022

National Adaptation Plan
Ministry for the Environment
PO Box 10362
Wellington 6143

By Email: adaptation@mfe.govt.nz

Re: Submission on the Draft National Adaptation Plan and Proposals for Managed Retreat and Flood Insurance

1. Introduction

1.1. Gisborne District Council (GDC) thanks the Ministry for the Environment (MfE) for the opportunity to provide a submission on the draft National Adaptation Plan (NAP) Consultation Document and proposals for managed retreat and flood insurance (hereafter referred to as "the Consultation Document").

1.2. Due to the length of the submission period, we have had limited engagement with our elected members in preparing the content of this submission. We have not been able to engage with iwi and hapū, and our wider community to inform our submission. Therefore, this submission is informed by GDC staff as technical advisors with some inputs from our elected members.

1.3. We do not wish to be heard in support of our submission.

1.4. We broadly support Central Government's proactive method to climate change adaptation planning and action. The status quo reactive approach of responding to natural hazards[1] is not suitable for dealing with the impacts of climate change. Government's current approach to anticipate, prepare, and adapt will build national climate resilience, especially as some climate impacts are already locked in.

1.5. However, we are interested in how the approach in the Consultation Document would impact GDC, our community, and tangata whenua. Climate change is already impacting Tairāwhiti and other regions of the country as evident in the increasing floods, coastal erosion, and landslides we have recently experienced in Tairāwhiti. We appreciate the recognition of these issues in the Consultation Document, and the fact that there will be disproportionate impacts across various regions of the country.

1.6. We appreciate these challenges and are already taking a pragmatic approach in our climate change response. We welcome Government's support through and beyond the current consultation.

1.7. Government needs to give greater attention to vulnerable and more exposed regions like Tairāwhiti. Targeted significant financial, technical, and ongoing partnership

[1] Including conventional natural hazards/disasters and those exacerbated by climate change.

support packages should be created for Tairāwhiti and other vulnerable regions to avoid exacerbating current inequities and to foster the environmental, cultural, social, and economic well-being of our people.

1.8. We are aware that other councils, the regional sector, and other local government organisations have also submitted on this kaupapa. We support their broad recommendations, particularly around the need for measures for adaptation and managed retreat that promote equity and help to avoid disproportionate impacts on exposed and vulnerable groups and sectors of our community and the entire country.

1.9. Council looks forward to partnering with Government on this kaupapa.

1.10. This submission is structured as follows:

- Overview of GDC and Tairāwhiti.
- Summary of our key messages.
- Our submission points on the draft NAP
- Our submission points on managed retreat.

For further clarification or any queries, please contact Dr Magnus Abraham-Dukuma (Senior Policy Advisor – Climate Change Focus) – Magnus.Abraham-Dukuma@gdc.govt.nz

Nāku noa nā,

Joanna Noble
Chief of Strategy and Science

A2542145

2. Overview of GDC and Tairāwhiti

2.1 GDC is the unitary authority for the Tairāwhiti/Gisborne region. We combine the functions, duties, and powers of a territorial authority (service delivery bodies) with those of a regional council (regulatory authorities).[2]

2.2 Tairāwhiti covers a land area of 8,265 square kilometres. Within this is approximately 228,000 hectares of whenua Māori, which is 28% of the total land area in the region. Tairāwhiti also contains approximately 270 kilometres of coastline. Some of the key industries in the region include horticulture, agriculture, fishing, and forestry.

2.3 Population growth in Tairāwhiti over the past three years, has increased at a higher rate than expected. The region's population is now over 50,000 and continues to grow. This growth is putting pressure on services, housing, infrastructure, and the natural environment. This footprint of our community and urban area is changing and as houses (current developmental projects) are 'locked in place' under the current governance system, we there are potential issues around adaptation and managed retreat.

2.4 Over half of Tairāwhiti's population is Māori — 53% compared to 16.5% for New Zealand. Iwi include Ngāti Porou, Ngāi Tāmanuhiri, Rongowhakaata, Te Aitanga-a-Māhaki, Te Whanau a Kai and Nga Ariki Kaiputahi. There are also about 69 hapū located throughout Tairāwhiti.

2.5 We also have a younger population than most other regions, and the over 65 age group is growing. These factors influence the ability of our community to pay more for their rates and our ability to match the level of investment more affluent councils can make.

2.6 Tairāwhiti is also exposed and vulnerable to climate risks and multiple natural hazards. Recent climate change projections by the New Zealand Institute of Water and Atmospheric Research (NIWA) show that climate change will adversely impact our natural and built environments.

2.7 The Manaaki Whenua Landcare Research also suggests that climate change will adversely impact four key areas of Māori wellbeing. The areas include He Kura Taiao (living treasures), Whakatipu Rawa (Māori enterprise), He Oranga Tāngata (healthy people), Ahurea Māori, Tikanga Māori (Māori culture and practices).[3] Tairāwhiti will have its own share of these effects.

2.8 Therefore, we are generally supportive of policy measures that help us respond effectively to climate change, build regional resilience, and carry our people along in our transition journey. This includes well-considered policy settings to afforestation and land use governance.

[2] Our ***regional functions*** include biosecurity, civil defence, regional land transport, resource management, and river management. Our ***territorial functions*** cover community wellbeing and development, environmental health and safety, infrastructure, recreation and culture, and resource management.

[3] The full report — He huringa āhuarangi, he huringa ao: a changing climate, a changing world — can be found here.

A2542145

3. Summary of Our Key Messages

a) Proposed approaches, actions, and principles

3.1 Council supports Government's proposed approaches to adaptation and managed retreat, including the ongoing and planned actions in these spaces. They align with international best practices as we have detailed across sections of our submission.

3.2 Council appreciates the proposed process for managed retreat: initiation, (**Step A**) planning and preparing (**Step B**), enabling investment (**Step C**), active retreat (**Step D**), clean-up, and repurposing (**Step E**). The process is currently framed for Steps A-C to occur sequentially (one after the other). Council believes that **Step C** needs to occur simultaneously with **Step B** or as early as possible in the process to ensure that active retreat (**Step D**) can occur easily and with popular support, especially as enabling investment can facilitate the availability of alternative spaces for retreating homes/asset owners.

3.3 Council supports the guiding principles provided in the Consultation Document. However, there are key considerations that are currently missing or not clearly captured. These are:

- Considerations of adequacy, robustness, and effectiveness of adaptation actions.
- Site-specific approach to adaptation.
- A sense of urgency (rapid early action).

b) Enablers, policy complementarity, and strategic coordination

3.4 It is important to speed up work to get the governance framework[4] right to provide certainty and legislative direction for this kaupapa.

3.5 There is a high probability of insurance retreats, especially for assets in high-risk areas. Insurance can be harnessed to incentivise good decision-making regarding adaptation action and managed retreat through:

- Setting high premiums for assets that ought to be retreated based on available risk profile/data.
- Offering insurance covers and premiums for protected with tolerable risk profile/data and with stiff ongoing risk mitigation obligations.
- Offering a differentiated cover with less premiums for new and existing assets in safe zones.

3.6 Insurance or other market instruments must be used with other complementary policies. For example, there must be strict consenting provisions, spatial planning, and delineation of climate risk zones across all regions of the country to avoid the siting of infrastructure or development in high-risk zones.

3.7 Government should facilitate flood insurance availability and affordability for safe and less risky zones by incentivising robust competition between insurance providers and ensuring effective regulation to avoid unfair practices.

3.8 Government's work on adaptation and managed retreat promises to be a cross-agency effort. As there are multiple agencies playing different roles, there should be a well-thought-out plan to ensure strategic coordination of available and required resources.

[4] The Natural and Built Environment Act, the Strategic Planning Act, and the Climate Adaptation Act.

A2542145

c) Roles and costs for adaptation and managed retreat

3.9 Council believes that the roles and costs for adaptation, resilience-building, and managed retreat should be equitably distributed across the key stakeholders — including Central Government, local government, iwi/Māori, asset owners, private sector, businesses, and the wider public. We suggest the following:

- **For Government** — The roles should include ***ensuring certainty of the governance framework*** by speeding up the passing of the Natural and Built Environment Act, Strategic Planning Act, and the Climate Adaptation Act as they will be crucial in facilitating managed retreat; ***creating the enabling environment*** to incentivise private investment; and ***providing guidelines*** and technical support to local government and the private sector. Central government investment should include co-funding of regional projects, funding pilot projects, and funding large-scale significant projects.
- **For local government** — The roles should include ***risk assessments*** to identify regional climate change risks and high-risk zones for managed retreat; ***promoting local awareness; consenting process*** to discourage development in high-risk sites; ***proper spatial planning***; ***budgetary/LTP*** consideration for adaptation projects and managed retreat work. Local government investment should include funding regional pilots; cost for retreating councils' assets, and co-funding arrangements with Government for regionally significant projects.
- **For iwi/Māori** — The roles could include ***contributing te ao Māori worldview***; ***actively participating*** throughout the policy making and implementation processes (including joint decision-making); ***identifying Māori assets of cultural significance***; ***promoting awareness*** among Māori group; ***ongoing management of any whenua Māori being the subject of managed retreat***. Investment by iwi/Maori could be to fund specific projects (recognising the affordability constraints for some) and providing in-kind support or funding for large-scale projects with Government funding input.
- **For asset owners, private sector, and business** — The roles should include ***identifying and understanding high-risk assets***; ***long-term planning*** for resilience and managed retreat for relevant assets; ***climate change considerations*** in asset management plans and decision-making; and ***taking up insurance*** where appropriate and planning to relocate — being prepared. They should also be ready to bear significant costs for protecting assets against tolerable risks and relocating for intolerable risks, with some Government support where necessary.
- **For the wider public** — The roles should include ***identifying and planning to manage personal risks***; ***promoting peer-to-peer awareness*** within the community; ***taking up insurance*** where appropriate and planning to relocate — being prepared; ***general support for Government policy direction***. Cost-bearing should include willingness to pay rates for community projects relating to adaptation, resilience-building and managed retreat; and cost-bearing for personal retreat with necessary Government/local government support.

d) Strong equity lens for Tairāwhiti on adaptation and managed retreat

3.10 Many assets (homes, buildings, and infrastructure) across Tairāwhiti will need resilience-building and/or be impacted by managed retreat due to the known risk profile of such assets. These assets are mostly in low socio-economic zones, thus affecting the ability of a large section of our community to take robust adaptation action requiring significant investment and our ability to generate additional income via rates to fund such activities.

3.11 Asset owners will struggle or may not be able to afford the cost of moving, considering the increasing cost of housing in Tairāwhiti and nationally. Our region's growing population (currently over 50,000) is already putting increased pressure on social amenities, services, and the environment. There is also an existing challenge with housing availability and affordability. These existing socio-economic realities make Tairāwhiti very exposed and vulnerable to the adverse impact of managed retreat.

3.12 Tairāwhiti will need significant Government support and partnership to design and implement a fair approach to managed retreat.

3.13 Government should also prioritise housing support in Tairāwhiti to facilitate the availability and affordability of healthy and resilient homes. This should be factored into the planning processes and be a fundamental precondition to commencing the retreat of assets to avoid housing hardship in the region.

e) Specific equity considerations for Māori on managed retreat

3.14 There should be a different approach for Whenua Māori with specific equity considerations and any property transfer. This applies to whenua Māori generally and land that has historical, cultural, social, or religious significance (such as marae, urupa and wāhi tapu).

3.15 Māori have not recovered from the significant socio-economic impacts of land confiscation since the arrival of European settlers across Aotearoa. Through confiscatory and discriminatory policies and practices, Māori in Tairāwhiti lost most of their best lands that have the most productive soils. The Treaty Settlement process has not been able to restore significant parcels of land to Māori ownership and reverse the disparity in socio-economic status.

3.16 The cultural and spiritual connection to Whenua Māori must be respected by Government. ***Māori should have exclusive ongoing management right over Whenua Māori subject to retreat***, while Government provides ongoing technical and financial support in line with the aspirations of Māori. Government should also allow Māori and local government/councils to jointly provide ongoing management of sites/places of historical significance and other public property that may become subject to managed retreat.

A2542145

4. Our Submission Points on the Draft NAP

General remarks

Recent climate impacts in Tairāwhiti

4.1 Recently, climate change has contributed to increased flooding and landslides across Tairāwhiti. These events caused internal displacement and relocation to temporary accommodation for affected members of our community as well as significant damage to property and assets.

4.2 In June 2018, due to adverse weather and flooding that mobilised forestry debris, the region suffered approximately $27 million in damage to our roading assets. Repairs were fully funded by Central Government with the Funding Assistance Rate (FAR) from Waka Kotahi increased from 62% to 92% and PGF funding the remaining 8% of costs. Two other major rain events in June and July 2020 again resulted in damages of $28.8m. Waka Kotahi agreed to fund this with $23.7 million at 88% and the remaining contribution at the lower BAU FAR rate of 68%.

4.3 People across a large section of Tairāwhiti are still recovering from similar devastation caused by flooding just 10 months ago, where $14 million in damage was caused to our infrastructure, and in the time of seeking approval for an increased FAR contribution we experienced a series of small events costing a further $7m in repairs.

4.4 These extreme weather events, their impact on people and assets, and Council's interventions (emergency response and recovery work) lead to the overstretching of Council's resources (personnel and finances needed for recovery work).

Focus areas and immediate actions

4.5 Council believes ***focus area one*** is of critical importance and aligns with current global evidence. IPCC's Climate Change Adaptation Report 2022[5] observes that losses and damages from climate change need to be ***addressed by the right institutions***. The report also notes that there is increasing evidence that ***current governance and institutional arrangements are unable to address the escalating risks in coastal areas worldwide***. These notions echo earlier sentiments established in the 2014 Thematic Report by the UNFCCC Adaptation Committee.[6]

4.6 Having the right institutional arrangement is pivotal to facilitating guidance/data/information (***focus area two***), ensuring the embedding of climate resilience across government policies (***focus area three***), and other elements necessary for effectively driving adaptation action nationally.

4.7 However, Government needs to clarify the institutions that should be reformed. Does this include the local government sector? And how does this institutional reform integrate with the ongoing future of local government kaupapa?

4.8 Council believes that local government should be among the institutions that Government wants to reform and empower as we are at the forefront of leading place-based climate change action at the grass roots.

[5] WGIII contribution to the Sixth Assessment Report.
[6] Covering institutional arrangements for national adaptation planning and implementation.

A2542145

Include an additional focus area

4.9 Government should include an additional focus area **that encapsulates the 10 priority risks** which the proposed NAP intends to address. In the current draft NAP, this issue is implicit, but if Government is working within the framing of "focus areas", ***the priority risks should also be captured as the focus areas for immediate adaptation action***.

4.10 The actions covered by the NAP are all necessary for collective driving adaptation, but the ones we list below promote legislative certainty for planning purposes, funding support, and ongoing technical assistance for adaptation planning:

- **SW1:** Reform the resource management system.
- **SW1:** Pass legislation to support managed retreat.
- **SW1:** Establish a foundation to work with Māori on climate actions.
- **SW1:** Set national direction on natural hazard risk management and climate adaptation through the National Planning Framework.
- **SW2:** Complete case study to explore co-investment for flood protection.
- **SW2:** Explore additional interventions to mobilise investment.
- **SW2:** Public investment in climate change initiatives.
- **HBP1:** Ensure minimum regulatory requirements for buildings take into account future climate data.
- **13:** Scope a resilience standard or code for infrastructure.
- **13:** Invest in public transport and active transport.
- **C1:** Expand current funding for proactive community resilience.
- **EF1:** Support Māori small business resilience and transitions.
- **EF1:** Establish innovation grants, such as project grants.

4.11 Government must also give greater attention to actions that will ensure existing inequities in Tairāwhiti, and other regions are not exacerbated throughout the adaptation planning and implementation processes. At the global level, it has been argued that high-quality and scaled-up finance flows to the most vulnerable is an important consideration for effective adaptation. The most exposed and vulnerable regions should receive priority in adaptation financing. Government should include the following into the planning and implementation process:

a) ***Significant funding support to Council*** to reduce the financial burden on the community through rates for adaptation action.

b) ***Facilitating region/site-specific adaptation actions*** that avoid major disruptions and significant economic losses, for example disrupting economic activities through land use changes and infrastructural retreats.

c) ***Providing sufficient financial support to assist people likely to be impacted by any managed retreat***, especially income earners that cannot afford the high cost of relocating into alternative healthy homes.

A2542145

Additional guiding principles and factors[7]

4.12 Action to address risks to the natural environment from a changing climate should be informed by some other considerations not adequately captured in the draft NAP. These include:

a) ***Considerations of adequacy, robustness, and effectiveness*** — It is not enough to roll out policies and implement measures for adaptation. Government needs to ensure an ongoing checking system to ascertain whether the measures are adequate, robust, and effective for achieving the intended purpose of adapting to climate change.

b) ***Site-specific approach to adaptation*** — Meticulous analysis, planning, and geospatial mapping should precede and inform adaptation actions for all regions, noting that adaptation is very site-specific. Government needs to work closely with Council and the regional leadership in Tairāwhiti to understand site-specific approaches and interventions for our region.

c) ***A sense of urgency (rapid approach)*** — The evidence regarding the rapidity of climatic changes and their expected adverse impact should lead to a high sense of urgency in rolling out interventions nationally and building the adaptive capacities of various regions, especially in vulnerable and exposed places.[8] Government understands the need for urgency and has signalled the implementation of suitable actions, but the concrete actions that actively build adaptive capacity and ensure resilience must be sped up, especially as there is a short window for climate change response.

d) ***Close and continuous engagement with Māori*** — Government needs to engage closely with Māori and continue to do so throughout the planning and implementation processes to further understand and advance the role of Māori as kaitiaki in a changing climate.

Roles, risks, and costs

4.13 Climate change adaptation and resilience-building should be advanced by collective action by all stakeholders and industry sectors. Council supports Government's view about the need for roles, risks, and cost-bearing by Government and outside Government. Local government, asset owners, private sector and businesses, iwi, hapū, and other Māori groupings all have roles to play and some costs to bear as discussed below:

4.14 ***The role of Government should include, but not limited to:***

a) Creating certainty as to the legislative/overarching national framework (as currently done with the NAP, Strategic Planning Act, and the Climate Adaptation Act).

b) Ensuring an inclusive governance arrangement that captures central, regional, local, iwi/hapū representation in the policy process.

c) Empowering local action by facilitating collaboration across all governance levels.

d) Ensuring policy coherence and avoiding siloed working among Government agencies.

e) Integrating climate risks and adaptation opportunities throughout Government's decision making and policy processes.

[7] For more on general principles that can guide Government's actions in this space, see the World Bank Guide — The Adaptation Principles: A guide for designing strategies for climate change adaptation and resilience. The Consultation Document already captures some of the principles, while opportunity remains for the points discussed in response to this question.

[8] IPCC's Climate Change Adaptation Report 2022 demonstrates that urgent adaptation needed to address rising impacts of climate change on the ocean and populations.

4.15 ***The role of banks and insurers, and the private sector should include:***

a) Identifying actions and fiscal mechanisms for climate resilience in financial and funding needs.

b) Integrating climate resilience indices and parameters into public financial management and project financing.

c) Creating targeted financial and insurance instruments (loans, grants, insurance) for promoting climate resilience building.

d) Incorporating climate resilience and adaptation considerations into all financial and fiscal decision making.

e) Facilitating and simplifying access to climate finance.

f) Future-proofing investments/businesses by researching and investing in climate-resilient business models.

g) Leveraging public-private partnerships for funding climate-resilient investments.[9]

4.16 ***The role of local government include:***

a) Driving local actions at the forefront.

b) Conducting regional/local climate change risk assessments for identifying region-specific risks and priorities

c) Incorporating climate resilience (and broadly climate change considerations) in all local decision making.

d) Identifying site/region-specific resilience building needs.

e) Planning and implementing local level resilience-building projects.

f) Promoting local awareness on climate change adaptation (and mitigation).

4.17 ***The role of asset owners should include:***

a) Understanding the adaptation risks peculiar to their assets.

b) Supporting Government's policy direction on resilience-building.

c) Willingness to bear some financial adaptation costs through insurance and retrofitting assets where possible.

d) Ongoing management of assets in line with any national policy or standards to ensure resilience.

4.18 ***The role of iwi, hapū and other Māori groupings should include:***

a) Contributing any essential te ao Māori worldview that is not already captured by the current consultation process.

b) Supporting Government's broad policies that foster Māori aspirations.

c) Actively participating throughout the policymaking and implementation processes (including decision-making).

[9] For more information, see OECD's Guidance for Strengthening Climate Resilience and the Worldwide Fund's Climate Adaptation Guide for Asset Owners.

A2542145

4.19 Government needs to work closely with the private sector, the financial sector, and local government to design a feasible cost-sharing formula for adaptation cost-bearing.

4.20 Equity considerations must underpin and define whatever cost-sharing formula Government develops.

4.21 Some ideas for this kaupapa include:

a) Direct Government funding for huge projects of national significance.

b) Direct Government funding subsidies for trialling adaptation projects in designated regions.

c) Central Government-Local Government partnership to fund adaptation projects at the regional level where there is an agreement on the percentage of contributions from each party (either 50/50% or 60/40%) and noting that regions like Tairāwhiti will need higher Government funding ratios due to our low-income threshold.

d) Local government/Council funding of some adaptation projects within their budgetary constraints.

e) Joint public-private sector funding partnerships.

f) Government can also leverage and incentivise private equity capitals and funding by creating tax reliefs for financial institutions that embark on adaptation financing.

g) Asset owners and the public can also contribute to adaptation funding through payments of charges, taxes, and payments of environmental services.[10]

The role of insurance in response to flood risk

4.22 Insurance can incentivise good decision making by asset owners/developers. Some ways through which insurers (insurance companies) can do this include:

- Offering lower premiums for assets in less exposed and vulnerable suburbs/sites.
- Specifying minimum quality benchmarks for flood barriers to protect assets to be insured.
- Adopting a differentiation approach where new assets built in environmentally compromised or high-risk zones get no coverage or get coverage with high premiums. This can disincentives property development in flood-prone locations and encourage people to retreat assets from high-risk areas.

4.23 Council believes that Government should have a role in supporting flood insurance as climate change risks cause private insurance retreat. The role of Government in this regard can include:

a) ***Facilitating risk mitigation measures*** to make vulnerable assets insurable in circumstances where retreat is difficult, for e.g., sites and objects of cultural and spiritual significance.

b) ***Facilitating insurance affordability by subsidy schemes*** targeted especially at low-income earners and regions and groups experiencing socio-economic deprivation.

c) ***Supporting local government*** to incorporate hazard mitigation and resilience in their spatial plans to make assets insurable and reduce the level of exposure and vulnerability of assets exposed to climate risks within various regions.

[10] See IPCC material on the economics of adaptation (from AR5).

A2542145

Economic opportunities for Tairāwhiti

4.24 The economic opportunities that exist for Tairāwhiti and other communities include:

a) ***Adaptation goods*** — for sourcing and supplying the materials needed for adaptation and resilience-building projects.

b) ***Adaptation services*** — consultants/experts could get retainerships or contracts to provide ongoing adaptation services, either of a technical or operational level.

c) ***Tourism*** — water gardens, artificial ponds, and floating homes could be designed and beautified as tourist attractions. They can also boost local tourism in communities.

d) ***Saved and rechannelled income*** — Investing in adaptation and resilience-building can also have economic value in saved funds and rates which would have been used for capital-intensive interventions or recovery work in response to adverse impacts of climate change without adaptation. The saved income could be rechannelled into other valuable community projects.

4.25 A thriving market for adaptation goods and services, and the prospect of new innovative tourism ideas can be new revenue sources for the community.

4.26 Government can enable these economic opportunities by:

a) Partnering with Council to optimise the opportunities.

b) Providing technical support and guidance to harness opportunities.

c) Funding support for establishing tourism-related economic opportunities.

System-wide actions

4.27 We support Government's system-wide objectives as they address the key issues necessary for adaptation action — establishing the legal and institutional frameworks to ensure certainty and suitability, information sharing and awareness, the right toolkit and financing.

A sense of urgency is lacking

4.28 The draft NAP lacks a sense of urgency that matches the enormity of climate change risks most regions of the country currently face. The IPCC and other scientific literature recommend that ***adaptation must be urgent and at a large scale***.

4.29 We understand and appreciate Government's effort in this space through the $4.5 billion Climate Emergency Response Fund (CERF), but we also know that adaptation is not an immediate focus of this fund.

4.30 Rapidly determining and unlocking financing channels is fundamental to proceeding at the right pace to build climate resilience. New data from the NZ Sea Rise project shows that sea levels are rising twice as fast as thought in New Zealand, with high possibility of a 30cm sea level rise in the next 10-20 years. This will have significant impacts across the length and breadth of the country and exacerbate adverse environmental events in Tairāwhiti and similar vulnerable regions.

A2542145

Removing barriers to building resilience and supporting local action

4.31 Government can incentivise a greater investment climate through:

a) Providing tax credits to financial institutions for supporting or executing resilience-building projects/infrastructure.

b) Advocating to national and international investment sectors on the economic benefits of investing in adaptation.

c) Leveraging and unlocking private capital and equity for adaptation investment through Government green bonds.

d) Building a tourism narrative around adaptation infrastructure such as artificial ponds and floating homes.

4.32 Government should support local planning and risk reduction measures by facilitating or creating an enabling environment for the establishment of more consultancy services for climate services. For example, there is a very limited supplier market for conducting regional climate change risk assessments, thus creating a monopolistic marketplace and constraints on availability. This can delay implementation of some adaptation actions which depend on the outcome of a climate change risk assessment. For example delineating climate risk zones is a fundamental outcome of most climate change risk assessment which can be very useful for good adaptation planning in relation to the risk zones.

4.33 Actions that focus on institutional reforms, availability of the right tools and information, and adaptation financing will have the most widespread and long-term benefit. They create the certainty that is required for the functioning of a good system and provide the right information, as well as money to get things done.

4.34 Additional specific actions to strengthen climate resilience include:

a) ***Running multiple pilot projects on co-funding arrangements:*** Adaptation actions are largely site/region-specific. What works for one region may have a different effect in another region. This point has not been emphasised in the Consultation Document. It is good that Government is running a pilot flood control pilot project with Buller, especially to understand how a co-funding framework may pan out. While this is good, there is no certainty or guaranty that one framework will work unilaterally across councils/regions. Perhaps, Government can run a couple other simultaneous pilots to have a diverse range of models and avoid a situation where they are left with a sole framework which may not work in some regions.

b) Applying a pro rata approach and not a blanket approach to funding: This is not to pre-empt Government on the anticipated approach to co-funding adaptation action. However, different regions have various needs and economic capacities. In Tairāwhiti, our ability to fund massive adaptation projects may be stymied by our low-income population due to historical socio-economic deprivation. Adaptation costs will occasion huge burdens on Council and ratepayers. Therefore, we may need higher funding assistance from Government compared to other regions with better and more favourable economic indices. In this regard, a blanket Government funding package across councils will not be an equitable approach.

4.35 Council supports Government's proposed plan to have a taxonomy of green activities. This will help to unlock investment. Government can monitor trends in this space at the international scene and learn from best practices. For example, the European Commission

has recently signalled an EU taxonomy for sustainable activities for facilitating action on the European Green New Deal.

4.36 However, any green taxonomy will not be self-sufficient to promote large-scale action in the right direction. It needs to co-exist within a regime mix of well-functioning policies and institutional arrangements, especially around the legislative framework and financial channels.

Natural environment

4.37 Council supports the ongoing and proposed actions set out in the draft NAP. The actions are suitable, and part of the measures documented in the scientific literature for effective adaptation and resilience-building.

4.38 However, Government can strengthen biosecurity in the face of climate change by:

- Supporting regions with the establishment of ***an early warning system*** to track and eliminate biosecurity threats.
- Building a ***national interactive portal that can forecast biosecurity threats*** in high confidence based on different warming scenarios. This can complement the early warning system and firm up regional and national preparedness against invasive species.

4.39 Government should identify and support New Zealand's most vulnerable ecosystems and species. Just as geospatial mapping is done to identify climate risk zones for prioritising areas suitable for climate response measures, we should identify the country's most vulnerable ecosystems and species for prioritising climate action for our ecosystems.

Homes, buildings, and places

4.40 Council supports the outcomes and objectives in this chapter as they capture the minimum benchmarks necessary for an inclusive and coherent adaptation action regarding homes, buildings, and places.

Additional guiding principles for the resilience of homes, buildings, and places

4.41 Policy symmetry, strong equity and affordability considerations should guide Government's actions to increase the resilience of our homes, buildings, and places as explained below:

a) ***Policy symmetry:*** There must be very close coordination between the mitigation aspects and the adaptation aspects of the Building for Climate Programme and Kainga Ora housing programmes to avoid the risk of carbon lock in or maladaptation.

b) ***Strong equity and affordability considerations:*** Affordability remains a major barrier to most climate policies — whether mitigation or adaptation-focused. The transition to low-carbon and climate-resilient housing is certainly crucial. We appreciate Government's policy direction to set necessary standards to incentivise the building of resilient houses and closed spaces. However, this will have significant cost implication for Council and our community without adequate Central Government support, given the low-income population across various parts of the country.

A2542145

4.42 Property developers are likely to externalise the cost impact of resilience building to home buyers and renters. This is an equity issue of concern which Government should avoid or significantly ameliorate.

4.43 Tairāwhiti is exposed and vulnerable to such market dynamics as we have one of the highest unemployment statistics in the country, coupled with the number of low-income earners in the region. Tairāwhiti is already struggling to find enough homes for its population, and this is causing the cost of housing to skyrocket in the region.

4.44 Council appreciates the housing development initiatives and other promising measures documented in the draft NAP. However, to avoid or drastically reduce inequities, Government should:

- Ensure there is sufficient public resilient housing to avoid the dominance of market forces resulting inequities to low-income earners.
- Provide a robust and accessible subsidy programme for healthy homes/housing.
- Partner with Council for low-cost housing projects on an agreed co-funding formula.

4.45 It is equally essential for Government to work closely with Māori to get appropriate approaches for strongly integrating Mātauranga Māori into urban design.

Place-based approach and retrofitting

4.46 Adaptation action such as managed retreat can significantly impact on rural settlements where property is more affordable. Council agrees that that adaptation actions will impact significantly on Tangata Whenua because of the location of culturally significant sites such as urupa and Marae.

4.47 Government should support Māori-led adaptation solutions but be cautious against having two different risk profiles that do not communicate to each other.

4.48 There is need for a national natural hazards risk assessment to identify what is an acceptable level of natural hazard risk and what is not tolerable. This will determine where a natural hazard-related risk is manageable and where it is not.

4.49 Government needs to adopt a place-based/site-specific approach to the different adaptation measures on homes, buildings, and spaces. A measure may work in one or a few regions/places/sites, while other measures may be more suitable for other regions/places/sites. This must be strongly integrated into the NAP planning and implementation processes to avoid a one-size-fits-all approach.

4.50 Resilience can include building in a form that can recover following events and should not automatically mean managed retreat.

4.51 Council believes that there is a role for Government in supporting actions to make existing homes and/or buildings more resilient to future climate hazards. Some examples include:

a) Providing a national guide for retrofitting different times of builds.

b) Providing ongoing technical support to homeowners and offering a call-in service for answering questions on an ongoing basis.

c) Rolling out a robust awareness programme so that everyone knows about the retrofitting kaupapa.

4.52 The effect of the absence of Government's action and support in this space will be felt more by low-income earners and renters generally. The impacts are majorly the externalised costs of resilient and low-emissions buildings as explained above.

4.53 In Tairāwhiti currently, there are barriers to climate-resilient housing:

a) Reluctance to accept that increased frequency and severity of weather conditions will impact land and buildings that have not previously been impacted. Greater education will assist with this.

b) The age of natural hazard data leads to uncertainty of its accuracy. More investment in having up to date data will assist.

c) Planning provisions make it difficult to justify declining applications for the redevelopment of buildings in areas at risk of coastal inundation and/or erosion. This point links to a and b above. To overcome this, we need clear national direction for avoidance of areas identified, and when managed retreat is required.

d) The value placed on buildings that have a high natural hazards risk, that will be exacerbated by the effects of climate change do not accurately reflect the risk profile and reduces the ability to encourage/facilitate managed retreat.

e) Insurance companies continue to provide covers for buildings that have been damaged and are likely to be more damaged reduces the ability to encourage/facilitate managed retreat.

Infrastructure and communities

4.54 Council agrees with the outcomes and objectives for ensuring New Zealand has climate resilient infrastructure across the identified domains — energy, telecommunications, transport, water, waste.

4.55 Most of the proposed actions are currently high-level and do not offer enough details for us to provide robust feedback on concrete measures of Government in this space. We are keen to see how Government defines and details the different parts and pieces of work for infrastructure.

4.56 Government can facilitate or support the establishment of region-focused and community-focused decentralised socio-economic infrastructure, systems, and services as part of resilience-building. This can remove or drastically reduce disruptions, increase people's adaptive capacity and their ability to get on with life during adverse environmental events.

What should inform Government's approach to infrastructure resilience?

4.57 Government should incorporate an additional taxonomy into the planning processes alongside Te Waihanga's conceptual framework to ensure climate-resilient infrastructure. The additional taxonomy we propose is to group actions into structural adaptation measures and managed (or non-structural) adaptation measures, as explained below:

a) ***Structural infrastructure measures*** can include "changing the composition of road surfaces so that they do not deform in high temperatures, building seawalls or using permeable paving surfaces to reduce run-off during heavy rainfalls. Ecosystem-based approaches using natural infrastructure to design adaptation measures are also key alternatives to be considered alongside structural adaptation measures." (OECD Environmental Policy Paper No. 14, 2018).

b) ***Managed/non-structural infrastructure measures*** can include "changing the timing of maintenance to account for changing patterns of energy demand and supply, investment in early warning systems or purchasing insurance to address financial consequences of climate variability. These measures can also include enhanced monitoring of existing assets to reduce the risk of failure as climate conditions change." (OECD Environmental Policy Paper No. 14, 2018).

4.58 Either way, there must be some flexibility in any policy or structural design from the outset so that future adjustments can be possible in line with the dynamic circumstances throughout the lifetime of any asset. This is a key consideration in adaptive management.

Government's involvement and support in flood insurance

4.59 Whether Government should directly support the availability of flood insurance is a controversial topic. There is some argument to the effect that government should not be directly involved in the insurance business (Haddow et al 2020).

4.60 In jurisdictions such as the United States, the direct involvement of government in flood insurance through the US National Flood Insurance Program has had a regressive effect.[11] Government should ensure that its support for flood insurance does not create inequity for low-income earners.

4.61 Council believes that Government can achieve the twin-objectives of supporting availability and affordability of insurance by using regulatory approaches that incentivise the establishment of more flood insurance packages by private insurers and ensuring that low-income earners can also access a suite of insurance packages. Some measures to help achieve this include:

- Tax credits to promote the establishment of new flood insurance packages.
- Extending tax credits to existing insurers with a focus on flood insurance.
- Regulating the insurance sector to avoid unfair terms and conditions that do not favour low-income earners.
- Ensuring any Government insurance affordability support scheme is "progressive" and not regressive. This can be achieved by factoring income thresholds and offering greater support to low-income earners instead of applying a blanket ratio to all New Zealanders.
- Government-sponsored direct subsidy to insurers to reduce the premiums for flood insurance.

4.62 However, Government needs to adopt a cautionary approach regarding flood insurance because measures to incentivise the availability and affordability of flood insurance cannot guarantee climate change resilience without the existence of complementary policies.

4.63 Councils have been at the forefront of adaptation action, including measures that avoid development in flood-prone locations for years, but there have been difficulties and

[11] A system or regulation has a regressive effect if it redistributes wealth from lower-income households to higher-income households by forcing lower-income households to subsidize the risk mitigation preferences of the wealthy and pay for risk reductions they would not otherwise choose (Thomas, 2019).

stiff opposition to councils' effort under the current RMA and policy settings. Strong national direction and robust guidelines from Government will be crucial for councils to effectively action the right adaptation interventions across regions. There has been much talk about national direction on natural hazards management, but this has not yet materialised. Government should speed up action in this regard.

4.64 Government should also be cautious about exploring price signals as signalled in the draft NAP. Price signals can have distorting effects. Higher premiums can incentivise the reduction of flood risk, but they can also make flood insurance unaffordable to people owning existing structures that need to be insured, and where managed retreat is significantly challenging. To avoid this kind of unintended effect, Government can consider the initial ideas around flood insurance availability and affordability but determine some metrics or parameters for ensuring that there is probity and fairness in the administration of any support package/policy.

5. Our Submission Points on Managed Retreat

General remarks on managed retreat

5.1 Managed retreat is inevitable across sections of Tairāwhiti and in many other regions of New Zealand, especially in circumstances where protective works have failed or where it is impracticable to carry out protection works. Therefore, Council supports Government's forward-thinking in this space and looks forward to seeing the comprehensive governance framework for managed retreat in due course.

5.2 Council also supports the proposed objectives and principles for managed retreat, as well as the objectives and principles for funding and financing adaptation.

5.3 However, managed retreat will have disproportionate impacts across sections and regions of the country. For example, Tairāwhiti will be significantly impacted due to our low-income population and the existing difficulties we are experiencing with housing development as explained above. There are also specific equity issues for Māori. About 28% of the land in Tairāwhiti is whenua Māori who have already been disadvantaged because of historical inequities. Considerable care should be taken to avoid exacerbating current difficulties. We discuss this topic more below as it relates to equity issues in Tairāwhiti and for Māori.

Process for managed retreat

5.4 We support the proposed process, but Government should ensure close interaction between all the stages. Stage C does not have to flow sequentially after Stage B, but it should be considered and enabled alongside the planning work for Stage B.

5.5 A suitable environment and policies to incentivise investment in managed retreat must be given early consideration to ensure a smooth transition from planning and preparation to active managed retreat. For example, if people must move from a high-risk environment, there should be early efforts to provide alternative accommodation in safe locations. Similarly, there must be an enabling environment to fast-track the development of liveable spaces, considering the already difficult situation with housing in New Zealand. A delay in enabling investment will exacerbate existing inequities and difficulties with housing across various regions of the country, and Tairāwhiti will be significantly impacted due to our low-income population in relation to the increasing cost of housing.

A2542145

Evidence for retreating and property transfer management

5.6 The results of climate change risk and natural hazard mapping/assessments should provide the evidence base for identifying land that should be the subject of managed retreat. There is an opportunity for these assessments (climate change risk and natural hazard assessments) to include geospatial mapping to identify climate risk zones or risk hotspots to inform risk prioritisation in various regions. The result of these processes (data, information) can reveal high-risk areas for flood, land subsidence and other adverse impacts for which managed retreat is highly necessary and must occur to save lives.

5.7 An increasing number of councils are completing or are planning to complete climate change risk and updated natural hazard assessments. A non-contestable fund to support these assessments would ensure equitable resourcing across councils.

5.8 Strong national direction is needed to ensure equitable management of property transfer with respect to assets that are caught up by managed retreat. The difficulties explained above regarding adaptation plans for managing risks associated with land use and development also apply to managed retreat and property transfer. Lack of robust national direction or guidance creates a lacuna in this space and stymies the imposition of more stringent and restrictive controls.

5.9 Government has a duty of care to provide significant support to people whose assets fall within areas with unaccepted risk profile needing managed retreat or other costly interventions. Government should establish a compensation scheme for this category of asset owners.

5.10 Council believes that a different approach may be taken for those who purchased properties before a risk was identified (or the extent or severity of the risk was known) **[Category A]** and those who bought after the risk became clear **[Category B]**.

5.11 **Category A** asset owners should be given greater support in terms of facilitating alternative safer properties or considerably large compensation money. Government may have to take a different approach to managing issues about asset owners who knew about the high-risk nature of their property/land in a land information memorandum (LIM) and still went ahead with property development **[Category B]**. This category of asset owners may have volunteered to the risks in principle, but there should still be some measure of Government support to help such people/asset owners retreat. This differentiated approach can discourage future development in high-risk areas.

5.12 In cases where Government is paying monetary compensation or providing alternative homes/properties to affected asset owners, it is logical to transfer proprietary rights and ongoing management obligations to Government, or an agency established for the purpose.

Implications for Māori, sites of cultural and historical significance

5.13 Whenua Māori, and land with historical, cultural, social, or religious significance (such as marae, urupa, wāhi tapu, or churches) must be accorded veneration and treated differently.

5.14 Land transfers/management must not resemble Crown confiscation of whenua Māori and all the vestiges of inequities against Māori. In less than eight generations since the signing of Te Tiriti, Māori lost 95% of their land. Māori were left with marginal land that others did not want. This loss of productive land has negatively impacted on the socio-economic status of many generations of iwi, hapū, and whanau. The Treaty Settlement process has

not been able to restore significant parcels of land to Māori ownership and reverse the disparity in socio-economic status. Ownership of whenua Māori retreated from should remain with Māori. This should also mean that Māori should have exclusive ongoing management right over Whenua Māori retreated from, while Government provides ongoing technical and financial support in line with the aspirations of Māori.

5.15 There must be meaningful engagement with Māori in determining the best approach to managed retreat for whenua Māori. Government policy and legislation on managed retreat must support the aspirations of current and future generations of iwi, hapū, and whanau.

How insurance could interact with a managed retreat policy

5.16 Council supports Government's approach for adaptation management in high-risk areas, i.e., the options to ***accommodate*** the risks, or to ***protect*** assets against the risks, or to ***retreat*** the affected assets. These accord with the OECD best practice guide for responding to rising sea level.

5.17 We should not enable ongoing or future asset development in high-risk and flood-prone areas. Houses located in areas with high risk profile will become increasing difficult to get insurance due to the nature of insurable risks.

5.18 Insurance clearly has a role to play to incentivise good decision making by asset owners and other affected parties. Here are some ways:

a) Removing insurance or high premiums for assets that ought to be retreated based on available risk profile/data.

b) Offering insurance covers and premiums for protected with tolerable risk profile/data and with stiff ongoing risk mitigation obligations.

c) Offering a differentiated cover with less premiums for new and existing assets in safe zones.

5.19 These insurance measures could support complementary policies by Central Government and local government through regulations, by-laws, and consenting processes that disincentivise development in high-risk areas.

Equity issues for Tairāwhiti generally on managed retreat

5.20 The equity issues we discuss under the homes, building, and places section also surface in the topic of managed retreat. There are numerous assets and lands traversing the length and breadth of our coasts. These areas are often in low socio-economic zones and with a low-income population. This will affect people's ability and economic to effectively retreat.

5.21 Our region's population is currently over 50,000, putting increased pressures on social amenities, services, and the environment. We are also struggling with housing availability and affordability. Plans for managed retreat must not exacerbate the existing housing and economic hardship across Tairāwhiti, given the low-income population across various parts of the region, and noting that we have one of the highest employment statistics in the country.

5.22 The existing socio-economic circumstances make the region exposed and vulnerable to the adverse impact of managed retreat.

A2542145

5.23 We will need significant Government support and partnership in the design of a fair and feasible approach to managed retreat across the high-risk sections of our region.

5.24 Government should also prioritise housing support in Tairāwhiti to facilitate the availability and affordability of healthy and resilient homes. This should be factored into the planning processes and be a fundamental precondition to commencing the retreat of assets to avoid unbearable housing hardship in the region.

5.25 Council looks forward to partnering with Government on this kaupapa.

Roles, costs, and support for managed retreat

5.26 The roles and costs for managed retreat should be equitably distributed across the key stakeholders — including Central Government, local government, iwi/Māori, asset owners, private sector, and businesses, and the wider public.

	Central Government	Local government	Iwi/Māori	Asset owners, private sector, and business	The wider public
Roles	***Ensuring certainty of the governance framework*** by speeding up the emergence of the Natural and Built Environment Act, Strategic Planning Act, and the Climate Adaptation Act as they will be crucial in facilitating managed retreat. ***Create the enabling environment*** to incentivise private investment. ***Providing guidelines*** and technical support to local government and the private sector.	***Risk assessments*** to identify high-risk zones for managed retreat. ***Promoting local awareness***. ***Consenting process*** to discourage development in high-risk sites. ***Proper spatial planning***. ***Budgetary/LTP*** consideration for managed retreat work.	***Contributing te ao Māori worldview***. ***Actively participating*** throughout the policy making and implementation processes. ***Identifying Māori assets of cultural significance***. ***Promoting awareness*** among Māori groupings. ***Ongoing management of any whenua Māori being the subject of managed retreat***.	***Identifying and understanding high-risk assets***. ***Long-term planning*** for resilience and managed retreat for relevant assets. ***Climate change considerations*** in asset management plans and decision-making. ***Taking up insurance*** where appropriate and planning to relocate — Being prepared.	***Identifying and planning to manage personal risks***. ***Promoting peer-to-peer awareness*** within the community. ***Taking up insurance*** where appropriate and planning to relocate — Being prepared. ***General support for Government policy direction***.
Costs	• Co-funding of regional projects. • Funding pilot projects. • Funding large-scale significant projects.	• Funding regional pilots. • Cost for relocating Council's assets. • Co-funding.	• Counterpart funding.	• Bear significant cost of shoring up or relocating own assets.	• Cost-bearing (through rates) for community projects. • Cost-bearing for personal retreat with necessary Government/local government support.

GISBORNE DISTRICT COUNCIL

22-111

Title: **22-111 Climate Change Update**

Section: Strategy

Prepared by: Magnus Abraham-Dukuma - Senior Policy Advisor - Climate Change Focus

Meeting Date: Thursday 2 June 2022

Legal: No	Financial: No	Significance: **Low**

Report to SUSTAINABLE TAIRAWHITI Committee for information

PURPOSE

The purpose of this report is to provide an update on climate change covering key national, regional, and organisational developments.

SUMMARY

Climate change remains a major risk to the world. It continues to dominate global conversations by leaders at the international, national, and local levels. Multiple scientific materials paint a bleak picture about the present and future consequences of a warming world. However, there is still a short window to act decisively to save planetary life forms, the built and natural environment, and socio-economic and cultural systems from the adverse impacts of climate change. This short window is driving national, regional, and organisational-level climate change response. This report provides a general update on these developments in the following order:

a) ***National level climate change update*** — covering the announcement of the national emissions budgets, the release of the national greenhouse gas (GHG) inventory for 1990-2020, the release of an updated guide for measuring organisational emissions, the release of a draft National Adaptation Plan (NAP) for consultation, and the publication of the national Emissions Reduction Plan (ERP).

b) ***Regional and organisational climate change update*** — covering various pieces of work such as the state of regional decarbonisation and just/equitable transition planning, the Tairāwhiti climate change risk assessment project, and progress on our climate change roadmap.

c) ***Notable local government climate change-related events/actions*** — covering events/actions by some councils, including mitigation and adaptation planning.

This report also highlights the potential organisational and regional implications of some of these developments to inform Council's discussion and planning.

The decisions or matters in this report are considered to be of **Low** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS

That the Sustainable Tairawhiti Committee:

1. Notes the contents of this report.

Authorised by:

Joanna Noble - Chief of Strategy & Science

Keywords: Climate change; Climate change response; Climate change update.

BACKGROUND

1. Carbon-intensive activities by humans and the global economic system continue to cause warmer temperatures. This trend continues to change weather patterns and disrupt the balance in nature.
2. The Intergovernmental Panel on Climate Change (IPCC) has recently released three reports on climate change science, the impacts, adaptation and vulnerability and mitigation. These three reports are the contributions of Working Groups I-III to IPCC's the Sixth Assessment Report on Climate Change and demonstrate a very short window (less than 10 years) is left to peak warming and to avert the worst adverse future impacts of climate change.
3. The Annual Climate Update released by the World Meteorological Organisation (WMO) in Geneva on 9 May 2022 paints a more sober picture and suggests that the world now has a 50:50 chance of exceeding 1.5 °C warming in the next 5 years (2022-2026). This shows that global emissions remain unabated and without enough mitigation action by countries.
4. The global Climate Change Performance Index (CCPI) for 2022[3] shows that no country performs well enough in all index categories to achieve an overall high score for climate action. New Zealand had a low overall rank of 35th while Denmark had the highest ranking of 4th.
5. **Figure 1** illustrates the potential impacts of climate change in different warming scenarios:

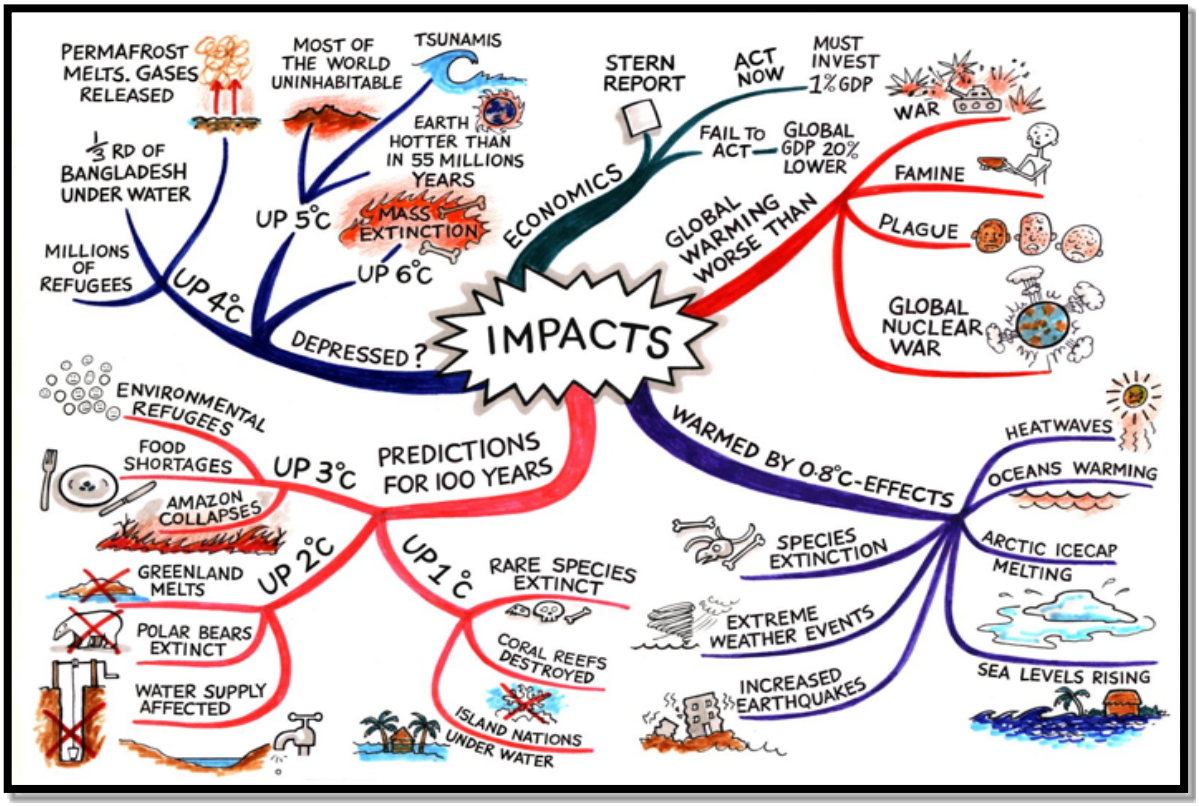


Figure 1: The impacts of climate change (**Source:** The British Geographer, 2022).

[3] The CCPI is an international monitor developed by Germanwatch, NewClimate Institute and Climate Action Network (CAN). The monitor tracks climate mitigation efforts of 60 countries plus the EU – covering 92% of the global greenhouse gas emissions.

6. The three IPCC reports recommend urgent action to reduce greenhouse gas (GHG) emissions and adapt to the locked-in impacts of irreversible climate change.

7. The IPCC observes that "*climate change is affecting Australia and New Zealand significantly; and some natural systems of cultural, environmental, social, and economic significance are at risk of irreversible change. The socio-economic costs of climate change are substantial, with impacts that cascade and compound across sectors and regions, as demonstrated by heatwaves, wildfire, cyclone, drought, and flood events*".[4]

8. New data from the NZ SeaRise shows that while the global sea level is expected to rise 50cm by 2100, there could be a 1 metre sea level rise for large parts of New Zealand. This means that a large portion of our whenua would 'sink'. New Zealand faces major sea level rise far sooner than thought (20 years sooner), thus leaving different regions of the country more exposed and vulnerable to coastal inundation and flooding (see **Figure 2**).

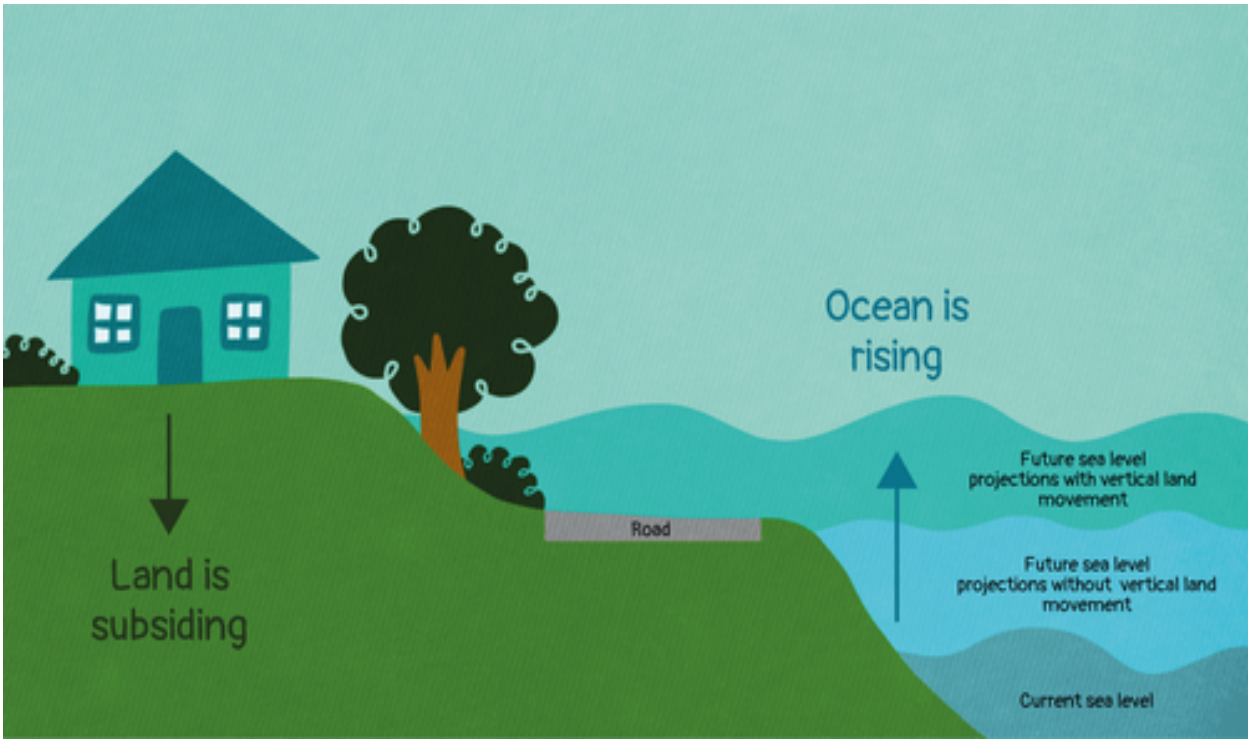


Figure 2: Predicting sea-level rise for New Zealand (**Source:** NZ SeaRise 2022).

9. Independent scientific research confirms the vertical land movement in New Zealand is closely linked to sea level rise.

10. These developments will have adverse implications for Tairāwhiti, noting that the current climate change projections for our region show that our physical and built environments will suffer from the impacts of climatic changes (see **Figure 3**).

[4] See the Australasia section of the IPCC Climate Change Adaptation Report.

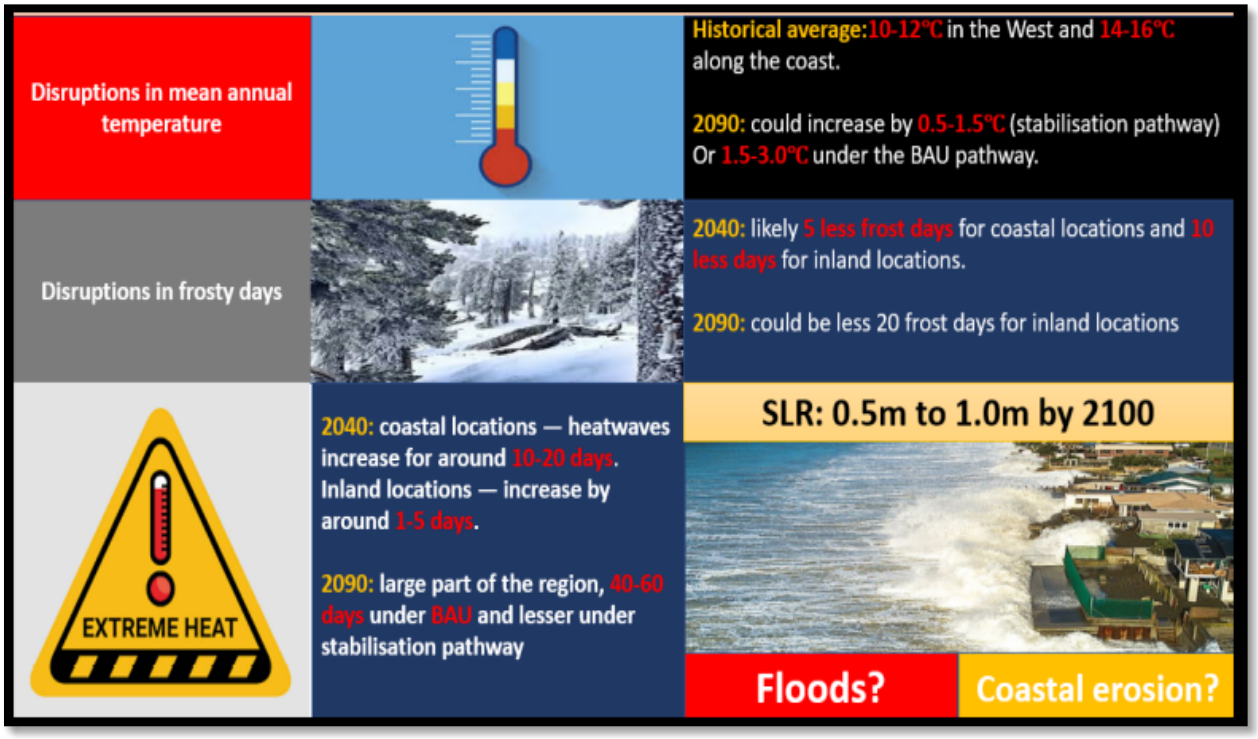


Figure 3: Summary of key messages from NIWA's Climate Change Projections for Tairāwhiti.

DISCUSSION and OPTIONS

NATIONAL LEVEL CLIMATE CHANGE UPDATE

Government publishes national emissions budgets for 2022-2035

11. On 9 May 2022, Government (through the Climate Change Minister) announced New Zealand's first set of emissions budgets as follows:

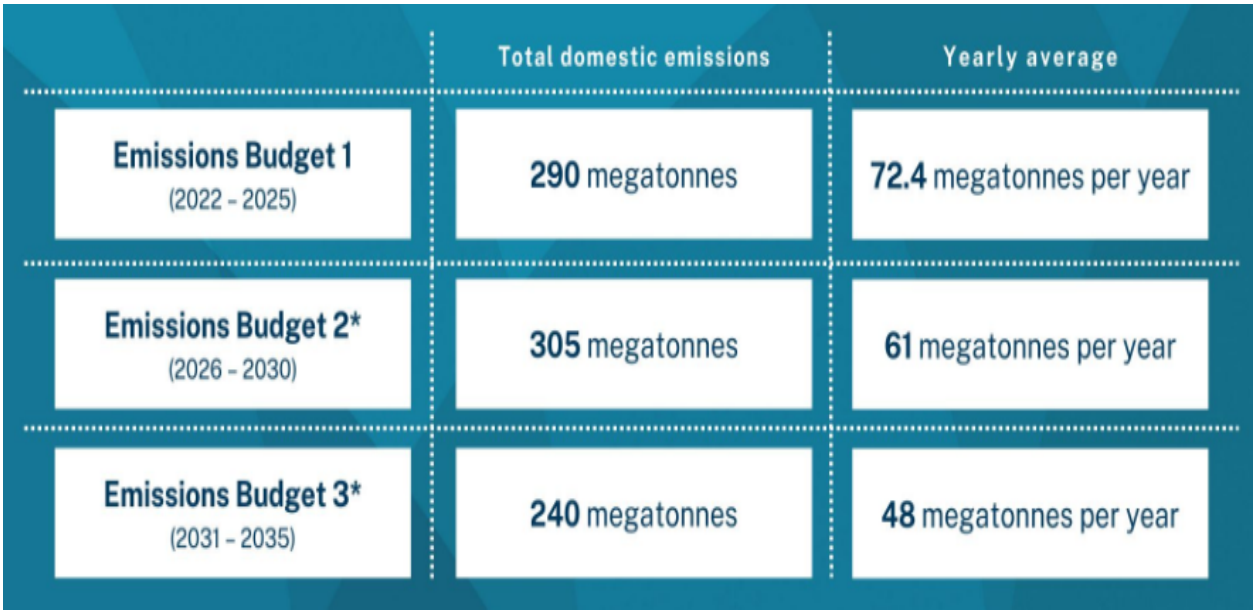


Figure 4: National emissions budgets.

12. This announcement is in line with the Zero Carbon Act, which requires Government to have three consecutive emissions budgets (one current and two prospective), in place at any one time.

13. The announcement means that the national average emissions for 2022-2025 must stay around 72.4 mega tonnes; 61 mega tonnes for 2026-2030; and 48 mega tonnes for 2031-2035.

14. While the budget for 2022-2025 has been confirmed, the other two budgets are in principle and will be confirmed by Government at a later date.

Updated 2022 National GHG Emissions Inventory (with increased gross emissions)

15. The Ministry for the Environment (MfE) recently released the country's updated GHG emissions inventory for 1990-2020. This is as an annual report on anthropogenic (human induced) GHG emissions and removals in the country and informs MfE's policy direction on climate change mitigation.

16. The inventory shows that national gross emissions increased by 21% between 1990 and 2020, with agriculture, energy, industrial processes and produce use (IPPU) and waste accounting for most of the emissions as **Figure 5** illustrates.

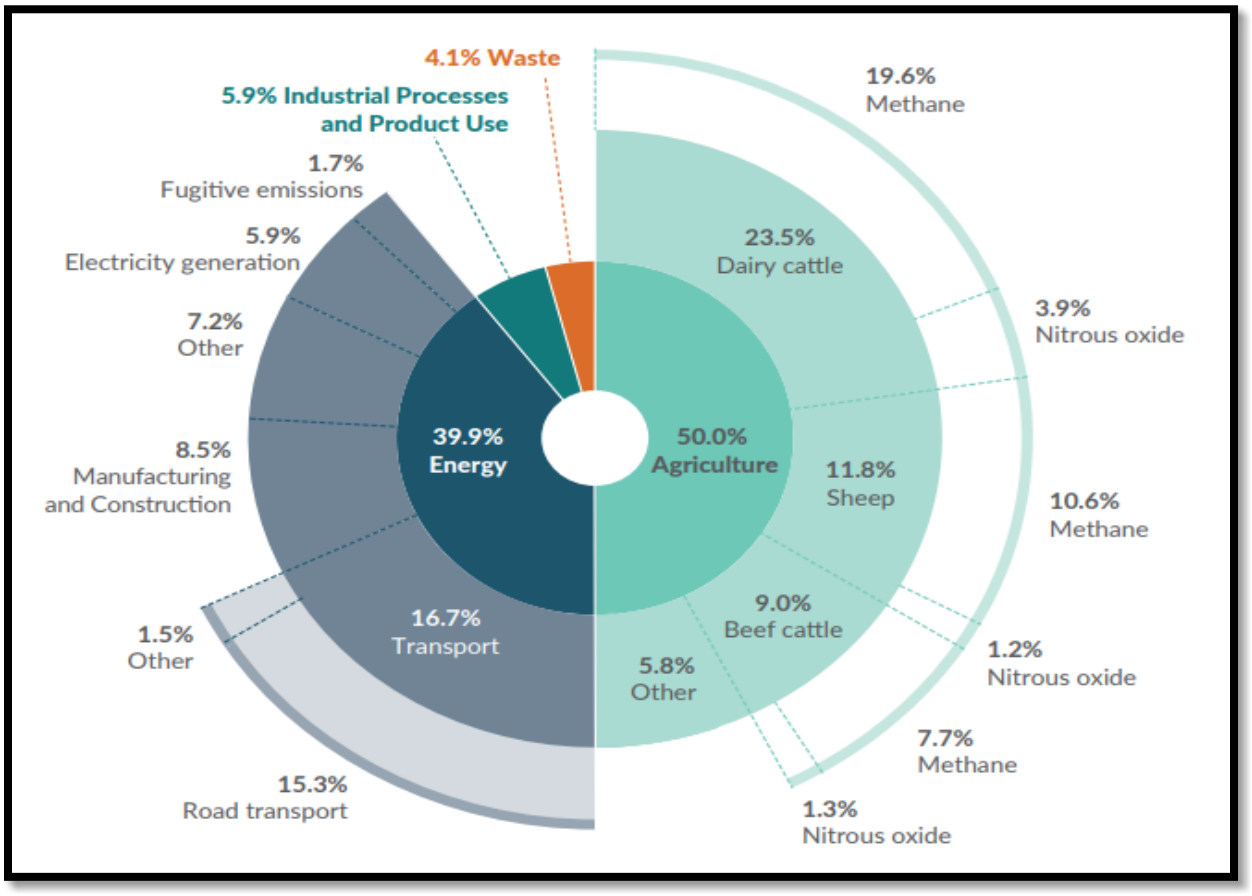


Figure 5: Breakdown of national emissions by sector.

17. This shows there is more work needed to cut emissions in our major emitting sectors if we want to achieve the national 2050 net-zero mitigation target.

Updated Guide for Measuring Organisational Emissions

18. MfE has released the updated Guide for measuring organisational emissions. The Guide helps corporate entities and businesses to measure and report their GHG emissions voluntarily and accurately following 7 steps (**Figure 6**).

Figure 6: An outline of steps to measure organisational emissions (**Source:** MfE 2022).

19. Accurately measuring and reporting corporate GHG emissions will contribute to Government's effort to regarding climate change mitigation.

20. Council's next emissions inventory process will be informed by this guidance.

Draft National Adaptation Plan Released

21. MfE released the National Adaptation Plan (NAP) in April alongside preliminary thoughts on managed retreat for consultation. A snapshot/summary document can be read here.

22. The NAP captures current/ongoing and planned measures to manage the climate change risks New Zealand faces. The first National Climate Change Risk Assessment (NCCRA) completed in 2020 identified 43 priority risks across five value domains.[5] This first NAP addresses 10 prioritized risks (see **Figure 7** below).

23. Consultation closes on 3 June 2022. Staff have worked on a draft submission for Council's comments and decision (**Report 22-112**).

[5] The value domains include natural environment, human, economy, built environment and governance.

Natural	Human	Economy	Built	Governance
Risks to coastal ecosystems, including the intertidal zone, estuaries, dunes, coastal lakes and wetlands, due to ongoing sea-level rise and extreme weather events.	Risks to social cohesion and community wellbeing from displacement of individuals, families and communities due to climate change impacts. ✸	Risks to governments from economic costs associated with lost productivity, disaster relief expenditure and unfunded contingent liabilities due to extreme events and ongoing, gradual changes.	Risks to potable water supplies (availability and quality) due to changes in rainfall, temperature, drought, extreme weather events and ongoing sea-level rise. ✸	Risks of maladaptation across all domains due to the application of practices, processes and tools that do not account for uncertainty and change over long timeframes.
Risks to indigenous ecosystems and species from the enhanced spread, survival and establishment of invasive species due to climate change.	Risks of exacerbating existing inequities and creating new and additional inequities due to differential distribution of climate change impacts. ✸	Risks to the financial system from instability due to extreme weather events and ongoing, gradual changes.	Risks to buildings due to extreme weather events, drought, increased fire weather and ongoing sea-level rise. ✸	Risks that climate change impacts across all domains will be exacerbated because current institutional arrangements are not fit for climate change adaptation.

Figure 7: The 10 most significant climate risks New Zealand faces from 2020–26 (NCCRA 2020).

National Emissions Reduction Plan (ERP) Published

24. On 16 May 2022, Government released the national Emissions Reduction Plan (ERP) for which they completed a consultation in November 2021.

25. The national ERP is Government's strategy for meeting the country's first emissions budget for 2022-2025[6] and building momentum to meet New Zealand's long-term emissions reduction targets and the country's international climate commitment under the Paris Agreement.

26. It is based on five key principles:
    - playing our part
    - empowering Māori
    - equitable transition
    - working with nature
    - a productive, sustainable, and inclusive economy.

27. The ERP contains specific actions for reducing emissions across sectors — transport, energy and industry, building and construction, agriculture, forestry, and waste. It also talks about plans for a circular and bioeconomy, and the role of research, science, innovation, and technology in the country's decarbonisation agenda.

[6] This means that emissions must stay within an average of 72.4 million tonnes a year nationally from 2022-2025. See **Figure 4**.

28. Here is a summary of the key actions for each sector:

    - ***Agriculture*** — $339 million for research & development of technology to cut farming emissions; Centre for Climate Action on Agricultural Emissions to produce tools/resources to help farmers measure and monitor their emissions; farm-level emissions accounting and reporting due by 2023.
    - ***Energy*** — Renewables to account for half of all energy by 2035; $650 million subsidy scheme for energy-efficient manufacturing equipment and switching to low-emissions technology for heating, boiling, and drying; plans to roll out offshore wind farms.
    - ***Waste*** — City landfills designed to capture methane emissions by 2026; kerbside food waste separation by most households by 2030 to aid composting.
    - ***Transport*** — $569 million to trial a vehicle scrap-and-replace scheme targeted at low-income households due to equity considerations; 35% cut in freight emissions by 2035 by deploying biofuels, hydrogen, zero-carbon trucks, and zero-emissions shipping; zero emissions public buses by 2025; 30% of cars, vans, and utes to be fully electric by 2035.
    - ***Housing*** — new buildings to take 40% less energy for heating through stronger insulation standards; provision for retrofitting old houses to be more energy-efficient.
    - ***Forestry*** — $73 million for planting 10,000 hectares a of new trees; fund to produce native seedlings; $111 million for improving the natural ecosystems used for carbon storage.
    - ***Jobs*** — to make forestry and wood processing work higher value; jobs in a clean energy economy, and the Jobs for Nature Programme.

29. Government plans to use $2.9 billion proceeds from the Emissions Trading Scheme (ETS) to fund most policies of the ERP over the next four years.

REGIONAL AND ORGANISATIONAL CLIMATE CHANGE RESPONSE

Tairāwhiti Climate Change Risk Assessment Project Has Started

30. The regional climate change risk assessment is a key piece of work in our climate change work programme, and a fundamental step for our regional climate change adaptation planning. Work on the **Tairāwhiti Climate Change Risk Assessment (TCCRA)** started in May. Tonkin & Taylor have been contracted deliver the TCCRA.

31. The project will run until mid-late 2024 and has four phases:

    a. Getting started Jan-Aug 2022: scope project, supplier procurement, governance endorsement, early iwi/hapū engagement.

    b. Setting up the TCCRA Jun-Sep 2022: Confirm project setup with iwi/hapū and governance group.

    c. Carrying out the TCCRA Aug 2022-Jun 2024: stage 1 – risk identification, stage 2 – further detailed assessment.

    d. Next steps post assessment Jul/Aug 2024: risk prioritisation workshop, project closure.

32. It should be noted that when and how we engage with iwi and hapū as well as the wider community is still being considered, and the timing of phase 1 and 2 may be adjusted to reflect the outcome of this process.

33. Staff will report to Council when governance decisions are required, and on risk prioritisation on completion of the assessment (Phase 4).

Progress of Regional Decarbonisation and Just/Equitable Transition Planning

34. Staff from Council and Trust Tairāwhiti continue planning work to deliver the regional just/equitable transition plan.

35. Just transition is a TEAP action, and Trust Tairāwhiti has recently engaged Beca to provide additional technical inputs into the planning process.

36. Staff have identified the need for a strong decarbonisation focus in the regional just transition plan to produce a document that helps us understand the critical milestones and timeframes for building a climate-resilient region through a fair process.

37. Stakeholder engagement will be scoped as one of the first steps in the project. It is expected to begin sometime in the second half of this year.

Progress on Our Climate Change Roadmap Project

38. The development of our climate change roadmap is near completion. This is a high-level document that captures the critical milestones and timeframes for Council's organisational climate change action and how we support regional climate action.

39. A decision report will go to the Sustainable Committee meeting in July 2022.

Progress on Our Organisational Emissions Reduction Plan (ERP)

40. Staff are still working closely with MyImprint to deliver Council's ERP. We are still in the process of capturing our entire organisation chain in our approach to emissions reduction.

41. Staff have also been working to ensure that our organisational ERP aligns with the key milestones and timeframes identified in our climate change roadmap that is under development.

42. Current timeframe for delivery of the final report is to the Sustainable Committee meeting in July 2022. This will coincide with the decision on our climate change roadmap to 2050.

NOTABLE CLIMATE CHANGE DEVELOPMENT ACROSS COUNCILS

Wellington City Council Approves New Climate Funding

43. Shortly after our previous climate change update report, the Wellington City Council approved funding for five climate projects, totalling about $175k.

44. Wellington's $250k per annum Climate and Sustainability Fund was established in October 2021 to support communities and businesses in Wellington to undertake climate action initiatives that reduce and/or support the reduction of carbon emissions.

45. The successful projects/recipients of the recent funding round include:

    a) **Sustainability Trust** — $95k to transform their existing eco-centre into a climate action centre. This will provide Wellington with a central hub for climate action, where Wellingtonians can go for locally specific climate information, get support for individual and collective change, measure their impacts, and connect into Wellington climate initiatives and movements.

    b) **Wellington Chamber of Commerce** — $50k to support 40 small-to-medium Wellington businesses to go through a "Sustainability Bootcamp" that results in tangible and tailored climate action plans for each business.

    c) **Eco-church NZ** — $20k to support grassroots efforts by churches in Wellington to understand their carbon footprint and develop climate action plans.

    d) **PlantMe Growathon** — $5k to run a gamified online platform that tracks the carbon benefits of backyard food production in Wellington.

    e) **Lodabike** — $4,250 to undertake research on barriers to ebike ownership. The intention is to connect this mahi to Council's existing behaviour change work programme and Paneke Pōneke, the bike network.

46. This funding initiative is something Council could replicate to support climate action here in Tairāwhiti.

Auckland Harbour to Host Government-Funded Electric Ferry

47. On 26 April 2022, Government announced a $27m plan for the construction of 200-seater ferries to be built for Auckland Transport's inner and mid-harbour services, for launch in 2024.

48. The project will significantly reduce transport-related emissions in Auckland (approximately 1000 tonnes of carbon annually) and support Government's climate change mitigation agenda.

49. On completion, the electric ferries will have a range of 40km and be able to travel the approximately 30km distance from Auckland to Waiheke.

Majority of Auckland Residents Support Auckland's $1 Billion Climate Plan

50. At the March Sustainable Tairāwhiti Meeting (**Report 22-42**), staff informed Council of Auckland's $1 billion Climate Action Plan, and how Auckland Council plans to raise over half of the $1 billion ($574 million) through a Climate Action Targeted Rate (CATR).

51. Auckland Council recently conducted a survey to gauge residents support for the plan.

52. The poll, conducted by Kantar for the council, revealed that 48% of Auckland residents supported the plan, while 36% opposed it.

Lower Hutt and Porirua Councils Considering Kerbside Organic Waste Separation

53. Lower Hutt and Porirua Councils have recently commissioned a project to investigate a waste stream transition to include kerbside organic waste separation.

54. This is part of a waste management overhaul to reduce waste generally and drastically cut methane emissions by avoiding sending organic waste to landfill.

55. The two councils receive more than 90,000 tonnes of organic waste at the Spicer and Silverstream landfills each year. Separating organic waste at the kerbside will significantly reduce the councils' emissions profile.

56. This is similar to what staff are considering for Council's waste management improvements and as part of our Emissions Reduction Plan.

Northland Announces Regional Adaptation Strategy: A New Zealand First

57. In April 2022, Northland became the first region in New Zealand to adopt a region-wide Climate Change Adaptation Strategy.

58. It is a joint climate action by the Whangārei District Council (WDC), Kaipara District Council (KDC), the Far North District Council (FNDC), and the Northland Regional Council (NRC).

59. The Strategy sets out to protect about 70 Northland towns and localities from the significant projected impacts of climate change — erosion, coastal flooding, and permanent inundation because of sea level rise.

ASSESSMENT of SIGNIFICANCE

Consideration of consistency with and impact on the Regional Land Transport Plan and its implementation
Overall Process: **Low** Significance
This Report: **Low** Significance

Impacts on Council's delivery of its Financial Strategy and Long Term Plan
Overall Process: **Low** Significance
This Report: **Low** Significance

Inconsistency with Council's current strategy and policy
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on all or a large part of the Gisborne district
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on individuals or specific communities
Overall Process: **Low** Significance
This Report: **Low** Significance

The level or history of public interest in the matter or issue
Overall Process: **Low** Significance

60. The decisions or matters in this report are considered to be of **Low** significance in accordance with Council's Significance and Engagement Policy.

61. Whilst this report and the process of providing update reports is of low significance, there are projects mentioned in this report that have medium or high levels of significance against some of the significance criteria. When reports on these projects are presented to Council, they will have a different significance profile.

TANGATA WHENUA/MĀORI ENGAGEMENT

62. There has been no engagement with Tangata Whenua in the preparation of this report. Climate change will generally impact four key areas of Māori wellbeing. The areas include He Kura Taiao (living treasures), Whakatipu Rawa (Māori enterprise), He Oranga Tāngata (healthy people), Ahurea Māori, Tikanga Māori (Māori culture and practices).

63. Government's proposed plan for adaptation and managed retreat will also impact Māori assets of cultural and spiritual significance, such as urupa, maraes and other sacred objects.

64. As part of the Council-led regional climate change risk assessment, there will be engagement with Māori on how we work together to identify the climate risks Tairāwhiti faces and prioritise them for effective adaptation action. Engagement with Māori is also planned in the regional decarbonisation and just/equitable transition work co-led by Trust Tairāwhiti and Council. Staff will consider how this can be integrated with other projects, such as the Tairawhiti resource Management Plan review.

COMMUNITY ENGAGEMENT

65. There has been no engagement with the community in the preparation of this report.

66. There will be community engagement for individual pieces of work such as the climate risk assessment, just/equitable transition, and some workstreams under the TRMP programme. Staff are currently looking into how best to integrate and complete engagements with similar themes.

CLIMATE CHANGE – Impacts / Implications

67. This report has no climate change implications.

CONSIDERATIONS

Financial/Budget

68. This report has no financial implications. Staff will present the financial implications of various pieces of work as we continue our climate response journey.

Legal

69. We have a legal obligation under the Resource Management Act (RMA) to plan for the effects of climate change. There are no legal obligations identified in this report, but staff will ensure that various pieces of climate change-related work align with Council's legal obligations under the law.

POLICY and PLANNING IMPLICATIONS

70. Current climate events and the scientific evidence presented above suggest the need to plan for mitigation and adaptation as required by the RMA. Staff are currently delivering various pieces of work under the climate change portfolio.

71. Our future Annual Plans, Long-Term Plans and other policy planning processes will need to align with best practices and needed changes to progress our climate response journey.

RISKS

72. There are no risks associated with this report.

NEXT STEPS

Date	Action/Milestone	Comments
September/October 2022	Staff will monitor international, national, and regional climate change developments for the purposes of planning and presenting the next update/information report to Council.	This aligns with the reporting system detailed in the climate change portfolio plan.

GISBORNE DISTRICT COUNCIL

22-123

Title: **22-123 Overview of Local Government Reform**

Section: Strategy

Prepared by: Joanna Noble - Chief of Strategy & Science

Meeting Date: Thursday 2 June 2022

Legal: No	Financial: No	Significance: **Low**

Report to SUSTAINABLE TAIRAWHITI Committee for information

PURPOSE

The purpose of this report is to provide an overview on how Government reform proposals may impact the operation and governance of Gisborne District Council and prompt a discussion on how Council is engaging with this work.

SUMMARY

Government is considering several proposals that will impact the way government delivers services across Aotearoa, and the way local government delivers functions across cities, districts, and regions. The scale and intensity of change has increased significantly since the last national elections. Regular updates have been provided to Councillors through the Chief Executive report to Council and individual reports.

A schedule of the Government policy proposals is **attached**, and a PowerPoint **presentation** will be provided at the meeting to support this report and prompt discussion.

The reforms covered in this report are those that could have the most significant impact on the functions and roles of Gisborne District Council:

a. Three Waters reform
b. Resource Management reform
c. Emergency Management reform
d. Future for Local Government
e. Climate Change response package.

There's a clear push for centralisation occurring via Government policy proposals. We need to understand these and identify how we go about influencing change

Whilst the matters discussed in this report may have significant implications for Council and the community, this report is for information only. Therefore, the report is considered to be of **Low** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS

That the Sustainable Tairawhiti Committee:

1. Notes the contents of this report.

Authorised by:

Joanna Noble - Chief of Strategy & Science

Keywords: legislative reform, three waters reform, trifecta review, climate change, local government, Government consultation, advocacy

BACKGROUND

1. Government is considering several proposals that will impact the way government delivers services across Aotearoa, and the way local government delivers functions across cities, districts, and regions. The scale and intensity of change has increased significantly since the last national elections. Regular updates have been provided to Councillors through the Chief Executive's report to Council and individual reports.

2. Much of the reform programme is coming under the umbrella of improved service delivery. Government is leaning towards centralisation of service delivery, independent governance, and increased national consistency as solutions. The Resource Management and Three Waters Reforms call into question the broader functions and roles of local government, while other reforms in health and education have implications for local governance and wellbeing.

3. Understanding the implications of significant Government policy proposals is a strategic priority for 2022. Keeping abreast of changes, national direction and legislation is crucial to understanding the impact of change on Council's strategic priorities. There is also an opportunity to shape the outcome of change through feedback, submissions, and other advocacy options.

4. The Chief Executive and Councillors identified the Impact of externally driven change as a key strategic risk for Council in June 2021 (refer **report 21-123** to the Audit & Risk Committee). While staff respond to and provide advice on these proposals individually, Council also needs to assess the cumulative effects and direction of reform and determine how we influence this broader change.

5. Given the scale of Government consultation, staff sought clarity from Council on what matters they wished to submit on to form part of the work programme for 2022 (**Report 22-38**). The work programme prioritises key engagements as Council does not have sufficient resource to respond effectively to everything coming out of central government on top of our own work programmes.

6. The reforms covered in this report are those that could have the most significant impact on the functions and roles of Gisborne District Council:
   a. Three Waters reform
   b. Resource Management reform
   c. Emergency Management reform
   d. Future for Local Government
   e. Climate Change response package.

7. Government also recently announced a conservation reform package – this may also impact Council; however, none of the proposals released to date have significant implications. Staff are maintaining a watching brief of this work programme.

8. We have an ability to influence this change through clear and targeted advocacy. To do this, we need to understand the cumulative impacts of this change, be clear on what our priorities are for this work, and how we can constructively add to the discussion.

DISCUSSION of REFORM PROPOSALS

9. This discussion focuses on reform proposal that could directly impact how Council operates, its functions and responsibilities. We acknowledge there are other reforms underway that will have an impact on Tairāwhiti and have an underlying theme of continued centralisation, such as the health system reform.

10. **Attachment 1** provides an overview of these reform proposals and an indicative timeline. A **presentation** will be provided to the Sustainable Tairāwhiti Committee to guide discussion.

Three Waters Reform

What's proposed?

11. Transfer the delivery of Three Water Services (Wastewater, Water Supply and Stormwater) to four new Water Services entities. The Gisborne district falls within entity C alongside 19 other councils. Four components will impact local government operational and/or governance functions:
    - Removal of operational and governance functions relating to Three Waters service delivery; transfer of staff to the new entity.
    - Establishment of a regional representative group for the area covered by the new Water Service entity. This committee will have a minimum of 12 and maximum of 14 representatives, comprising Council and iwi/hapū representatives.
    - Provision for sub-regional advisory groups or committees to the regional representative group to exist. These would be based on regional or geographic areas in the service area of the water services entity, with equal representation from mana whenua and councils in the geographic area.
    - Impact and expectations regarding planning functions and the continued role of councils is unclear.

When's this happening?

12. The reform is well underway, and implementation is being supported by a National Transitions Unit, headed by Heather Shotter (former CEO Palmerston North City Council). Key dates are:
    - Q3 2022 - Chief Executive appointments to the four new Water service entities.
    - Q4 2022 - Senior management appointments.
    - 2023 – Establishment and transition.
    - 1 July 2024 - New water service entities go live and provide three water services.

Resource Management Reform

What's proposed?

13. Replacing the RMA with new legislation – the Natural and Built Environments Act (NBA), the Strategic Planning Act (SPA), and a new Climate Change Adaptation Act (CAA). Three components may impact Council's operational and/or delivery boundaries:
    - New regional spatial strategies prepared and approved by a joint committee comprising representatives of central government, Gisborne District Council, and mana whenua.
    - One mandatory NBA combined plan for Tairāwhiti prepared by a joint committee comprising representatives of the Minister of Conservation, Gisborne District Council and mana whenua.
    - Secretariats to support the functions of the Joint Committees and preparation of planning documents and spatial strategies – the exact role of these entities is still unclear.
    - The Randerson report (an independent review of the resource management system) also proposed establishment of new regional hubs to undertake resource management compliance, monitoring and enforcement. These 'more independent and better resourced' hubs would combine the Compliance, Monitoring and Enforcement (CME) personnel and resources from all local authorities in a region (similar to how the unitary council model works), with support from the Environmental Protection Authority (EPA). Hubs would be structurally separate and independent from local authorities, 'in order to mitigate bias and conflicts of interest'.

When's this happening?

14. MfE have stated the following timeframes:
    - Q3 2022 - Natural and Built Environments Act and Strategic Planning Act introduced to Parliament and passed into law in mid-2023.
    - 2023/2024 – new legislation intended to take effect. Central government officials anticipate a long transition period of up to 10 years.
    - 2023/2024 - A model region (or regions) will be supported to be an early adopter of the new legislation. This facilitated approach will help ensure that the lessons from the development of the first strategies and plans can be efficiently applied to other regions.
15. We are waiting for clarification on whether the Randerson report recommendations regarding the CME hubs have been accepted.

Emergency Management Reform

What's proposed?

16. Emergency Management Reform commenced in August 2018. The Regulatory Framework Review ("Trifecta") Programme consists of:
    - developing a new Emergency Management Bill
    - reviewing the National Civil Defence Emergency Management Plan and accompanying Guide
    - developing a Roadmap for the National Disaster Resilience Strategy.

17. The Emergency Management Bill will enable iwi and Māori to participate in and have decision-making roles across the emergency management system. This includes establishing electoral processes to elect two iwi and Māori representatives to the CDEM Group. This is proposed to be centrally funded. More information on the role of Māori in the proposed changes can be found in the cabinet paper.

When's this happening?

18. The Minister for Emergency Management, Hon Kiri Allan, has indicated the following timeframe:
    - October 2022 - Emergency Management Bill introduced to Parliament and passed into law in mid-2023
    - October 2022 onwards - review the draft National Civil Defence Emergency Management Plan. This will be part of operationalising the proposed changes to the legislation.
    - 2023/2024 - new legislation intended to take effect. The Bill will not be a fundamental transformation of the emergency management system but will address several identified shortcomings to ensure the system is robust and agile to meet current and future needs.

Te Arotake I te Anamata mo Nga Kaunihera: Review into the Future of Local Government

What's proposed?

19. The Future for Local Government Review was established in April 2021 by the Minister of Local Government. Its overall purpose is to consider how New Zealand's system of local democracy and governance will need to evolve over the next 30 years to improve the wellbeing of New Zealanders, and actively embody the Treaty partnership.

When's this happening?

20. The review panel provided an interim report Ārewa ake te Kaupapa to the Minister of Local Government in September 2021, which sets out the broad direction and priority questions for the review. Broader public engagement, alongside research and policy development, is now underway. The panel is working to the following timeframe:
    - Late 2022: Report to the Minister of Local Government with draft findings and recommendations.
    - Late 2022/2023: Public consultation on draft recommendations.
    - April 2023: Final report to the Minister.

Climate Change Response Package

What's proposed?

21. As advised in **report 22-111**, Government is progressing its climate change response. There are three main components:
    - A new Climate Change Adaptation Act (CAA).
    - The National Emission Reduction Plan and emission reduction budgets (in place).
    - A National Adaption Plan.
22. The National emission Reduction Plan contains 130 initiatives where local government and regional councils are mentioned as key stakeholders or partners. The majority of these actions are transport related.

When's this happening?

23. MfE have stated the following timeframes:
    - May 2022 – Emissions reduction Plan released.
    - August 2022 – final National Adaptation plan released.
    - May 2023 – Climate Change Adaptation Act introduced to Parliament and passed into law later that year.

What are the key implications for Council arising from this reform?

The combined impact of these reforms could fundamentally change the form and functions of Councill, ahead of the outcomes of the Future of Local Government programme

24. The Three Waters and Resource Management reforms are well progressed. As noted in Ārewa ake te Kaupapa, these reforms will have implications for many aspects of local authority operations, including leadership and culture, financial viability, information systems, and much more.
25. There is a strong push for centralisation of functions and changes to governance as well as operations and service delivery. The future role of councillors could be very different. We remain unclear regarding the extent to which new entities will be needed to support new governance arrangements (such as the Secretariat supporting NBA and RSS joint committees) and how these will be resourced and funded.
26. We are also hearing repeated messaging regarding greater accountability and reporting to central government on action taken to implement national direction and legislation. There could be additional audit functions arising from the current reform.

Development of strategic direction and content for the 2024 Long Term Plan is subject to significant uncertainty

27. We are continuing to plan for the three waters infrastructure needed to support growth in Tairāwhiti. We know we are already experiencing capacity constraints across some parts of the network and cannot defer this important work until the new entities are up and running and there is more clarity on roles and responsibilities. Planning for development ready land (including infrastructure), currently remains a responsibility of councils under the NPS-Urban development.

Recruitment and retention of staff will continue to be a challenge

28. As previously advised, the significant central government reform programme means that policy and planning staff are at a premium. We also anticipate we will need to increase capacity and capability in some areas (for example, climate change and integrated farm planning) to meet central government expectations.

29. The Three Waters Reform directly impacts several teams across Council. The high level of uncertainty regarding future employment, combined with attractive salary packages offered by other employers, means existing staff are more likely to seek alternative opportunities. It also makes recruiting new staff challenging.

30. The wider impact on teams that support delivery of Three Waters services in the same way (such as environmental monitoring, strategy and planning, drinking water exploration, land surveying, finance, human resources, and information technology) is unknown and still being considered by the National Transitions Unit. Transition of these staff from the organisation to a new Water Service entity could have a significant impact on our ability to deliver key functions and organisational support services.

Expectations and aspirations regarding Te Tiriti and co-governance

31. A common theme throughout the package of reform is a drive to embody Te Tiriti o Waitangi partnership more effectively in governance and service delivery. This is a move supported by both iwi and most local authorities but does raise important considerations regarding the capacity of mana whenua in Tairāwhiti to share in decision-making and the ability of councils to respond and meet expectations.

32. Central government appears to be expecting local government to fund capacity building for te iwi maori in resource management decision-making, which potentially means an additional rating burden on our ratepayers, many of whom are Māori.

It is unclear how well the community understand these reforms and their potential impact

33. Whilst central government has been engaging with stakeholder groups, iwi and some maori groups on various aspects of reform, there has not been a comprehensive community engagement programme. The most high-profile engagement was in relation to the Three Waters reform, and that did little to progress a meaningful engagement.

Our current response

34. We continue to advocate for recognition of our points of difference as a unitary authority, and the need for central government to properly resource capacity and capability building of iwi and hapū to meet the expectations of its reform programmes. Similarly, we are clear in our messaging around affordability and the burden that poorly designed change could place on our ratepayers.

35. Staff are engaging with the work of the National Transitions Unit and intend to develop a draft submission on the two Water Services Bill.

36. Similarly, staff are actively engaging in the Resource Management reform programme, and we are fortunate to have representation on the Regional Sector Advisory Group. We have also presented initial thoughts to MfE officials regarding how a joint committee and secretariat structure could work in Tairāwhiti. We have also made a case for Tairāwhiti being adopted as one of the 'model regions' used for early implementation of the SPA and NBA.

37. Wherever possible (given the current uncertainty), we incorporate the signalled national direction in our policy planning and strategic thinking; however, we will be unable to anticipate and future-proof against all change.

ASSESSMENT of SIGNIFICANCE

Consideration of consistency with and impact on the Regional Land Transport Plan and its implementation
Overall Process: **Low** Significance
This Report: **Low** Significance

Impacts on Council's delivery of its Financial Strategy and Long Term Plan
Overall Process: **High** Significance
This Report: **Low** Significance

Inconsistency with Council's current strategy and policy
Overall Process: **Medium** Significance
This Report: **Low** Significance

The effects on all or a large part of the Gisborne district
Overall Process: **High** Significance
This Report: **Low** Significance

The effects on individuals or specific communities
Overall Process: **High** Significance
This Report: **Low** Significance

The level or history of public interest in the matter or issue
Overall Process: **Medium** Significance
This Report: **Low** Significance

38. As this is an information only report, the decisions or matters in this report are considered to be of **Low** significance in accordance with Council's Significance and Engagement Policy. However, the combined impact of the reform proposals is of high significance.

TANGATA WHENUA/MĀORI ENGAGEMENT

39. Central government has been engaging with maori as part of its various reform programmes. The full extent of engagement is not known; however, we know central government has been engaging with iwi on Resource Management Reform.

COMMUNITY ENGAGEMENT

40. Central government has undertaken public consultation on aspects of its reform programmes. As discussed in paragraph 34, it is not clear how well the community understands the extent of the reform proposed and what it may mean for ratepayers.

CLIMATE CHANGE – Impacts / Implications

41. One of the drivers for reform is the need to develop and integrated and timely national and local climate change response.

CONSIDERATIONS

Financial/Budget

42. There are no financial implications arising from this report. The outcomes of the reforms discussed are likely to have financial implications that will be considered during development of the 2024-2034 Long Term Plan and subsequent long term planning processes.

Legal

43. There are no legal implications rising from this report. There will be legislative change because of the reforms. This will create new legislative requirements and responsibilities for local authorities.

POLICY and PLANNING IMPLICATIONS

44. There are no immediate planning and policy implications arising from this report; however, the outcomes of the various reform programmes will need to be incorporated within our policy and planning documents.

RISKS

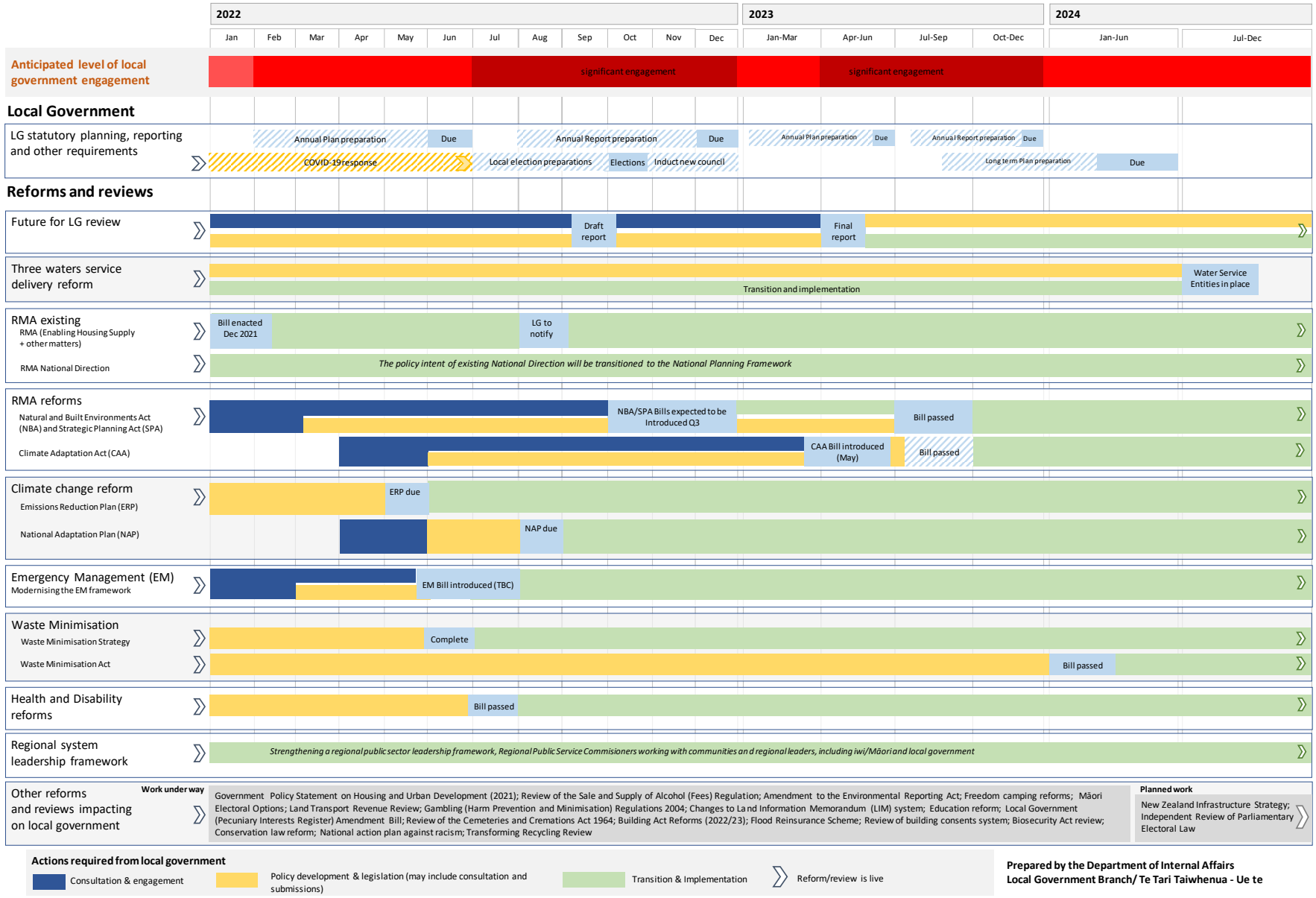
45. The key implications of the current reform programme and our response are discussed in paragraphs 25-38. Councillors may see additional implications or risks that they wish to raise and discuss at the meeting.

ATTACHMENTS

1. Attachment 1 - Central government reforms impacting on local government [**22-123.1** - 1 page]

Central government reforms impacting on local government

Date: 22 March 2022



GISBORNE DISTRICT COUNCIL

22-125

Title:	**22-125 Summary of BERL Report on Impact of PGF on Tairawhiti**
Section:	Finance & Affordability - Performance
Prepared by:	Tim Breese - Planning & Performance Manager Tim Muir – Planning & Performance Advisor
Meeting Date:	Thursday 2 June 2022

Legal: No	Financial: No	Significance: **Low**

Report to SUSTAINABLE TAIRAWHITI Committee for information

PURPOSE

This report provides a summary of the ***Impact of the Provincial Growth Fund on the Gisborne Economy*** report, commissioned by the Gisborne District Council, published in April 2022 by Business and Economic Research Ltd (BERL).

SUMMARY

The Gisborne region was identified as a priority region for investment and support under the Provincial Growth Fund (PGF). The purpose of this funding is to help build a sustainable, inclusive and productive regional economy. Building the capabilities and skills of the people in the region will ensure sustainable growth after the acute effects of the funding end.

In order to determine the social and economic impact of this funding on the Tairāwhiti region, Council commissioned BERL to deliver an assessment report.

As of August 2021, $299 million of PGF funding had been approved as a combination of loans and grants in the Gisborne region and $121 million had been paid out.

The report concludes that the PGF has directly contributed to accelerated growth in Tairāwhiti and had a range of positive economic and social impacts on the region. Upon completion of the PGF, BERL maintains we can expect to see an increase of approximately 1,500 FTE and a $176 million increase in GDP. The report also indicates that the effects of the PGF will be significant but will not, by itself, change the region's economy on a lasting basis without a concerted effort to ensure the benefits are sustained.

The report notes the benefit of the PGF on the resilience of our transport network but does not consider the ongoing costs to maintain the existing Level of Service of the network. The increasing impact of climate change on the network, as evidenced by the number of recent flooding events, will mean Council will need to work closely with central government to ensure adequate funding is available to continue to deliver a resilient network.

To ensure that opportunities for sustaining the benefits of the PGF throughout the region are considered, staff intend to share the BERL Report with Trust Tairāwhiti and the Rau Tipu Rau Ora Leadership Group.

The decisions or matters in this report are considered to be of **Low** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS

That the Sustainable Tairawhiti Committee:

1. Notes the contents of the report.

Authorised by:

Pauline Foreman - Chief Financial Officer

Keywords: Provincial Growth Fund, PGF

BACKGROUND

1. Council commissioned a report from BERL (included as **Attachment 1**) dated April 2022, outlining the impact of the Provincial Growth Fund on the regional economy.
2. As of August 2021, $121 million of the region's $299 million portion of the grant had been spent (40%).
3. There is uncertainty around how the region's economy will be affected when the PGF funding is exhausted. Therefore, a proactive approach to maintaining economic growth (and in turn, social and cultural growth) should be considered.
4. Research into the report was done in three phases:
    - **Phase One:** Macro-economic assessment of the Gisborne economy to identify factors, other than PGF investment, that could explain the region's recent economic improvement.
    - **Phase Two:** Interviews with Project Managers or representatives of organisations that have received, or been approved, either a grant or loan as part of PGF funding to the region.
    - **Phase Three:** Economic impact assessment of the PGF to estimate the direct, indirect and induced effects of the investments to businesses and households in Gisborne and whether, in the absence of the PGF funding, each project would have gone ahead unchanged, or at a later date and/or on a smaller scale.
5. A breakdown of funding provided to each reporting sector is provided in table 3.1 of the **attached** report.

BERL REPORT FINDINGS

Phase One: Macro-economic assessment of the region

6. The PGF was introduced at a time when the economy of Gisborne region was already starting to improve.
7. Economic conditions in Gisborne have been lower than other regions over the last decade and began to improve from 2015/16, eventually outperforming all other regions by 2020.
8. Demand for highly skilled workers due to the PGF has resulted in an influx of people from large New Zealand cities, who were looking for more relaxed lifestyles. This has been further enhanced by:
    - The popularisation of remote work which has allowed young people, who may have been from the region, to return permanently.
    - Increased frequency of flights to Gisborne from larger cities such as Auckland and Wellington, which has allowed people to travel easily for work.
9. A consequence of the increase in the relative attractiveness of the region is the sharp increase in house prices, which have more than tripled between 2015 and 2021.
10. The Gisborne region is currently facing a shortage of labour which has intensified over the past year (2021).

Phase Two: Findings from interviews with funding recipients

11. Without PGF support, employers would have either not been able to offer programmes or would not have had the funds to retain employees who were previously marginally attached to the workforce.
12. Many respondents stated that the PGF will enhance the competitiveness of the Gisborne economy on an ongoing basis.
13. Several respondents stated that PGF funded projects had a profound impact on the ability, especially of young Māori, to participate in the workforce, develop skills and take on important roles within their businesses and organisations.
14. Some respondents reported that they paid their workers a Living Wage, instead of the minimum wage, which would not have been possible without the funding.
15. Respondents noted that the programmes offered had provided significant interventions in the lives of the local population, particularly the youth, many of whom faced significant disruptive challenges at home.
16. Many respondents stated that projects in novel and innovative technologies (e.g. forestry and horticulture sectors) would not have been supported by commercial lenders due to those projects carrying greater financial risk.
17. Many respondents believed that the PGF was more than just a temporary injection of cash into the economy and will have ongoing positive effects on the region's economy.

Phase Three: Economic Impact Assessment of the PGF

18. The Economic Impact Assessment indicates that the effects of PGF will be significant but will not, by itself, change the region's economy on a lasting basis.
19. Investment in local industries has improved business confidence, which in turn has boosted salaries and wages in the region.
20. Most PGF supported projects would not have started without funding; projects that would have started would have been delayed and/or of a smaller scale.
21. On completion of the PGF fund, the region is expected see an increase of approximately 1,500 FTE and a $176 million increase in GDP.
22. BERL estimates that 82% of the PGF funding was additional. This means that $243m of the approved $299m of funding will support investments that would not have otherwise gone ahead.
23. BERL concluded that the Council has been an effective partner in the delivery of the PGF, in particular taking an innovative approach to ensure a steady supply of contractors.
24. The Council's capital expenditure programme has not been displaced by the PGF. This contrasts with most other district councils who have been unable to spend their capital budgets by significant margins.
25. Less experienced businesses have benefited by gaining skills in the tendering process for local government projects which has also given them the opportunity to build the capabilities and skills of their workers. As a result, the quality of bids for local authority projects has improved significantly.

26. The majority of the projects supported by the PGF contributed to the skills and capability development of Māori, particularly those who have been marginally attached to the workforce.

27. The use of local Māori contractors from rural townships such as Ruatōria has meant that Gisborne District Council now has a wider pool of experienced contractors to choose from for future projects.

28. PGF has enabled businesses to upskill employees and support greater development goals. This has had a particularly profound effect on the resilience of the region's construction sector and has provided opportunities to many people that were previously unemployed. As a result, the size and quality of the workforce has been improved.

29. At least 75 percent of the contracts and sub-contracts were awarded to Māori, Pasifika, or owner-operated businesses within the region. 18 contractors were involved in delivering all the PGF-related work and most of these were local firms. National firms involved in PGF projects delivered all work using staff from within the region.

30. Growth in FTEs from 2015 onwards was not a direct result of PGF investment in every industry. Some industries experienced PGF-induced stimulus as a result of a rippling effect through the local economy.

Impact of the PGF on Regional Connectivity

31. Upgrades to state highways were brought forward in time by an average of five years with the help of the PGF funding.

32. The transport link for businesses and households in the region improved significantly providing predictability and reliability of journey times. This will drive investment in horticulture and forestry firms.

33. The significant investment towards local roads has meant that the Council has been able to divert more resources to rural forestry road networks.

34. The Connecting Tairāwhiti – State Highway 35 Resilience Project will contribute to an 18.1 tonne reduction in carbon dioxide emissions, by way of native tree planting and reducing travel times.

35. Improved integrity of some of the local roads has meant that farming communities now have a more reliable connection to marae and larger economic centres.

36. The largest share of PGF funding went towards the building and maintenance of new and existing roads (approximately one third of funds). These were either local roads, state highways, or connecting roads and were managed by either Gisborne District Council ($64m) or Waka Kotahi ($48.5m).

Impact of the PGF on the Regional Environment

37. Several of the projects have contributed significant environmental benefits, by way of ecological restoration work. Projects such as those to support the restoration of local rivers and riverbeds were supported.

38. In addition, it found examples of how the projects were having significant environmental benefits, especially by improving waterways and riparian zones.

39. A water storage project aims to provide reliability of water to surrounding Māori land blocks. Limited access to water has held back horticultural development in the past.

DISCUSSION

40. There are some key findings throughout the BERL report that provide guidance around how to undertake actions to support continued regional development once the PGF is completed, which Council is already aware of and working towards, for example:

    - Ensure that during any tender process, in addition to costs, consideration is given to upskilling and developmental opportunities of the region's workforce.
    - Support the development of policy which allows for the prioritisation of projects that emphasise improving the region's sustainability goals in relation to climate change and the natural environment.

41. BERL also note opportunities that regional leadership could consider actively supporting, either in collaboration with Trust Tairāwhiti or through the Rau Tipu Rau Ora process, for example:

    - Allow for continuation of activities that boost the region's economy, knowing that when the PGF is exhausted, it is predicted that the region's economic growth will slow.
    - Encourage people outside of the region who have remote working capabilities to move to the region, allowing them to participate in the local economy and cultural activities.
    - Resolve the labour shortage by developing tools that encourage skilled workers to move to the region.

      Support regional businesses and organisations to secure lending where specific risks prevent commercial lending activity.

The impact of PGF Investment for Maintaining our Transport Network

42. BERL report benefits of PGF investment in the district's transport network (see paragraphs 31 to 36) but provide no commentary about the cost impacts of maintaining the Levels of Service (LoS) that the PGF funding has enabled.

43. A deep dive on the challenges associated with the districts transport network would be a duplication of the Tairāwhiti Regional Land Transport Plan (RLTP) 2021-2031 and is therefore outside of the scope of the BERL report.

44. Furthermore, the series of heavy rain events in Tairāwhiti (November 2021 through to April 2022) which saw major flood damage across the transport network was not anticipated at the time of the PGF investment into improving resilience.

45. Adapting to the impact of climate change will involve difficult discussions and decisions about top-priority risks and the things we need to change so that our communities can thrive in a climate that continues to change. Decisions about LoS within the transport network will be just as much about this as they will be about cost.

ASSESSMENT of SIGNIFICANCE

46. The decisions or matters in this report are considered to be of **Low** significance in accordance with Council's Significance and Engagement Policy.

TANGATA WHENUA/MĀORI ENGAGEMENT

47. A number of PGF recipients were Māori owned businesses or Trusts. These organisations were interviewed in the delivery of the BERL report. The interviews found several examples of how the projects had already had a profound impact on the ability, especially of young Māori, not only to participate in the workforce, but also to develop their skills and take on important roles in businesses and other organisations.

48. Ensuring the benefits from the PGF are sustained for Tangata Whenua should be an ongoing consideration for regional leadership.

COMMUNITY ENGAGEMENT

49. There has been no engagement with the community in the preparation of this report.

CLIMATE CHANGE – Impacts / Implications

50. This report itself has no specific climate change implications. However, planning for and managing the impacts of climate change will be key to ensuring that the benefits of the PGF can be sustained over the long term.

CONSIDERATIONS

Financial/Budget

51. On completion of the PGF fund, the region is expected see a $176 million increase in GDP.

52. The BERL Report finds that Council's capital expenditure programme has not been displaced by the PGF and that the external funding provided by the PGF has added additional value to the Gisborne economy. This contrasts with most other district councils who have been unable to spend their capital budgets by significant margins.

Legal

53. There are no legal implications in the preparation of this report.

POLICY and PLANNING IMPLICATIONS

54. This report is consistent with Council's policies and plans. In particular:
    a. Tairāwhiti 2050: Spatial Plan, which identifies working with regional partners as key to sustaining the benefits of the funding opportunities over the long term.
    b. Direct alignment with Council's strategic priorities under the 2021 Long Term Plan – Te Taiao, Te Hanganga and Nga Tikanga Awhina Tangata.
    c. Regional Land Transport Plan: Transport Priority 2: Reliability and Resilience.

RISKS

55. The BERL Report finds that the PGF has provided significant economic benefits to the district and will enhance the competitiveness of the Tairāwhiti economy on an ongoing basis.

56. There is a risk that without ongoing consideration from regional leadership to sustain the momentum generated by the PGF, the benefits of the PGF will diminish over time.

NEXT STEPS

Date	Action/Milestone	Comments
June 2022	BERL Report to be shared with Trust Tairāwhiti and Rau Tipu Rau Ora Leadership Group.	

ATTACHMENTS

1. Attachment 1 - BERL Report - Impact of the PGF - April 2022 [**22-125.1** - 43 pages]

The impact of the Provincial Growth Fund on the Gisborne economy

Final report, April 2022

Making sense of the numbers

Authors: Hillmarè Schulze, Mark Cox, and Urvashi Yadav

©BERL Reference No: #6213 April 2022

Executive summary

This report has been prepared by Business and Economic Research Limited (BERL) for Te Kaunihera o Te Tairāwhiti/Gisborne District Council (GDC). It provides an assessment of the contribution the Provincial Growth Fund (PGF) has made, and will continue to make, to the economy of the Gisborne district.

The Gisborne economy was lagging behind for the past ten years, but has picked up in 2019 and outperformed the New Zealand economy in 2020

Based on a range of indicators, the Gisborne economy performed relatively poorly for much of the past decade. Traditionally, the region has had relatively high unemployment, slow population growth, and limited opportunities for youth. This started to change towards 2019, when the performance of key indicators began to broadly match the nation's performance during the year, and bettered it in 2020. The small bursts of growth between 2016 and 2019 were largely a result of the inward migration of people from elsewhere in New Zealand who were seeking a better lifestyle; and partly because the disadvantages of the district's geographical remoteness were being overcome by improved internet and air transport services. There were also spillover effects from the strong performance of the national economy. However, this was not enough to drive significant investment and growth in the region, where economic opportunities were still limited.

The introduction of the PGF provided a strong, much needed boost to employment and growth in some of the traditional sectors, such as forestry and farming. However, equally importantly, the funding also encouraged the establishment, and growth, of organisations in non-traditional industries such as medical research and engineering technologies. The funding allowed various businesses and organisations in the region to collectively boost innovation, employment, economic opportunities, and the resilience of the region.

The PGF has supported projects that generated additional value for the economy and community

The assessment of the contribution of the PGF was designed to identify the extent to which the fund has supported projects that were 'additional'; that is to say projects that would not have happened at all, or would have happened later, or on a smaller scale, in the absence of the funding.

BERL undertook a survey of PGF grant or loan recipients, covering 91 (or 67 percent) or all PGF-supported projects in the district up to mid-2021. The survey found that every supported project was additional to some extent. Most projects would not have gone ahead at all without PGF support, and a few others would probably have gone ahead without the support, but at a later date and/or on a smaller scale.

82 percent ($243 million) of the PGF funding was additional

From the survey, it was possible to estimate that 82 percent of the PGF funding was additional. The total amount of PGF funds approved by mid-2021 was $299 million, which implies that the additional portion was $243 million. In other words, the PGF supported $243 million worth of investments that would not have gone ahead, in the foreseeable future, in its absence. This amount was used as an input into BERL's economic impact model for Gisborne, which provides estimates for the increase the amount of activity in the economy when all the supported projects are completed.

The funding will generate 1,500 FTE jobs in the local economy: equivalent to 6.6 percent of current total employment

Measured in terms of employment, our modelling showed that, allowing for multiplier effects, the increase will be just over 1,500 Full Time Equivalent (FTE) jobs (6.6 percent of all FTEs in the region, as of February 2021), and the increase in GDP will be $176 million (7.6 percent of Gisborne's GDP, as of March 2020). This is a significant outcome for a region like Gisborne, which has had historically experienced slow growth and limited opportunities. It also highlights how PGF investment in a large variety of sectors and industries has enabled the whole region to pull itself out of the low-growth and low-investment cycle. These employment and GDP increases will be spread over the period during which the grants and loans are spent. But, there will be significant long-term effects.

The PGF will enhance the competitiveness of the Gisborne economy on an ongoing basis

The fund was designed to support projects that prioritised the skills and capability development of groups that have traditionally been underserved, particularly Māori, to ultimately, increase social and economic participation, enable equal outcomes, and build resilience. It is critically important to note that the projects supported by the funding will have enduring effects, particularly through the increased capability of, and training provided to, individuals and groups with historically unequal outcomes. The projects have also supported local business' innovation activities, production capacity, and ability to compete domestically and internationally. Many of them will also continue to assist skills development in the workforce. Overall, therefore, the PGF will enhance the competitiveness of the Gisborne economy on an ongoing basis.

The funding has made a transformative contribution to the region, particularly for Māori

The fund has helped diversify the economy of the region, which has traditionally been heavily reliant on the primary sector. The PGF has attracted, and helped retain, a number of high-value organisations to the region, including a medical research centre and two leading wood product manufacturers, that specialise in the research, development, and the manufacture of innovative and high-value wood products. The fund also supported a large number of organisations proposing to use innovative, novel technologies or methods to increase productivity, which would have been considered too risky by commercial lenders.

Gisborne has traditionally had a considerable amount of untapped potential in the workforce, particularly within the Māori population, for whom tailored support has been limited. The need for formal programmes and support for this group was paramount, considering the fact that Gisborne has the highest share of Māori residents in the entire country. Majority of the projects supported by the PGF contributed to the skills and capability development of Māori, particularly those who have been marginally attached to the workforce. Already, a number of examples have emerged of how the projects had a profound impact on the ability, especially of young Māori, not only to participate in the workforce, but also to develop their skills and take on important roles in businesses and other organisations. In most cases, these programmes were significant interventions in the lives of youth (and adults) who had no prior formal work training and often faced serious disruptive challenges in their personal lives. What made these initiatives even more impactful was the emphasis on spiritual and mental support, coupled with skills development. Majority of the organisations providing these programmes noted that without the support from the PGF, they would not have had the resources or capability to provide the training and targeted care they did.

The resilience of the region's infrastructure and natural environment has been enhanced

The PGF provided much needed investment in the local roading network, which is the lifeline for many rural communities and forestry businesses. Prior to this investment, the roading network in the region was incredibly fragile, with many heavily used roads not having been upgraded since the start of the century. The upgrades supported by PGF investments have improved the resilience of local roads, and provided certainty to businesses and rural communities, while also improving connectivity. Moreover, PGF funding has allowed Council's resources to be focussed on rural road networks, particularly those that experience heavy wear and tear from frequent use by trucks. This has also provided reliability for businesses and individuals using these roads. Moreover, contracts for infrastructure projects were awarded based on, not just price, but also the training and development initiatives provided to local staff and contractors.

The fund also contributed to projects aimed at restoring and protecting te taiao/the environment. Unmanaged waste from forestry and logging activities blocked many of the region's waterways, particularly in remote areas. These waterways often support entire communities, providing food, transport, and water. Projects supporting the restoration of these resources ensured not just the protection of the native flora and fauna, but also allowed communities to reconnect with this valuable taonga. Furthermore, employing and training rangatahi who were previously not in employment, education, or training (NEET) has provided a pool of trained workers, contributing to long-term environmental and economic sustainability.

The Council has managed to complete virtually all of its capital programme, it was not displaced by PGF

A subsidiary aim of the research was to consider the role of the Council and its capital spending programme and whether PGF projects have displaced any projects, since majority of them have been construction-based. We conclude that the Council has been an effective partner for Kānoa in a number of ways. The Council took an innovative approach to ensure a steady supply of contractors. It placed a huge focus on upskilling the local construction workforce, by providing them with the opportunity to work with large, national contractors. This helped local firms build the experience and confidence needed to tender for projects independently. According to Council, this has significantly improved the quality of bids and provided a steady supply of contractors in the industry, which is severely constrained. The Council has also maintained a clear line of communication with contractors on upcoming opportunities.

As a result of this, the Council has managed to complete nearly all of its capital programme, and has even managed to reduce its contractor costs. The Council's success in fulfilling its capital programme contrasts with the experience of many district councils elsewhere in New Zealand, which have frequently been unable to spend their capital budgets by a significant margin, and have sometimes failed to attract any tenders for projects notified.

Looking deeper than the numbers

The report also briefly reviews the role of the PGF in the redevelopment of the Gisborne inner harbour. The inner harbour area, which used to be an industrial port, has been revitalised, and it is now likely to attract further investment to make it a visitor attraction and encourage more retail and commercial activity. The area has also been beautified and made safer, providing a leisure space for residents and visitors. Finally, PGF contribution to the project allowed the ageing three waters infrastructure in the area to be upgraded.

The report presents a set of five case studies on organisations that received PGF loans or grants. These case studies illustrate how PGF funding was used by individual organisations to contribute to the social and economic outcomes in the Gisborne region. The case studies present a peek at the stories behind the numbers.

Contents

Tables

Figures

1 Introduction

1.1 Context

Gisborne district (Tairāwhiti) is located on the north-eastern tip of New Zealand. Gisborne City, the biggest population centre, is the first city in the world to see the sunrise. As of the 2021 population projections, the district had a population of 50,243 people, 72.7 percent of whom lived in Gisborne City. Other population centres include Ruatōria, Tolaga Bay, and Te Karaka. The region has the youngest population in the country with 39 percent of the people being under 25 years old. Gisborne also has the largest share of people of Māori ethnicity of any region in the country, nearly 53 percent of the population identifies as Māori. The region has four regional iwi, 70 operational marae, and 16 percent of the population speaks Te Reo. The high proportion of youth and Māori in the region present a large source of untapped potential for the region.

Gisborne has historically grappled with significant social and economic challenges. The median income is 19.5 percent lower than the national median. In March 2021, unemployment in the region was at 5.1 percent, compared to 4.6 percent nationally. The region has higher than average levels of deprivation. The population weighted deprivation index, as of Census 2018, was 7.5, the highest in the country.

In the past, the economy of the region has also lagged behind the national economy, with GDP growth being just 1.9 percent per annum (p.a.) in the 10 years between 2010 and 2020, compared to a GDP growth rate of 2.7 percent per annum nationally. However, there are signs that economic growth in the region has gained momentum. Between 2019 and 2020, GDP grew by two percent in the region compared to 1.5 percent at a national level.

1.2 Purpose of the report

The main aim of this research is to understand the role of the Provincial Growth Fund (PGF), which is administered by Kānoa – Regional Economic Development Unit (Kānoa – RDU) within the Ministry of Business Innovation and Employment (MBIE), in helping grow Gisborne's economy, particularly in the past couple of years. We also set out to understand the wider wellbeing benefits of the investments on businesses, households, and the community. The rest of this section explains the methodology used in more detail.

1.3 Methodology

The project was carried out in three phases, described in more detail below.

Phase one

In the first phase of the project, we conducted a macro-economic assessment of the Gisborne economy. This stage centred on conducting research to identify the various possible factors, other than PGF investment, that could explain the region's recent economic improvement. The 10 biggest industries in 2020 (in terms of full time employment) were identified. We then tracked how employment within each of these industries had changed over the past decade, compared to national employment in the same industries. To provide deeper context to the situation, and to understand the drivers behind the data, we also conducted a series of key informant interviews.

Phase two

In the second phase, we conducted a series of interviews with project managers or representatives of organisations that have received, or been approved, either a grant or loan as part of PGF funding to the Gisborne region. These interviews allowed us to understand the economic and wellbeing benefits of the PGF funding on the organisations as well as the wider community. The interviews also allowed us to estimate the additionality of each project to calculate the economic benefits in phase three.

The interviews were designed to provide us with a full picture of the wider benefits of the funding on the region, i.e., how the investments enhanced the capability and capacity of the Gisborne economy, by investing heavily in the youth, particularly Māori youth, in the region. The interviews also yielded information on the social, cultural, and environmental benefits of the funding.

Phase three

In the final phase, the aim was to understand the additional value of the PGF funding to the Gisborne economy. To understand the economic effects of the spending, we conducted an economic impact assessment. The first step was to calculate the 'additionality' of each investment/project, where additionality is a measure of the extent to which a project would have gone ahead unchanged without the PGF support. In brief, for our calculations, we considered whether, in the absence of the PGF funding, each project would have gone ahead unchanged, or at a later date and/or at a smaller scale. This information was obtained from the interviews in phase three. The funding from the PGF was distributed to organisations as either loans or grants. We categorised the interviews along these two types of funding and scaled up the average estimated additionality in each group to the entire fund. We conducted the assessments in two parts:

- An economic and wellbeing assessment of PGF and Gisborne District Council (GDC) projects on the Gisborne district as a whole
- Economic and wellbeing assessments of projects focusing on specific sub-regions.

In order to examine the sub-regional impacts, we created a custom grouping using Statistical Area two (SA2) boundaries as defined by Statistics New Zealand. A map of the custom sub-regions can be found in Appendix A.

As a final step, we created an Excel-based economic impact calculator to estimate the direct, indirect, and induced effects of the investments to businesses and households in Gisborne. This model used Gisborne region's multipliers, created using Statistics New Zealand's input-output tables. Multipliers allow us to identify the direct, indirect and induced effects in terms of expenditure, gross domestic product (GDP), and full-time equivalent (FTE) employment.

From the interviews, we learned that the PGF was more than just a temporary injection of cash into the economy. Therefore, we also assessed, in qualitative terms, the long-term impact the funding will likely have in the region.

2 Background

2.1 The Gisborne economy

As at March 2020, the GDP per capita of the Gisborne region was lower than the national average at $45,531, compared to $63,556 for New Zealand as a whole. Historically, the region has had higher than average levels of deprivation. The population weighted deprivation index, as of Census 2018, was 7.5, the highest of any region in the country.

Gisborne district has a small economy, which contributed 0.7 percent to New Zealand's total GDP in the year to March 2020. Some of the biggest industries in Gisborne (in terms of full time equivalent (FTE) employment) are livestock farming, food product manufacturing, construction services, and agricultural support services. The forestry, fishing, and mining industries are also significant contributors to Gisborne's GDP. Table 2.1 shows the top 10 industries that employed the largest number of people (FTE employment) in 2020. Employment in the region was heavily concentrated in the primary sector and related services. Some of industries that employed a large number of people were the livestock farming, food product manufacturing, and agricultural support services industries.

Table 2.1 Top industries in Gisborne by FTEs, 2020

Industry	2020 FTEs
Preschool and School Education	1,577
Livestock farming	1,526
Agriculture support services	1,408
Food product manufacturing	1,250
Construction Services	1,108
Professional, Scientific and Technical Services	1,040
Hospitals	1,034
Horticulture	915
Food and Beverage Services	788
Other Store-Based Retailing	784

Source: Statistics New Zealand, BERL analysis

Over the past decade or so, Gisborne's economy experienced slow annual GDP and employment growth, relative to New Zealand (Table 2.2). Probably linked to slow economic growth, the district's population growth between 2010 and 2020 was just 0.8 percent per annum, which was half the national growth rate.

However, in 2019, the Gisborne economy performed better than the national economy in several key respects. While the economy had experienced small bursts of growth over the previous four to five years, the 2019-2020 year shows how resilient the region was, particularly in the face of the economic effects of the COVID-19 pandemic. GDP growth in Gisborne between 2019 and 2020 outpaced national GDP growth, and employment growth was 1.1 percentage points higher than at the national level (Table 2.3). This was during a time when most of New Zealand (and the world) was grappling with the effects of the economic downturn that followed the COVID-19 outbreak. GDP growth in the region stayed steady during this period and retail activity, employment growth, construction activity, and house price growth also remained strong.[1] Part of the reason for this could be the heavy reliance of the Gisborne economy on the primary sector, which was not as heavily impacted by COVID-19 as other industries, with primary sector exports performing well

[1] https://www.asb.co.nz/content/dam/asb/documents/reports/asb-regional-economic-scoreboard/scoreboard-q4-2020.pdf

during the pandemic. Forestry was an exception, as exports dropped significantly in the months following global lockdowns.

However, it seems unlikely that export performance alone can explain the sharp change in the fortunes of the Gisborne economy. Other factors are likely to have been at play.

Table 2.2 Annual growth of key performance indicators, 2010 – 2020

Key Performance Indicators	%pa for 2010 - 2020	
	Gisborne	New Zealand
Resident population growth	0.8	1.6
GDP growth	1.9	2.7
GDP per capita growth	1.1	1.1
Employment growth	1.2	2.3
Labour productivity growth	0.7	0.4
Business units growth	0.2	1.5
Business size growth	0.8	2

Source: Statistics New Zealand, BERL analysis

Table 2.3 Annual growth of key performance indicators, 2019 – 2020

Key Performance Indicators	%pa for 2020 year	
	Gisborne	New Zealand
Resident population growth	1.2	2.1
GDP growth	2	1.5
GDP per capita growth	0.8	-0.6
Employment growth	2.1	1
Labour productivity growth	0	0.4
Business units growth	2.6	1.9
Business size growth	-0.5	-0.9

Source: Statistics New Zealand, BERL analysis

2.2 Evidence of a turning point

In this section, we show how some of the top industries in Gisborne (in terms of FTEs) performed over the ten years between 2010 and 2020. We present this data in the context of the industry's performance at the national level. The purpose of this exercise is to illustrate the fact that the Gisborne economy has been heating up over the last few years and employment is growing at a faster pace in some industries than at the national level.

Between 2019 and 2020, the industries that saw the largest increases in employment included food product manufacturing, fruit and vegetable processing, and horticulture (Table 2.4). Interestingly, employment in industries such as building construction, meat and meat product manufacturing, and livestock farming had been falling (on average) between 2010 and 2019. However, these industries saw strong employment growth in the 2020 year.

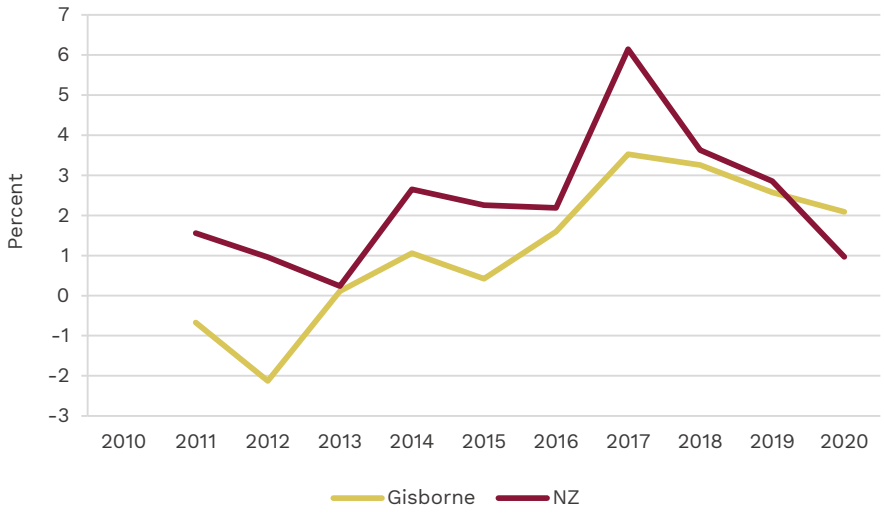
Table 2.4 Fastest growing industries in Gisborne, 2019-2020, by FTE's

Industry	FTEs 2010	2019	2020	Absolute change (2019-20)	% change (2010-19)	% change 2019-20
Food product manufacturing	899	1047	1250	203	16.6	19.3
Fruit and vegetable processing	329	481	594	113	45.9	23.6
Horticulture	1215	810	915	105	-33.3	13.0
Livestock farming	1660	1426	1526	100	-14.1	7.0
Medical and Other Health Care Services	583	585	670	85	0.4	14.5
Food and Beverage Services	694	718	788	70	3.5	9.7
Building Construction	422	396	447	51	-6.3	12.9
Meat and meat product manufacturing	329	299	350	51	-9.2	17.0
Other Store-Based Retailing	796	736	784	49	-7.5	6.6
Food Retailing	518	557	599	42	7.6	7.5

Source: Statistics New Zealand, BERL analysis

Figure 2.1 shows a comparison of annual growth in total employment in Gisborne and New Zealand. Until 2019, national employment grew at a faster rate every year than employment growth in Gisborne. In 2020, employment growth in New Zealand slowed down to just one percent from 2.9 percent in the year before. Although employment growth did slow down in the 2020 year in Gisborne as well, it wasn't as large as it was at the national level. In the 2020 year, the number of people employed in the region grew by 2.1 percent. Since 2012, employment growth in Gisborne has been steadily increasing, but, was lower than the national growth.

Figure 2.1 Total employment growth, annual



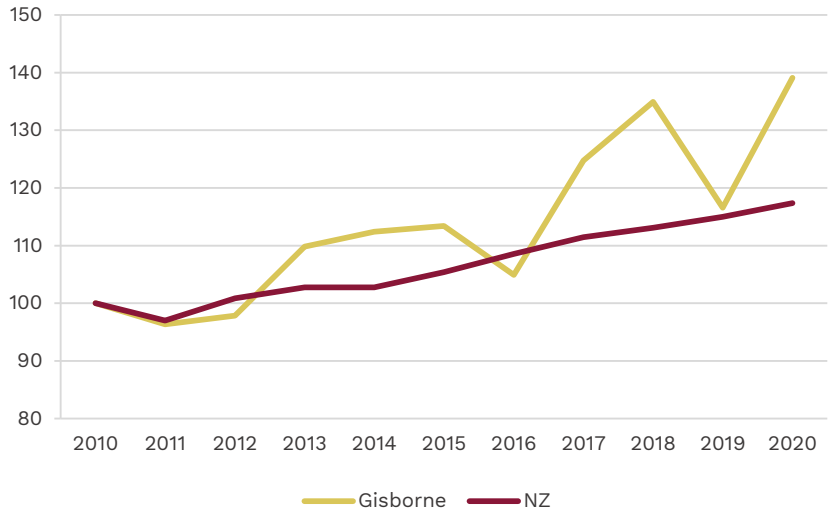
We will now look at each of the top industries shown in Table 2.4 to understand how employment in these industries has changed over the past decade. We will also compare the trends in employment in the same industries at the national level. This will also allow us to see when the growth in employment began.

To compare employment in New Zealand and Gisborne, we show employment as an index. The amount of employment in each industry in both the locations in 2010 has been set to an index level

of 100. The movements over the decade show employment has changed relative to its level in 2010.

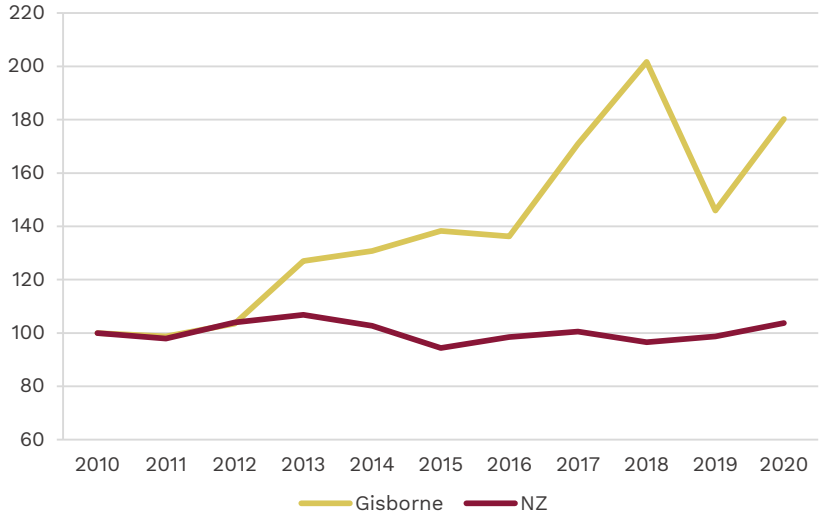
The food product manufacturing industry was one of the largest employers in the Gisborne region, employing 1,250 FTE's in 2020. Companies in this industry transform livestock and agricultural/horticultural products into products for intermediate or final consumption. From Figure 2.2, we can see that employment levels in this industry in Gisborne have been relatively volatile compared to New Zealand, with periods of shrinking employment and sudden growth. Employment in food product manufacturing picked up speed in 2017 and after a fall in 2019, has recovered. Despite the volatility, between 2010 and 2020, employment in this industry grew by 39 percent, compared to 17 percent at the national level. Between 2019 and 2020, employment increased by 19.3 percent in Gisborne.

Figure 2.2 Index of employment in the food product manufacturing industry, 2010=100



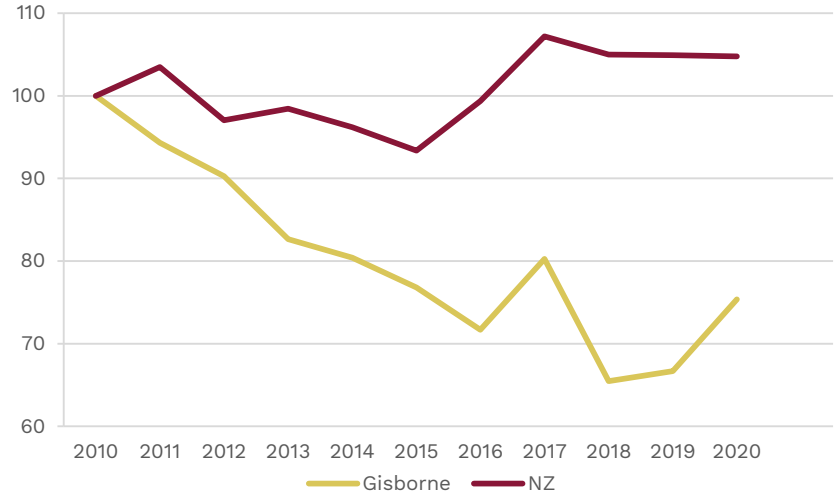
From Figure 2.3, we can see that until 2012, employment trends in the fruit and vegetable processing industry in Gisborne and New Zealand overall were fairly similar. After this period, employment in this industry in Gisborne increased by over 50 percent overall, while in New Zealand, the number stayed broadly stable. The businesses in this industry are largely involved in activities such as canning, preserving, and freezing vegetable products, along with manufacturing other vegetable products such as salads, soups, and sauces. As was the case in the food product manufacturing industry (Figure 2.2), employment in the fruit and vegetable processing industry saw a sudden boost in 2017, and again in 2020, after a drop in 2019. Over the entire 10 year period, employment in the fruit and vegetable processing industry grew by 80 percent. Comparatively, employment in this industry at the national level grew by four percent during this period.

Figure 2.3 Index of employment in the fruit and vegetable processing industry, 2010=100



Despite the horticulture industry being one of the largest employers in the Gisborne region, until about 2017, employment was declining compared to 2010 levels (Figure 2.4). This was also true at the national level until 2016. Post this period, employment in the horticulture industry saw a growth spurt in New Zealand. There was a small boost to employment in this industry in Gisborne in 2016 and again in 2020, after a large drop in the 2018 year. Between 2010 and 2020, employment in horticulture fell by 24.7 percent in Gisborne, this is surprising since horticulture if often thought of as one of the most important sectors in the region.

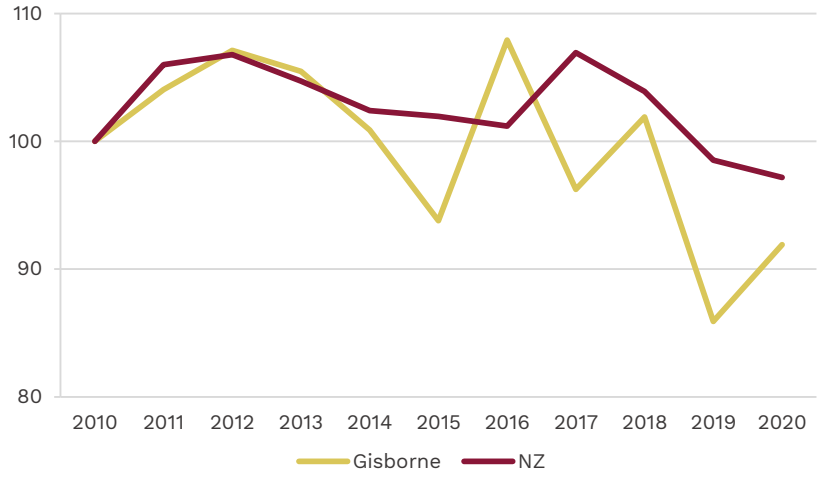
Figure 2.4 Index of employment in the horticulture industry, 2010=100



In 2020, the livestock farming industry was the second largest employer in the Gisborne region, employing over 1,500 people (Table 2.1). This is one of the largest industries at a national level as well, using 45 percent of New Zealand's total agricultural land and contributing significantly to exports. Since 2015, employment in this industry has been volatile with sudden increases and decreases from one year to the next (Figure 2.5). However, on average, employment in the

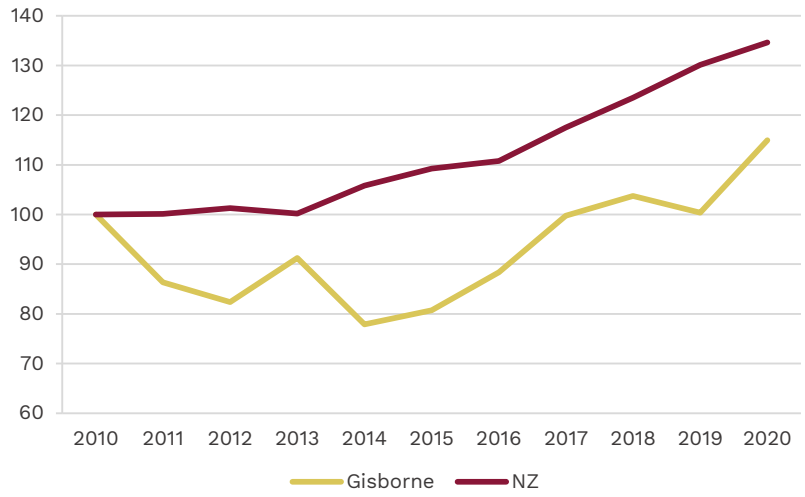
livestock farming industry in Gisborne has been lower than the level in 2010 and lower than the level in New Zealand, since 2014. There is evidence of an increase in the 2020 year, but, on the basis of past experience, this could be temporary.

Figure 2.5 Index of employment in livestock farming, 2010=100



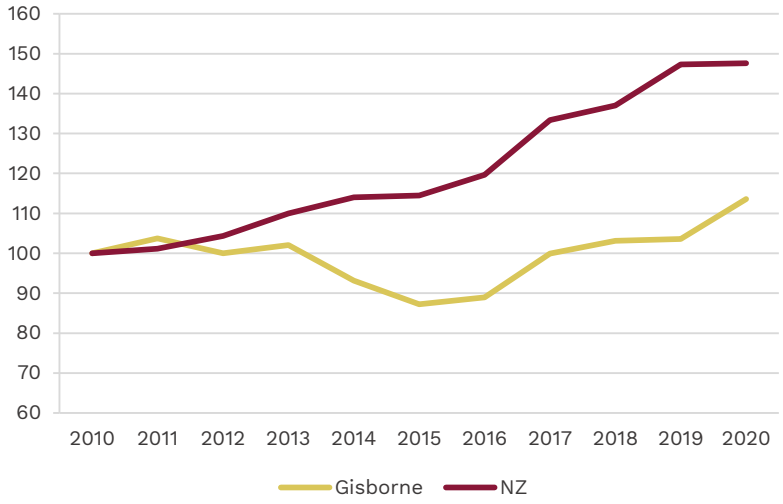
The medical and other care services industry includes services such as general practitioners, specialised medical services, and pathology and diagnostic imaging services. While the number of FTEs in this industry is increasing relative to 2010 numbers in New Zealand (Figure 2.6), the trend was initially declining in the Gisborne region. However, beginning in 2015 to 2016, the number of people in this industry has been steadily increasing, recovering to 2010 levels during the 2020 year. Employment in this industry is closely linked to the population growth rate and the age of the population. Since the average age of Gisborne's population is less than the national average, it is not surprising that employment in this industry has been lagging compared to New Zealand. However, the recent increases could be linked to the sudden growth in the number of people moving to Gisborne.

Figure 2.6 Index of employment in the medical and other health care services industry, 2010=100



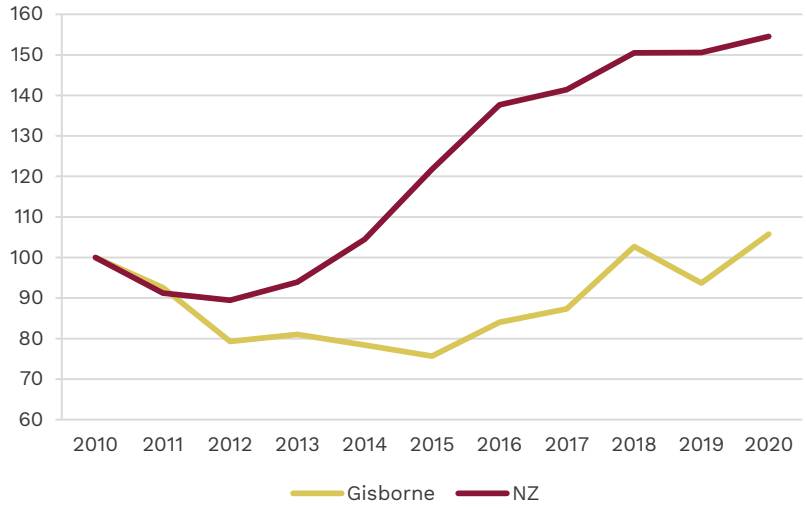
The food and beverage services industry includes cafes, restaurants, bars, and clubs. In New Zealand, this industry has experienced a steady growth in employment over the past decade (Figure 2.7). After a dip in employment between 2013 and 2017, there has been some growth in this industry, notably, in the 2020 year. This was during a time when employment at the national level had stagnated.

Figure 2.7 Index of employment in the food and beverage services industry, 2010=100



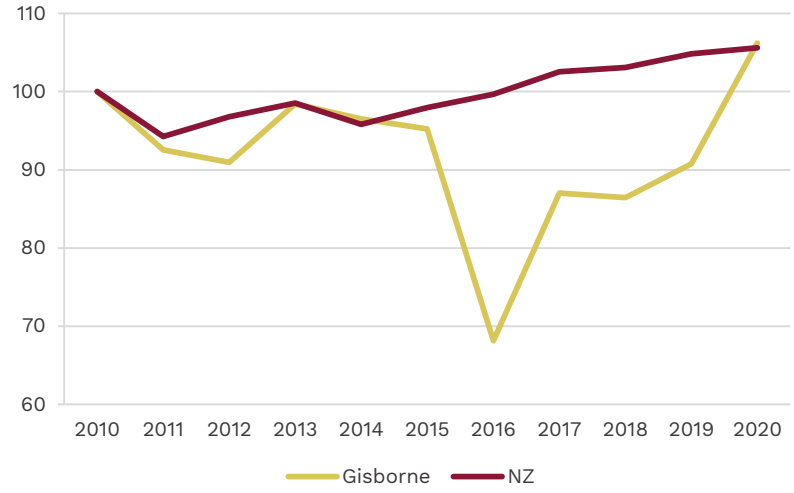
From Figure 2.8 we can observe that employment in the building and construction industry fell significantly between 2010 and 2015, while the industry started to boom at national level. There was some growth in this industry in the Gisborne region post 2016, but it was not fast enough to surpass 2010 employment levels. However, there was a boost to building and construction employment in the 2020 year. The PGF investments into roads may have contributed to this.

Figure 2.8 Index of employment in the building construction industry, 2010=100



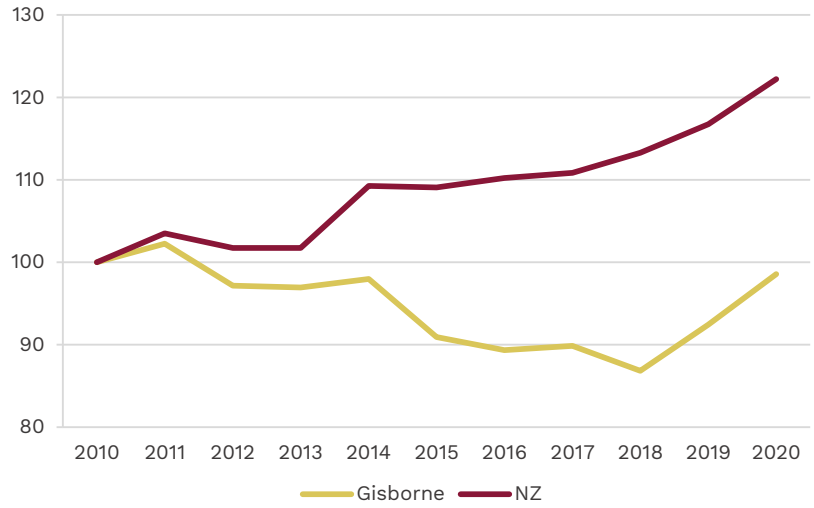
Employment in the meat and meat product manufacturing industry has not seen any significant change over the last decade at a national level (Figure 2.9). In Gisborne, there was a sudden and sharp decline in the number of people working in this industry in the 2016 year, possibly a result of one or more employers in this industry closing their doors during this period. Since then, employment has recovered and has surpassed 2010 levels., with particularly strong growth since 2018.

Figure 2.9 Index of employment in the meat and meat product manufacturing industry, 2010=100



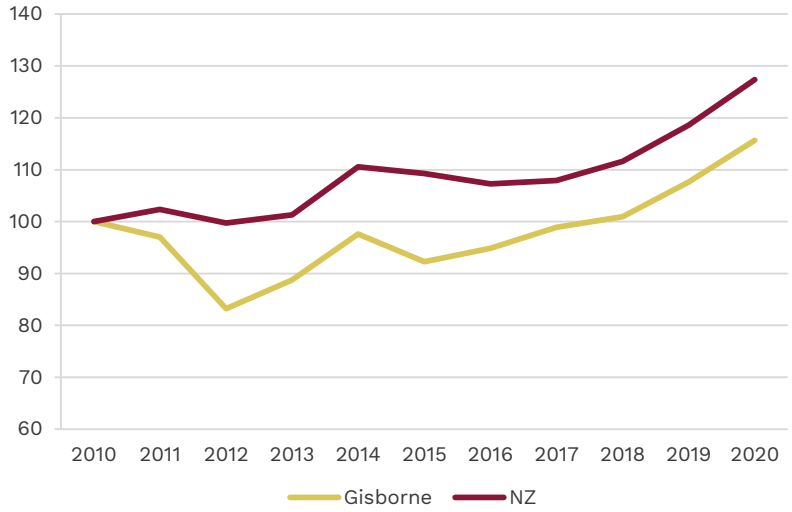
In 2020, 784 people were employed in the other store-based retailing industry in Gisborne (Figure 2.10). This industry includes non-food-based retailing such as furniture, clothing, and electrical goods. Between 2010 and 2018, employment in this industry had been declining steadily in the region, while it was increasing nationally. Starting in 2018, the number of people working in other store-based retailing has increased sharply but is still below 2010 levels.

Figure 2.10 Index of employment in other store-based retailing, 2010=100



The food retailing industry includes employees of supermarkets, grocery stores, and specialised food retailers. The employment trends for this industry in Gisborne and New Zealand have been surprisingly similar over the past decade (Figure 2.11), apart from between 2010 and 2012, when employment in the industry in Gisborne was in decline. There has been a steady upwards trend since 2015 in both the Gisborne and New Zealand.

Figure 2.11 Index of employment in the food retailing industry, 2010=100



The analysis from the ten industries above showed that in most of these industries, employment was falling between 2010 and 2015/2016. However, in 2019 overall employment growth in Gisborne was as fast as it was nationally, and in 2020 it was faster. This reversal might have been in part due to the PGF, which may have provided additional support and momentum to an economy that was already on the mend. It should be noted that the growth in FTEs during this period was not a direct result of PGF investment in every industry. However, industries that did not directly receive funding are likely to have benefited indirectly as a result of the PGF-induced stimulus rippling through the economy.

We detail how the PGF supported local employment and the development of long-term skills and capabilities in the Gisborne region in section 3 and onwards.

2.3 Insights from informed observers

To gain the perspective of industry insiders and informed observers in the Gisborne region, we conducted a series of key informant interviews. These included a local real estate agent, a valuation specialist, a recruitment consultant, and local business owners. These interviews allowed us to understand the story behind the trends we observed in the data presented in the preceding sections.

Collectively, the key informants were of the opinion that the economy began to turn a corner about four to five years ago. This is in line with the picture painted by the data in the previous section where we saw the indexes of employment in the main industries often falling until about 2017 or 2018. However, this growth was uneven and not enough to boost employment and GDP significantly. Post this, growth in most industries picked up and employment growth has been substantial since 2018 or 2019.

One respondent pointed out that, while other regions in New Zealand had experienced an economic boom already, Gisborne was just beginning to experience a change in its fortunes. This indicates that there is a significant amount of latent potential, yet to be realised within the region. The increasing number of economic opportunities, coupled with a better quality of life,[2] has meant that Gisborne has seen a sudden inflow of people from abroad, as well as from other parts of New Zealand.

Many of the key informants noted that there had been an increase in the demand for people in highly-skilled roles as a result of increased investments in the wood processing industry, the construction sector, and even medical research. Moreover, wages were on the rise as more high-skilled positions were created and as more employers began to pay a living wage. As a consequence of this, there was a sudden influx of people, largely from other big New Zealand cities, who were in their forties and fifties. This group also included people who were looking for a more relaxed and slow-paced lifestyle that Gisborne could offer.

A number of factors have contributed in a large way towards this trend. The first one is the increased frequency of flights to Gisborne from larger cities such as Auckland and Wellington, which has allowed people to travel easily for work, if needed. The second factor that has encouraged people to relocate to Gisborne has been the popularisation of remote work. An increasingly large number of people are now able to work from home some, or even all, days a week. This has meant that a large number of young people, who may originally have been from the region, are now returning permanently. Another factor driving migration to the region has been the lower cost of living, compared to other major cities in the country. House prices, rents and the price of health care are comparatively lower in Gisborne. Moreover, the recent improvement in public amenities, such as the redevelopment of the inner harbour, has made the region more attractive than in the past.

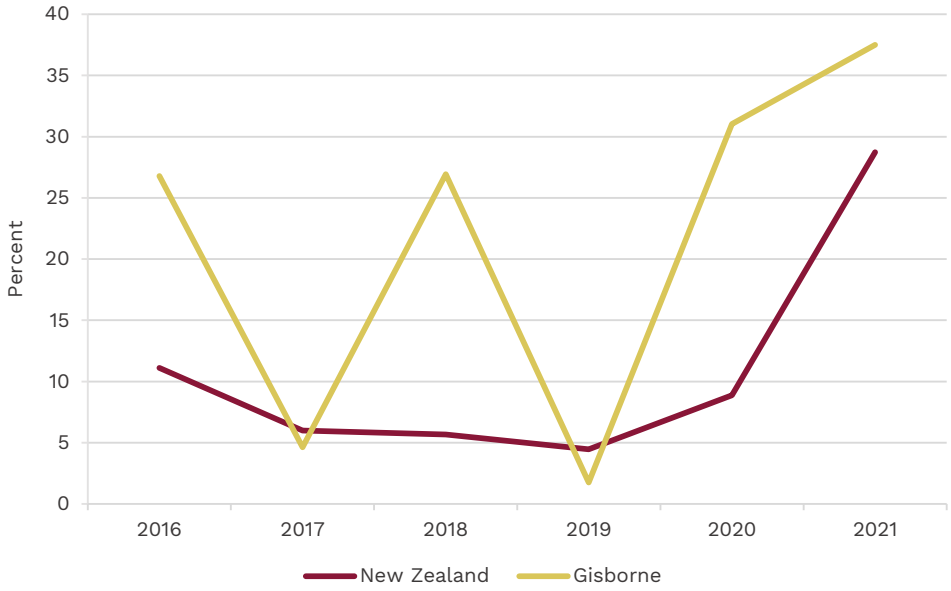
One observer noted that the increased spending by the government (both central and local) on roads and other infrastructure has been beneficial for the economy in terms of attracting talent and building up the skills of the local population, particularly in providing training and qualifications, along with tailored support, to Māori youth. The investment in local businesses in industries such

[2] quality of life here refers to differences in lifestyle and the cost of living, not health outcomes.

as horticulture, forestry, and wood processing has improved business confidence and productivity, which, in turn, has boosted salaries and wages in the region. The Gisborne region, just as New Zealand overall, has been facing a shortage of labour, which has intensified over the past year.

A consequence of the increase in the relative attractiveness of the Gisborne region has been a sharp increase in house prices. Figure 2.12 shows how house prices have increased in Gisborne and New Zealand over the past five years. Between 2016 and 2020, house prices were growing by less than 10 percent per year, nationally. In Gisborne, median house prices were growing at nearly 20 percent annually during the same time period. In the year to June 2021, the median house price in Gisborne went up by a staggering 37.5 percent. Since 2015 median house prices in the region have more than tripled, increasing from $196,000 in June 2015 to $605,000 in June 2021, indicating a growing demand for housing in the region over this period.

Figure 2.12 Median house price growth, June years



Source: REINZ

3 Measurable economic impacts of PGF investments

The PGF has the potential to impact the Gisborne economy in two ways. First, the spending of PGF grants and loans will stimulate the economy fiscally. The spending will be associated with increases in employment and GDP, and these increases will be multiplied as the effects ripple throughout the economy. This type of impact can be estimated relatively easily, and this is what we do in this section.

Secondly, the projects on which the grants and loans are spent will tend to enhance the growth potential of the economy, by increasing productive capacity, innovation, and workforce capabilities, amongst other things. These impacts cannot measured, as such, although they can be highlighted, described and gauged. We do this in section 4.

In measuring the economic impacts of the PGF, it is important to exclude any impacts that would have occurred anyway, in the absence of the fund. For example, it would not be right to measure the impacts of a project supported by the PGF that would have gone ahead regardless. These projects would be regarded as non-additional.

However, it is also important to acknowledge that, while some projects might have gone ahead regardless, they could have gone ahead later and/or on a smaller scale without PGF support. These projects would be regarded as partly-additional, and their additional component would be factored in when estimating their economic impact.

Estimation of the additionality of the PGF funding was based on interviews with project managers, owners, and other individuals associated with each project who had extensive knowledge on how the spending was utilised within their organisation. Put simply, we asked the interviewees if their project would have gone ahead anyway without PGF support and, if so, whether the support brought forward their project in time and/or increased its scale. Once we had an estimate of the additionality of projects, grouped by loans and grants, we applied it to the entire fund in the region ($299 million). The second part of this stage was to conduct an economic impact analysis.

3.1 The Provincial Growth Fund in Gisborne

The Provincial Growth Fund (PGF) is administered by Kānoa – Regional Economic Development and Investment Unit (previously known as the Provincial Development Unit), which is a part of the Ministry of Business, Innovation and Employment (MBIE). The Government earmarked $3 billion to be distributed over a period of three years to invest in the development of those regions that struggle with issues such as high unemployment, low productivity, and slow economic growth. The goal of this funding has been to help build a sustainable, inclusive, and productive regional economy. There was a large focus on building the capabilities and skills of the people in these regional economies to ensure sustainable growth after the immediate effects of the funding begin to wear off.

The Gisborne region was identified as a priority region for investment and support under the PGF. As of August 2021, $299 million of PGF finding had been approved as a combination of loans and grants in the Gisborne region. Of the $299 million approved for the Gisborne region, $121 million had been paid out as of August 2021.

Table 3.1 shows the amount of grant/loan funding approved per reporting sector. The largest share went towards the building and maintenance of new and existing roads. These were either local roads, state highways, or connecting roads. These projects were managed by either the Council or

Waka Kotahi NZ Transport Agency (NZTA). The second biggest share of funding went towards projects that promoted the development of skills and training for the local population. These included programmes taken by individual organisations to upskill existing workers or provide training and skills development to workers who may have previously been marginally attached to the workforce. A significant amount of investment also went towards progressing the wood processing industry in Gisborne. PGF funding in this area enabled the recipients to develop innovative products and technologies, train people in this area, and form networks with overseas buyers. There was also a significant amount of investment in the primary sector.

Table 3.1 PGF funding by reporting sector

Reporting sector	Approved ($ millions)
Road	115.06
Training Skills / Employment	51.43
Wood Processing	42.07
Agriculture / Horticulture	24.45
Forestry	24.06
Regional Projects	16.1
Water Storage / Management	7.04
Other	6
Tourism	5.74
Airports	5.7
ICT & Digital Connectivity	2.35
Waste / Recycling	0.03

Source: Kānoa

3.2 Additionality of PGF investments

Interviews

We interviewed representatives from 15 recipient organisations of PGF grants or loans. This group accounted for 66 percent of all projects supported by the PGF, and 67 percent of the total funding.

More detail on the organisations interviewed and coverage is provided in Table 3.2.[3] Organisations such as the Council, NZTA, and Ngāti Porou had a large proportion of the approved funding allocated to them. It should be noted that while we were not able to interview representatives from NZTA, we have treated the NZTA roading projects in the same way as Council roading projects, i.e., we have assumed that the upgrades to state highways were brought forward in time by five years, on average, with the help of the PGF funding. This is because, while the NZTA projects, such as building the resilience of State Highway 35 and State Highway 2, would have eventually taken place, they would not have happened in the short-term without PGF investment.

As noted earlier, one purpose of the interviews was to obtain an estimate of the degree of additionality of each project. Since we only had very limited details on each recipient, we first asked the respondents to describe their project and what activities the funding was, or would be, used for. Next, to determine the value added by the PGF, we asked the participants whether the project would have gone ahead in the absence of the PGF. If they believed that their project would have gone ahead, we asked whether it would have been smaller in scale, or be completed at a later

[3] The complete list of PGF grant and loan recipients can be found on the Kānoa website

date. We then used this information to adjust the total value of the spending to determine how much of it was additional. More details on this are provided in the next section.

The PGF investment in the region had a wide range of impacts including social, cultural, and environmental benefits for business that received the funding, other businesses, the wider community, and households. We asked interview participants to describe some of these benefits perceived by the recipients. These benefits are illustrated qualitatively in Section 4.

Based on interviewing recipients of grants and loans from the PGF, we determined the degree to which the funding was additional. Based on the additionality of this sample of projects, we scaled up the proportion to the total PGF funding of $299 million in the Gisborne region. Our sample included projects from nearly every reporting sector represented in the PGF database and is, thus, representative of the entire fund for the region.

PGF coverage

Table 3.2 provides some detail on the interviews we conducted in phase two of the project, compared to the total PGF investment in the Gisborne region. 182 different PGF grants or loans were made to at least 72 individual organisations. The data is all in the public domain and it is categorised based on whether the recipient organisation received a loan or a grant.

Table 3.2 Sample of PGF funding recipients

Type of funding	Organisation	Reporting sector	Approved funding ($)	Percent of PGF total
Grants	Gisborne District Council (roads)	Roads	64,205,000	28.49
	Gisborne District Council (inner harbour project)	Roads	2,300,000	1.02
	Mātai Medical Research Institute	Other	6,000,000	2.66
	TBD Limited (Four Seasons Packhouse)	Training skills / employment	940,228	0.42
	Te Wiwi Nati Trust	Regional projects	2,500,000	1.11
	Waihorokaka Limited	ICT and Digital connectivity	400,000	0.18
	Tairawhiti Technology Trust	ICT and Digital connectivity	400,000	0.18
	Te Aitanga-a-Hauiti Centre of Excellence Trust	Training skills / employment	550,000	0.24
	Pultron Composites Limited	Training skills / employment	612,994	0.27
	Pahiitaua Incorporated	Regional projects	1,378,280	0.61
	Waka Kotahi NZTA	Roads	48,550,000	21.54
	Ngati Porou	Training skills / employment	23,189,031	10.29
	Grants total		151,025,533	67.01
	PGF total		225,365,781	100.00
Loans	LeaderBrand	Agriculture / horticulture	15,000,000	20.54
	Turanga Waimaori	Water storage / management	6,500,000	8.90
	Wood Engineering Technology Limited	Wood processing	21,600,000	29.57
	Pultron Composites Limited	Training skills / employment	5,364,000	7.34
	Loans total		48,464,000	66.36
	PGF total		73,034,814	100.00
Grants plus loans	Grants and loans total interviewed		199,489,533	66.85
	PGF total		298,400,595	100.00

The PGF had projects covering 12 reporting sectors. In our interviews, we were able to talk to a sample of recipients in eight of these reporting sectors. The projects in the remaining four reporting sectors were generally small.

3.3 Economic impact assessment

Additionality

None of the recipients we interviewed said that their project would have gone ahead anyway, and at the same time and/or on the same scale, in the absence of the PGF funding, i.e., none of the projects were zero percent additional. This was reassuring, in that it showed that PGF funding was not being given to support projects that would have gone ahead anyway.

Nine of the 15 grant or loan recipients[4] in our sample indicted that their projects were 100 percent additional. This means that they would not have gone ahead at all, not even later or on a smaller scale, in the absence of the investment from the PGF. Many of these recipients were smaller organisations providing skills and education training programmes or other regional projects.

In the cases where the respondents indicated that their project would have gone ahead anyway, but at a later date or on a smaller scale, we adjusted for this in calculating the additional value of the funding. For example, if the recipient of a $1 million grant said that their project would have been 90 percent smaller in the absence of the fund, the additional value from the PGF grant would be $900,000. In the case of respondents who said that their projects would have gone ahead at the same scale, but at a later time, we discounted the value of the funding received using a discount rate of five percent for every year the PGF support brought the project forward in time.[5]

Based on this calculation approach, we found that overall, the additionality of the projects, as indicated by the recipients was very high, at over 82 percent (Table 3.3). Grants had a slightly higher additionality than loans. The high rate of additionality is not unexpected since projects that would have gone ahead in the absence of the funding would have been identified in the selection phase of the PGF and would have had a low chance of being approved.

Moreover, from the interviews, we gathered that the PGF invested in new and innovative projects (e.g., the use of novel technologies not used before in the region in the wood processing and horticulture sectors) that would otherwise have been considered too risky by commercial lenders. The PGF also placed high value on the training and development of skills and capabilities of the workforce within the region, particularly Māori youth. Many interviewees pointed out that in the absence of PGF support, they would either not have been able to offer these programmes or would not have had the funds to retain employees who were previously marginally attached to the workforce, as they required significantly more resources. In addition, for infrastructure projects such as roading, contracts were provided based not just on price, but the training and upskilling of local staff and contractors was also heavily encouraged. Therefore, the nature and purpose of the funding meant that the projects funded were likely to be highly additional.

Table 3.3 Additionality of PGF projects by funding type

Type of funding	Approved funding	Additionality	Percent
Loans	48,464,000	39,628,453	81.77
Grants	151,025,533	124,027,117	82.12
Total	199,489,533	163,655,570	82.04

Once we calculated the additionality of each individual project in Table 3.2, we applied the average additionality, by funding type, to other grants and loans from the PGF. For the projects covered by our interviews, we applied their actual additionality.

The estimated amount of additional PGF funding was then used as the key input into the model we used to measure the fund's economic impact on the Gisborne economy.

[4] Some recipients had both grant and loan funding.
[5] This is the default rate set out by the New Zealand Treasury for most types of projects.

Economic impacts

Measures of economic activity

The three measures of economic activity used were:

1) Expenditure: The value of production, which is built up through the national accounts as a measure of gross sales or turnover. This is expressed in $ millions

2) GDP: The increase in output generated along the production chain, which when aggregated, totals gross domestic product, or GDP. This is the sum of:

- Compensation of employees (i.e. salaries and wages)
- Income from self-employment
- Depreciation
- Profits
- Indirect taxes less subsidies

Note that expenditure is made up of the above (GDP) plus:

- Intermediate purchases of goods (other than stock in trade)
- Intermediate purchases of services

3) Employment: The volume of employment is expressed as full-time equivalents (FTEs). These are estimated as the number of full-time employees and working proprietors and one-third of the number of part-time employees, converted to an annual basis.

FTEs provide a measure of total labour demand associated with expenditure - e.g. four full-time jobs running for three months or three part time jobs running for a year would be shown as a single FTE.

Since we were only able to estimate how the funding was spread across the sub-regions outlined in Appendix A for some projects, it was not possible to complete a full economic impact assessment at the sub-regional level. Moreover, multipliers are not available at this level. Therefore, we provide an outline of how the funding was divided amongst the four sub-regions.

Caveats

4) In our additionality calculations, we have treated loans and grants as the same. This is because we are estimating the current economic effects of the injection of money into the region. However, the loans will have to be repaid by a certain date. This means that there will be an outflow of money from the region. Therefore, the economic effects are likely to be slightly overstated in the case of loans.

5) In calculating the additionality of the roading projects, we have treated NZTA and Council roading projects similarly, i.e., we have assumed that NZTA roading projects would have happened, on average, five years later than they did.

6) We have conducted the economic impact analysis using the amount of funding approved for each project from the Kānoa database. Since not all of the approved funding has been paid out to some organisations yet, we assume that this will be drawn by firms in the near future.

Economic impact assessment

To understand the economic impacts of the PGF investments in the Gisborne region, we conducted an economic impact analysis. We created an Excel-based model using economic multipliers from the Gisborne region, created using input-output tables from Statistics New Zealand. An economic multiplier quantifies how money invested in an economy is re-spent, creating additional economic activity. Therefore, the calculations measure how the money introduced by the PGF via grants and loans to local businesses will be spent as salaries and wages or payments to other businesses, and how those payments will generate additional rounds of spending in the region.

The direct effects outlined in Table 3.4 are estimates of the direct impact of the PGF grants and loans to the recipient organisations, i.e., the impact of the first round of spending by recipient organisations. The total impacts show the effect of the investment after multiple rounds of spending by businesses and individuals.

As a result of the PGF investments, $243.2 million will be injected into the Gisborne economy, after accounting for the portion of the funding we calculated to be non-additional. This direct expenditure will generate $87.3 million in GDP in the region and will create employment equalling 810 FTEs.

These direct impacts will be associated with multiplier effects in the region. For example, the construction companies contracted to upgrade the local roads buy inputs from other local businesses, who may also purchase goods and services from their suppliers and so on. Moreover, organisations will begin to employ more people, or increase the wages of employees, who will then spend this income, generating further economic activity. The total economic impacts in Table 3.4 capture the effect of this increase in economic activity.

The economic activity generated by the PGF investments will have increased GDP in the Gisborne economy by $175.6 million, which is equal to around 7.6 percent of the region's GDP (as of March 2020). Additionally, the flow-on effects of the spending by households and businesses are estimated to generate employment for 1,517 FTE employees, equalling 6.57 percent of all full-time employment as of February 2021.

Table 3.4 Economic effects of the PGF investments in Gisborne district

	Direct	Indirect	Induced	Total
Expenditure ($m)	243.2	131.1	60.4	434.7
GDP ($m)	87.3	53.9	34.4	175.6
Employment (FTEs)	810	460	248	1517

It is important to note that the above analysis was conducted based on the amount of funding approved to organisations within the Gisborne region, as opposed to funding already paid out. This means that the impact estimates above show the eventual impacts of the funds that have been paid and those that are yet to be drawn. Since it is uncertain when the rest of the approved funding will be paid out, the impacts shown in Table 3.4 are likely to be spread over a number of years.

As mentioned before, the economic analysis does not differentiate between loans and grants. However, loans are intended to be repaid at some point in the future, but the value of what is paid back needs to be discounted. Some of these are also likely to be made at less than the commercial rate and this would make their impact similar to grants. Moreover, some of the loans may not be repaid, which will, again, have the same effect as grants in providing a short term boost to the economy. Overall, equal treatment of loans and grants means that the economic impacts in

Table 3.4 are likely to be overstated. However, we believe that the extent of the overstatement is small, both for the reasons outlined above, and because the amount of loan funding paid and approved is only a third of the grant funding paid and approved.

3.4 Sub-regional impacts

It was not possible to complete an economic impact analysis at the sub-regional level (see Appendix A for a map of the sub-regions) since we did not have complete information on where each of the projects in the fund was located. Moreover, economic multipliers were not available at the sub-regional level.

However, we were able to break down the additional value added to each sub-region for the sample of projects we covered in our interviews, as shown in Table 3.5. The Gisborne sub-region, which includes Gisborne City, the largest population centre in the district, received the largest share of the funding, equalling over 50 percent of the funding from our sample. The Northern sub-region, which includes Ruatōria, received nearly 25 percent of the share, followed by Central Bays with 14.8 percent. The region that received the smallest share of the investments from our sample was the Southern sub-region, with just 10.2 percent of the share, all of which was spending on roads. This sub-region is extremely sparsely populated with only a few rural communities.

Table 3.5 Additional expenditure by sub-region

Region	Total expenditure ($m)
Northern	32.0
Central Bays	18.9
Gisborne	64.2
Southern	13.1
Total	128.1

From our sample of interviews with recipients of funding located in the Northern and Central Bays regions, it was clear that even small amounts of funding in the remote communities made a large difference to businesses and households. Employment and training provided to just one member of a household provided stability to an entire family, especially in the case of those who have faced intergenerational disadvantages. Moreover, community members who were able to turn their lives around were a source of inspiration for other youth in the community.

4 Ongoing effects of the PGF

The economic impact assessment in the previous section provided an estimate of the economic effects of the additional portion of the PGF funding that has been and will be injected into the Gisborne economy. This effect will undoubtedly be significant, but it is important to note that it will not, by itself, change the Gisborne economy on a lasting basis. What is more important is how the PGF funding has been, and will be, used to change the capacity and capability of the region's economy. In other words, the PGF is not just a one-off boost to the economy. The nature of the projects and initiatives supported, and the focus on building the resilience of the people and infrastructure, implies that the effects of the investment will remain long after all the loans and grants have been exhausted. This section examines what our interviews revealed on this score. It also considers how the funding has affected and will affect other wellbeings, apart from economic wellbeing.

A large number of the interviewees pointed out that one of the biggest successes of the PGF investment in the region had been the development of the long-term capabilities of the workforce, particularly the attachment of young Māori to the labour force. Moreover, the initial months of the lockdown in 2020 was an extremely stressful and highly uncertain time for business to be operating in, particularly small businesses. PGF funding during this period provided certainty to businesses and contractors.

Benefits to the businesses and organisations

Several respondents stated that the PGF funding helped projects that are important to their business or organisation to get off the ground. The fund supported investments in new and innovative ideas and technologies that would have been considered risky by commercial lenders, such as a new type of processed wood product and an innovative medical research facility. The funding helped some larger wood processing businesses build export links with customers and partners in the United States of America and the Middle East. The certainty of the financing provided support to organisations during uncertain COVID-19 times, which helped build business and customer confidence.

For its part, Gisborne District Council ensured that the funding contributed to increased resilience and skills development for local contractors. The Council's tendering process enabled the development of local contractors to be the lead contractors on projects in the future, instead of working with larger companies solely in the capacity of subcontractors. This process had the additional benefit of improving the quality of bids from these companies, providing the Council with a wider pool of talent and businesses to choose from for future roading projects.

The improved capability and capacity in the region will have long-term benefits for all businesses and organisations in the region that will have a steady flow of a better trained workers. Moreover, the investment in non-traditional industries, such as high-technology wood processing and medical research, has meant that the training provided to workers in the region has been in diverse settings. In the future, businesses will have a wider pool of skills to choose from in a region that has historically been reliant on forestry, agriculture, and horticulture. This may be a catalyst for other similar organisations to move operations to the region.

Benefits to households and the community

One of the main aims of the PGF funding was to build up the human capital of the Gisborne region to support long-term growth. There was a large focus on the employment of Māori in particular.

As part of this, nearly all organisations who received funding provided extensive training and opportunities for career progression to their new employees. Some recipients said that they employed mostly Māori youth who were previously unemployed. Training provided by each organisation varied based on the type of work being carried out by them. However, upskilling ranged from providing level two or three qualifications, help with obtaining driver's licences (for cars, trucks, forklifts, etc.), gun licences, pastoral care, help with setting up bank accounts, employment law basics, and digital skills training. Employees who showed promise were trained to be supervisors and project managers. People who were new to the workforce were rotated through several departments and roles in bigger organisations, so they could find their fit and discover their skills.

Several businesses, such as those in the wood processing industry and in scientific research, have taken on students from the region as summer interns. Some businesses also said that they offered scholarships to high school students. These opportunities in new and upcoming industries in the region build awareness about future career pathways for students and help inspire young people. These initiatives resulted in significant benefits to individuals and their communities. Workers are now more likely to be attached to the labour market, opportunities for young people have improved, employed workers provide financial support to their families, and we heard multiple stories of youth turning their lives around after being offered opportunities resulting from the PGF investments.

The training opportunities built on the skill set of people and helped them progress from minimum wage jobs to higher incomes. Some businesses reported that they paid their workers a Living Wage, instead of the minimum wage, which would not have been possible without the funding. Being in steady employment also meant that workers were able to significantly improve their quality of life. They were able to take annual and sick leave to spend time with their families, which contributed to an improved quality of life. Additionally, increasing employment and stability of workers in small, sparsely populated towns by even a small amount has a large impact on the wellbeing of the entire community. A large number of the respondents noted that the programmes offered had been significant interventions in the lives of the local population, particularly the youth, many of whom faced significant disruptive challenges in their domestic lives such as intergenerational trauma, abuse, and violence. Special attention was paid to such workers' mental and spiritual wellbeing. Interviewees stated that, in their opinion, in the absence of the PGF funding, many of these youth would have continued down the same path as the generations before them had, faced with limited opportunities for personal development.

Several of the projects have contributed to significant environmental benefits, by way of ecological restoration work. Projects such as those to support the restoration of local rivers and riverbeds were supported. Ongoing damage was being curtailed via riparian planting. In times of major flooding and heavy rain, forestry waste would flow into the rivers downstream, blocking the flow of water. The planting of native trees in the riparian zone now prevents the waste from flowing into the rivers. A water storage project aims to provide reliability of water to surrounding Māori land blocks. Limited access to water was holding back horticultural development in the past.

All of this provides security of land for future generations. The stabilisation of the land around the local rivers will provide opportunities for the local Māori population to use the land for economic gains in the future, while also protecting the cultural heritage of the land.

Investment in local roads and state highways

The large amount of investments in various roading projects (Council and NZTA managed) also had considerable capability benefits within the region. For the projects the Council managed, it formed relationships with local contractors and offered them the opportunity to work alongside larger companies such as Fulton Hogan. These companies hired a large number of local staff from within the region. This also provided local contractors the opportunity to upskill in areas where they did not have experience. The Council awarded contracts to local Māori contractors, based in the region, which allowed the staff to learn up to date work practices and new skills. Through this process, local contractors gained the experience and confidence to tender for local authority projects. According to Council staff, the quality of bids has improved as a result of the heavy focus on upskilling locals.

The roads in some parts of Gisborne experience heavy wear and tear as a result of heavy rainfall and flooding, and a large amount of logging truck and heavy vehicle traffic. This means that some roads see frequent closures. The investment into these local roads and state highways has helped build the resilience of this infrastructure. This meant that the transport link for businesses and households in the region improved significantly, providing predictability and reliability of journey times. This predictability and resilience will drive investment from horticulture and forestry firms. Moreover, the connectivity of local communities and businesses in the more remote parts of the region was able to be maintained. The improved integrity of some of the local roads has meant that farming communities now have a more reliable connection to marae and bigger economic centres. The significant investment towards local roads has meant that the Council has been able to divert more resources to rural forestry road networks. In addition, the improved resilience of these roads will lead to lower costs of maintenance and upkeep for Council in the coming years.

The investment in roads has also had significant environmental benefits. According to NZTA, the Connecting Tairāwhiti – State Highway 35 Resilience project will contribute to a 16.7 tonne reduction in carbon dioxide being emitted into the atmosphere each year, by way of reducing travel times. Additionally, the project includes planting over 250,000 native trees and shrubs, removing another 1.4 tonnes of CO_2 a year.

The benefits outlined above are further illustrated in the case studies presented in sections 6 and 7.

5 The effect of the PGF on Gisborne District Council's capital expenditure

One possibility that we were keen to explore in our research was that a substantial amount of PGF funding in a relatively small economy would displace (i.e. crowd-out), other investment activity, particularly in the Council's capital expenditure programme. Accordingly, we interviewed David Wilson, the Council's Director Community Lifelines, on this matter. David is responsible for the Council's Roads and 4 Waters projects. Through the interviews with David and other staff at the Council, we discovered that the Council has been successful at spending its capital expenditure budget alongside the additional funding from PGF grants into the region.

Roads are one of the critical infrastructure areas identified by the Council in its 2018-2028 Long Term Plan (LTP). The Council has received 94 percent more grant funding over the three years since 2018 than what was signalled in the LTP. This has considerably improved its ability to provide additional services to the community. In the 2020/21 year, the Council spent 131 percent more on critical capital infrastructure projects than what was planned for the year in the LTP. A major reason for this has been the support provided by the PGF, which freed up Council's financial resources to focus on areas that may have been overlooked in the past, such as rural roads.

This has been achieved by the Council at a time when the building and construction sector has been severely constrained by shortages and many other councils in New Zealand have struggled to spend their capital expenditure budgets. Additionally, Council staff have reported that they have experienced a fall in contractor costs over the past two years.

The Council has taken a unique approach to contracting for infrastructure projects to overcome this issue, as well as build the resilience of this sector in the region. Firstly, contracts were not awarded based on price alone. Several social and economic outcomes were considered in the decision making process. At least 75 percent of the contracts and sub-contracts were awarded to Māori, Pasifika, or developing owner businesses operating from within the region. 18 contractors were involved in delivering all the work and most of these were local firms. The national firms involved delivered all work using staff from within the region.

Before the tendering process began, workshops and meetings were held with all 18 businesses to make sure that each business understood how to tender and what the projects entailed. 1.5 to three percent of each contract value was allocated to staff training to ensure employment numbers increased and opportunities were made available for training new staff to build their experience and skills. Moreover, all new employees had to achieve a Construct Safe qualification and complete a development plan which showed their progress while working on Council projects.

The above strategy used by the Council has enabled the development of local business capability, particularly for local Council projects. Newer and less experienced firms gained experience in tendering for local government projects and got to build the capabilities and skills of their workers in areas they may have not been traditionally involved in. Additionally, the quality of bids for local authority projects has improved significantly. The use of local Māori contractors from remote areas such as Ruatōria has meant that the Council now has a wider pool of experienced contractors to choose from for future projects. The heavy focus on providing training to employees and helping them fulfil their development goals has contributed towards building the resilience of the construction sector workforce in the region, particularly considering that a significant share of the new employees were previously unemployed. This means that the size and quality of the workforce has been improved.

We are satisfied, therefore, that the PGF has not caused projects in the Council's capital programme to be displaced. In other words, Council projects have not been delayed or cancelled, and the external funding provided by the PGF has added additional value to the Gisborne economy.

6 Inner harbour redevelopment: a case study

The inner harbour redevelopment project is a part of the Navigate Tairāwhiti programme, which is a set of five projects delivered by the Council with a number of partner organisations and tangata whenua. Note that we have included the PGF grant received for the inner harbour redevelopment programme as part of the economic impact assessment calculations.

The programme is a way to showcase the region's dual heritage, unique history, and culture. The specific aim of the inner harbour project was to transform the waterfront to become a visitor hub, a space for leisure, a thriving hospitality precinct, and to showcase the cultural heritage of Gisborne. The project was funded by the Council, Eastland Port, and the PGF. The local iwi, Ngāti Oneone was consulted during the project to ensure their cultural heritage was reflected in the space.

Prior to the redevelopment, the harbour was mainly used for industrial purposes such as transporting forestry products to and from the region. This meant that residents and visitors felt detached from the area and did not view it as a space they could visit. However, before the work started, more and more people were using the area in peak periods. Campervan visits were on the rise and locals frequently used the boat ramp. Due to the industrial nature of the area, there were no public toilet facilities, parking was limited, and heavy logging traffic created dangerous conditions for pedestrians.

This was recognised as a huge missed opportunity, with waterfront locations in other major cities, such as Auckland and Wellington, being prime spots for commercial and retail development, tourists, and local residents. Moreover, Gisborne also hosts hundreds of cruise ship passengers during summer, with the number of tourists visiting the region on the rise. The aim was to transform this resource to become more attractive to tourists and locals, while staying true to Gisborne's unique cultural heritage.

A number of developments were carried out to transform the space. The ageing three waters infrastructure was upgraded, roads were repaved, lighting was added to dimly lit streets, new toilets and parking was built, a large amount of green space was added, with cycleways and a pedestrian promenade. Contaminated soil was removed from the area and a new stormwater treatment plant was also installed. PGF investment into the project allowed it to be completed in time for the 2019 Te Ha Sestercentennial celebrations and *Tuia – Encounters 250*, an event that commemorated 250 years since James Cook made landfall in New Zealand. The $2.3 million contributed by the PGF also allowed for significant infrastructure upgrades to be carried out, facilitated the softening of the landscape, and allowed the road to be realigned. According to the interview with Council staff responsible for the management of this project, without PGF investment, the project would not have been completed in time for the Sestercentennial celebrations. Additionally, the PGF funding allowed the landscape around the harbour to be softened considerably, along with significant infrastructure developments, which would not have happened otherwise.

The upgraded inner harbour precinct has brought a number of positive benefits to Gisborne City. Economic activity in the area has increased with new restaurants having opened up on the waterfront, along with a shared workspace that hosts a number of businesses. Additionally, the developments have acted as a catalyst and attracted further interest and investment for retail and commercial development. The developments have increased the value of land and market rental rates in the immediate area, and local restaurants now have a more enhanced outdoor space for

their guests. The upgrade of the aging facilities, such as the water infrastructure, has also meant that the Council has been able to avoid significant costs that it would have incurred in the near future, which would have caused significant disruptions to traffic in the area.

Individuals and households have also benefited hugely from this transformation. There is a large amount of green space available to tourists and residents around the harbour for leisure activities. The focus was on planting native species of plants to protect the heritage of the site. Pedestrian access has been significantly improved with paths for walking and cycling cutting through the green space along the harbour. The improved lighting along some roads and paths has increased the sense of safety for pedestrians and cyclists. Pedestrian access to the boat ramp has improved and is now considerably safer than before. The cycleway is a part of the larger Urban Cycleway Programme. Visitation to the area has now significantly improved with more people visiting the restaurants and walking or cycling along the harbour, particularly since the area is within easy walking distance of the Gisborne CBD.

The redevelopment of the inner harbour has been successful. The area has transformed from a purely industrial space to one that showcases Gisborne's heritage and welcomes tourists and residents for retail, commercial, and leisure activities. This is in line with the use of waterfront locations in other major urban centres in the country. However, the Gisborne waterfront is unique in that the design incorporates the lifestyle of the residents, for example, the parking spaces are suitable for larger vehicles. Moreover, cultural aspects have been woven through the space to reflect the region's navigational heritage. The inner harbour is now a space that current and future generations can use for years to come, providing a sense of place and identity to the residents.

7 Other case studies

This section presents a set of case studies on organisations that received loans and/or grants from the PGF. These case studies are based on interviews conducted with the recipients. As mentioned in the preceding sections, the programmes initiated by many of the organisations had a considerable impact on the skills development of some of the most vulnerable groups in the region. These programmes helped provide stability and direction to a large number of people who may not have otherwise had this opportunity. The case studies below reinforce the evidence presented in the previous sections, especially about the ongoing effects of the PGF, and provide context to the data presented.

7.1 Four Seasons Packhouse (TBD Limited)

Four Seasons Packhouse (FSP) is a squash harvesting and packing company based in Gisborne. The company also provides growers with the option of picking and pruning kiwifruit, citrus and other horticultural produce. They also manage the packaging and distribution of products to domestic and international markets. Four Seasons Services, a new division of FSP was created to supply labour to existing customers operating citrus and kiwifruit orchards.

A PGF grant was approved for the company to undertake a horticultural expansion and workforce development programme in Gisborne. From BERL's interview with Elliot Callender and Tamsin Coulter at FSP, we gathered that skilled or experienced seasonal workers for horticulture were in short supply in the region.

The funding was used to upskill the horticultural workforce, particularly for citrus and kiwifruit orchards, for skilled and unskilled roles. The grant allowed Four Seasons to employ 60 permanent employees, as of October 2021. An estimated 68 percent of their new workers were unemployed prior to being taken on by the organisation. 80 percent of all new workers were Māori, and at least 50 percent were women.

As part of the training, some workers were provided with licenses for forklifts and wheels, tracks and rollers. Education around employment rights, such as annual leave, was also carried out. Having stable employment with annual and sick leave also meant that workers were able to take time off to be with their families, which contributed to better wellbeing and mental health. FSP also implemented a skills matrix that allowed them to rate staff and track development based on competency and confidence, which improved motivation amongst workers and focussed on developing the skills that were most important to them.

The project has had a number of positive benefits for businesses and households. The training programme will provide a steady supply of horticultural workers, and people can take their upgraded skills with them, if they move on to other employment. This is particularly important for a region like Gisborne, where horticulture contributes a substantial share to the region's economy.

Elliot and Tamsin indicated that the training and development programme would not have gone ahead at all in the absence of the PGF funding. The grant also helped ease the workload of existing staff, which meant that they were able to provide a better quality training and development programme.

7.2 Waihorokaka Limited

Waihorokaka Limited received a $400,000 grant from the PGF to set up a business hot desk hub in Ruatōria. Ruatōria is a small, largely isolated area in Northern Gisborne with a population of fewer than 800 people. The hub provides a co-working space for the community members and local businesses to use the resources available. These resources include high quality Wi-Fi, printing, and video conferencing.

The space encourages small business owners, freelancers, and community members to come together and collaborate and share ideas. Having a space such as this may also encourage enterprising individuals to set up their own ventures, while learning from others in the space. Digital hubs also help lift the technological capability of a region by providing people with the option to learn new technologies and digital skills from one another.

Ensuring that smaller communities are digitally connected also opens up a range of possibilities and can act as a catalyst for progressing economic development and improving wellbeing. Private sector firms who come into the hub in Ruatōria to use the conferencing facilities have an opportunity to network with one another and learn from experienced business owners.

The interviewee, Hilton Collier, stated that in the absence of the investment from the PGF, the hub would have been limited to commercial use only. Currently, 80 percent of the use comes from the community, while the rest comes from the private sector, including businesses in the region. Therefore, the household and community members would not have had access to the technologies, skills, and opportunities that came with the hub, if the investment had not been provided.

7.3 Mātai Medical Research Institute

Mātai is a non-profit medical research institute in Gisborne that focuses on advancing understanding of the brain, heart and body, to improve the health and social outcomes for all Kiwis. The institute collaborates with medical researchers, bioengineers, and scientific advisors all over the globe to combine expertise and conduct world-leading research.

The founders decided to set up the facility in Gisborne for a number of reasons, such as the prevalence of a number of health issues in the community, the gap in expertise and equipment in the region, and a desire to act as a catalyst for the region to attract other health and scientific experts.

BERL interviewed Jeannette Lepper, the head of development at Mātai, to understand the impact of the PGF on the organisation. The organisation was awarded a major grant that was vital in enabling the Institute to get established. She stated that the PGF grant provided the seed funding that allowed the institute to be set-up, and to purchase the initial, much needed equipment and technologies, which would not have happened in the absence of the funding since the project would have been considered too risky for commercial lenders. Jeanette also mentioned that the PGF funding was flexible in its requirements, which allowed Mātai more scope in the way research projects were developed.

The establishment of the facility in Gisborne has brought, and will continue to bring, a variety of benefits to the region. The research is tailored to the health issues affecting the region, which will make a positive contribution towards understanding and improving the health of the community, particularly the Māori population, which has historically been underserved. The research will help improve health and education locally, and benefits of the research can then be translated nationally and globally.

For a region where growth in employment has traditionally been driven by the primary sector, the Institute will bring a diversity of expertise and skills, acting as a catalyst for other such ventures. The scholarship and internship opportunities provided by Mātai to the youth in the region will provide new and diverse career pathways for the future generations.

7.4 Te Aitanga a Hautiti Centre of Excellence Trust

The Uawanui restoration project has been undertaken by the Te Aitanga a Hautiti Centre of Excellence Trust. BERL interviewed Victor Walker and Taylah Mitchell from the Trust. The project is located in the Uawa/Tolaga Bay area, a small, predominantly Māori, community in the Gisborne region, with a population of less than 900 people. The aim of the project is to plant 60 hectares of riparian zone along the Uawa River. This involves 20km of fencing, planting of around 55,000 trees, and pest control. The project also includes the employment and training of local staff within these areas. The project was undertaken in response to large amounts of forestry waste drifting down from the neighbouring plantations into the river during times of heavy rain. The waste blocked the flow of the river during these times. The PGF provided a grant towards the project. Funding was also provided by Te Uru Rākau, the New Zealand Forest Service, which is part of the Ministry for Primary Industries, and connected with the wider Uawanui sustainability project.

As part of this project, 10 Māori rangatahi, aged between 16 and 24 have been trained as “eco-leaders”. Two people are also being trained as project managers. All the youth were previously not in employment, education, or training (NEET). The eco-leaders are being trained in plant-sourcing, germination and propagation, nursery construction, pest management, environmental management, and land use. The programme is based on Māori environmental practice. Additionally, pastoral support is also provided to the workers, with special attention being paid to their mental and spiritual wellbeing.

The interviewees commented that the programme was a significant intervention in the lives of the youth, most of whom had no formal work training and faced serious disruptive challenges in their domestic lives. Some of them were victims of intergenerational trauma, abuse, and violence. One of the interviewees observed that, in the absence of the funding, the youth would likely have continued down the same path as the generations before them, and that the project provided them with the opportunity to gain technical skills, as well as support with becoming attached to the workforce. This has, and will continue to have, extended social benefits to whānau and the wider community.

The programme also connected youth to the forestry sector in the region by provided relevant training in this area. This will contribute towards providing a steady supply of workers to the forestry sector, which is essential to the economy of Gisborne. Finally, the environmental benefits of the project came in the form of ecological restoration work. The focus was on planting native species and using Māori environmental practices. Over the long-term, these steps will contribute to greater environmental resilience and restore and protect the waterway and coastal area by preventing woody debris from floating into the waterways.

7.5 Pultron Composites Limited

Pultron Composites Limited is a company that develops and manufactures high-performance fibre-reinforced polymer composites, providing a sustainable and durable building material. Pultron received a PGF loan towards helping it grow its business by expanding research, building a new production facility, and lifting staff numbers. In addition to this, the company also received a grant to enable it to deliver a comprehensive training programme. BERL interviewed Jasper Holdsworth, the CEO of the organisation, to understand the impact of the funding on the business and the wider community.

The loan was used by Pultron to support diversification and expansion. Jasper stated that the PGF loan was used for an investment in the development of a product that would probably have been considered to be too high a risk by commercial lenders. The fundamentals of the product and the idea were solid, but it was a new and innovative venture and, thus, was very high risk. The loan was used to develop a state-of-the-art research and engineering facility. This growth allowed the company to increase employment by 60 people within the span of a year, with another 40 planned to be employed over the coming year.

The investments have allowed the company to grow substantially. Pultron has connected with buyers in new, high-value markets outside New Zealand, further enabling expansion. There were also significant benefits to the community and individuals. The organisation took unemployed people, particularly Māori, for some of the roles and trained them. Some of these workers had limited work experience and did not know what skills they had. Pultron was also able to offer higher wages after the comprehensive training program. In the absence of the intervention, according to the interviewee, many of these people would have been unemployed or on lower wages. Jasper also stated that the expansion and growth was enhanced by the PGF investment.

8 Conclusions

This report has indicated that while the Gisborne economy had experienced some growth before the advent of the PGF, this was not sustained. The PGF has enabled businesses and other organisations to make investments that might otherwise not have been made at all, or that would have happened later and/or on a smaller scale.

One effect of these investments will be to provide a short- to medium-term boost to the economy while the PGF grants and loans are being spent. But, more importantly, the investments enabled by the PGF will change the economy on a longer-term basis. Businesses have been supported to make investments that will enable them to innovate and increase their competitiveness. And both businesses and other organisations have been able to provide opportunities for local people, especially Māori, to participate effectively in the labour force and develop their skills. The PGF also supported projects that will lead to environmental gains, and the reversal of damage caused to the region's waterways. Equally importantly, PGF funding has allowed further investment in businesses and sectors that generate high-paying jobs and do not depend on the use of natural resources, but rather place value on technological and productivity enhancements.

The PGF has not simply provided funding for projects that would have happened anyway. On the contrary, over 80 percent of the fund was additional, meaning investments worth $243 million would not have taken place in the foreseeable future. Moreover, the PGF, and the construction activity that is involved in many of the supported projects, has not resulted in projects in the Council's own capital works programme being displaced. Indeed, the Council has shown that it is possible to successfully complete a capital works programme, while many other councils have struggled to spend their capital budgets. This has been possible because of the large focus on upskilling local contractors, and providing them with the experience to tender for local infrastructure projects. The Council has, thus, formed a strong relationship with these local firms.

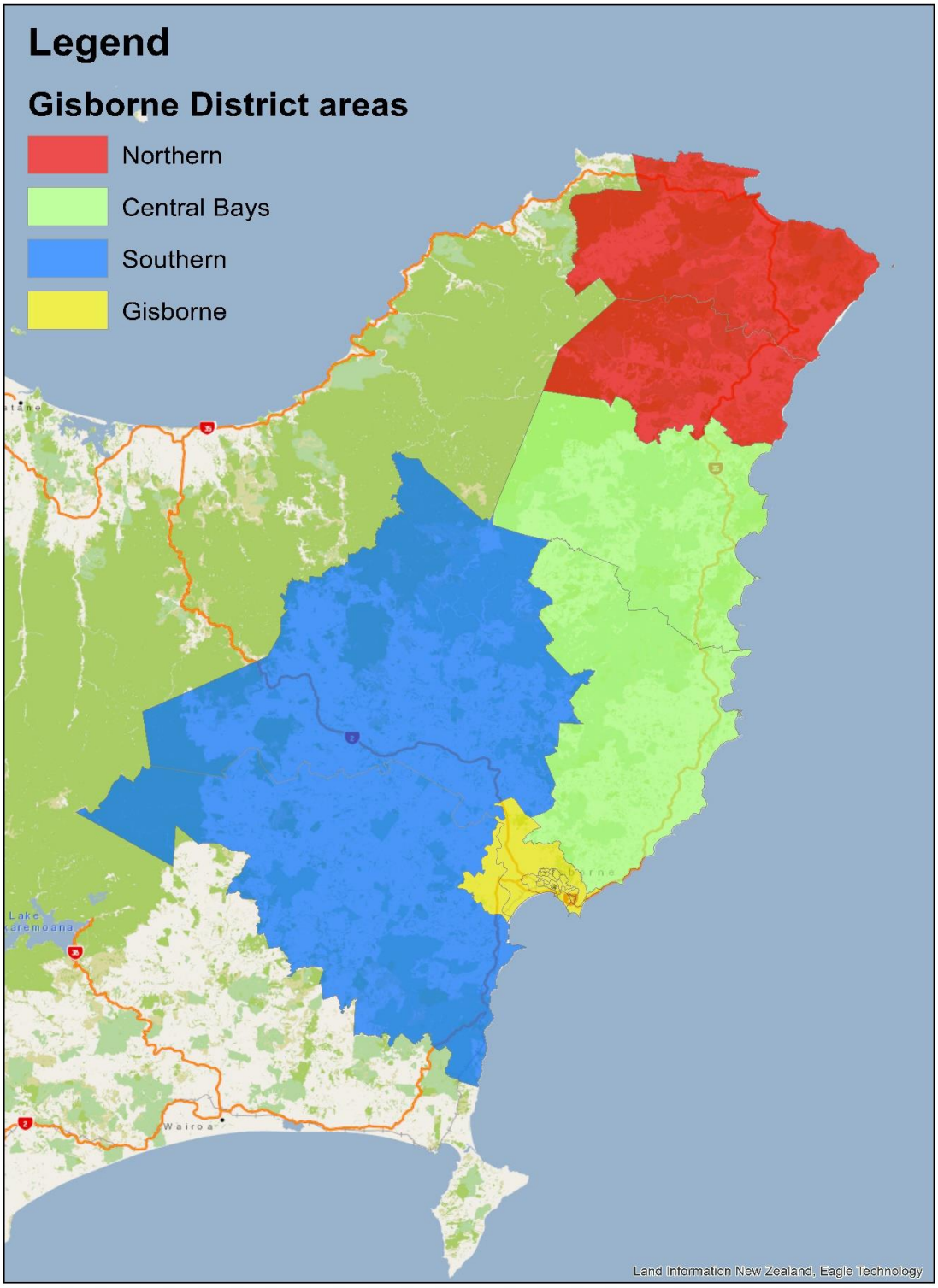
In summary, the points below qualitatively highlight the many ways in which the PGF benefited local businesses and communities, contributing to the long-term resilience of the economy:

- PGF investment was targeted at a variety of organisations, contributing to economic diversification
- The creation of new opportunities for youth in non-traditional and high-value industries
- Extensive capability and capacity development of local businesses and communities, with a particular focus on improving outcomes for Māori
- Pastoral care was provided by some grant recipients to their vulnerable workers, supporting them to remain attached to the workforce
- The PGF supported several businesses to be able to pay their workers a living wage. It also allowed businesses to create more high-skilled and high-paying roles, while also training locals to take up these opportunities
- PGF investment in the, previously, fragile and unreliable roading network has contributed to more resilient and reliable travel routes for rural communities and businesses
- Loans provided to innovative projects carried out by a number of research-heavy and high-value businesses helped de-risk the opportunities and accelerated technological advancement

- The PGF also provided certainty to businesses and households during the uncertain era of COVID-19-induced lockdowns, allowing important infrastructure and capability building projects to continue
- PGF funding has contributed to technological advancements within the region. Public financing for opportunities that were considered to be too risky for commercial lenders has de-risked these commercial opportunities
- Local iwi have been able to train rangatahi to lead the clean-up of local waterways, and build the resilience of this vital resource.

All of this, taken together, suggests that the PGF has directly contributed to accelerated growth in the region and brought forward many of the opportunities that would have happened several years down the line, at the earliest. The region has also benefited greatly from the fact that these investments were concentrated within a period of a few years, instead of one-off or piecemeal funding injections. In order to continue the momentum gained by the economy over the past few years, and ensure stable long-term growth and self-sufficiency, there is a need for further investment into the region. The success of the PGF has illustrated the strength of businesses, households, and the Council, in working together to support the growth and resilience of the region as a whole.

Appendix A Gisborne district sub-regions



GISBORNE DISTRICT COUNCIL

22-136

Title:	**22-136 Final Paper to Ministers - Potential Napier to Gisborne Rail Re-instatement**
Section:	Chief Executive's Office
Prepared by:	Jade Lister-Baty - Principal Advisor to Chief Executive
Meeting Date:	Thursday 2 June 2022

Legal: No	Financial: No	Significance: **Low**

Report to SUSTAINABLE TAIRAWHITI Committee for information

PURPOSE

This paper provides for Council's information, a copy of the updated Assessment Report on the potential reopening of the Napier to Gisborne Rail Line submitted to Ministers on 25 May 2022.

SUMMARY

An updated Assessment Report on the potential reopening of the Napier to Gisborne Rail Line has been prepared by an independent team of consultants. The report was commissioned jointly by Gisborne District Council and Hawke's Bay Regional Council for submission to government Ministers. It is intended to provide Ministers with sufficient information to make a decision on whether to fund and proceed to a detailed business case on:

- the work and associated investment required to reinstate/reopen the line from Wairoa to Gisborne; and
- to assess any works needed for greater resilience of the reinstated Napier to Wairoa line;
- or to declare the Wairoa to Gisborne line closed and lift the rail designation.

The decisions or matters in this report are considered to be of **Low** significance in accordance with the Council's Significance and Engagement Policy.

RECOMMENDATIONS

That the Sustainable Tairawhiti Committee:

1. Notes the contents of this report.

Authorised by:

Nedine Thatcher Swann - Chief Executive

Keywords: Gisborne rail reinstatement

BACKGROUND

1. In late 2021 Hawkes Bay Regional Council and Gisborne District Council were engaged by a team of consultants undertaking further work on the potential re-opening of the Napier to Gisborne Rail Line, following renewed interest and discussions with KiwiRail.
2. In conjunction with Hawkes Bay Regional Council, the Chief Executive agreed to jointly fund the development of an updated Assessment Report, intended to provide Ministers with sufficient information to decide on commissioning a detailed business case.
3. The Report builds on the 2019 BERL Wairoa-Gisborne Rail Feasibility Study and includes updated information provided by KiwiRail and recent engineering and technical assessments on the condition of tracks, bridges, tunnels, retaining walls, communications, and signalling.
4. An Interim Paper was sent on 30 March to Minister of Finance, Grant Robertson, Minister of Transport, Michael Wood, Minister of Economic and Regional Development, Stuart Nash and Minister of State-owned Enterprises, David Clark.
5. Further assessments by technical engineers have since been completed on tracks, bridges, tunnels, retaining walls and reinstatement of dropouts; along with communications and signalling, further hydrological studies, infrastructure and land required for an operational line.
6. Following completion of updated estimates, freight assessments and pre-engagement with stakeholders, the final paper was submitted to Ministers on 25 May 2022.
7. This Report estimates the cost of the detailed investigation business case phase to be $6.38m.
8. At the time of writing this report the Project Group are awaiting a response from Ministers.

ASSESSMENT of SIGNIFICANCE

Consideration of consistency with and impact on the Regional Land Transport Plan and its implementation
Overall Process: **Low** Significance
This Report: **Low** Significance

Impacts on Council's delivery of its Financial Strategy and Long Term Plan
Overall Process: **Low** Significance
This Report: **Low** Significance

Inconsistency with Council's current strategy and policy
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on all or a large part of the Gisborne district
Overall Process: **Low** Significance
This Report: **Low** Significance

The effects on individuals or specific communities
Overall Process: **Low** Significance
This Report: **Low** Significance

The level or history of public interest in the matter or issue
Overall Process: **Medium** Significance
This Report: **Medium** Significance

9. The decisions or matters in this report are considered to be of **Low** significance in accordance with Council's Significance and Engagement Policy.

TANGATA WHENUA/MĀORI ENGAGEMENT

10. Iwi and hapū were engaged within the 2019 BERL study, supportive of reinstatement of the line.

11. The Project Team included an Iwi advisor based in Gisborne, who undertook brief engagement with Tūranga and Wairoa iwi/hapū in the timeframe of preparing the updated assessment.

12. If successful in attracting investment for a detailed business the Project Team will be widened to include representatives of Tūranga and Wairoa iwi/hapū and in-depth engagement and analysis of land development and aspirations.

COMMUNITY ENGAGEMENT

13. The Project Team visited and engaged with interested stakeholders in Hawkes Bay, Wairoa and Gisborne, although engagement was brief due to the short timeframe for submitting the paper to Ministers.

14. Further in-depth engagement will occur if the proposal for a detailed business case is successful.

CLIMATE CHANGE – Impacts / Implications

15. The report considers the benefits of reopening the rail line from Gisborne to Napier in reduction of emissions and reduced carbon footprint.

CONSIDERATIONS

Financial/Budget

16. Council's contribution of $30k to develop the Assessment Report will be funded from operational budgets.

Legal

17. There are no legal implications of this report.

POLICY and PLANNING IMPLICATIONS

18. While reinstatement of the Gisborne to Wairoa rail line was not included in the New Zealand Rail Plan 2021-24, Council have continued to advocate for the project's inclusion through the Regional Land Transport Plan 2021 – 2031.

RISKS

19. There are no major risks associated with noting this report.

NEXT STEPS

Date	Action/Milestone	Comments
25 May	Assessment Report submitted to Ministers	The report is jointly signed by Hawkes Bay Regional Council, Wairoa District Council, Gisborne District Council.
June - August	Response from Ministers	For further discussion, decision on further investment or closure.

ATTACHMENTS

1. Attachment 1 - 2022-05-25 Joint Councils Letter to Ministers - Napier to Gisborne Rail [**22-136.1** - 2 pages]
2. Attachment 2 - 2022-05-25 Napier to Gisborne Rail Line Potential Reopening - Final Report [**22-136.2** - 100 pages]

HAWKES BAY REGIONAL COUNCIL
TE KAUNIHERA Ā-ROHE O TE MATAU-A-MĀUI

159 Dalton Street
Private Bag 6006
Napier 4142
Telephone: (06) 835 9200

GISBORNE DISTRICT COUNCIL

15 Fitzherbert Street
Whataupoko
Gisborne 4010
Telephone: (06) 867 2049

WAIROA DISTRICT COUNCIL

Mayors Room
Wairoa District Council
PO Box 54
Wairoa 4160
Telephone: (06) 838 7309

25 May 2022

Hon. Grant Robertson
Minister of Finance
Minister for Infrastructure

Hon. Michael Wood
Minister of Transport

Hon. David Parker
Minister for the Environment

Hon. Stuart Nash
Minister for Economic Development and Regional Development
Minister of Forestry

Hon. Dr David Clark
Minister of State-owned Enterprises

Hon. James Shaw
Minister of Climate Change

Tēnā koutou Ministers

NAPIER TO GISBORNE RAIL LINE – POTENTIAL REOPENING - FINAL PAPER

Following our earlier Interim Paper sent to you on 30 March, we are pleased to provide the Final Report from our Gisborne Rail Reinstatement Update Assessment Project Team on the proposal to proceed to a detailed business case on the potential reopening of the Wairoa to Gisborne Rail Line.

This report is intended to provide Ministers with sufficient information to make an informed decision on whether to fund and proceed to a detailed business case on:

- the work and associated investment required to reinstate/reopen the line from Wairoa to Gisborne; and
- to assess any works needed for greater resilience of the reinstated Napier and Wairoa line.

The report notes that the estimated cost of the detailed investigations business case phase is $6.38m.

We would welcome the opportunity to meet with you to discuss the contents of this report and your response to the proposal for a detailed business case.

If Ministers agree that consideration of a detailed business case is warranted then we propose that the Project Team, in consultation with KiwiRail, develop a Business Case specification, project plan, and timetable for final consideration and approval. In the event that Ministers do not wish to proceed with a detailed business case it could be appropriate to discuss the future of the Wairoa to Gisborne rail designation.

This Report has been prepared by an independent Project Team of consultants funded and commissioned jointly by the Gisborne District Council and Hawke's Bay Regional Council and overseen by a Project Group led by representatives from our three councils.

You will be aware of the considerable regional efforts over the last 10 years to get rail reinstated from Napier to Wairoa and Gisborne. The Report outlines the growing freight demand for a rail freight service as part of a regional mix of transport infrastructure. Our respective council Regional Land Transport Plans clearly state the important role of rail including the repair reinstatement of the line to Gisborne.

Now that the Napier Wairoa section has regular log train services established, we believe that it is time to complete the repair reinstatement of the line through to Gisborne.

We look forward to follow up with you on the proposed next steps.

Ngā mihi nui

James Palmer
Chief Executive
Hawke's Bay Regional Council
Email: james.palmer@hbrc.govt.nz

Nedine Thatcher-Swann
Chief Executive
Gisborne District Council
Email: nedine.thatcher-swann@gdc.govt.nz

Kitea Tipuna
Chief Executive
Wairoa District Council
Email: kitea@wairoadc.govt.nz

Rick Barker
Chair
Hawke's Bay Regional Council
Email: rickjbarker@gmail.com

Rehette Stoltz
Mayor
Gisborne District Council
Email: mayor@gdc.govt.nz

Craig Little
Mayor
Wairoa District Council
Email: craig.little@wairoadc.govt.nz

cc: Hon. Kiri Allan, MP for East Coast
Hon. Meka Whaitiri, MP for Ikaroa-Rawhiti

NAPIER TO GISBORNE RAIL LINE

POTENTIAL REOPENING

FINAL REPORT
25 MAY 2022

Gisborne Rail Reinstatement Update Assessment Project Team Report

Contents

25 May 2022

Hon Grant Robertson
Minister of Finance
Minister for Infrastructure

Hon Michael Wood
Minister of Transport

Hon David Parker
Minister for the Environment

Hon Stuart Nash
Minister for Economic Development and Regional Development
Minister of Forestry

Hon Dr David Clark
Minister of State-owned Enterprises

Hon James Shaw
Minister of Climate Change

NAPIER TO GISBORNE RAIL LINE – POTENTIAL REOPENING
Final Paper

Tēnā koutou Ministers,

1. Summary

It is recommended that Ministers:

Note This report is intended to provide Ministers with sufficient information to make an informed decision on whether to fund and proceed to a detailed business case on:

- the work and associated investment required to reinstate/reopen the line from Wairoa to Gisborne; and
- to assess any works needed for greater resilience of the reinstated Napier to Wairoa line; or
- to declare the Wairoa to Gisborne line closed and lift the rail designation.

Note The cost of the next detailed investigations business case phase, split into 2 sub phases, is $6.38m; and the preliminary estimate of repair reinstatement costs is $80.5m.

Note The detailed business case will include detailed assessments of bridges, tunnels, other structures and track formation for the full line from Napier to Gisborne covering the specific items that KiwiRail has requested be included. There is a detailed breakdown of these items

and their costs as part of the Engineering Study of the Infrastructure section 4 of this Paper below.

Agree to proceed with a detailed business case on the elements above.

Note That independent of any decisions around repair and reopening of the line, there are some immediate actions needed to prevent further deterioration by undertaking basic clearance of drainage systems on the Wairoa to Gisborne section with a provision of $200,000 to be made for this to be done.

Agree to request KiwiRail to provide an update on ensuring basic clearance of drainage systems on the Wairoa to Gisborne rail asset so as to minimise the risk of further storm damage or deterioration.

Request officials to identify the Lead Agency to engage with the Regional Project Team for the planning and execution of the detailed business case.

Preamble

On 30 March 2022, an interim report was presented to you in relation to the Napier to Gisborne railway line and advised that a more comprehensive report would be provided to Ministers.

Both reports have been commissioned and funded jointly by the Gisborne District Council and Hawke's Bay Regional Council.

The Project Team which has prepared both reports has been guided by input from a Project Group consisting of representatives from Gisborne, Wairoa and Hawkes Bay, including iwi and hapu, and with KiwiRail.

The Project Team of consultants has included geotech, bridge and tunnel specialists, and track engineers with experience of working as part of projects for KiwiRail, along with consultants for the freight assessment.

Nature of the Report

This report builds on, but is not a rewrite, of the BERL report of 2019, and goes into a more detailed analysis of the infrastructure, the economics of the line through providing an updated rail freight assessment and its contribution to the regions, the social and environmental impacts of the current options, and the future safety of traffic on roads in the region.

The extensive nature of information in the report's Annexes, particularly the engineering and formation aspects of the line, as well as identified prospective rail freight, could be seen as a business case in itself and that, between the Project Team and KiwiRail, a less detailed quality assurance process could be seen as sufficient.

One of the purposes of the detailed business case is to provide a forum to enhance the certainty and confidence in the analysis for decision makers to make informed judgements and decisions.

Annexes cover:

1 Detailed Track Formation and Civil Construction report
2 Freight Assessment
3 Matawhero Yard
4 Napier to Gisborne Rail Track Study
5 Externalities such as GHG emissions, other environmental costs, potential accident reduction, congestion, road wear not met by RUC and reduced SH 2 maintenance and repairs.

2. Key Findings

Rail Vital to Meet Growth in Regional Freight Transport Needs

- The continued strong growth in high value primary production in the Gisborne region, including off shore biosecurity demands for export product to be packed and custom sealed in containers close to production source.
- 150,000 tonnes of projected rail freight 2025 expected to rise of over 210,000 tonnes by 2030.
- Includes strong year on year growth in apples exported through Napier Port, as well as squash, citrus, meat, maize (corn), wine, processed timber and logs as potential rail customers.
- Estimated projected gross revenue in 2025 for the rail service including rail operator and intermodal road transport to and from rail for customers (including port fees) is $15 million or more.
- Increasing identified inbound rail freight, including primary product for processing in Gisborne and fertiliser to support the increased investment in high value horticulture.
- Rail to provide sufficient combined transport logistics infrastructure required to service the type of large-scale wood processing industry investment identified by Trust Tairawhiti that could conservatively process 1m tonnes pa of logs into over 450,000 m^3 of export product. This processing output is expected to require over 21,430 40ft containers pa which equates to over 420 40ft containers a week. Gisborne currently exports approximately 96% of its log harvest as unprocessed logs with only 4% of logs harvested having any value-add processing.
- Major packhouses producers and transport logistics operators have been calling for rail reinstatement for the last 10 years. These parties are seeing the predicted growth in freight and increasingly strained trucking infrastructure to handle this growth, including continuing growth in 40ft containers for export markets with increasing

frustration at lack of Government action to address this problem.
- Wider benefits to the region from developing an intermodal container transport hub at Matawhero to encourage industrial growth area outside of the city centre.

External Benefits

- Rail benefits from reducing growth in trucks on the main state highway making these roads safer, thereby contributing to "Road to Zero" strategy.
- GHG emissions rail net savings of 2,550 to 3,650 tonnes pa based on current KiwiRail locomotives.
- Well-being combined benefits from reductions in GHG emissions, air quality impacts and reduced vehicle crash costs of $1.04m to $1.54m pa.
- We believe that the option for the rail link is important, and will become more so in the future as more consideration is given to environmental and social issues facing our country. These issues are covered in Annex 4.

Line Reinstatement

- The reinstatement of the line to Gisborne, including upgrades to the Napier - Wairoa section, can be achieved for between $73M and $80M. This number may reduce with the sale of the current Gisborne rail yard either through an offer back to iwi or the open market. The estimate will be firmed up once the detailed investigations particularly on bridges and other structures has been completed. This is expected to take 6 months.

- A significant degree of detailed planning design and costing work with regional contractors has already been undertaken for the repair and reinstatement of the Wairoa to Gisborne line to current KiwiRail design standards. The work required has been spilt into a series of work packages suitable for an early procurement and civil works contracting process to be used.

- It is assessed that the Wairoa to Gisborne line could be repaired and reinstated within 18 months, noting the importance of being able to get the major civil works underway by the start of the summer season.

- Independent of any decisions around repair and reopening of the line, there are some immediate requirements to prevent further possible storm damage as a priority action requiring basic clearance of drainage systems on the Wairoa to

Gisborne section with a provision of $200,000 made for this to be done. A lack of cleared drainage contributed to the damage incurred over the years including the major slip last November at Beach Loop that has resulted in increased repair costs. This cost will cover hi- rail based equipment hire to clear culverts and make sure all the cross track drainage structures are at least clear of debris and functional. Some additional funding may be required to repair driven rail structures and similar upstream blockage protection.

Blocked swale drainage and culvert inlet outside Tunnel 23

Blocked swales drainage channels – view south looking to Bridge 271

Example of blocked culvert at inlet side

Blocked outlet culvert at PGNL 355.516km

Most of the repair civil works are concentrated along a 11km section Kopuawhara Valley/Beach Loop as shown in the map below:

- The reopening of the line leads to a number of good outcomes for the local economies, social and environmental improvements, reduced maintenance and improved safety on the State Highway 2 and local Napier roads, particularly SH 50 to the port.

- It will also build on rail's ability to deliver product in a more environmentally friendly way, although this does come at a cost similar to other climate change measures.

- The rebuild engineering is to a resilient standard which with regular maintenance should enable the line to be robust enough to stand up to the frequent weather occurrences experienced in the area.

- It is recommended that the project should be carried out in two parts, the first looking at critical structures including the Westshore bridge in Napier, the Mohaka Viaduct and possibly the Kopuawhara Viaduct and the second will look at the remaining structures and any extra works such as the Matawhero yard and any changes/addition to passing loops. (See section below)

- The project, if approved, should be carried out as a civil project with all work carried out to the highest

construction standards and the rail work would be to the KiwiRail codes for a low-speed line.

- The detailed business case could consider the role for a locally based, regional management structure to assist in ensuring responsive and timely project completion within scope and budget. The work could be carried out by private sector contractors that have the expertise and some that already carry out work for KiwiRail.

- This recognises that KiwiRail is fully committed at present to a number of projects around the country, including Wellington and Auckland metro areas and the Northland line. We still see an important role for KiwiRail during the life of this project. The completed line would then be handed over to KiwiRail to operate.

3. Engineering of Rail – Napier to Gisborne

This section summarises the engineering investigations to date and sets out the way forward with costs to carry out the additional investigation work required to understand the life and quality of the existing infrastructure and a very preliminary cost to reopen the route. The costs will be firmed up, risks both financial and construction will be articulated, and the timetable to rebuild the route will be set out after the completion of the next stages.

Standards

The Napier Gisborne line was completed in sections, finally being opened to Gisborne in 1942. As a route completed relatively late in terms of rail building, the latter sections were constructed to higher standards than the earlier lines with generous tunnel clearances and more modern bridges.

The majority of the rail is 70lb/yd, adequate for the foreseeable future at an axle load of 16.3T and speeds below 50kph. With the engine power available (DFTs/DCs) and with a trailing load of 24 CFTs for a gross tonnage of 1500T, a train should be able to traverse the route from Napier to Gisborne in approx. 5 hours

BERL Report

BERL completed a Feasibility Study on the reopening of the closed Wairoa to Gisborne section in 2019. From an engineering perspective the BERL study focused on repairing the dropouts, improving the formation where required, repairing the rail as required and reopening the route. KiwiRail has rightly expressed some concerns about considering just the Wairoa to Gisborne section as investing a significant amount money and completing engineering work on an isolated section, without a fuller understanding of the structures and infrastructure which would link this section to Napier and hence the rest of the rail network.

This current study and the proposed next stage is to cover from the triangle at Napier to Gisborne Port and including the proposed freight hub at Matawhero.

Looking North, just South of Nuhaka

Line looking South from Kiwi Lumber site at Matawhero, Gisborne

View North from Wairoa Station site

4. Engineering Study of the Infrastructure

This section is divided into the following sections:

a) Rail, Sleepers and Ballast
b) Formation
c) Bridging and Structures
d) Land Required
e) Communications
f) Hydrological Study

a Rail, Sleepers and Ballast

Rail is light weight by modern standards but adequate for the proposed 16.3T axle loads. Whilst wholesale replacement of the rail is not required, selected curves, particularly those with a radius of less than 400m, will likely be relayed in second hand heavy weight rail recovered from the mainlines. Modern container wagons can be loaded to the maximum and will not exceed the allowable axle load so there will be no impact on the efficiency on this route. It will operate as a feeder to the Napier Port and the rest of the rail system. Where the formation is to be rebuilt through dropouts, heavy weight rail on concrete sleepers will be installed.

Sleepers are generally TPR (Treated Radiata Pine), some are life expired and will likely require replacement. All Peruvian sleepers will be replaced.

Ballast is of variable quality and in the section north of Wairoa has not been maintained for the past 10 years. Large sections are expected to require cleaning and /or replacement.
Track weed-spray and the removal of vegetation has not been undertaken on the Wairoa to Muriwai section for 10 years. The section that KiwiRail has opened between Napier and Wairoa should require little attention for vegetation control and weed-spray other than routine annual maintenance. The section north of Wairoa will require extensive vegetation control and a contractor will likely take some weeks to clear the trees encroaching on the line or that are likely to encroach in the near future.

The engineering investigation will focus on examining the sleepers and ballast to form a view on what requires replacement in order to provide a fit for purpose, "resilient railway" that does not require significant amounts of day-to-day maintenance.

Cost to carry out this investigation is estimated at $1.7m as set out in more detail in Annex 4. While it is difficult to estimate the cost for the work required to reach the "resilient railway" standard without first having undertaken the detailed investigation, it is anticipated a sum of approx. $10m will be sufficient.

Once the investigation on what is required to bring the track up to a suitable standard is undertaken, there is little risk in cost overruns or scope creep. Costs of working on the rail and the replacement of sleepers and ballast is well understood and accordingly detailed estimates can be arrived at with a high degree of confidence.

b Formation – See detailed report Annex 1

The reinstatement of the formation where the dropouts have occurred is the single largest cost element and has been the focus of previous reports. The design for the repairs has been well developed and the costs have been estimated to about a 50% confidence level. Dropouts will be reinstated to current New Zealand and international design standards with embankments designed for a service life in excess of 100 years.

All of the dropouts that have occurred have been caused by a build-up of water behind the formation due in the main to blockages of the culvert inlet. Culverts in general are believed to be adequate in size but this aspect will be checked and peer reviewed as part of the hydrological study. As part of the dropout repairs, additional culverts above the level of the existing culverts will be installed to act as overflow protection and the inlet structures at the existing culverts will be rebuilt to prevent blockage, particularly where caused by "forestry slash"

KiwiRail has expressed a view that the estimates of costs to repair the dropouts are understated. However, it has not articulated specifically what elements of the repair work that it believes are under costed.

KiwiRail has not been to site, does not have a good sense of what the repairs actually entail and does not understand what is needed to carry out the work.

We note that detailed investigation and repair design work has been carried out over a number of years. Engineers have gone through and identified all the main risks (mostly access and site construction related), pulled these out and priced them separately and thought through what needs to be done. Additionally, there has been significant contractor input from a range of tier 1 & 2 contractors to quality check both the costs and the feasibility. Design & pricing has been done to at least the same level as the recent Marsden Point Rail Link pricing exercise and, in several cases, well beyond.

In late 2021 a new large dropout occurred in the same location as Dropout 3. This was a substantially bigger event than previous dropouts and has effectively eliminated the possibility of being able to reinstate track formation around the outside of the bluff without significant blasting and benching of rock slopes in excess of 70 metres high. However, the land which slipped in November 2021 is sacred to the local Iwi and so we could not recommend any further desecration to this site. A tunnel of about 500m in length will be required to the west to bypass this area. Total diverted lengths including cuttings at either end will make for a diversion of close to 800m. Whilst the construction of the tunnel is expensive it will provide a long-term stable solution.

Costs for this new tunnel and the associated diversion has been provisionally estimated in the region of $25m with some of this available from reallocating costs within the current dropout repair estimates. However no specific design and costing has been undertaken as there is currently no funding available. It is intended that survey, design and costing

to at least a 50% confidence level will be undertaken very early in the next stage so that the feasibility and cost are understood early. Investigative costs and preliminary design are estimated at $1m.
The formation between Napier and Wairoa has received little attention other than for the repair of a large slump repaired by KiwiRail for the line could be reopened in 2019. The next phase of the work will investigate cutting and embankment stability over this whole route and cost accurately the work necessary to provide a long-term sustainable asset.

Costs for further investigation and confirmation of pricing is estimated at $1,200,000.

c *Bridges, Tunnels and Retaining Walls*

This study has summarised and listed all of the structures between Napier and Gisborne and estimated a cost to carry out a detailed investigation in order to determine the suitability of the structures, their stability under earthquake loading, and their remaining economic life.
The costs have been prioritised so that work commences with the critical structures that could be "show stoppers" if found to be uneconomic to repair or replace or if found to have a working life of less than 5 years and hence making the reopening of the route to be "not viable".
This category of structure includes the large bridges and viaducts such as:

- Bridge 218 at Westshore Napier
- Viaducts between 234km and 263km
- Waipaoa bridge
- Tunnels longer than 400m

In the second category will be all the remaining bridges, retaining walls, sea walls and culverts
Until the work is undertaken and a "life" is ascribed to each structure it is not possible to estimate the costs involved. However, at this stage there is nothing to suggest that any of the structures are life expired and standard repairs and maintenance should be able to keep the structures in good workable condition for the foreseeable future.
Costs for Stage 1 is estimated at $350,000 and for the second stage $1.7m
If stage 1 shows up some unexpected fundamental flaws, then the work would be paused to reconsider the whole project.

d *Communications and Signalling*

If the route is reopened, trains should be operated with a single locomotive engineer. This will require the route to be up to full ATP standard. Current thinking is that this can be achieved by contracting with the current provider of the forestry radio system which already has better than 90% coverage of the rail route. However, the remaining 10% is the more difficult, being in areas of tunnels and cuttings which will require translators, generally solar powered, as there is no power supply, and "leaky cables" through the tunnels.

As this type of radio system has not been used previously by KiwiRail a rigorous design process will have to be undertaken

in order that the resultant system is robust and reliable.
Whilst the freight line will effectively end at Matawhero, it is proposed that the line will continue through to Gisborne and the Port. While the radio system will be up to the same standard, double manning will still be required due to the crossing of the airport runway and on account of the large number of manually controlled level crossings.

Costs to investigate the feasibility of this communications system and first order design of the necessary translators and power supplies will be in the order of $100,000.

e *Hydrological Study*

Other than the assessment of culverts as part of the reinstatement of dropouts no assessment of the hydrology of the route has been undertaken. However, with the intense and seeming more frequent heavy rainfall events taking place on the east coast in the vicinity of the Hawkes Bay – Gisborne area, an in-depth study of the catchments that affect the rail route needs to be undertaken.

This study will inform the engineering design for the reinstatement of the washouts to ensure that repairs are robust, culverts and bridge openings are adequate for all foreseeable rainfall events, and washouts on the route will not reoccur.

No consultant for this work has been identified but it is expected that the NIWA models will form the basis for the detailed work required. The work is largely desk based and costs are expected to be less than $60,000.

f *Land Required*

All the land for the route exists and the only land that needs to be acquired is for a new yard at Matawhero. A plan and short report on what will be required at Matawhero is attached as Annex 3. Net cost, allowing for the sale of land no longer required at Gisborne, should be zero.

Further investigation will be required on the land at Matawhero in order that a paved yard can be designed for road vehicles and loading devices for containers. Until this is undertaken, the cost of a paved yard is difficult to determine but design costs should not exceed $120,000 and construction of the yard including track work should not exceed $2.5m.

g Costs

The cost of the next phase, split into 2 sub phases is $6.38m. This study will take 6 months to complete.

If the study of the critical structures and the preliminary investigations into other aspects of reopening show up unacceptably high costs or major unknown flaws then the work will be paused to re-evaluate the remainder of the ongoing work. A decision can then be made as to whether the investigation should continue.

At the completion of this section a quality estimate will be available of what the costs will be to reopen the entire route as a robust freight line suitable for the long term.

The costs to reopen the route will be peer reviewed to ensure transparency of costs and risks, both financial and construction, will be pulled out and identified.

Table: Engineering Design and Construction Costs

	Critical Investigations Stage 1	Balance of Investigations and design	Investigations Total	Preliminary Construction Costs
Track	400,000	1,300,000	1,700,000	10,000,000
Tunnel	750,000	250,000	1,000,000	25,000,000
Formation and Dropouts	200,000	1,000,000	1,200,000	32,000,000
Bridges, Tunnels and Structures	350,000	1,700,000	2,050,000	10,000,000
Matawhero Yard and Land	20,000	100,000	120,000	2,500,000
Communications	25,000	75,000	100,000	1,000,000
Hydrology	60,000	-	60,000	incl. elsewhere
Peer review	50,000	100,000	150,000	-
Total	1,855,000	4,525,000	6,380,000	80,500,000

5. Freight Logistics

- To achieve the level of freight that appears to be on offer from the Gisborne and Wairoa areas, KiwiRail will need to allocate wagons and locomotives and at this time there appears to be a shortage of this rolling stock within the network. It is possible to achieve this allocation with a minimum of cost over and above the costs of the infrastructure rebuild. KiwiRail may have to consider rebuilding some of the freight wagons currently identified for scraping which will be eminently suitable for operating on this slow speed route.

- An alternative option would be to have the current service which runs from Napier to Wairoa leave earlier and drop wagons off at Wairoa and then continue to Gisborne to collect the wagons from Gisborne before returning to Wairoa and picking up the log wagons before proceeding to Napier. This option will need to consider the crew hours and an increase in the wagon fleet.

- Prior to the slips closing the line in 2012, freight on the line was increasing through the efforts of the local trucking sector which was, and continues to be, looking to rail to transport goods to customers. One operator, that is already a regular customer for the Interislander is keen to use rail for transporting fresh and frozen product to the South Island rather than the current trucking method. It will make use of the new rail ferries and be an example of regular use of the wider KiwiRail network if the Gisborne line is reinstated.

- Further discussions need to be held with the Port of Gisborne which could benefit from rail shuttles from the proposed Matawhero freight hub and the nearby existing timber storage yard. Potentially there could also be some product in containers which could be exported through the port.

This report is written on the basis of what is already in the ground in Gisborne or Wairoa, including horticulture, viticulture and trees for logs or processing and other processing of product which comes to Gisborne from out of the area. See Annex 2.

We became aware of large areas in both the Wairoa and Gisborne districts which are being planted in crops such as apples and blueberries., Since these are products which leave mainly in containers, those carrying out these plantings, and the trucking firms which transport the product to Napier and beyond, wish to use rail as their preferred transport option.

In addition, we were also informed of the intention of one processor to transport up to 18,500 tonnes of product from the Hawke's Bay to Gisborne along with additional product from Wairoa. One Gisborne company directly involved with major crop production mentioned the prospect of having a proportion of the fertiliser transported into Gisborne use rail, as was the case before the line closed.

The Project Team believes that it would rather, at this stage, provide Ministers with known tonnages and if the additional product comes onstream then changes can be made later.

6. Community Interests

- In the time available, we have only been able to have brief conversations with a number of entities in Gisborne, Wairoa and Napier along with engineering staff in KiwiRail. From those discussions. There is strong support for the reinstatement of the line from Councils and trucking interests and from local iwi and hapu.

- The trucking firms are concerned about a shortage of drivers with the average age well into their 50s. They recognise that even if there were more drivers available, the ability of the road to carry the vehicles is at capacity. There is also a feeling that they have reached the limits of their social licence to add more heavy vehicles to the roads.

- We would recommend that, in conjunction with Trust Tairawhiti, further investigation is carried out on these factors as part of the next stage of the business case exercise.

- There will also need to be discussions with Gisborne City Vintage Rail on its lease at Gisborne, the improvements that it has made on the line from Gisborne to Muriwai, including upgrading of the lights at road crossings. This upgrade will benefit rail providers. Rescheduling of its trains will be required to ensure that there are no clashes between its services to Muriwai from Gisborne and any rail freight service. Railbike Adventures Limited will, in all likelihood, need to cease as its route is along the current railway from Matawhero to Beach Loop, which will no longer be available.

7. Matawhero Inland Port

- A key report assumption is that freight trains operating on the Napier – Gisborne section will terminate at Matawhero, some 8 km's from Gisborne where an inland port would be built on the site of the old Matawhero yard. A local shunt would operate between Matawhero and Gisborne Port if required.

- The current Gisborne rail yard bounded by Grey Street and Awapuni Road and Waikanae Creek, is significant land close to the city centre. It is bordered by a motel and land currently managed in both public and iwi interest. Located in the nearby surrounds is a camping ground, tourism and sporting facilities.

- The report considers that this land would need to be offered back first to iwi, though could be sold to fund the reconstructed Matawhero yard (apart from the land required for the line into the port and the area of land currently occupied by the Gisborne City Vintage Rail and the adjacent turntable).

8. Other Issues

- During our discussions with the various interests in Gisborne, there were a couple of themes which were common to all.

- The availability of labour at critical times of the year. In common with the rest of the country, the lack of overseas visitors and RSEs who would normally work in the horticulture, viticulture and farming areas, has affected the Gisborne area.

- In one instance, a business has used 4 minivans each day to bring workers from Wairoa to work in Gisborne. It is now in the process of building modular workers' accommodation to overcome a shortage of rental accommodation and to encourage workers to stay for work.

- There was a suggestion made that a carriage could be attached to the train to bring workers to Gisborne in the morning and return at night but that is not a practical solution.

- The second issue mentioned was the availability of power which would enable the area to do more value-add processing, in particular for large scale timber processing. It is noted that the current JNL wood processing plant uses bioenergy from wood waste.

- Trust Tairawhiti is considering a solution using wood pellets, but the volume required could be an issue.

- In the Wairoa district there is frequent flooding of the main road into the town and the availability of the railway to move goods would be advantageous to residents and businesses in the Wairoa region.

9. KiwiRail's involvement in the review

The Project Team agrees with the KiwiRail feedback that a detailed business case would need to be funded to reliably estimate and assess a resilient and reliable solution if this was considered a priority for the Government.

The Project Team's engineering consultants engaged in in-depth discussion with KiwiRail senior engineering staff with an open book approach of sharing the considerable amount of in-depth detailed design and costing work they have already undertaken on the Wairoa to Gisborne line. KiwiRail received this information in January 2022. This information was well received in the meetings that took place including a general acknowledgement of the estimated costs provided.

KiwiRail is continuing to engage with the project team to understand the project assumptions, approach and costs estimates in further detail to allow KiwiRail to provide its own independent advice to Ministers. KiwiRail continues to provide the Project Team with reasonable access to its specialists and information.

KiwiRail does not endorse the conclusions in this paper, noting that "By agreement, KiwiRail's involvement in this review has been limited to the provision of asset records and access to members of its engineering and delivery team."

The Project Team appreciates the assistance that KiwiRail staff have provided to us.

KiwiRail's initial feedback is that:

- The reinstatement estimates seen to date seem very optimistic and downside risk associated with resilience to weather events, the market environment and resource constraints would need to be considered;
- The solution currently does not allow for any tunnelling works. Based on the geology and storm risk, KiwiRail believe this would be an essential element to ensure the line is resilient and reliable;
- A detailed business case would need to be funded to reliably estimate and assess a resilient and reliable solution if this was considered a priority for the Government.

Project Team Comment

The Project Team considers that the KiwiRail feedback reinforces the rationale for a detailed business case, given that this report:

- uses estimates for reinstatement which are based on very detailed engineering assessments on a number of sites and many visits to the various areas of concern.

- Incorporates considerable allowance for repairs for future resilience. (Annex 1).

- includes provision for tunnelling works, which were discussed at meetings with KiwiRail engineers in Wellington on 12 April 2022 and in Auckland on 9 May 2022.

- reflects interviews with many businesses in Gisborne that have indicated a desire to use the rail if it was reinstated, not only for outbound goods but also in bound from Hawkes Bay for processing in Gisborne. The costings for freight are updated from KiwiRail's letter of November 2019.

- identifies options to cover the current shortages of wagons and locomotives.

Ngā mihi nui,

Chris MacKenzie
Lead Consultant for the Update
Email: chrisnewm@yahoo.co.nz
Phone: 021 799 499

Gisborne Rail Reinstatement Update Assessment Project Team
Neil Buchanan, Maurice Fraser, Stephen Underwood, Peter Ryan, Graeme Carroll
With input from Richard Paling, Robert Strong, Novare Design, BERL and Nikki Searancke.

Annexes

1 Detailed Track Formation and Civil Construction report
2 Freight Assessment
3 Matawhero Yard
4 Napier to Gisborne Rail Track Study
5 Externalities such as GHG emissions, other environmental costs, potential accident reduction, congestion, road wear not met by RUC and reduced SH 2 maintenance and repairs.

Annex 1: Detailed Track Formation and Civil Construction report

fraser GEOLOGICS engineering design delivery

PNGL Wairoa – Gisborne 296.3 - 390.5km Track Formation & Civil Construction Background Data Updated April 2022

Date: Updated – 24 April 2022

Project: FGL 1331

Prepared by: Maurice Fraser - Fraser Geologics Ltd

View looking north across Waikokopu / Opoutama into lower Kopuawhara Valley

TABLE OF CONTENTS

View to south over Bridge 290 looking across Waipaoa River to Young Nicks Head

1 INTRODUCTION

Significant investigation work was undertaken in mid-2019 as part of the BERL report to establish estimated repair costs around track formation & drainage civil works required to reopen the PNGL railway line north of Wairoa to Gisborne. The railway line was damaged in a major storm event in late March 2012 with multiple large washouts caused by a combination of poor drainage performance and high intensity rainfall.

This work was substantially updated in 2021 & early 2022 to include additional design work on repair options and site access, preparation of detailed pricing schedules and on site discussions with multiple contractors to provide confidence around repair work costs and construction programming.

Significant rainfall in November 2021 caused additional land movement at the 355.5km mark ("Dropout 3") which has required additional design assessment. Reinstatement of a previous tunnel (Tunnel 24) through this track section is considered the most practical long term repair option through this area.

Work to date has primarily focused on track formation repairs to reopen the line along with significant resilience works on culverts and drainage structures to ensure that the existing infrastructure is brought up to a modern standard that is better able to handle increasingly extreme weather events. Repair designs for these features are between 30% & 70% complete and are to a sufficient level to allow sensible tender pricing.

Additional resilience investigations and structure assessments will be carried out as part of a wider track assessment work package extending from Napier through to Gisborne.

As a general comment, the 190km of balance track length outside of the immediate 11km repair stretch in Beach Loop is generally in good condition and no major significant civil track works are expected.

2 SUMMARY POINTS / BACKGROUND

2.1 RAIL CORRIDOR

- The track section between Waikokopu and Gisborne is some of the youngest in the KR network with construction dating from the late 1930s through to mid-1942. The Wairoa to Waikokopu section is somewhat older (1921-23) built to provide access to a former coastal port at Waikokopu.

    - Overall the main bridge and tunnel structures are in good to very good condition for their age compared to other parts of the KR network. Tunnels are sized for hi cube containers with all bridge structures certified for 16 tonne axles.

    - Rails and sleepers are in reasonable condition and generally fit for purpose for a second class line, although several areas do require some work including rail replacement, re-sleepering and some lifting and packing of rail joints. Significant re-ballasting is also required in some areas.

    - Culverts and inlets are generally fit for purpose, with several requiring significant maintenance to bring back to 100% capacity. Some require secondary inlets and additional capacity to improve Q_{100} flood risk management.

    - Slopes and cuttings are in reasonable condition although the majority require some drainage maintenance and rock fall scaling where steep rock cut slopes are present. Significant vegetation clearance is also required.

    - The 2012 damage was primarily caused by a lack of drainage maintenance – if the installed drainage works had been working at 100% capacity, damage would have been substantially less.

2.2 2019 / 2020 / 2021 WORKS

- Given the above rail background, the main premise of 2019 work was to scope the dropout repair works required to reopen the line and price maintenance and upgrade works to bring the line into a reasonable operating condition to meet modern KR requirements.

- The 2019 work has have been progressively updated in 2020 & 2021 to add additional confidence around the engineering design included upgraded earthquake / seismic requirements and detailed site access works.

- 2019 reporting used early release Gisborne Council LIDAR ground survey information, undertook detailed inspections and site assessment on some 40 task items and prepared 30% -60% engineering designs for eight major tasks covering the main dropouts, trackside retaining works and concrete seawall issues at Opoutama.

- Detailed quantity schedules and construction programs have been established taking into account site constraints and rail / land access issues working within the rail corridor.

- Costing schedules and contractor pricing has involved pricing from local material and contractor resources in the Gisborne and northern Hawkes Bay regions. Repair costs and programs have been built around using as many local resources as practicable.

- There are nominally 40 repair tasks requiring work including the 6 major washouts, trackside / formation drainage works, rock fall / stability issues, coastal erosion works and a combined rail / road relocation issue at Blacks Beach (331.41km) which we understand is currently being progressed separately by the Wairoa District Council.

- Proposed dropout repair works are industry standard retaining wall / geogrid reinforced slope solutions, used throughout NZ on both road and rail infrastructure. Background images for the 6 dropouts are shown in the following section.

- Proposed dropout solutions have been designed to relevant NZ, international and KR design standards including significant seismic loading. Solutions are straightforward to construct, the complicating issue being access logistics for plant and materials into Beach Loop and Tikiwhata stream for Dropouts 1 - 4.

- Proposed works around Dropout 3 have substantially changed as a result of land movement in early November 21 to include reinstatement of Tunnel 24, day lighted in the 1950s due to then ground movement.

- Pricing schedules have costed both rail based and overland access operations to get plant and materials into the various dropout sites.

- Majority of rebuild is from local forestry and civil works contractors and material resources – limited requirement to accommodate out of town contractors apart from specialist rail and a small team of project management personnel.

- Local contractors are considered to have the experience and expertise to operate safely within the steep hill country across the area and are able to self-manage the majority of the construction and access risks present as well as organise supply of project sourced aggregates and other materials through local quarries and delivery firms.

- Project management is run by a relatively small internal team of engineering & QS staff with design engineering embedded in the control team. Project supervision will predominantly operate on a CM3/CM4 type level depending on what element is being built with onsite field testing personnel and equipment available as required. Some elements will be CM5, particularly around establishing benching levels and matching final designs to exposed dropout ground conditions.

- Project will direct source required materials and supply to each of the sites / subcontractors as required.

- Subcontractors are expected to be broadly self-managed and capable of integrating project H&S and Rail Safety requirements into their own operational procedures as required.

- Required repair works are designed and constructed to applicable Kiwirail & NZ design requirements including for earthworks, slope stability and seismic design. Design work for major structures requires PS1 & PS2 peer review and signoff.

2.3 LAND ACCESS

- Pricing and works scheduling is on the basis that access to all areas is straightforward and earthworks / tracking consent conditions are standard / non notified.
- Some access points and potential cut areas for filling around Beach Loop appears to sit outside KR boundaries – this is assumed to be resolved and at $0 project cost.
- Provisional verbal agreements have been obtained with the Land Owner to access the rail corridor through Paritu Station including upgrading the old PWD road, relocating gates and fences where required.
- Discussions with JNL / Hikurangi Forest Farm representatives indicated access would be straightforward through the land they control, provided we operate within their access procedures where live logging operations are underway.
- Based on recent experience with Gisborne District Council for retaining wall design on the Upper & Lower Port Logyard we assume that embankment fill solutions, bridging and drainage structures can be exempted from the Building Consent process provided independent PS1 & PS2 certification is supplied as part of the works package.
- We have assumed building consent works with Wairoa District Council can be obtained on a similar exempt basis with PS1 & PS2 supplied as above.
- We have assumed that coastal consents for the work at Opoutama can be obtained on a non-notified basis, albeit with additional (limited) environmental assessment reporting.

2.4 PRICING

- Pricing assumed that the majority of dropout repairs and general civil drainage and formation works were undertaken as a standalone civil works contract without any live rail protection requirements. Operational costs and procedures working around rail movements can be quite expensive in terms of time and cost requirements.
- Rail protection works and operational procedures would kick in once the civil works were completed and there was generally end to end access available to relay track and undertake formation works.
- Pricing has been built up two ways, as follows:
    - Using day works rates with a range of assumed and advised productivity from several local forestry and earthworks contractors
    - Using measure and value rates based on preliminary design volumes and items.
- Pricing items were checked against local contractor rates as at August 2019 and again in February / March 2022. Many of the works are similar to forestry roading and maintenance type projects where access is relatively long and stringy and significant health & safety constraints exist.

2.5 RISK MANAGEMENT

- Risk items have been allocated to principal / project on basis that is the best place to manage it from - limited lump sum and risk pushed onto individual contractors apart from some incentives around productivity.

- Land ownership access and earthworks risk is assumed to be resolved at minimal cost prior to the project commencing.

- Drainage design risk has been managed with relatively conservative Q_{100} flood estimates; these appear justified based on the over topping failure events that have occurred. We allowed for multiple lines of drainage defence however a comprehensive maintenance regime is critical for the track going forward.

- Contractual risk and insurances will need to be assessed further; we have assumed a relatively small team of design and project management personnel as well as on site testing equipment / technician(s) to run the project.

- Physical construction risks are considered best managed by employing subcontractors who work in this terrain every day and have good local knowledge of ground conditions and behaviour.

- There are some cost risks around what time of the year the project is built - it is somewhat cheaper project to construct in summer than winter.

3 Specific Major Repair Tasks

3.1 Task 6 – Dropout 1 @ Wharekakaho Tunnel.

Dropout one straddles a deeply incised gully approximately 150 m south of the Wharekakaho Tunnel (Tunnel 26) southern portal at track meterage 358.300km. Dropout dimensions are in the order of 40m wide by 60m long and nominally 20 to 30 metres deep depending on how the washout is measured. Upstream catchment is some 1.83km^2 with a base concrete arch culvert of nominal 1.2*1.8m dimensions and a 900mm diameter, high level emergency overflow steel pipe culvert. Top of rail level (TOR) is nominally RL 130m with the base culvert invert at nominal RL 110m and emergency overflow set at nominally RL 119m. The formation fill embankment is constructed from side and bottom tipped tunnel spoil excavated from the adjacent Wharekakaho Tunnel Base of the dropout is around RL100m +/-

Existing formation damage is due to the base culvert blocking with flood debris and storm water subsequently overtopping the track formation and washing out the downstream facing as well as erosion from the emergency bypass

Repair works required at Dropout 1 are as follows:

- Existing slope stability FOS values on the current pinnacle embankment are considered unacceptably low, particularly under flood loading and/or seismic shaking and reinstatement of the downstream fill buttressing is required for long term rail operations. Adequate short term geotechnical capacity is considered available for work trains passing the dropout at 10km/hr.

- Buttress fill is designed as Paragrid reinforced local soils derived from the dropout itself, as well as material recovered from the track cutting to the south and additional materials brought into the site via side tipping rail wagons.

- The cutting excavations to the south will be designed to allow some easing of the track curve on top of the embankment between Tunnel 26 and Bridge 273 - currently 150m right radius through Bridge 273 northwards, transitioning onto 300m right radius into the tunnel. In practical terms this will require a 3 – 4m widening of the cut +/- with a nominal track slew of 1 – 3 metres dependant on final track centreline design.

- 30% drawings and cross sections are included in the drawing set, ref 1331. Indicative MSE fill volumes are in the order of 23,000m^3

Drone view looking into current embankment from east. Note emergency 900Ø pipe overflow approx. 10m from track level on embankment LHS (shown as *). Note also waterfall on RHS of image – this is discharge from arch culvert under the ridgeline

Drone view looking down on formation. Note Railway grid around upstream inlet as well as emergency bypass. Note also additional lengths of overflow pipe in base of washed out gully – these need to be recovered and reinstated.

2013 photos stitched together looking into northern side face. Note washed out 900Ø pipe sections in base washout, substantial volumes of spoil washed away in 2012 event and evidence that multiple overtopping events have occurred based on vegetation growth on ridge facing

1936 historical photo during Wharekakaho Tunnel 26 construction – tunnel spoil was railed out over gully and then either bottom or side tipped to form unconsolidated embankment. Note photo is also good indication of typical excavated rockmass materials in other embankments and fills in Beach Loop and Kopuawhara Valley areas.

3.2 TASK 7 – DROPOUT 2 @ BEACH LOOP.

Dropout two straddles a backfilled incised gully at nominal track meterage 357.14km. Dropout dimensions are in the order of 25m wide by 70m long by 10m deep depending on how the washout is measured. The dropout is at the southern end of the Beach Passing Loop and sits more or less directly underneath the turnout.

Upstream catchment is some 0.3km^2 with a concrete arch culvert of nominal 1.0*1.6m dimensions set nominally 5m below TOR level. Secondary/ emergency drainage is via a swale drain heading north on the inland side of the passing loop. The formation fill comprises excavated soil and rockmass from the adjacent track formation cuttings and is in the order of 15 to 20m depth based on the surrounding slope geomorphology. TOR level is in the order of RL134 +/- with the base of the dropout nominally RL100, some 70m downstream of rail centreline.

Material exposed in the washout is predominately excavated cut materials comprising a mix of silty and sandy residual soils and gravel to boulder size siltstone and sandstone clasts with no intact rockmass visible, although it is likely to be present at 3 – 4m depth in places down the slope. There is onsite evidence of at least one washout having occurred previously with an older, cemented stacked stone retaining wall and backfill present immediately south of the current washout.

Required repair works are as follows:

- Reshaping and significant benching out the washout area prior to installing a vertically faced retaining wall structure backfilled with Paraweb reinforced GAP 80/ 100 greywacke derived hardfill.

- The retaining wall option has minimum benching and imported fill volume requirements to meet design requirements. The wall will need to be thoroughly keyed into underlying ground at the toe, rear and sides. Surplus excavated materials will be placed downstream of the MSE toe to provide additional toe support.

- The secondary / emergency bypass drainage system for this area comprises a sideways cutting into the concrete faced swale drain at the back of the passing loop to the north. Recent redesign work has also considered installing two new box culverts discharging partway up the MSE wall; this is likely to be incorporated into the built solution pending further design work.

Drone view of Dropout 2 looking south. Note significantly incised erosion into underlying side tipped soils from adjacent 1940s track benching and cutting operations and underlying residual soils

PNGL Repair Works

Drone view of Dropout 2 looking west. Note drainage outfall on northern side of track with the inlet back into the slope at the base of the gully.

PNGL Repair Works

Drone view of Dropout 2 looking north back along Beach Loop

3.3 Task 13 – Dropout 3 @ Beach Loop – replaced with Tunnel 24 Reinstatement.

Dropout 3 is another deep infilled gully set between two significant rock bluffs, approximately 200 m north of Tunnel 23 at track meterage 355.57km. Dropout dimensions were in the order of 45m wide by 90m long and nominally 15 metres deep on the outer edge of track formation although this has been substantially increased following November 2021 slip movement. Upstream catchment is some 0.3km^2 (similar to Dropout 2) with a top of rail level (TOR) nominally RL 134m. The 2019 proposed repair solution was similar to Dropout 2 using imported aggregate and vertical faced retaining walls along with a short span bridge to pass runoff and flood flows down the washout gully centreline.

Tunnel 24 was constructed in the late 1930s some 250m north of Dropout 3 as part of the original rail alignment. Significant tunnel wall distress occurred throughout the 1940s and the tunnel was daylighted by NZR in 1957 – 58. Several photo sets are included below to show 2019 ground conditions, November 2021 slip movement and 1957 tunnel daylighting works.

There is some 6.8km of railway tunnels over a 15km stretch of the PNGL between 345km & 360km which straddle the 6 dropout locations; these were excavated using a mix of blasting and mechanical excavation as well as physical hand work where required (see phots below).

There are also multiple additional hand excavated drainage drives in several locations; these are likely to add another 1 – 1.5km of tunnelling through this area and illustrate the scale of engineering works used to build the line.

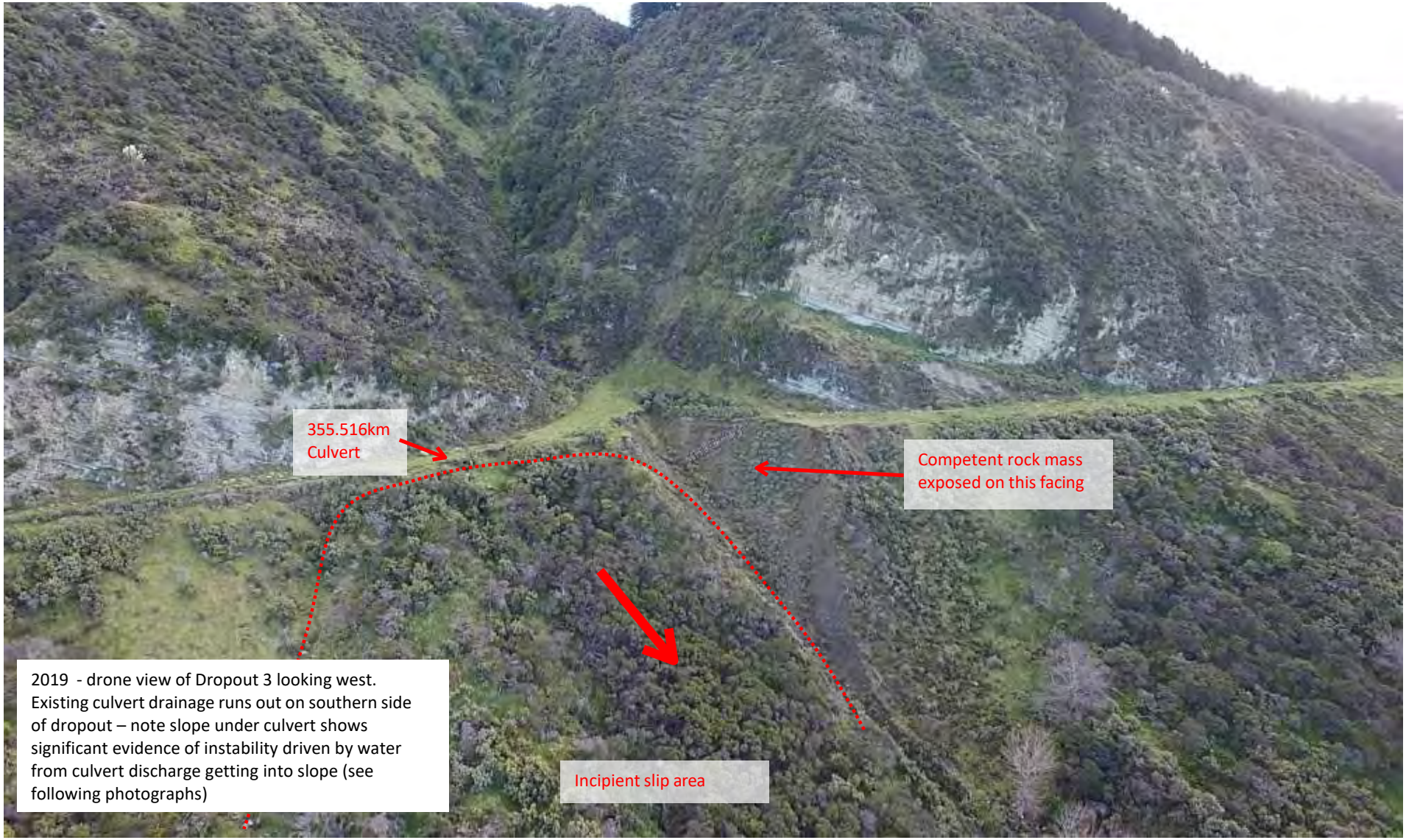
We have undertaken significant design work in the past two months looking at engineering options around the head of the November slip including a mix of blasting, benching, construction of retaining walls and short span bridging to reinstate the current alignment on intact rock as well as alternatively tunnelling through the bluff from nominal 355.600km and daylighting nominally 500m northwards at about 356.100km+/-.

At this stage the most cost effective / environmentally acceptable solution is considered the tunnel option, particularly as it gives several hundred years of future erosion & cliff face movement protection. There are substantial geological issues present on the outside of the bluff that were identified in the 2019 reporting that are still present despite the scale of the 2019 movement and currently pose significant future slope movement risks.

While building a new tunnel to bypass several actual and potential geological issues sounds a relatively complex & expensive task to reopen the line we note that tunnelling ground conditions are generally good with reasonably competent, readily excavatable rock lending itself to either drill & blast or road header excavation and short term support with either steel sets & timber lagging or rock bolts and shotcrete. Permanent long term lining can be either pumped mass concrete behind steel shutters or precast base block and wall units grouted in place.

The relatively short length also lends itself to these support methods with steel sets used during the original railway construction. There are several NZ & Australian contractors constructing these sorts of tunnels on a daily basis (particularly in Australian mining) and with the right sort of logistics support we consider tunnel construction should be relatively cost effective and straightforward to achieve.

PNGL Repair Works



2019 - drone view of Dropout 3 looking west. Existing culvert drainage runs out on southern side of dropout – note slope under culvert shows significant evidence of instability driven by water from culvert discharge getting into slope (see following photographs)

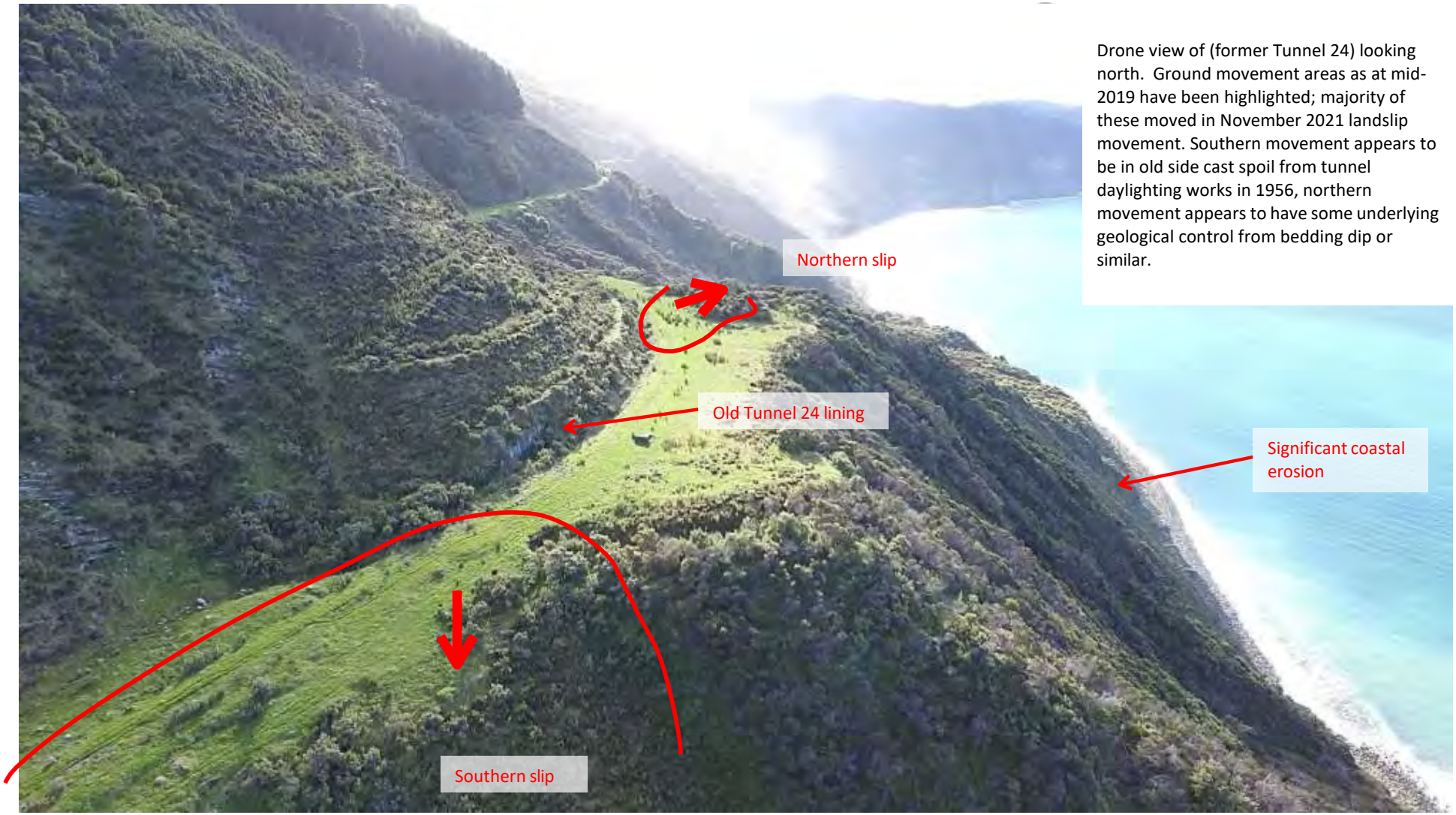
PNGL Repair Works

2019 - drone view of Dropout 3 looking south.
Compare with November 2021 slip picture below.

PNGL Repair Works

Feb 2022 - drone view of Dropout 3 looking south.
Compare with May 2019 picture above.

PNGL Repair Works



Drone view of (former Tunnel 24) looking north. Ground movement areas as at mid-2019 have been highlighted; majority of these moved in November 2021 landslip movement. Southern movement appears to be in old side cast spoil from tunnel daylighting works in 1956, northern movement appears to have some underlying geological control from bedding dip or similar.

PNGL Repair Works

Historical photographs from 1956 tunnel daylighting operations – note benching and fill placement from this area back to Dropout 4

4 GISBORNE PHOTO NEWS, APR.5, 1956

EAST COAST RAILWAY DEVIATION

About a mile south of Beach Loop, on the East Coast railway, three bulldozers and a team of men are working night and day on a big contract. Their job: to shovel 150,000 cubic yards of hillside into the Pacific Ocean to make a new railway deviation. The plan will eliminate a short tunnel which is threatened by earth movement.

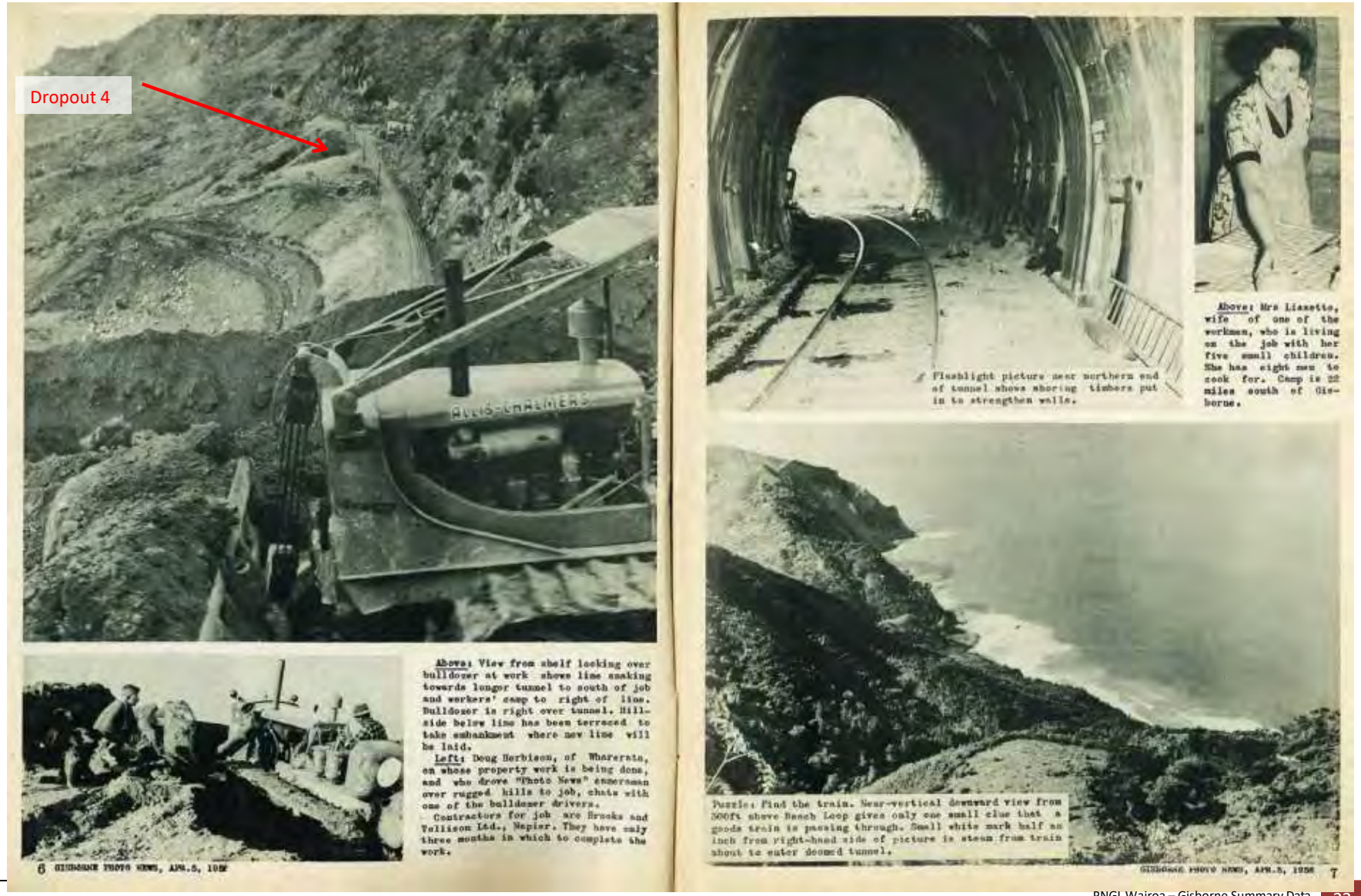
High above the sea, men working machines enjoy one of the most beautiful seascapes. But they have little time to admire the scenery, for the job demands unceasing concentration. One false move would be enough to bring disaster, as the picture at left indicates. View looking north to Gisborne shows Whareongaonga and Young Nick's Head in far distance.

South portal of tunnel, showing bulldozer at work on shelf. The new line will be at right of tunnel, on seaward side.

Looking south from the job, showing two of the bulldozers at work.

GISBORNE PHOTO NEWS, APR.5, 1956 5

PNGL Repair Works



Dropout 4

Above: View from shelf looking over bulldozer at work shows line snaking towards longer tunnel to south of job and workers' camp to right of line. Bulldozer is right over tunnel. Hillside below line has been terraced to take embankment where new line will be laid.

Left: Doug Herbison, of Wharerata, on whose property work is being done, and who drove "Photo News" cameraman over rugged hills to job, chats with one of the bulldozer drivers.

Contractors for job are Brooks and Tullison Ltd., Napier. They have only three months in which to complete the work.

6 GISBORNE PHOTO NEWS, APR.5, 1956

Flashlight picture near northern end of tunnel shows shoring timbers put in to strengthen walls.

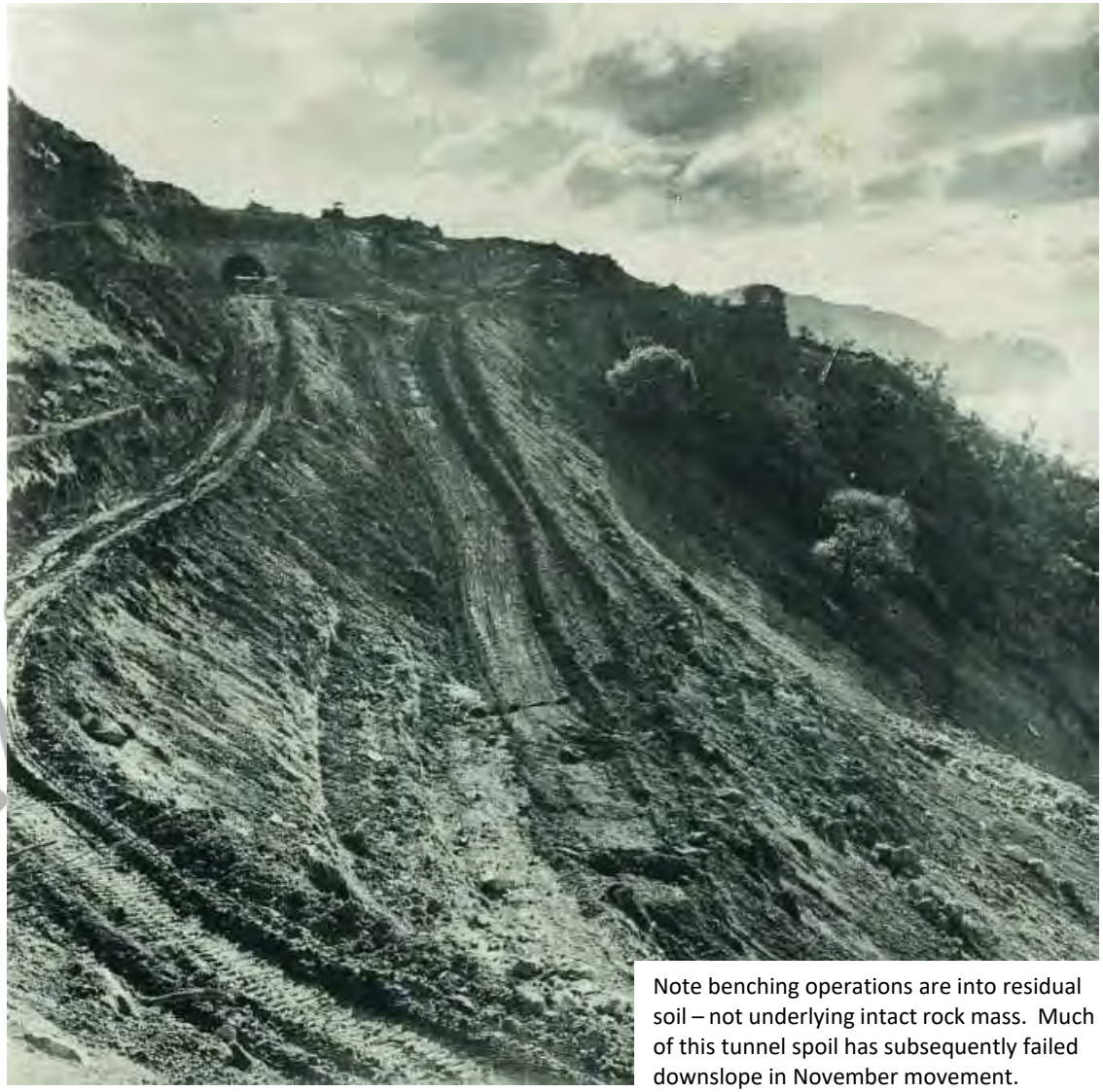
Above: Mrs Lizotte, wife of one of the workmen, who is living on the job with her five small children. She has eight men to cook for. Camp is 22 miles south of Gisborne.

Puzzle: Find the train. Near-vertical downward view from 500ft above Beach Loop gives only one small clue that a goods train is passing through. Small white mark half an inch from right-hand side of picture is steam from train about to enter doomed tunnel.

GISBORNE PHOTO NEWS, APR.5, 1956 7

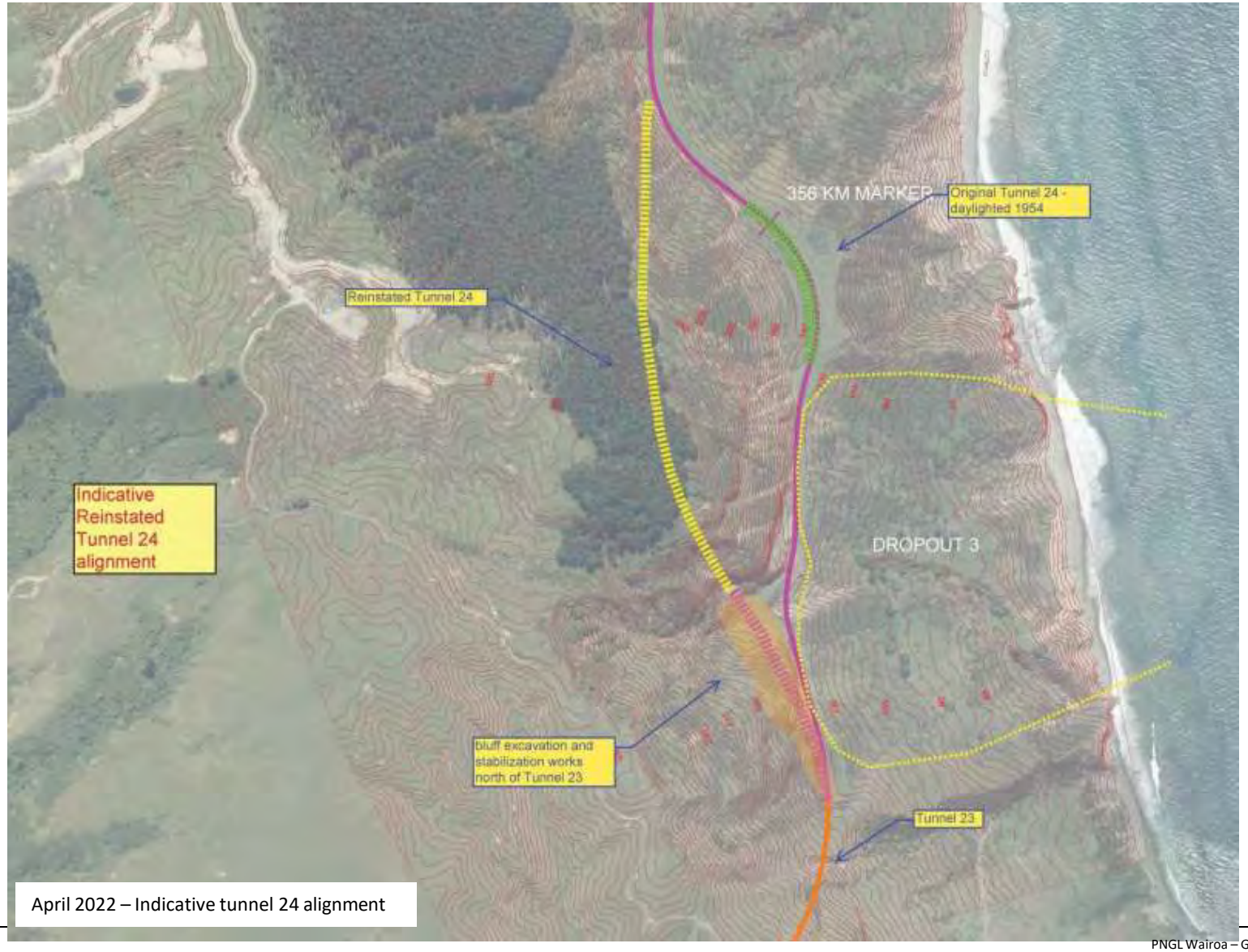
PNGL Repair Works

Historical photographs from 1956 tunnel daylighting operations – note benching and fill placement looking back to north



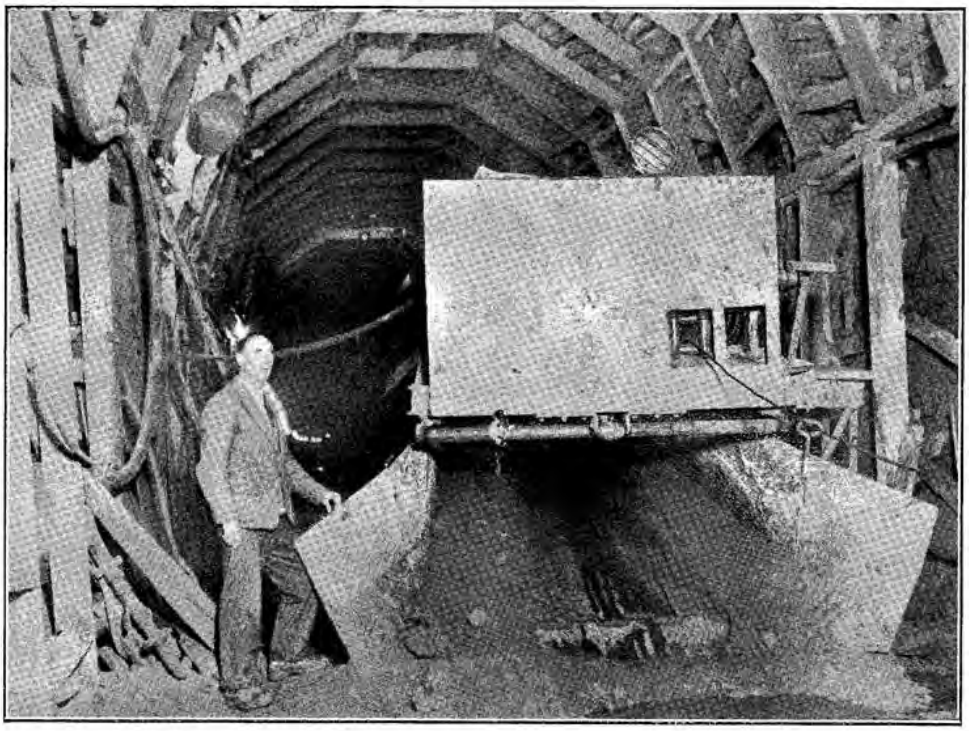
Note benching operations are into residual soil – not underlying intact rock mass. Much of this tunnel spoil has subsequently failed downslope in November movement.

PNGL Repair Works

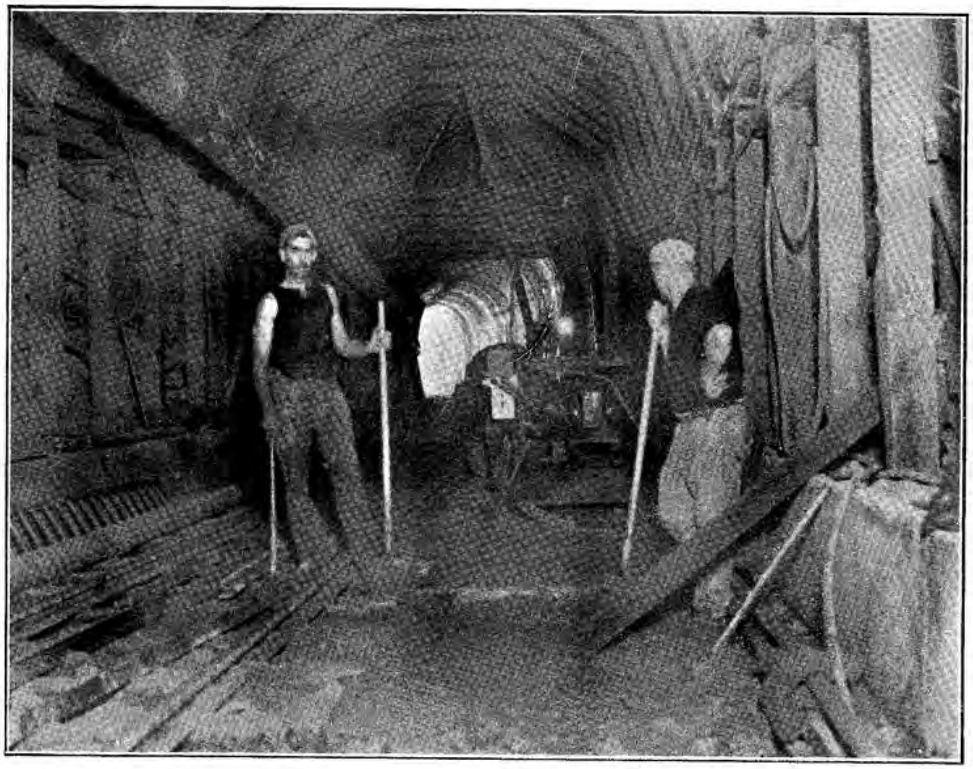


April 2022 – Indicative tunnel 24 alignment

Following pages show historical images from tunnel construction – 1937 /38 (National Library Data). Note concrete lining was directly poured / pumped around timber sets & lagging and tunnel supports shown in various photographs.



MUCK-SCRAPER SLIDE AND SHIELD USED FOR RAPID CONVEYANCE OF MATERIALS FROM THE WORKING-FACE.

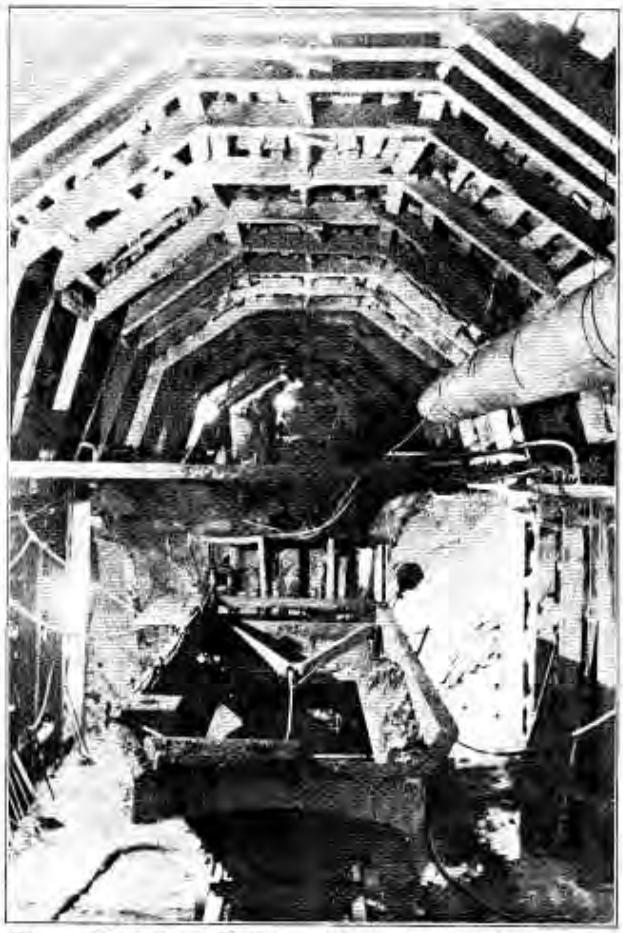


VIEW OF CONSTRUCTION, SHOWING CONCRETE-PUMP IN CENTRE FOREGROUND. NOTE STEEL FORMWORK IN MIDDLE DISTANCE AND COMPLETED CONCRETE LINING IN BACKGROUND.

WAIKOURA TUNNEL, WHARERATA SECTION, NAPIER–GISBORNE RAILWAY.

A

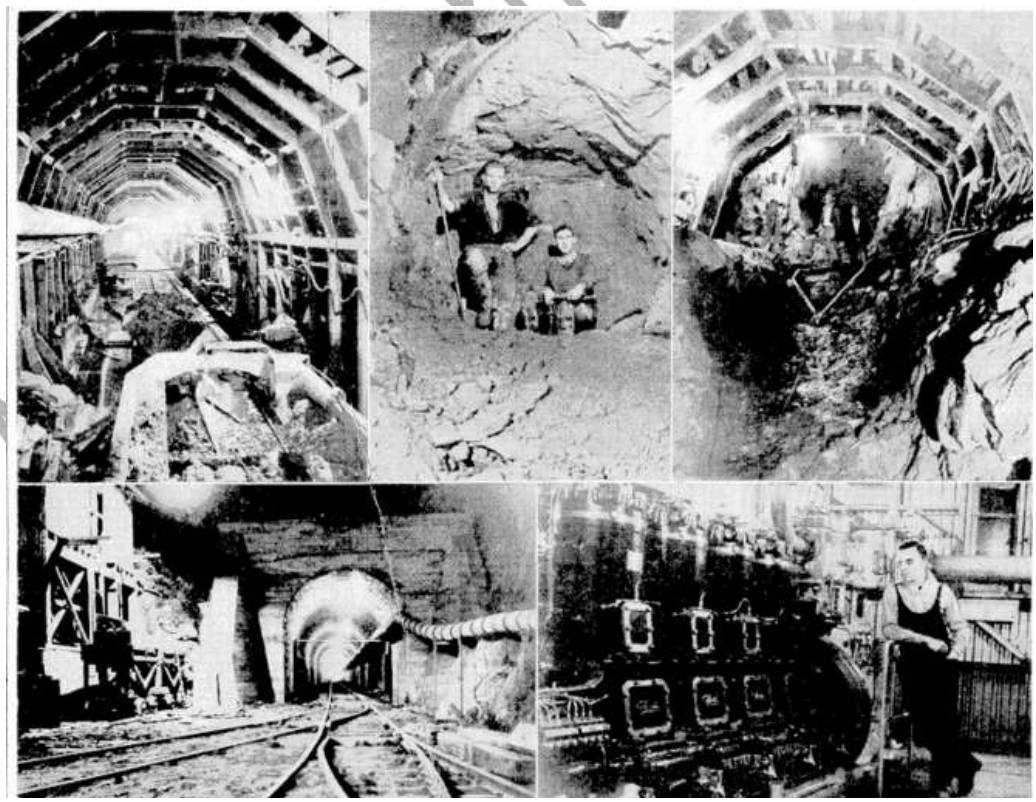
WAIKOURA TUNNEL, NORTH END. VIEW SHOWING STAGES OF CONSTRUCTION: TIMBERING IN BACKGROUND; STEEL FORMWORK IN MIDDLE DISTANCE; AND FINISHED LINED TUNNEL IN FOREGROUND.



WAIAU-TIRIWHATA TUNNEL, SOUTH FACE. VIEW SHOWS TIMBERING AND MECHANICAL MUCK-SCRAPER.

GISBORNE–NAPIER RAILWAY.

Photo showing lining support at approx. track meterage 359.4km (TBC). Track has also been lowered to allow passage for high cube containers at this location.



Tikawhata tunnel 19 construction photos above – note hand excavation and multiple benching / top heading construction in upper RHS photos

3.4 TASK 16 – DROPOUT 4 @ 353.95KM

Dropout Four is further south in the upper reaches of the Tikiwhata Stream catchment at track meterage 353.95km. The dropout straddles a deeply incised gully (up to 30 metres deep on track centreline and some 90 plus metres wide at formation level) with an estimated embankment volume of some 75,000 - 80,000m^3 washed out in the 2012 event. Track level is at nominal RL 150m +/- with the base of the dropout at nominal RL 120 on track centreline and some 20 metres lower at the downstream end of the former embankment fill area.

The majority of previous embankment filling was excavated tunnel spoil from the adjacent series of Tikiwhata Tunnels to the south (Tunnels 19 to 22) along with some material from cuttings to the north and Tunnel 23.

The existing tunnel drainage sits some 30 plus metres under the ridgeline to the north and comprises an upstream 29m length of arched top box culvert 1.95m high by 1.22m wide with a nominal 70m length of 2.5m dimensioned tunnel excavated through solid rock mass on the downstream end. The culvert has a nominal discharge capacity of 23m^3/s at 9m head which is above the Q_{100} discharge required – 18m^3/s capacity is around 6m of head. The culvert system is in good condition for its age and apart from inlet works is able to be directly reused.

The upstream inlet appears to have been buried by 3-4 of metres of stream debris over time based on 1986 photos with a steel pipe riser visible at the upstream end during site inspections. The steel riser within the inlet is further blocked by an additional 3 – 4 metres of landslide debris which we infer occurred early on during the 2012 event causing the water to build up behind the embankment and cause its eventual failure. Total burial depth is in the order of 6 – 8 metres at the upstream end, working off a nominal intake level of RL 127m +/- (Outlet is around RL126m)

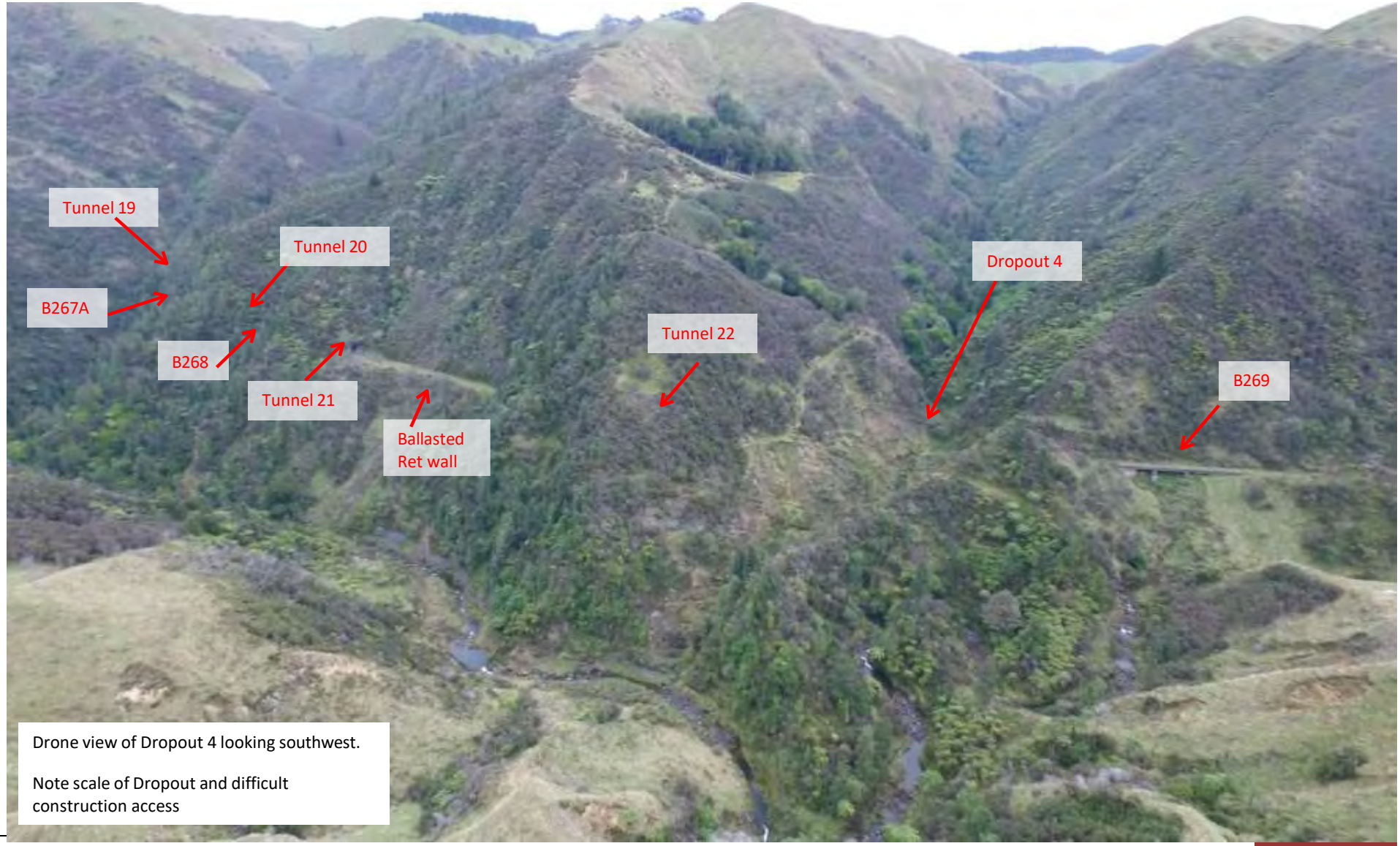
We have put considerable thought into repair options for Dropout 4, ranging across multiple design iterations containing bridging solutions and multiple embankment type constructions including vertical retaining and sloping MSE solutions, imported and local backfills and variations and combinations of the same. Delivery options around using rail and overland access have also been considered.

The most cost effective option is to construct a hybrid solution involving a vertical faced MSE wall some 24m high (from RL 116 to RL 140 +/-) built from imported GAP80/ 100 aggregate reinforced with Paraweb topped off with a 10 m high 1:1 Paragrid reinforced site soil embankment directly under the rail formation. Some 35 – 36m of the reinstatement length at the southern end will include a short section of low height anchored block walls and two second hand 12.2m railway bridge spans spanning across to the embankment to minimise fill volumes.

Local cohesive soils will be compacted on the upstream face to act as a seepage cut off for any seepage under flood surcharge loadings. The downstream aggregate will act as its own underdrainage system and vertically facing the MSE allows for much better efficiency in terms of geogrid performance and limits the amount of imported granular material required.

30% drawings and cross sections are included in the drawing set, ref 1331. Indicative MSE fill volumes are in the order of 20,000m^3 of imported aggregates and some 13,000m^3 of local site soils.

PNGL Repair Works



Drone view of Dropout 4 looking southwest.

Note scale of Dropout and difficult construction access

PNGL Repair Works

PNGL Repair Works

April 2012 photograph above showing intact rail line, balance 2013 photographs

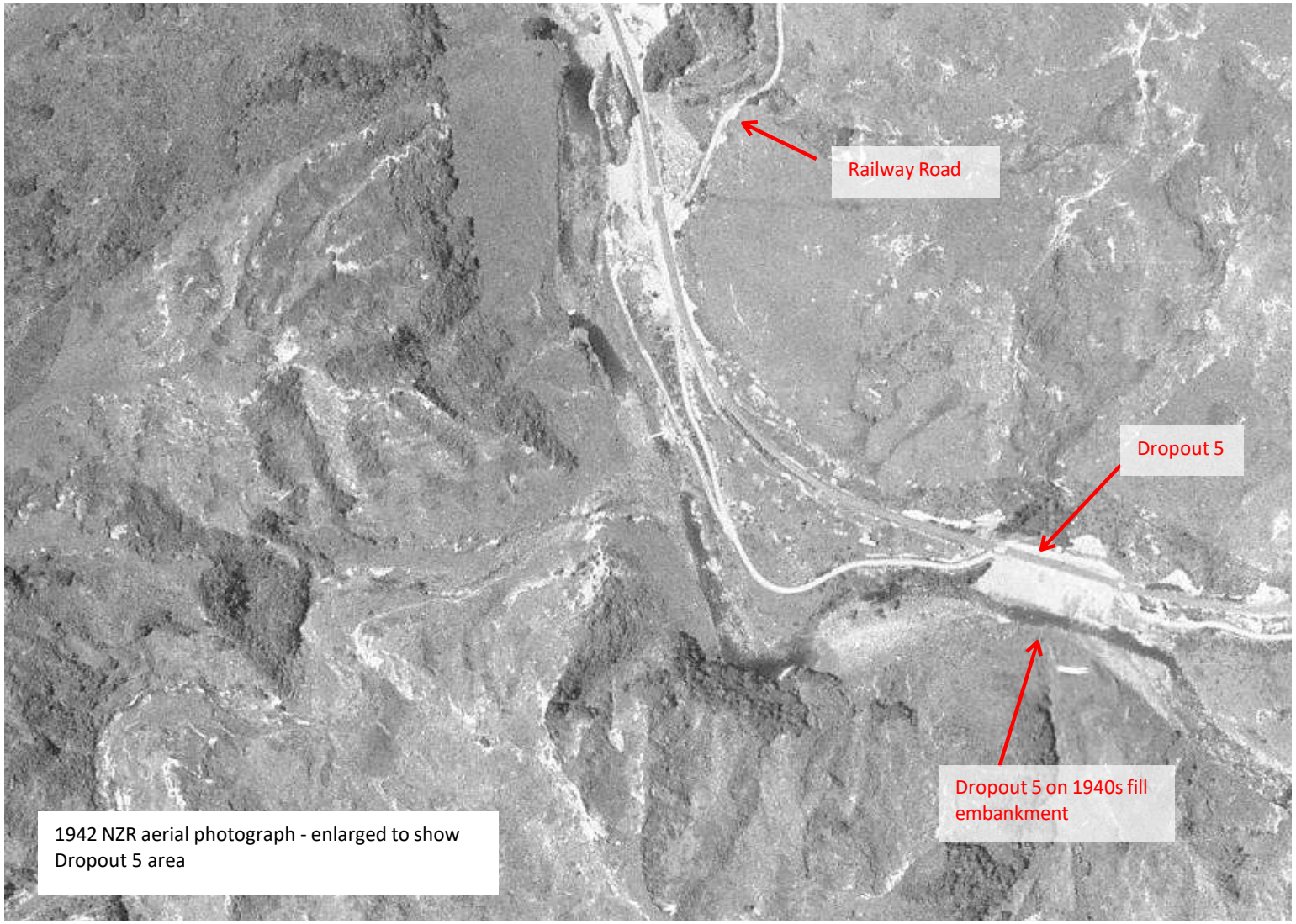
Drainage drive photos – above is nominal 2.5*2.5 tunnel section for 60m downstream of arch culvert

3.5 TASK 22 – DROPOUT 5 @ 349KM

Dropout 5 appears to mostly be scour failure and shallow formation washout due to blocked swale drainage behind the track. Approximate extents are 15m long by 3m wide by 2m high. A gravity / MSE concrete block wall designed for the track surcharge load is proposed, founded on competent fill visible in the base of the washout. Additional swale drainage works are covered under Item 36 in this area.

There is ongoing scour on the outer dropout face at river level. Longer term erosion solutions will need to be addressed as part of detailed design; there is some budget allowance for this in the current costings.

Access into the site will be overland, via Railway Road.



1942 NZR aerial photograph - enlarged to show Dropout 5 area

PNGL Repair Works

Drone shot looking down on Dropout 5 – note extensive retaining works in various states of repair, south of current washout area

3.6 TASK 23 – DROPOUT 6 @ 347.73KM

Drop out six straddles a moderately incised gully with a nominal upstream catchment area of some 0.3km^2, similar in size to dropouts 2 & 3. Washout dimensions are in the order of 30m wide by 40m long by 10 – 12 metres deep.

The site is known to have had several washout events with a recent repair incorporating twin 600mm culverts sighted by the report author during a mid-2010 Tunnel 13 slip inspection visit. This appears to have failed in late 2014 / 2015 as access was available across the fill embankment during our 2013 & 2014 reconnaissance visits.

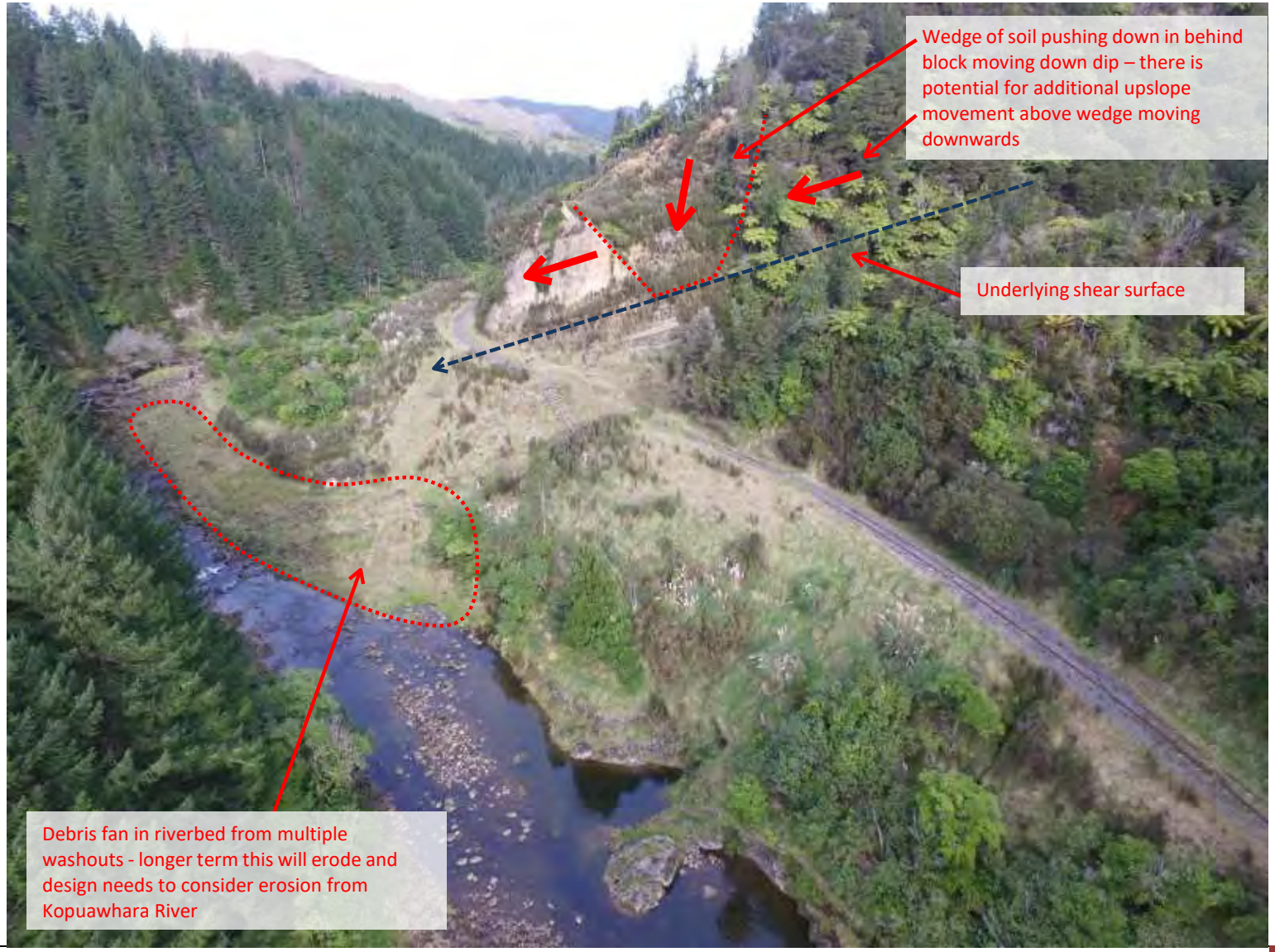
Immediately downstream of the dropout the railway line curves around a large rock bluff. This bluff is failing down dip out towards the river but appears to be relatively stable at track level based on geological observations to date. The upper part of the bluff appears to have been accessed a couple of times to provide material to backfill the dropout area; there is significant potential for additional movement upslope of the borrow area to move downwards and excavating additional material out for backfilling will need to be assessed during detailed design.

The upstream catchment area of 0.3 km^2 has a nominal NIWA Q_{100} flood estimate in the order of 5.4m^3/s. The proposed 1.7 arch box culvert has a capacity of 5.4m^3/s at 1.2m head depth above invert.

Required works at dropout 6 are as follows:

- Construction of a nominal 12m high Paragrid reinforced MSE slope fill on the downstream face using Nuhaka quarry or GAP65 with local site soils used on the upstream face to minimise imported fill volumes.
- Deep excavation and rail inlet protection is required around the existing culvert inlet and installation of an upstream rail gate to prevent it being blocked with trees and vegetation. The stream channel upstream of the existing base culvert will need to also be excavated down to restore the original levels from 1940 +/-.
- Installation of a single set of 1.7m dimensioned arch box culverts to act as an emergency overflow as well as provide additional Q_{100} flood capacity.
- 30% drawings and cross sections are included in the drawing set, ref 1331. Indicative MSE aggregate fill volumes are in the order of 4000m^3 with a nominal volume of 3000m^3 for cohesive materials placed on the upstream shoulder.

Drone shot looking south into Dropout 6


Wedge of soil pushing down in behind block moving down dip – there is potential for additional upslope movement above wedge moving downwards
Underlying shear surface
Debris fan in riverbed from multiple washouts - longer term this will erode and design needs to consider erosion from Kopuawhara River

Drone shot looking northwest into Dropout 6

4 Coastal Works – Waikokopu to Opoutama

4.1 Tasks 27 to 34 – Waikokopu – Opoutama seawall area 334.0km – 335.5km.

Required works along the Waikokopu – Opoutama coastal section include repairs to the northern abutment of Bridge 262 (Task 27, 335.43km), remedial works on a landslide falling down into the formation area (Task 29, 335.05km), numerous seawall repairs (Tasks 28 and 30 -32) some landslide / coastal erosion works (Task 33, 334.55km) and some rock slope scaling work (Task 34) from 334km to 334.38km to mitigate existing rock fall hazards at the Waikokopu end of the site.

The original 1.5km of coastal works between Waikokopu and Opoutama were constructed between 1937 and 1939 and involved construction of multiple concrete seawalls, significant earthworks, benching and cutting back of rock faces to form track formation areas and upslope stabilisation works as well as building two ballast deck bridges – Bridge 261 at Waikokopu and Bridge 262 at Opoutama.

Based on a review of aerial photographs and historical information the majority of the seawalls were directly cast against sandstone / siltstone rockmass exposed along the foreshore with a couple of minor areas where walls were constructed across inlets and have more extensive wall backfilling derived from local soils and rockmass. Construction photographs indicate the structures are predominantly mass concrete with relatively light steel reinforcement used to form the rolled lip along the top wall edge.

Concrete walls were founded on nominally embedded shallow concrete footings excavated into the underlying rockmass. Typical wall dimensions are in the order of 400mm to1100mm wide with heights of between 1.6 and 3 plus metres.

Substantial additional coastal protection works were carried out in the 1960s & 1970s involving the placement of hundreds of concrete backfilled type L and LA 4 wheel railway wagons to protect additional areas of the coastline from wave erosion. Typical “wagon” concrete block sizing is in the order of 4.8m long by 2.2 m wide by 1.1m high – nominally 11.5m^3 of concrete with a mass of some 27 tonnes +/-. There are also significant numbers of “half wagon blocks” at nominally 2.4m*2.2m *1.1m with 5.8m^3 of concrete / 14 tonne capacity +/-. Both of these blocks appear to be stable under the existing wave environment with little evidence of block settlement / movement apart from that caused by under scouring or adjacent erosion.

While the relatively elderly concrete walls themselves are in quite good condition for their age, at least in terms of concrete performance, there are significant areas of wall undermining (up to 1 – 1.2m deep under multiple wall sections) where the rockmass has scoured out over the past 80 years.

There is also evidence of some increasing overtopping erosion on south east facing wall sections. Aerial photos from 1938 onwards show variable movement with the boulder banks in front of the walls (majority of these are tucked in behind wall sections protecting them from direct southerly wave activity). There is also some variability in the amount of exposed rockmass on the foreshore platform over the past 80 years although much of this is likely to be an artefact of tide times in various photograph sets.

The walls themselves appear to have limited geotechnical capacity to accept additional fill surcharges from large rock or similar placed on top of them; there is a couple of 6m long wall panel failures at meterage 335.220km where rock placed for scour protection has pushed the panels outward although this is complicated by evidence of toe erosion at the base and overtopping wave activity already having scoured out the wall back face prior to rock placement.

Based on our visual appraisal of the current situation, our engineering assessment is as follows:

- The existing seawalls have sufficient concrete capacity for several more decades (30 to 50 years +), contingent on the toe erosion and base scour being repaired as a matter of urgency with some additional wall height increases to limit overtopping and scour behind the walls.

- Base scouring can be repaired with a combination of cast insitu toe beams anchored down into the rockmass using grouted fibreglass anchors and large geotextile bags placed under the walls and pumped full of concrete and similar such measures.

- Between 800mm and 1.5m of additional retained height is required in a couple of relatively short wall areas, primarily on outside wall points directly facing to the south east to redirect overtopping wave sets. Given the limited geotechnical surcharge capacity within the existing walls, precast blocks should be used, concreted to the underlying seawall with epoxied fibreglass starters and tied back into the ground behind using hollow bar full cement grouted anchors.

- The extensive areas of railway wagon block seawalls are also in good condition for their age and while they are somewhat unsightly, the concrete blocks are doing a good job of coastal protection.

- We estimate these wagon block structures will have a similar future life in them of nominally 30 to 50 years. Areas of steel will continue to corrode and be washed away however the concrete is expected to remain.

- There are a couple of areas where sideways erosion is working in behind the end of the wagon block walls. Several large geotextile bags of concrete should be used to infill these areas to limit further wave penetration.

- There is an area of land slippage between track meterage 334.48 and 334.56km (Task 33 in the task list). The track is kinked in this general location and the area is known as an ongoing maintenance area, requiring periodic tamping and track realignment. The toe of the landslide is at or below the low tide level with the upper slip extent extending up to 200m inland and over 30m in elevation.

- The outer extent of the landslide is protected by 2 to 3 rows of wagon blocks however ongoing slope movement has pushed these down and seawards. Waves are able to break over these at mid to high tide and the area behind is eroding, further destabilising the landslide toe.

- The toe of the landslide in behind the wagons requires buttressing with large rock to prevent further erosion as well as provide some additional resisting mass to improve landslide FOS values. The wagon blocks provide a reasonable outer edge to build from.

- Some geotechnical investigation is required to assess groundwater levels, better model the slope movement and adequately size the rock toe volume and well as consider if any improvement would be obtained from counterfort drainage. Several additional wagon blocks would also be helpful, although we understand no old wagons are currently available.

PNGL Repair Works

PNGL Repair Works

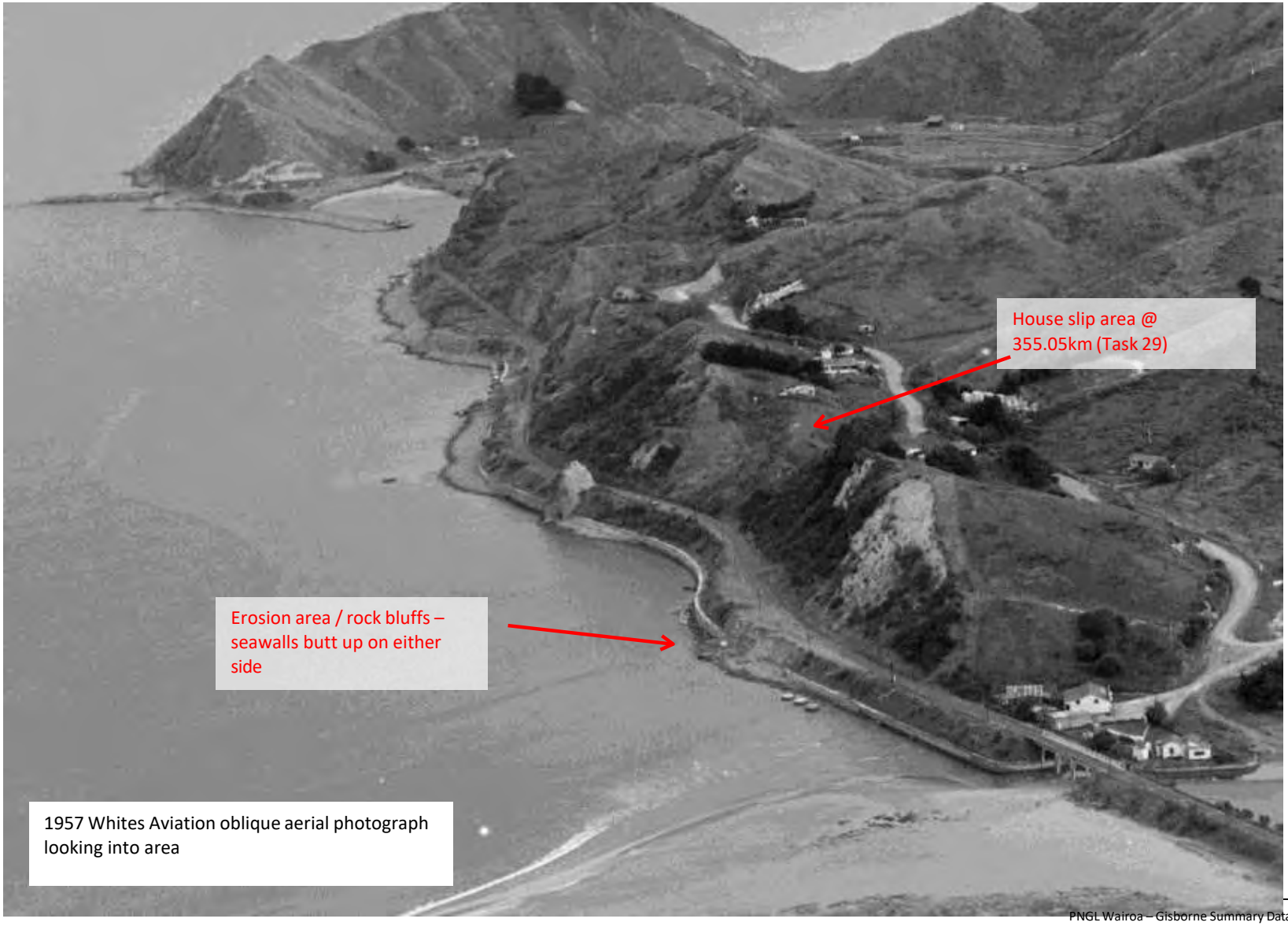
PNGL Repair Works

Drone shot looking northwest into erosion area

PNGL Repair Works

Drone shot looking southwest into erosion area

PNGL Repair Works



1957 Whites Aviation oblique aerial photograph looking into area

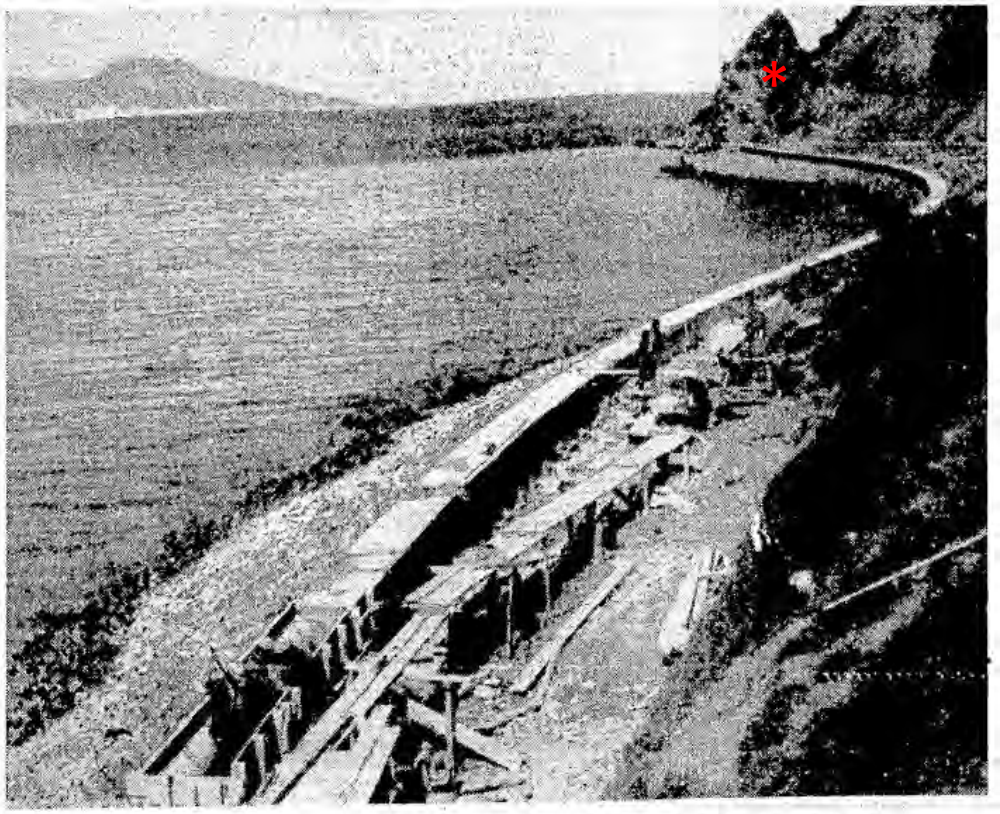
PNGL Repair Works

PNGL Repair Works

PNGL Repair Works

Sea-wall in Course of Construction, Waikorotu Bluffs.

PNGL Repair Works



Building a sea-wall on the route of the East Coast railway, the construction of which is nearing completion. This wall, in the neighbourhood of Waikokopu, is to protect the new line from erosion along a shingly beach, where the sea constantly alters the coastline.

PNGL Repair Works

Rock scaling area looking to Waikokokopu.
Benching operations date from 1937 - 38

Annex 2: Freight Assessment

Freight Update

Freight train crossing Poverty Bay flats carrying general freight plus 16x chilled containers of produce from the Poverty Bay flats directly to the container port at Napier. Photo: Aberail, 27 February 2012

Weatherell Transport Ltd truck with side lifter, loading full squash container onto railway wagon at Gisborne Railway Station. Photo: Aberail, January 2012

Overview

- An update review of the 2019 BERL Feasibility Study freight assessment information indicates that the freight for rail prospects forecasts for 2025 remain realistic and valid,. The growth of higher value crops such as apples and kiwifruit is accelerating ahead of the forecast levels in the BERL Study. The sustained strong growth in the area planted with new apple varieties is particularly important for rail as much of this crop is transported in 40ft containers to Napier Port.

- The reopening of the Napier to Wairoa section of the line has been of considerable benefit to log transporters. Logs harvested in the southern regions of Gisborne are being transported by log truck to Wairoa for transport by rail to Napier Port.

- The development of investment plans by iwi groups to plant high value horticulture crops, especially apples and kiwifruit, on iwi land in the Gisborne area has not been included in freight forecasts but the impact could be significant.

- Biosecurity requirements for horticultural products to be loaded and custom sealed at the point of harvest or processing remain. Part loaded containers sent by truck to Napier and then topped up to maximum weight represent an increased biosecurity risk. Sealed 40 ft containers are ideal for transport by rail from Gisborne to Napier.

150,000 tonnes pa growing to 210,000 tonnes pa of Rail Freight

- The 2019 BERL Study forecast possible rail freight totalling over 150,000 tonnes for 2020 with this figure growing to 210,000 tonnes by 2025. Most of this freight would be containers supplemented by some logs.

- These figures were based on interviews with potential customers that were prepared to use a reinstated rail service. Most of these freight generators used rail in 2012, and were mostly existing customers of rail advocate freight forwarder Weatherell Transport. The projected growth provides for the growing harvest volumes of apples and squash, with some citrus, meat products, manufactured products, complemented with some processed timber and logs.

- Actual freight tonnage from the 2020, 2021 and 2020 harvests was affected by the restrictions imposed by Covid-19. Labour supply was reduced, thereby affecting the ability of growers to harvest, and shipping schedules were disrupted with fewer ships available and calling on a reduced number of New Zealand ports. Nevertheless, the production of fruit by recent plantings continues to increase with each harvest season.

- The current Update Assessment forecast is that an achievable level of rail freight for 2025 is 140,000 to 150,000 tonnes if 2025 is the first full year of train operations. The growth of rail freight to 210,000 tonnes pa or more by 2030 is not unrealistic, especially if iwi proceed with planned horticultural investments.

- This freight assessment assumes that the time to complete the detailed rail investment business case, gain investment approval, and commence repair reinstatement work in achieved by late this 2022. That timetable would enable the line to be reopened for a train service by early 2024 for the 2024 harvest season.

Need for regular 5 day a week Train Service to service Customer Needs

- Businesses require a 5 day a week service, especially during the main harvest seasons. The development of greater local cool store capacity is lengthening these seasonal periods which should allow the peak season to be extended for rail freight.

Rail and Biosecurity catalysts for Gisborne based packhouses to pack, process and custom seal in export ready 40ft Containers

- Several potential rail customers noted the increasing biosecurity demands from export market customers for packing and custom sealing of containers, particularly those containing raw product, close to the point of production.

- This preferred level of containerisation is not always possible using road transport as at times full 40ft containers can be too heavy for transport by truck. Part-filled containers must be trucked to Napier to be topped up prior to export. Each additional step in the pre-export process increases the biosecurity risk.

Train service based on 24 wagon capacity trains

- This Update Assessment has used a same train size assumption used in the 2019 BERL Feasibility Study.

- This assumption is for trains of 24 wagons, with some seasonal variation expected with greater demand during peak seasons and less during the low late winter period.

- In 2019 KiwiRail proposed trains comprising 21 wagons as being economically viable with the ability to add additional wagons. Trains of 24 wagons were used for planning purposes, being a profitable configuration within the hauling limits of suitable locomotives for this 16.3 tonne axle load line.

- KiwiRail provided competitive rail freight rates as f input into the 2019 BERL Feasibility Study. A similar competitive rail rates approach is assumed from KiwiRail as part this Update Assessment.

- This Update Assessment has noted that the Napier Wairoa section of the line now has regular weekday trains provided by two locomotives based in Napier. It is possible that this existing log service could be added to a reinstated Napier to Gisborne train service that would include dropping off and picking up wagons at Wairoa. This amalgamation of services would provide greater resilience for train operations.

Processed Timber

- The closure of the Far East Sawmill and subsequent takeover of the sawmill operations by Kiwi Lumber from Hawke's Bay has changed the mix of production of containerised timber for export but the overall number of containers remains consistent.

- Far East was producing the equivalent of 6 containers a day, 5 days a week, or 1,500 containers a year of wood product, with a keen interest in using 40ft containers for shipping to their export customers. Far East was already trucking a quantity of product to Napier and Tauranga for repacking into containers for shipping, and its sawmill manager could see the advantages of using rail, helped too by the sawmill already having a rail siding. This number of processed timber containers represented a significant percentage of the baseline freight available for transport by rail at the time for the 2019 BERL Feasibility Study and the 2025 freight forecasts.

- Kiwi Lumber splits its production into three parts – transport to Masterton for treatment as decking material, transport to a sister site in Putararu for manufacturing into product for export to the USA, and export to Europe via Tauranga. The company has long-term contracts and does not load containers in Gisborne. A $20 million plant upgrade planned for October 2022 will increase production significantly,

- About 56% of daily production of 200 cubic meters of processed timber produced each day is exported. Kiwi Lumber is keen to use rail to transport containerised export processed timber to Napier for either direct export or transfer to a large port for transfer to a larger ship. The exported output has been included in the projected freight numbers.

- Approximately 25% of Kiwi Lumber's daily production (about 50 cubic meters, is trucked to its Masterton plant for further processing. This is equal to slightly more than two 40 ft containers a day. These containers could be transported by to Masterton but have been excluded from the freight projection used in this update.

- Kiwi Lumber is very interested in the transport by rail of logs from the Wairoa area to its Gisborne plant. Logs from Wairoa are larger and represent better value to Kiwi Lumber and its processing system and processed outputs. Far East had a similar interest in transporting logs from Wairoa by rail.

- JNL is continuing to produce processed product and previously expressed an interest in changing to the use of 40ft containers packed on site and then sent by rail. Both JNL and its current transport operator, Mainfreight, are used to using rail elsewhere in New Zealand.

- Since 2019 there has been the development of the new Wood Engineering Technology plant (WET Gisborne) which commenced production level operations in 2021, with significant growth expected over the coming years. The current focus is the domestic market with product currently transported by truck, largely to northern customers. It is worth keeping an open mind to future opportunities for rail product going south via Napier to elsewhere in NZ.

Train top up with log wagons

- The 2019 BERL Feasibility Study noted that where a train would not consist of 24 wagons of non-log freight it could be supplemented with log wagons to bring the train up to 24 wagons. At that time between 347,000 and 825,000 tonnes of logs, being in excess of the Eastland Port's current capacity, were identified as being possibly available for transport by rail.

- No top up is projected for the months of January, February, and March. A more significant top up is required from August until December.

- Each log wagon weighs approximately 21 tonnes and represents one truck movement. The projected annual number of log wagons is 1,387, representing approximately 29,127 tonnes of logs and 2,774 truck movements. This assumption is subject to KiwiRail offering competitive rail freight rates.

- Eastland Port has current capacity to export approximately 3 million tonnes of logs per annum, with a stated need to handle more than 5 million tonnes. The proposed 29,127 tonnes of logs used to top up a 5 day a week, 24 wagon, train service represents approximately 0.01.% of the total Eastland Port current capacity.

- This level of log freight does not represent any threat to Eastland Port's log export business.

- It is noted that Eastland Port can be closed to shipping when a southerly swell is present and having an alternative to road transport provides a means of keeping logs moving out of the region without adding to road congestion.

- In 2019 during preparation of the BERL Feasibility Study KiwiRail noted that in addition to non-log freight there was the potential for KiwiRail to operate log only trains. This Update Assessment does not include any provision for log only trains.

- In 2019 KiwiRail was about to institute a weekend only log train service from Wairoa to Napier Port. Since the inception of this service, it has been expanded to a 5-day a week service.

- Over recent years a quantity of logs from areas close to and just to the south of Gisborne are already being taken to Napier Port. This has been particularly during periods when sea conditions have restricted local shipping conditions.

- The largest log transporter in Gisborne has advised that it is a strong supporter of the log train out of Wairoa. Logs harvested in the southern part of Gisborne hills are being transported by truck to Wairoa and left at the Wairoa log yard for transport by rail to Napier Port. A log

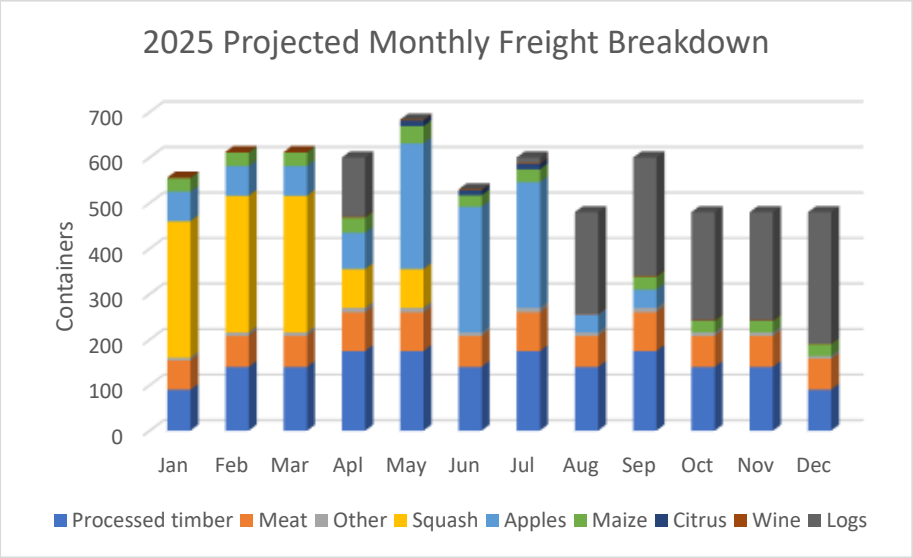
transporter cannot make more than one return trip from Gisborne to Napier in a day but can make at least two return trips to Wairoa, thereby increasing the productivity of the log truck and increasing total revenue. This operator is so short of drivers that it has been to the Philippines twice in the last 6 months to recruit drivers.

Rail Freight Estimate Tables

i. 2022 Update Forecast Wagon Numbers and Tonnage 2025 (including logs)

Product	Weight (tn)		Logs	20ft	40ft	Total Wagons	Total (tn)
Processed timber	21	All Year			1,720	1,720	36,120
Squash	28	Seasonal			1,070	1,070	29,960
Apples	23	Seasonal			1,183	1,183	27,209
Meat	20	All Year		880		880	17,600
Maize	20	Seasonal		318		318	6,360
Other	20	All Year		100		100	2,000
Citrus	20	Seasonal		35		35	700
Wine	24	All Year		20		20	480
Logs	21	All year	2,409			2,409	50,589
Total			2,409	1,353	3,973	7,735	171,018

ii. 2022 Update Forecast Monthly Wagons/Containers 2025 (including logs)



Note: In five months of the year, being January, February, March, May and June, the projected amount of freight available to rail is greater than the capacity of a 5 days a week24-wagon train. There is no proposed use of rail to transport logs to top up wagon numbers during these months.

The options to transport the available freight are to:

- Increase the number of wagons per train during those months
- Increase the number of trains during those months
- Transport the additional freight using trucks

Other Potential Freight in 2025

- The BERL Feasibility Study noted that there was no provision in the forecast tonnage and container numbers for rail freight from fertiliser, wine, wool, kiwifruit and other horticultural produce. The same approach has been taken in this update for the forecast rail freight volumes.

- A significant amount of other potential inwards and outwards freight was identified from interviews with business managers that may be attracted to rail once a regular train service is operating. Time would be required for other transport contracts to expire and thus for this freight to become available for rail.

- This potential included fertiliser, which used to be a major inwards freight component. Those interviewed were both prepared to use rail again if a competitive rate and service was offered. Indications were this could be for 4 - 5 wagons a week. Growers and processors have advised that the current and planned level of plantings of kiwifruit and apples are expected to result in an increased use of fertilizer, all of which must be brought into the region.

- There is also aggregate and some inwards fruit product from Hawke's Bay for processing in Gisborne and the transport of citrus from Gisborne to Hawke's Bay for processing. One large food processor has advised that it is now bringing 8,500 tonnes of apples and 10,000 tonnes of squash from Hawkes Bay to Gisborne for processing. This processor expects these tonnages to increase as land use changes in Gisborne as more high value crops are planted forcing lower value crops to more marginal land.

- Nuhaka is also seeing a growth in horticulture, including apples and citrus, as well as logs for Napier, as a potential site for a rail freight yard sometime in the future.

- The BERL Feasibility Study also noted that there was a level of scepticism in the Gisborne business community that a rail service would be reinstated. Freight generating businesses and some trucking companies stated that they would use rail but would not commit until the service was operating and they were confident that a such a service would be reliable. No provision for freight from these parties has been included in the freight projects for the BERL Feasibility Study or this Update.

- There is also the possibility for KiwiRail operating log only trains on the line, particularly when Gisborne Port is closed due to weather related reasons, e.g. southerly swells or flooding.

Kiwifruit

- The BERL Feasibility Study did not include any rail freight provided by kiwifruit. Kiwifruit plantings in 2019 were primarily undertaken by Bay of Plenty kiwifruit growers that were transporting any kiwifruit from Gisborne to the Bay of Plenty to be processed in the growers' existing packhouses. The capital savings were significant for these growers.

- Although in the intervening three years, kiwifruit plantings by local growers have not been as high as projected in 2019 due to labour shortages and other Covid 19 related reasons. There is significant major 'locked in' growth in plantings and new blocks coming into production.

- Large corporate and syndicate growers are now planting kiwifruit in Gisborne, and they will require post-harvest packing and cool store resources once these planting start producing export grade fruit. Fruit from these post-harvest processing facilities could be available for transport by rail to Napier Port. Zespri has previously expressed an interest in this as option.

- The area in production is expected to double by 2025, with every 100ha producing the equivalent of 200 40ft containers of export trays of fruit.

- There has been significant progress in resolving sourcing additional irrigation water supplies for the intensification of the Gisborne Flats which will assist with furthering the expansion of kiwifruit plantings and production in the area, including of new iwi horticultural developments.

- No provision for freight generated from kiwifruit has been included in the update freight projections.

Significance of new Iwi Apples and Kiwifruit Developments

- Of particular significance major are planned iwi horticultural developments beginning with an initial 900 ha being planted in apples and kiwifruit. A further 2,000 ha is under discussion subject to receipt of irrigation permits from the Gisborne District Council.
- Production from every additional 100 ha planted in apples will need about 80 40ft containers per season for transport to Napier Port.
- No provision for any rail freight from iwi horticultural developments has been included in the updated freight projections.

Critical Importance of Gisborne based Freight Forwarders for Rail

- The key to ensuring the use of rail from Gisborne is having locally based freight forwarders that will use rail as part of providing intermodal transport for their customers. The good news is that Gisborne is particularly well set up in this regard.
- Gisborne based Weatherell Transport as the major logistical freight forwarder for the primary produce in the region and stands out as a supporter of rail. It has strongly supported the use of rail for many years. In 2012 Weatherell Transport demonstrated its ability to load trains with containers but KiwiRail was unable to provide sufficient trains to meet the demand. There has been major growth in produce since 2012. Weatherell Transport has continued to offer KiwiRail its services in recent years. (www.wtrans.co.nz)
- Mainfreight, which handles the processed wood products transport for JNL, has a close association with KiwiRail. JNL is close to the rail line and has considerable experience using rail elsewhere in New Zealand.
- Halls Transport has previously used rail and has the potential to use a reinstated rail service for both inwards and outwards freight.

Continuing Growth of Primary Production Needing Improved Transport Options

- The trend of increased primary production intensification development is continuing in the Gisborne Tairawhiti region, particularly on the fertile Poverty Bay Flats. This growth is also being seen in the northern Hawke's Bay, Nuhaka, and Wairoa areas, as was forecast in the 2019 BERL Feasibility Study.

- This intensification of crop land transitioning from lower value to higher value horticultural crops is mainly with new apple varieties, citrus and kiwifruit. Investment is from within the region and from outside, particularly from the Hawke's Bay and Bay of Plenty.

- Developments include expansion by new entrants such as apple company Rockit (RGL) with initial plantings of 65ha.

- Progress is being made on solutions to ensure the provision of additional water to enable an expansion of irrigated crops.

Port Developments

- The new $190m Port of Napier 6 Wharf development is due to be completed by the end of 2022. It will provide significantly enhanced facilities to handle large container ships. The ability to accept larger ships is expected to enhance export shipping services through existing and new shipping operators for customers in the Gisborne region as well as Hawke's Bay.

- Eastland Port is underway with its $60m Twin Berth project, which will provide improved servicing of the core logs export business, as well as being aimed at attracting coastal shipping services. Eastland Group have also been increasing cool store capacity for kiwifruit and other product.

Potential Large Scale Timber Processing

- The Trust Tairawhiti economic development section has been investigating the potential of attracting a large-scale timber processing facility to the region. Gisborne exports approximately 96% of its log harvest as logs with only 4% of logs harvested having any value-added processing. This is the lowest level of value-added processing in New Zealand.

- A recent report issued by MPI recommends that any large-scale wood processing plant needs to take in at least 1 million tonnes of logs. This is conservatively expected to produce over 450,000 to 500,000 tonnes of processed timber output.

- A significant factor is a decision to locate a large-scale timber processing plant in the Gisborne region is the ability to transport the output of such a facility to an export port.

- Each 40ft container of processed timber is likely to hold 21 tonnes. Therefore, the potential production is in the order of more than 21,430 to 23,810 containers a year. Based on a 48-week production year, this equates to 428 to 476 containers a week.

- Transporting this number of containers by truck would require 21,430 to 23,810 truck movements a year. This number of truck movements represents about between 62 and 100 additional truck movements per day depending on the level of production and whether the plant operates 5 or 7 days a week, excluding public holidays.

- Trust Tairawhiti does not believe that there is any public licence to increase the number of truck movements by those numbers. The availability of a reliable and regular transport mode, such as rail, may be an important factor in any decision to locate a large-scale timber processing plant in Gisborne. Even if a decision to reopen the line is deferred, the reinstatement option should be retained by keeping culverts clear and vegetation clear of the track.

Other Relevant Factors

i. Covid-19 impact on labour supply

- The impact of Covid 19 and resulting closure of the New Zealand borders restricting the availability of seasonal labour provided by international backpackers and other itinerant workers due to lockdowns. The impact on harvest levels has been well documented and export figures may have been reduced. Lower export numbers may give the mistaken impression that freight numbers will not be as high as projected, but that impression is based on the ability to harvest rather than the capacity to produce.

ii. Impact of Covid 19 on freight out of New Zealand

- The impact of Covid 19 on the shipping of goods to and from New Zealand has received significant coverage in the news media over the last two years.

- The New Zealand Council of Cargo Owners notes that Covid 19 has been the catalyst for a rethink on freight. There appears to be more chartering of vessels to bypass scheduled shipping lines. Some of these traditional scheduled lines are either not coming to New Zealand or are missing ports. There is also the issue of the lack of availability of containers for export.

- The export sector is making decisions in the face of this disruption to meet current requirements. It is unclear if any immediate action will be permanent or if they will suffice until 'normal service is resumed.'

- The Ministry of Transport released a discussion paper 'New Zealand Freight & Supply Chain Issues paper' 1 on 20 April 2022 seeking public submissions on the issues facing supply chains.

- At this point it is unclear if and how any significant changes in the export of products from New Zealand may be affected but it is important to be open to the possibility that changes may occur.

iii. Regional Resilience

- It is noted that the effects of three recent major weather events in the Gisborne area have limited the availability of senior management of affected productive entities. These people have been busy either recovering from one major weather event, or preparing for the next

[1] https://consult.transport.govt.nz/policy/new-zealand-freight-and-supply-chain-issues/supporting_documents/Freight%20and%20supply%20chain%20issues%20paper%20%20full%20version.pdf

one, to have spent much time considering the longer-term impacts for transport logistics. This has been especially difficult at a time when the traditional harvesting is either underway or about to commence.

- These three major weather events have resulted in significant rainfall and subsequent flooding of rivers and damage to land (including crops), roads, bridges, and other infrastructure.
- Closure of the Wairoa to Gisborne State Highway due to flooding is increasingly common.
- One large forestry operator advised that a key bridge north of Wairoa had been damaged and will require up to six months to repair before it can be used again by logging trucks.
- Crop harvests difficulties and disruption to daily trucking out of produce due to road closures from severe storm events has become more common.
- The impact of climate change is expected to be an increasing number of heavy rain events with higher-than-normal rainfall. A 'one in one hundred years' rain event is expected on a much more frequent basis and may occur more than once in any calendar year.
- Increased frequency and intensity of heavy rain is expected to require a greater focus on the maintenance of infrastructure, such as roads and bridges, and require alternative means to transport goods in and out of the Gisborne region.
- A reinstated rail service is one option in the increased resilience of this region.

Projected Freight Rates

- In 2019 the BERL Feasibility Study used projected rates provided by KiwiRail that included provision for other parties to provide loading and unloading services for containers at either end of the rail journey.
- Some estimates have had to be made in this Update to provide indicative levels of possible revenue for a reinstated rail service.
- In the first four months of 2022 increases in the price of fuel, driven mainly by the war in Ukraine, has risen by 32% and added to the cost of transport. General inflation is running at an annual rate of 6.9% as of March quarter of 2022.
- Current standard trucking rates for containers from Gisborne to Napier are $2,310 including fuel surcharge and port fees for 40ft containers and $2,160 for 20ft containers. These prices excluding fuel surcharges are $1,925 for a 40ft container and $1,800 for a 20ft container.

Projected Rail Revenue

Based on the number and mix of containers and log wagons as detailed above, and assuming a 30% and 50% increase in the cost per wagon from figures provided by KiwiRail in 2019, the following indicative projected freight revenues inclusive of intermodal rail head to customer location road transport costs is forecast for 2025:

Assuming a 30% increase on 2019 freight revenue:

	Number	Unit Cost $	Total $000s
40ft Containers	3,973	2,405	9,555
20ft Containers	1,353	2,210	2,990
Log Wagons	2,409	1,014	2,442
Total			**14,987**

Assuming a 50% increase on 2019 freight revenue:

	Number	Unit Cost $	Total $000s
40ft Containers	3,973	2,775	11,025
20ft Containers	1,353	2,550	3,450
Log Wagons	2,409	1,170	2,819
Total			**17,294**

Annex 3: Matawhero Yard

Matawhero yard is situated on the corner of Awapuni Road and MacDonald Road at nominal track meterage 385km, some 6.4km south of the current railway yard in Gisborne City. The yard has good transport links into the southern side of Gisborne with most agricultural and industrial processing / freight dispatch facilities within a 3-5km road distance radius of the site.

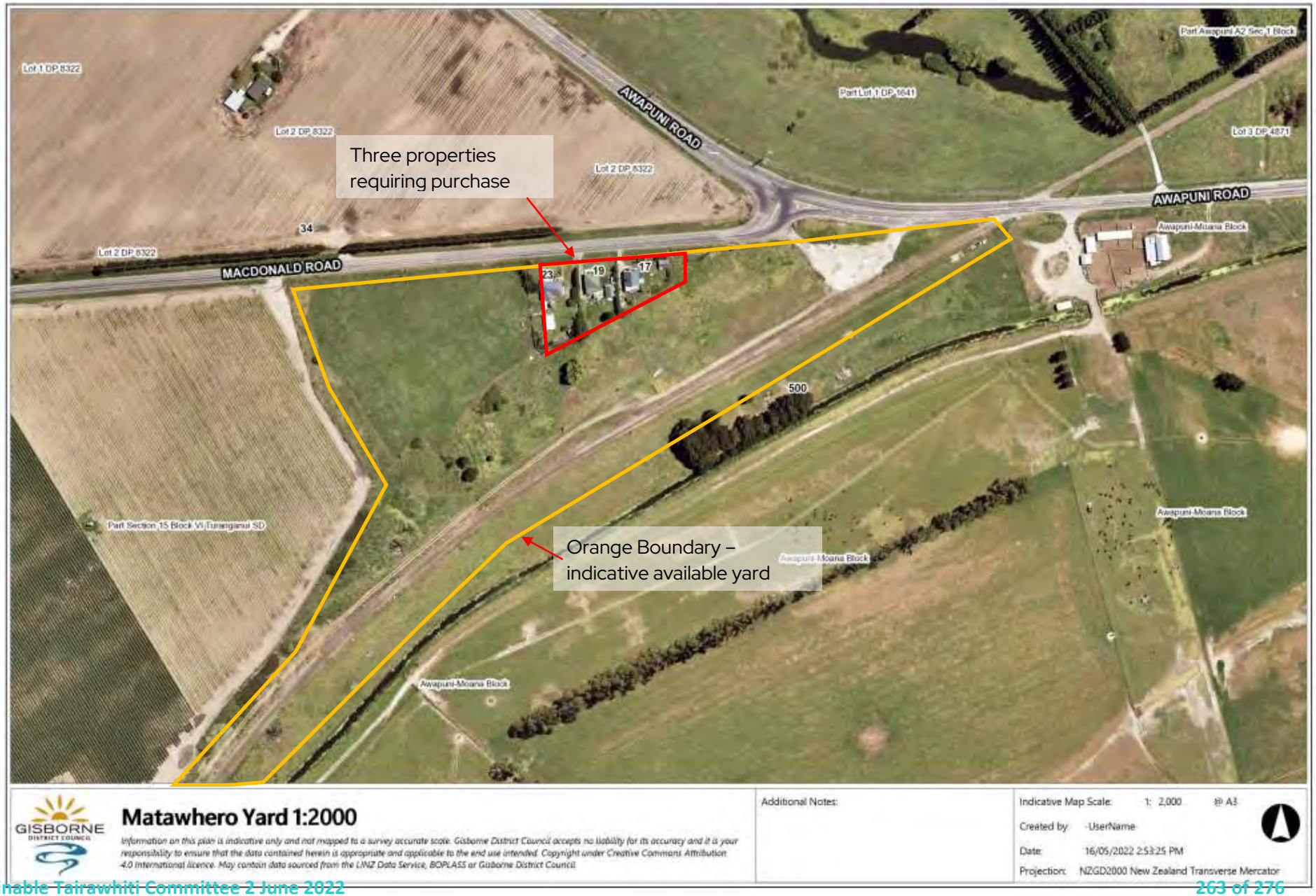
The yard was established in the 1940s as part of the original PNGL railway construction including multiple railway sidings, goods shed, loading banks and stockyards at the time. Additional sidings and spur lines have been installed over time to Ravensdown fertilizer @ 384.7km and Kiwi Lumber @ 381.5km.

Three railway houses were also part of the original site development; these have been sold off over the years and are now in private ownership. These will need to be purchased back as part of the yard development to permit clear access off MacDonald Road and allow adequate container storage and handling yard space.

The mainline through the site is in good condition with reasonable timber sleepers and ballast. Existing turnouts are in reasonable condition while the sidings are in a lesser state of repair and will require some reconstruction as part of yard development.

A series of photos are included on the following pages showing the yard location and general site features, taken from the Gisborne Council GIS website and a 1986 aerial photo flown for NZR.


HANSEN ROAD
NELSON ROAD
CAMERON ROAD
ROADWAY
MAKARAKA ROAD
BUSHMERE ROAD
BELL ROAD
BLOOMFIELD ROAD
VALLEY ROAD
POTAE AVENUE
ORMOND ROAD
NELSON ROAD
STOUT STREET
MASSEY ROAD
MAIN ROAD
MAIN ROAD
WHARERATA ROAD
MAIN ROAD
ABERDEEN ROAD
ORMOND ROAD
CHALMERS ROAD
SHEEHAN STREET
FOX STREET
RIVERPOINT ROAD
CHILDERS ROAD
GISBORNE
DARWIN ROAD
AWAPUNI ROAD
STANLEY ROAD
GLADSTONE ROAD
ANZAC STREET
RIVERSIDE ROAD
OPOU ROAD
WILLOWS ROAD
MACDONALD ROAD
ROADWAY
AWAPUNI ROAD
GREY STREET
ESPLANADE
HARRIS STREET
TYNDALL ROAD
HUXLEY ROAD
RUTENE ROAD
WAINUI ROAD
LYELL ROAD
STEELE ROAD
Proposed Matawhero Yard
Existing Gisborne Yard
GISBORNE DISTRICT COUNCIL
Matawhero Yard Location
Information on this plan is indicative only and not mapped to a survey accurate scale. Gisborne District Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended. Copyright under Creative Commons Attribution 4.0 International licence. May contain data sourced from the LINZ Data Service, BOPLASS or Gisborne District Council
Additional Notes:
Indicative Map Scale: 1: 30,000 @ A3
Created by: UserName
Date: 16/05/2022 2:50:16 PM
Projection: NZGD2000 New Zealand Transverse Mercator


Three properties requiring purchase
Orange Boundary – indicative available yard
AWAPUNI ROAD
MACDONALD ROAD
Lot 1 DP 8322
Lot 2 DP 8322
Part Lot 1 DP 1641
Part Awapuni A2 Sec 1 Blk
Lot 3 DP 4871
Awapuni-Moana Block
Part Section 15 Block VI Turanganui SD
23
19
17
34
500
Matawhero Yard 1:2000
Information on this plan is indicative only and not mapped to a survey accurate scale. Gisborne District Council accepts no liability for its accuracy and it is your responsibility to ensure that the data contained herein is appropriate and applicable to the end use intended. Copyright under Creative Commons Attribution 4.0 International licence. May contain data sourced from the LINZ Data Service, BOPLASS or Gisborne District Council
Additional Notes:
Indicative Map Scale: 1: 2,000 @ A3
Created by: -UserName
Date: 16/05/2022 2:53:25 PM
Projection: NZGD2000 New Zealand Transverse Mercator


Southern
Turnout @
Goods shed & loading
banks
Northern
Turnout @
NZR SN 8674
O/14 Flown
6/11/86

Annex 4: Napier to Gisborne Rail Track Study

Background

Prepared by Robert Storm, Raileng Services

Napier Gisborne Railway – Determining a cost to find out what work is needed to reopen this Line for a sustainable railway and the value of such work.

In being asked to develop a budget figure for determining the work required to achieve a fix-and-forget railway from Napier to Gisborne, the key is understanding what fix-and-forget might mean. The consensus seems to be that this does not mean 'gold plated' but should be on a par with other mainlines that KiwiRail operates.

The railway from Napier to Gisborne was constructed in five sections:

- Wairoa to Waikokopu – 37.7km (opened 1923)
- Napier to Eskdale – 19.0km (Opened 1923 closed 1931 after earthquake, reopened 1936)
- Eskdale to Putorino – 43.3km (opened 1930 closed 1931 after earthquake, reopened 1936)
- Putorino to Wairoa – 33.2km (opened 1937)
- Waikokopu to Gisborne – 56.9km (opened 1942)

The whole section was closed to traffic following a significant weather event in 2012 which caused the failure of 4 major embankments. Since then, another larger washout has occurred enlarging an existing wash out.

About 2 years ago, the Napier to Wairoa section (110km) was reopened following a do-minimum track rehabilitation. The Napier to Wairoa section passes through moderately difficulty terrain with sections of many curves, significant embankments and a number of large viaducts, including New Zealand's highest. One train a day of forestry products is delivered to the port of Napier. This was primarily a locally driven initiative funded through the Provincial Growth fund. There has been continued local pressure to reopen the rest of the route to enable forestry and horticultural products from Gisborne to be railed to Napier for export and for onward transport throughout NZ.

Today's transport environment is one that requires reliability, and KiwiRail has indicated that it would not want to operate on the Line beyond Wairoa if it was only patched up, as that would give no confidence to prospective customers that they would be able to provide a long-term reliable service. This has led to the request to find out what it might cost to get to a point where you clearly understand the work involved to achieve a reliable transport route.

The Wairoa – Gisborne section is some 90km long with much of it going through areas with poor access and some 20km of difficult country. There are quite a number of tunnels and large bridges and the costs associated with these are being addressed in a separate report. Reinstatement of the major failed embankments is also being addressed by others. I am assuming that the detailed work done previously and covered in the BERL Report will go a long way toward answering those questions.

I therefore see this portion of work falling into 7 categories:

1. Track
2. Alignment
3. Formation
4. Drainage
5. Slope Stability
6. Level Crossings
7. Reporting

Each of these will be considered briefly to encapsulate the scope of the task.

1. Track

A fully rehabilitated track will consist of good rail, sleepers, fastenings and ballast. Having been advised that the required train speed is 40km/h and the projected axle loads not above 16.3t, the existing rail will be fit for purpose being predominantly 70lbRBS from the 1930's with some less desirable older 70lbBS but also some newer 85lb and 91lb rail where worn rail has already been replaced.

In broad terms, only about 2km of rail would be required (1 track km) to replace those areas damaged by rock falls or lack of support at the major embankment failures.

Sleepers and Fastenings are a more complex issue. There are a significant number of sleepers in the track that are still from the period when sleepers were imported from Peru. These are all prematurely failing and require replacement. There will also be many sleepers that will now be rotting because they have been sitting in water due to clogged ballast and weed infestation.

For significant sections of the line, non-compliant track fastenings were tolerated while the line was operated in a 'do minimum' status, but will need upgrading if full train services were to return.
All of the 70lb rail is in 12.8m lengths jointed with standard fishplates. While this is acceptable for the slow speeds proposed, the support to the joints will be critical to avoid end batter and loose bolts. Accordingly, sleepers both sides of the joint will generally have to be replaced with "A or B class" or new sleepers.

Re-establishing an adequate ballast bed will be the largest expense with much of it needing to be replaced due to fouling by slip material and lack of weed control. Traditionally, ballast has been sourced from KiwiRail's major supplier at Otaki with cartage more than doubling its purchase price. While there is no local ballast production due to poor source material, the quantity that would be required would justify the serious investigation of a suitable local source material. There is at least one local quarry advertising railway ballast, but they are probably not an approved supplier. Once an indicative quantity is known, discussions would soon tell if local supply is worth following up. The cost savings could be significant.
Additional to the above is trackside signage. Which will need reassessing and replacing/updating where needed due to lowered line-speeds and 10 years of no attention.

It will be a relatively straight forward exercise to evaluate the full extent of the work required in this category by way of a standard Detailed Track Inspection. This type of inspection can be done at a rate of some 10km/day so is likely to involve about 250-man hours to inspect (including travel), and 150-man hours to document.

2. Alignment

There is no mandate to specifically improve track alignment, but there needs to be a high degree of confidence that the final curves are geometrically correct with can't and transition lengths appropriately set for the anticipated speeds. While this could be achieved using traditional string lining methods, this would be an extremely tedious and expensive process.
The most economic survey method would be to use LIDAR imaging with the equipment mounted on a fixed wing aircraft. Multiple passes would give improved accuracy and survey strings could be readily extracted (from the point clouds) for all desired features, individual rails, top of bank, bottom of bank, water courses, etc. A preliminary alignment of sufficient accuracy could be designed to identify those areas that would need higher accuracy surveys using Total Station equipment to lock in a final alignment, such as curves on bridges, through tunnels etc. A LIDAR survey would also provide invaluable input for the next three categories below, avoiding a lot of expensive field work.

3. Formation

This section covers the physical bed supporting the track, being both the cuts and fills, as well as the longitudinal drains to keep the track-bed dry (these are dealt with in the next section). With no request to increase permissible in axle loadings, it is not anticipated that any significant formation works will be required unless other issues point to that being the best alternative. The more significant weakness of the formation is its width, top of embankments and bottom of cuttings. It has been assessed that these fall short of current standards by about 1.5m, with no straightforward process to improve the situation. At some stage a better indication would be needed as to the importance of improving this area of the track as it can become a very expensive item. On the other side of the equation, my many years of experience of having to work on track with narrow banks and cuttings, (1870's construction), I know what risks that can generated and what problems it presents for track maintenance and when an incident does occur.

As careful thought will need to be given to how the existing contaminated ballast is to be utilized or disposed of, it may present opportunities when considering formation widening options. The LIDAR survey mentioned earlier will be helpful in being able to analyse the existing track bed width as a continuous feature, and should help in determining in which sections widening should or could be justifiably considered.

In those areas where Formation widening will need to be carried out, modifying the current track alignment may enable such widening to be confined to one side of the track only.

Apart from widening the formation purely for track reasons, consideration should also be given to providing track-side access for maintenance vehicles where practical, and in particular the provision of access to culvert inlets to assist in the task of their regular maintenance.

4. Drainage

Key to a good railway is drainage. Rainfall should be free to percolate through the ballast to the top of the formation where it should flow out to side drains. Side drains should form a designed network flowing to streams or rivers which can flow under the track through culverts or at bridges. Any obstructions in such a designed system will ultimately cause problems through washouts, subsidence or formation weaknesses, each unable to support the track adequately. An outcome of the track rehabilitation is a clearly documented drainage plan with a matching electronic record in the asset database.

One important aspect of drainage considerations is culvert capacities and the suitability of inlet and outlet structures. The more recently experienced embankment failures were considered to be largely due to blocked inlets, often with waste from forestry operations on adjoining land. However, with changing weather patterns, pipe capacity may well be a factor that needs more attention. In this light, all culverts should have their peak flows assessed and recommendations made in light of the most up to date metrological data. A hydrological survey to peer review the culvert designs will be required and is covered elsewhere.

5. Slope Stability

To give confidence that this rail route will be a safe transport corridor, sufficient geotechnical assessments should be carried out in those areas known to be prone to failures. The results of these studies may present a range of remedial options which would need to be considered along-side all other aspects of the rehabilitation work. In some cases, the installation of alarm systems might be more prudent than implementing extensive earthworks, so a full knowledge of best-practice options would be required by the assessors. The cost of such assessments is high so could not be justified for the whole route.

6. Level Crossings

Given the time that has elapsed since trains were operating on this portion of track, full Safety assessments will need be carried out on all level crossings between Wairoa and Matawhero, about 25 in total.
For the length of track involved there are comparatively few crossings. Napier to Wairoa has about 50% more crossings than Wairoa to Gisborne, and it is assumed that these will need updated safety assessments due to the increased rail traffic and altered train schedules.

7. Reporting

All the collected information and results would need to be brought together in a well-presented report with and accompanying schedule of works and costs.

Cost Estimate

The following table lists the assessed cost/allowance for each of the category discussed above. I have left the route length at a nominal 200km but I understand that at the Gisborne end, freight services will end at Matawhero, resulting in a reduction of about 6km.

		Unit	Quantity	Rate	Cost
1.Track	Fieldwork	hours	250	200	50,000
	Reporting	hours	150	150	22,500
2.Alignment	LIDAR	item			75,000
	Analysis	hours	250	250	62,500
3.Formation	Analysis	km	200	2,500	500,000
4.Drainage	Analysis	km	200	5,000	By others
5.Slope Stability		km	20	50,000	By others
6.Level Crossings	update	each	50	5,000	250,000
	full	each	30	10,000	300,000
7.Final Report		hours	160	250	40,000
					1.300,000
Contingency				20% app	200,000
TOTAL					$1,500,000

From the above it is clear that the slope stability assessments form a large component of the total cost. This is also the area of greatest uncertainty with a nominal track length of only 20km considered particularly vulnerable. Careful evaluation of LIDAR data should be able to define more accurately the extent of track where detailed slope Stability Analysis should be carried out It would be expected that sufficient information will have been gathered to allow a general. assessment of a wider area than just a single 20km stretch of track.

The timeframe available for this work left little opportunity for any detailed analysis, yet each item has received careful consideration to arrive at the rates applied. I have had input from other professionals for some of the more technical aspects of this work. At the end of the day, this is an estimate only and that reflects in the 20% contingency applied. As my opening paragraph states, the final extent of work will be determined by what fix-and-forget means to the end user. The above estimate is however given as a fair assessment of what the cost of determining the value of reinstating the Napier to Gisborne Railway will be, excluding the major embankment failures, Bridges and Tunnels.

Minimum Track Upgrade

On being asked to also assess the cost of Track upgrades to meet a minimum standard for reliable operation, the following tasks have been identified:

1. Eliminate 70lb rail on curves of less than 400m radius
2. Eliminate 'A' type fastenings
3. Eliminate all Peruvian Sleepers (Prematurely decaying)
4. Eliminate grade 4 and 5 sleepers
5. Ballast clean (mostly 100% reject)
6. Re-ballast
7. Tamp
8. Vegetation Control

The costs associated with the above are:

1. 17.7km @
2. 54.7km @
3. 68.4km @
4. 0.6km @
5. 170km @
6. 170km @
7. 170km @
8. 170km @ $500/km

The Rail, Sleeper and Fastening quantities were manually extracted from the latest KiwiRail Corridor Log. Based on my recent inspection experience, old TPR sleepers are starting to fail at much faster rates than has been typical previously, with much of it now presenting as centre rot. For that reason, I have included all sleepers pre 1970 regardless of their condition rating, plus all 4 and 5 grade sleepers. This is based on the fact that the recorded inspection results probably date from before the line was closed, so all ratings will be poorer.

The 170km length is an approximation of the ballasted track length, i.e., the route length minus an allowance for tunnels and bridges.

Robert Storm 31/03/2022
Raileng Services
Ph 0274 351 341
email robert@raileng.nz

Gisborne-Wairoa Rail Reinstatement

Quantification of selected well-being factors

1 Introduction

Proposals are being developed to reinstate the rail line between Gisborne and Wairoa to allow direct rail connections from Gisborne to the Port of Napier and beyond. As part of this it is considered that:-

"The re-opening of the Napier to Gisborne Railway will allow additional benefits other than just the cheaper direct freight cost.

Nationally NZ should benefit from

- *Reduction in Green House Gas emissions as a result of rails lower carbon footprint*
- *Reduction in accidents on the highway as a consequence of a reduction in truck numbers*
- *Reduction in highway maintenance costs as a result of fewer trucks"*[1]

In addition to the elements set out above, this report also considers the implications for air quality of the switch of traffic from road to rail.

The assessment of these impacts depends critically on the level of traffic expected to divert from road to rail. The forecasts of the freight that might switch to rail are drawn from the BERL work looking into the possible reinstatement of the track between Gisborne and Wairoa[2]. This would allow the operation of direct longer distance trains between Gisborne and Napier, particularly to the port. While these forecasts are described as representing the traffic that would simply be **available** to rail and which would otherwise go out by road or sea from Gisborne, for this report the figures for 2020 and 2025 have been taken as representing the volumes that would actually travel by rail, assuming that it takes 100 per cent of the available market. The positions represented below would therefore be the maximum impacts that might eventuate.

It is outside the scope of this work to assess the scale of the total demands or the extent that rail would in practice be able to capture this traffic.

2 Forecasts of rail traffic

The forecasts of rail traffic used for this assessment are derived from the BERL report and are set out below in Table 2.1. The report focusses on the Option 1 position for 5 trains per week in 2020 and Option 3 with 7 trains per week in 2025.

Table 2.1
Projected rail freight volumes

Transport mode	2020 Option 1	2025 Option 3
40ft containers	3,177	5,753
20ft containers	1,138	1,193
Log wagons	1,925	1,790
Total	**6,240**	**8,736**

Source : Tūranga ki Wairoa Rail, Feasibility study into reinstatement of rail line, Table 8.2

[1] Letter from Neil Buchanan 29 March 2022
[2] Tūranga ki Wairoa Rail, Feasibility study into reinstatement of rail line, Whiringa-ā-rangi 2019 BERL and Gisborne to Wairoa Rail reinstatement Feasibility Study Freight Assessment BERL Undated

Using data from the Freight Assessment, the estimated tonnages associated with these projected volumes would amount to about 150-160,000 tonnes in 2020 depending on the balance between containers and logs and 210,000 tonnes in 2025 (Option 3).

These flows have been used as the basis for the estimation of the well-being elements discussed in the remainder of this report. For road transport it is assumed that each of the consignments identified would require a separate journey and for this analysis it has been further assumed that the vehicle used for the outbound trip would return empty. In practice it is likely that there would be a degree of backloading which would reduce the potential savings from the shift of the outward journey from Gisborne to Napier from road to rail. As a consequence the estimates provided would represent the upper end of the likely range of outcomes.

3 Greenhouse gas emissions

Greenhouse gas emissions have been estimated on a per vehicle basis for road freight and on a net tonne-km basis for rail transport.

Using the most recent estimates of emission rates, the changes in emissions that would result from the projected switch of traffic from road to rail are summarised in Table 3.1. The values attached to the savings in the volumes of emissions have been drawn from the prices set out in the Waka Kotahi MBCM Table 11. These give values of $61-122 per tonne for 2021, $67-134 per tonne for 2025 and $116-232 per tonne for 2050. It should be noted that higher value of $232 per tonne for 2050 is broadly in line with the upper end of the range that the 2018 Productivity Commission report[3] estimated would be necessary to achieve full decarbonisation in New Zealand by that date.

Table 3.1
Greenhouse gas emissions with switch from road to rail

		Road	Rail	Savings with transfer to rail
2020 Option 1				
GHG emissions (tonnes CO_2e)		3,850	1,300	2,550
Value of GHG emissions	Carbon price $60 per tonne	$230,000	$80,000	$150,000
	Carbon price $120 per tonne	$460,000	$150,000	$310,000
2025 Option 3				
GHG emissions (tonnes)		5,400	1,750	3,650
Value of GHG emissions	Carbon price $67 per tonne	$360,000	$120,000	$250,000
	Carbon price $134 per tonne	$720,000	$230,000	$490,000

It should be noted that the figures in Table 3.1 are based on current emission rates for rail and road. These are likely to fall in the future reflecting the increasing use of bio-fuels for which the Government has set out a mandated position and also the possible switch to the battery electric vehicles or other forms of sustainable fuel. These factors would affect both road and rail and substantial savings with the use of rail are likely to remain. Further diversion of traffic to rail as part of a broader decarbonisation policy would improve this outcome.

[3] "Low-emissions economy Final report" Productivity Commission August 2018

4 Air quality impacts

Air quality impacts cover a range of substances harmful to people's health emitted with the combustion of diesel fuels. These include:-

- Carbon monoxide (CO)
- Volatile organic compounds (VOC)
- Nitrogen oxides (NO_x)
- Sulphur dioxide ($SO_{2)}$
- Particulate matter ($PM_{2.5}$ and PM_{10})

Although these are emitted from both rail and road vehicles, the rates of emission are lower for rail. There are also differences in the impacts of these emissions between urban and rural areas. It has therefore been necessary to split the road and rail routes between Gisborne and Napier into their urban and rural components.

The costs that would result for the movement of the volumes as set out in Table 2.1 and the savings from the switch of this traffic to rail are set out in Table 4.1. Again these figures assume that trucks used to carry goods from Gisborne to Napier return empty. As a consequence the numbers in the table may overestimate the total road costs and the savings that might be achieved in practice.

Table 4.1
Air quality costs and savings with the switch from road to rail

Option	Total air quality costs		Savings with transfer to rail
	Road	Rail	
2020 Option 1	$90,000	$60,000	$30,000
2025 Option 3	$125,000	$80,000	$45,000

As in the case of greenhouse gas emissions these are based on current emission rates. Again these are likely to decline in the future possibly sharply in part as the result of a switch away from diesel powered vehicles and also in part reflecting declining emission rates for diesel vehicles themselves.[4] These factors would potentially affect both road and rail so considerable savings are likely to remain. A further switch of traffic to rail would improve this position.

5 Crash cost savings

The switch of freight traffic from road to rail is also likely to result in a diminution in the number of road crashes involving heavy vehicles as the level of traffic is reduced. From an analysis of the CAS data held by Waka Kotahi covering the five year period from 2015-2019, the average annual crash rates for trucks on the State Highway network in Gisborne and Hawke's Bay have been identified.

The analysis of the CAS data provides estimates of the numbers of crashes by type. These have been valued using the figures in the MBCM tables A32-A34 derived from values published by the Ministry of Transport[5].and updated to current values. These costs include:-

- Loss of life and life quality
- Loss of output due to temporary disability
- Medical costs
- Legal and court costs
- Vehicle damage costs

These values are set out in Table 5.1.

[4] Metcalfe J, Kuschel G & Peeters S (2021). Vehicle Emissions Prediction Model: VEPM 6.2 technical update report. Report prepared for Waka Kotahi NZ Transport Agency by Emission Impossible Ltd, July 2021.
[5] Ministry of Transport. (2020). Social cost of road crashes and injuries - June 2019 update.

Table 5.1 Crash costs by type ($)			
Crash type	**Crash costs $2015**	**Update factor to 2021**	**Updated crash costs at current values**
Fatal	$4,850,000	1.1	$5,335,000
Serious	$525,000	1.1	$577,500
Minor	$30,000	1.1	$33,000

Source : Waka Kotahi MBCM Tables A32 -A34

Overall the shift of traffic from road to rail (assuming that all journeys involve an empty return leg) would give a reduction of about 2.5 per cent in the heavy vehicle kms on the State Highways in Gisborne and Hawke's Bay. This would give a reduction in crash costs of about $0.7m per year for Option 1 rising to about $1.0m with the increased flows in Option 3 in 2025. This latter figure assumes the same crash rates as for Option 1 with no allowance for any possible trend over time.

It is likely that with there would be some crash and accident costs associated with the new rail operation but these are likely to be small.

6 Savings in road maintenance costs

The reduction in heavy vehicle traffic with a shift to rail is likely to result in a reduction in the damage and wear on the roads caused by the passage of these vehicles. Offsetting this, heavy vehicles pay Road User Charges. These are intended to cover the full costs of the use of the road network, including both the direct damage costs and an appropriate allocation to the fixed costs of operating and maintaining the road network with a further contribution to other Waka Kotahi costs. The estimated total Road User Charges associated with the movement of the vehicles likely to be used for the movement of freight potentially transferred to rail in 2020 and 2025 are set out in Table 6.1. As with other elements of this report, these assume that all vehicles will make a return trip but that for logging trucks, the trailer will be loaded back onto the powered unit so avoiding the Road User Charges which would otherwise be associated with the return journey of these trailers. The rates for Road User Charges are those that applied before the recent temporary reduction and which it is assumed would represent the typically longer term position.

Table 6.1 Reduction in road user charge revenues to Waka Kotahi with forecast transfer of road traffic to rail ($m)	
Option	**Reduction in road user charge revenues ($m)**
Option 1 2020	$1.60
Option 3 2025	$2.30

While the total revenues to Waka Kotahi from road user charges would be reduced with the diversion of traffic, not all of this would be reflected in reduced road damage costs.

Heavy vehicle Road User Charges also contribute to the costs of road maintenance and operation which do not vary with traffic flows and also to the costs of other activities funded by Waka Kotahi including investment in new or improved roads. Without the contribution from heavy vehicles, either less would be available to spend on these relatively fixed costs or other items or alternatively additional sources of revenues possibly from other road users would need to be sought.

Other unpublished work has suggested that the costs of operation and maintenance of the road network attributable to heavy vehicles typically amounts to about 60-70 per cent of the totals raised from road user charges although the extent to which this would be the case in specific instances would depend on the particular road section. However using the figures developed above would suggest the savings in road maintenance and operation costs resulting from the possible diversion of freight from road to rail could amount to between about $1.0m and $1.5m per year.

7 Summary

The diversion of traffic from rail to road will reduce a number of the costs of the movement of freight impacting on the community. These costs include:-

- Greenhouse gas emissions
- Other air quality costs
- Crash costs

The estimated reductions in these with the possible switch of traffic from road to rail as included in Options 1 and 3 as set out in the BERL report are summarised in Table 7.1. It should be noted that the level of greenhouse gas emissions and other air quality effects are likely to decline over time in response to the Government's commitment to zero-net-emission economy by 2050[6]. However these changes are likely to affect both road and rail so the benefits would still be substantial. A further switch of freight to rail would further enhance these impacts.

Table 7.1
Summary of selected well-being impacts from the diversion of freight traffic from road to rail

	Option 1 2020			Option 2 2025		
	Road	**Rail**	**Savings**	**Road**	**Rail**	**Savings**
Greenhouse gas emissions (tonnes CO_2e)	3,850	1,300	2,550	5,400	1,750	3,650
Cost of GHG emissions - Low carbon price ($)	$230,000	$80,000	$150,000	$360,000	$120,000	$250,000
Cost of GHG emissions - High carbon price ($)	$460,000	$150,000	$310,000	$720,000	$230,000	$490,000
Air quality impacts	$90,000	$60,000	$30,000	$125,000	$80,000	$45,000
Crash costs			$700,000			$1,000,000
Total savings - Low carbon price			**$880,000**			**$1,295,000**
Total savings - High carbon price			**$1,040,000**			**$1,535,000**

Reduced crash costs represent the largest item of the elements set out in Table 7.1.

The reduction in road damage costs is estimated at about $1.0m with Option 1 on the basis of 2020 forecast flows and $1.5m for Option 2 based on 2025 flows However this would be more than offset by the loss of user revenues to Waka Kotahi from reduced Road User Charges.

[6] https://www.mbie.govt.nz/building-and-energy/energy-and-natural-resources/low-emissions-economy/emissions-reduction-plan/

12. Public Excluded Business

RESOLUTION TO EXCLUDE THE PUBLIC

Section 48, LOCAL GOVERNMENT OFFICIAL INFORMATION and MEETINGS ACT 1987

That:

1. **The public be excluded from the following part of the proceedings of this meeting, namely:**

   Confirmation of confidential Minutes

   Item 4.1 Confirmation of confidential Minutes 28 April 2022

2. **This resolution is made in reliance on section 48(1)(a) of the Local Government Official Information & Meetings Act 1987 and the particular interest or interests protected by section 6 or section 7 of that Act which would be prejudiced by the holding of the whole of the relevant part of the proceedings of the meeting in public are as follows:**

Item 4.1	7(2)(j)	Prevent the disclosure or use of official information for improper gain or improper advantage.