

AGENDA/KAUPAPA



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MEMBERSHIP: Larry Foster (Chair), Colin Alder, Andy Cranston, Debbie Gregory, Ani Pahuru-Huriwai, Rawinia Parata, Aubrey Ria, Tony Robinson, Rob Telfer, Teddy Thompson, Rhonda Tibble, Nick Tupara, Josh Wharehinga and Her Worship the Mayor Rehette Stoltz.

OPERATIONS - INFRASTRUCTURE/NGĀ WHAKAMAHI - TE HANGANGA Committee

DATE: Thursday 20 April 2023
TIME: Following Operations Environment & Communities Meeting
AT: Te Ruma Kaunihera (Council Meeting Room), Awarua, Fitzherbert Street, Gisborne

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Operations

Reports to:	Council
Chairperson:	Cr Cranston – Environment & Communities Cr Foster - Infrastructure
Deputy Chairperson:	Cr Ria – Environment & Communities' Cr Thompson - Infrastructure
Membership:	Mayor and all 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).

Functions

- To provide governance oversight of Council's operational programmes, services, activities and projects (including major projects) related to environmental operations, community development and infrastructural assets.
- To enable the progress of the Council's operational activities, projects and services.
- Its scope includes:

Environment Services and Protection

- Building Services
- Enforcement
- Environmental Health
- Pests and Plant management
- Biodiversity
- Integrated catchments
- Land management
- Animal control
- Harbour management

Infrastructure Services

- Urban Stormwater
- Wastewater
- Water Supply
- Land, Rivers and Coastal
- Local Roding Network – including associated structures, bridges and retaining walls, walkways, footpaths and road reserve, landscaping and ancillary services and facilities, street lighting and traffic management control
- Solid Waste – including landfill and transfer stations, recycling and waste minimisation

Communities

- Cultural Activities including Theatres, Museum and Public Art, Library and Tairawhiti Navigations
- Recreation and Amenity – including open spaces, parks and gardens, cemeteries, community property and the Olympic Pool complex

Planning and Development

- Customer Engagement
- Support Services

Terms of Reference

Operational oversight

- Provide governance direction for the Council's operational activities as outlined in the general purposes and scope section.
- Review and adjust relevant working programme priorities within agreed budgets, activity management plans and levels of service as per the Council's Long Term Plan.
- Receive updates on programmes, major projects/projects and activities.
- To have input into, and make decisions on, operational proposals, options and cost of projects/major projects.
- Contribute to the development of short term plans for community services and community facilities.
- Consider the strategic regulatory and compliance issues.
- Prepare submissions on any matter that is within its rationale and terms of reference for Council approval and submit on behalf of Council when timelines do not allow Council prior approval.

Asset management

- Oversee the management of all Council's physical assets – including land, buildings and roads.
- Make decisions on infrastructure and assets becoming Council's and on infrastructure and community assets on behalf of Council.
- Progress the sale of properties as approved in the Long Term Plan and Annual Plan.
- Contribute to the development of and oversee delivery of economic development projects.
- Consider proposals to change the status or revoke the status of a reserve as defined in the Reserves Act 1977 (including the hearing of submissions).

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 advisory members and/or Tangata Whenua representatives to assist the Committee.

Power to Recommend

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

3.1. Confirmation of non-confidential Minutes 7 December 2022

MINUTES

Draft & Unconfirmed



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MINUTES of the OPERATIONS - INFRASTRUCTURE/NGĀ WHAKAMAHI - TE HANGANGA Committee

Held in Te Ruma Kaunihera (Council Chambers), Awarua, Fitzherbert Street, Gisborne on Wednesday 7 December 2022 at 12:30PM.

PRESENT:

Larry Foster (Chair), Her Worship the Mayor Rehette Stoltz, Deputy Mayor Josh Wharehinga, Colin Alder, Andy Cranston, Debbie Gregory, Ani Pahuru-Huriwai, Rawinia Parata, Aubrey Ria, Tony Robinson, Rob Telfer, Daniel Thompson, Nick Tupara and Josh Wharehinga.

IN ATTENDANCE:

Chief Executive Nedine Thatcher Swann, Director Lifelines David Wilson, Director Internal Partnerships James Baty, Director Liveable Communities Michele Frey, Director Engagement & Maori Responsiveness Anita Reedy-Holthausen, Chief Financial Officer Pauline Foreman, Chief of Strategy & Science Jo Noble, Community Advisor Sophie Rishworth, Te Kai Arataki Gene Takarua, Democracy & Support Services Manager Heather Kohn and Committee Secretary Penny Lilburn.

The meeting commenced with a prayer.

1. Apologies

MOVED by Mayor Stoltz, seconded by Cr Ria
That the apology from Cr Tibble be sustained.

CARRIED

2. Declarations of Interest

Cr Alder declared an interest in report 22-237 regarding land that he owns by Papatu station.

3. Governance Work Plan

A report regarding the Waiapu Landfill and the old Te Araroa landfill will come in the New Year to Council with some options.

4. Leave of Absence

There were no leaves of absence.

5. Acknowledgements and Tributes

There were no acknowledgements or tributes.

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 22-237 Flood Mitigation Proposal Downstream of Papatu Station - Te Arai River

- Overtime, a lot of owners have alleviated an issue on their property not understanding the adverse effects for Council. To try and mitigate this, staff have taken an educational approach through inspections, and involves an enforcement action if people do not undertake what they need to reinstate.
- The drainpipe must be worked on with the landowner as previous modifications are causing water to flow where it should not. The sheer volume of water from these past weather events are also a contributing factor to the breakdown of the drain.
- Drain-cut although is an issue for the community, must be worked on by the landowner.
- A consultation is required with ratepayers when there is a significant difference between what they were originally charged to what they will be charged.
- Recommendation two will be funded through extra funding that can be found in projects in the Long Term Plan.
- Recommendation two is work on the ground happening in the Te Arai catchment in the next three years while the Long-Term Catchment Plan is set up.
- The only way to ensure that the work is done quickly is through the annual plan process for the 23/34 year, where Council can redo the plans and prioritise each of the spends.
- Recommendation two was changed to 'prioritises the works as needed across the Te Arai catchment and implement these through the 2023/24 Annual Plan.'

Division

For:

Cr Alder
Cr Cranston
Cr Foster
Cr Gregory
Cr Pahuru-Huriwai
Cr Parata
Cr Ria
Cr Robinson
Cr Thompson
Cr Tibble
Cr Tupara
Cr Wharehinga

Against:

Cr Telfer

CARRIED

MOVED by Cr Robinson, seconded by Cr Foster

That the Operations – Infrastructure/Nga Whakamahi – Te Hanganga Committee:

1. Prioritises the works as needed across the Te Arai catchment and implement these through the 2023/24 Annual Plan.

CARRIED

10.2 22-274 Appointment of the Operations - Infrastructure Committee Deputy Chairperson

- Appoints Teddy Thompson

MOVED by Cr Ria, seconded by Cr Foster

That the Operations - Infrastructure/Ngā Whakamahi - Te Hanganga Committee:

1. Appoints Councillor Thompson who received the majority of votes from members present and voting, to be the Deputy Chair.

CARRIED

11. Reports of the Chief Executive and Staff for INFORMATION

11.1 22-270 Gisborne Water Supply - Meeting the New Water Quality Assurance Rules

Discussions included:

- The bulk of water supply comes from the Waingake water treatment plan. Over summer a lot of water is being pushed into Gisborne, so Council will run both the Waipaoa and Waingake treatments in parallel.
- When there is large rainfall and the water is very dirty, the volume that can be treated is limited due to the amount of silt that is in the water.
- The plants are currently in a great position to meet the new compliance regime.
- The new UV plant is coming in June next year.

- Operating cost based on chemicals and power is around 15 cents a cubic metre from Waipaoa and around 3cents from Waingake. The difference is because Waipaoa needs to be pumped and Waingake is reliant on gravity, as well as a different treatment process with more powered components at Waipaoa.

MOVED by Mayor Stoltz, seconded by Cr Telfer

That the Operations - Infrastructure/Ngā Whakamahi - Te Hanganga Committee:

1. Notes the contents of this report.

CARRIED

12. Close of Meeting

There being no further business, the meeting concluded at 2:05 pm.

Larry Foster

CHAIR

10. Reports of the Chief Executive and Staff for INFORMATION



Te Kaunihera o Te Tairāwhiti
GISBORNE
DISTRICT COUNCIL

23-74

Title: 23-74 Cyclone Gabrielle Update
Section: Community Lifelines
Prepared by: Christine Middleton - Project and Contract Coordinator
Meeting Date: Thursday 20 April 2023

Legal: No

Financial: No

Significance: **Low**

Report to OPERATIONS - INFRASTRUCTURE/NGĀ WHAKAMAHI - TE HANGANGA Committee for information

PURPOSE - TE TAKE

The purpose of this report is to give the Operations Committee a high-level update on the work of the Lifelines Hub in response to Cyclone Gabrielle.

SUMMARY – HE WHAKARĀPOPOTOTANGA

Severity of Cyclone Gabrielle during in mid-February 2023 caused unprecedented damages to infrastructure throughout Tairāwhiti Rohe, impacting communities' and services.

Progressing in the recovery phase of the event, this report provides summary accounts from the Councils Lifelines Hub responsible for responding, repairing, and reinstating services. The accounts overview what happened, what has been done so far, what's next and current risks and uncertainties.

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 - NGĀ TŪTOHUNGA

That the Operations - Infrastructure/Ngā Whakamahi - Te Hanganga Committee:

1. **Notes the contents of this report.**

Authorised by:

David Wilson - Director Lifelines

Keywords: Lifelines, Cyclone Gabrielle

BACKGROUND - HE WHAKAMĀRAMA

1. Community Lifelines portfolio is broad ranging from emergency response, asset management, services provision, regulatory control, flood control, capital works and infrastructure maintenance.
2. Damages caused by Cyclone Gabrielle on infrastructure owned and managed by Gisborne District Council and on private property is significant. Effects on communities during the initial response varied depending on location, extent of flooding and access to services.
3. During the recovery phase post-event and as assessments, repairs and infrastructure reinstatements continue, Levels of Service are being progressively improved.

DISCUSSION and OPTIONS - WHAKAWHITINGA KŌRERO me ngā KŌWHIRINGA

4. Summary accounts from the Lifelines teams are appended including;
 - Tairāwhiti Civil Defence Emergency Management – CDEM Response and Recovery.
 - Journeys Operations – Getting Roads Open and Accessible.
 - Journeys Infrastructure – Building Bridges and Roads.
 - Land Rivers Coastal - Flood Schemes and Rivers.
 - 4 Waters Operations – Stormwater, Wastewater, Wastewater Treatment Plant, Water Supply.
 - 4 Waters Infrastructure – Water Supply Pipeline, Stopbanks and Flood Schemes.
 - Solid Waste – Collections and Disposal.
 - Building Services – Building Act Functions.
 - Harbourmaster – Bylaw Functions.

ASSESSMENT of SIGNIFICANCE - AROTAKENGA o NGĀ HIRANGA

Consideration of consistency with and impact on the Regional Land Transport Plan and its implementation

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

This Report: **Low** Significance

The effects on all or a large part of the Gisborne district

This Report: **Low** Significance

The effects on individuals or specific communities

This Report: **Low** Significance

The level or history of public interest in the matter or issue

This Report: **High** Significance

5. The decisions or matters in this report are considered to be of **Low** significance in accordance with Council's Significance and Engagement Policy.
6. The report is for the purpose of updating response and progress to services reinstatement since the mid-February cyclone event.

TANGATA WHENUA/MĀORI ENGAGEMENT - TŪTAKITANGA TANGATA WHENUA

7. The need to make emergency related rapid assessed operational and infrastructure changes means that engagement with tangata whenua has been response and recovery-specific and associated to situational specific relationship processes.

COMMUNITY ENGAGEMENT - TŪTAKITANGA HAPORI

8. Media releases, public communications, engagements, and community interactions have been ongoing across the Community Lifelines functions. Updating to public, industry, partner agencies and government about the response and recovery programmes.

CLIMATE CHANGE – Impacts / Implications - NGĀ REREKĒTANGA ĀHUARANGI – ngā whakaaweawe / ngā ritenga

9. Recognition of the extreme damages, social impacts, and financial costs for remediations and long-lasting community effects from Cyclone Gabrielle will assist to focus future decisions, planning and works required for greater resilience.

CONSIDERATIONS - HEI WHAKAARO

Financial/Budget

10. Financial costs for the response and recovery are being collated. Costs will be covered by National Emergency Management Agency 60% and Councils insurer 40%. Deductible costs up to 1.5m being funded by Council.
11. Reporting on costs and financial updates be done for future committee agendas in the fourth quarter.

Legal

12. Response and recovery are controlled by the Civil Emergency Management Act 2002 and associated legislation. A National State of Emergency was declared which gave legal mandate for the response activity.
13. The new Severe Weather Emergency Legislation Act 2023 covers Tairāwhiti. This Act is an Omnibus Bill that makes amendments to Civil Defence Emergency Management Act, Food Act + Regulations, Local Government Act and Resource Management Act. This new emergency legislation is to provide for adjustments to normal council processes.
14. Recovery works continue under this Act. Further pending amendments to this and the Resource Management Act are intended to assist longer term recovery works and lessen requirements of the 3-year Long-term plan process coming due in 2024.

POLICY and PLANNING IMPLICATIONS - KAUPAPA HERE me ngā RITENGA WHAKAMAHERE

15. Policy and planning implications and not canvassed in this report. Future reporting to Committee will include policy and planning assessments specific to projects, financial and other matters.

RISKS - NGĀ TŪRARU

16. Each summary account includes commentary on risk and uncertainties.

NEXT STEPS - NGĀ MAHI E WHAI AKE

Date	Action/Milestone	Comments
May 2023	Update reporting to Council	Update on Community Lifelines projects, recovery programme, financial implications.

ATTACHMENTS - NGĀ TĀPIRITANGA

1. Attachment 1 - Cyclone Gabrielle OPS Committee - LRC [**23-74.1** - 2 pages]
2. Attachment 2 - Cyclone Gabrielle OPS Committee - Stopbanks [**23-74.2** - 6 pages]
3. Attachment 3 - Cyclone Gabrielle OPS Committee - Harbourmaster [**23-74.3** - 2 pages]
4. Attachment 4 - Cyclone Gabrielle OPS Committee - Stormwater [**23-74.4** - 1 page]
5. Attachment 5 - Cyclone Gabrielle OPS Committee - Journeys Operations [**23-74.5** - 2 pages]
6. Attachment 6 - Cyclone Gabrielle OPS Committee - Building Services [**23-74.6** - 2 pages]
7. Attachment 7 - Cyclone Gabrielle OPS Committee - 4 Waters Infrastructure [**23-74.7** - 5 pages]
8. Attachment 8 - Cyclone Gabrielle OPS Committee - Journeys Infrastructure [**23-74.8** - 2 pages]
9. Attachment 9 - Cyclone Gabrielle OPS Committee - Sewer [**23-74.9** - 2 pages]
10. Attachment 10 - Cyclone Gabrielle OPS Committee - Solid Waste [**23-74.10** - 3 pages]
11. Attachment 11 - Cyclone Gabrielle OPS Committee TCDEM [**23-74.11** - 2 pages]
12. Attachment 12 - Cyclone Gabrielle OPS Committee - Wastewater Treatment Plant [**23-74.12** - 2 pages]
13. Attachment 13 - Cyclone Gabrielle OPS Committee - Water Supply [**23-74.13** - 4 pages]

4 Waters - Land Rivers Coastal (LRC)

WHAT HAPPENED

On the night of 13 February 2023, the township of Te Karaka (Waipaoa River Scheme), Tokomaru Bay (Mangahauini River Scheme), Tolaga Bay (Uawa/Hikuwai River scheme), Waipiro Bay, Anaura Bay, Makarika (Rural River Schemes) and part of the Gisborne region (Patutahi & Manutuke) areas were flooded. Extensive damage to dwellings, farmland, industries and roading infrastructure. Post-cyclone inspections were done immediately thereafter, and a summary is below:

- Te Karaka stopbank was overtopped.
- Waipaoa right bank was overtopped at few locations, partial damage to the Waipaoa stopbank at Lavenham Road.
- Breaching of Waikakariki Stream stopbank.
- Taruheru/Turanganui city revetments lost 51m behind Marina carpark.
- Te Arai was fully overtopped causing damage at Papatu flats destroying all farmland.
- Mangahauini was fully flooded damaging 160m length of the stopbank and 30m wide berm just upstream of SH35 bridge at Tokomaru Bay.
- Land drain system was fully silted including pump stations at Patutahi and Manutuke.

WHAT WE HAVE DONE

Pre-cyclone work:

- Mangahauini stopbank damaged by January floods was fixed
- Waiotu River outlet was opened just before the cyclone to minimise damage.

Post-cyclone work:

- Waipaoa stopbank damage at Lavenham Road repaired.
- Waikakariki stopbank breach repaired.
- Mangahauini river channel was diverted after the floods.
- Te Arai River was inspected together with Rongowhakaata and identified five critical hotspots to remove woody debris. The work started mid-March and is still in progress (Figure 1).
- Debris line survey was carried out in Waipaoa for future modelling work.
- Drone inspections were carried out in the worst affected areas.
- Helicopter inspections were done in Hikuwai/Uawa, and other inaccessible East Coast areas.
- Floodspread map was prepared for Matokitoki Stream. LRC is in the process of preparing floodspread maps on LRC river schemes using satellite images (Figure 2).
- All LRC assets damaged were estimated for repairs or replacements. The estimated cost is \$3,330,000.
- Insurance claims are in progress.



Figure 1 Woody debris at Te Arai



Figure 2 Satellite image of the upper Waipaoa river after Cyclone Gabrielle showing the obvious flood spread as well as the key tributaries that contributed to the flood spread.

WHAT'S NEXT

- Replacement of fully damaged LRC assets – Estimated cost \$1,450,000.
- Repair of the partially damaged assets – Estimated cost \$3,940,000.
- Maintenance of land drainage network – Estimated cost \$150,000.
- Preparation of floodspread maps - \$30,000.

RISKS AND UNCERTAINTIES WORKING INTO RECOVERY

- Risk of further damage during bad weather in the winter, if maintenance work not completed.
- Funds availability for the recovery.
- Availability of contractors.
- Wet weather conditions during winter months.
- Delays in consultation and engagement process.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

4-Waters Capital Infrastructure - Stopbanks

WHAT HAPPENED

Waipaoa Stopbank Damage

During Cyclone Gabrielle the Waipaoa River peaked at 12.15m at the Kanakanaia Bridge in Te Karaka. This was the highest flood level ever recorded in the Waipaoa River.

Overtopping of the Te Karaka Stopbanks occurred in several places, but the stopbank didn't fail. 44 houses in Te Karaka Township had flooding above their floor levels as a result.

Overtopping of the Waipaoa Stopbank just downstream of Te Karaka also occurred in several places on the western side between Kaiteratahi Bridge and McMillian Road. Noted these areas have not been upgraded yet. This resulted in 10 houses getting flooded in Branson Road.

A very large (30-40m wide) scour hole developed beside the Waipaoa Stopbank near Lavenham / Humphreys Road, which came very close to breaching during Gabrielle. A 1.8m diameter stopbank pipe was also damaged at the site. Refer to Photo #1 in the Appendices.

Just downstream of the KiwiRail Bridge on western side near the ocean/Waipaoa River mouth, there was significant damage to the stopbank from lateral erosion. About 150m of the Waipaoa Stopbank was affected. Refer to Photo #4 in the Appendices showing the problem.

Wi Pere Trust / Tangihanga Station, 864 Lavenham Road

Under the Waipaoa Stopbank upgrade Resource Consent, flood mitigation measures were required to mitigate works against the higher flood levels modelled at Tangihanga Station (owned by Wi Pere Trust). The required work involved the construction of a 900m long ring-bank, 450m long deflection bund and an emergency spillway.

The ring-bank and bund were both completed in December 2022; however, the spillway was only 99% completed. A capping beam along the top of the sheet piles was left to fully complete, but did not affect the performance of the mitigation measures.

The bund and ring-bank worked very well to protect Wi Pere Trust infrastructure and assets. It was estimated by the Trust that the ring-bank prevented about \$1 million worth of damage. Refer to Photo #5 in the Appendices showing the ring-bank in action during Gabrielle.

Unfortunately, the spillway had some minor damage. It sustained erosion from high velocity waters and will require replenishment of the downstream rock armouring area. Refer to Photos #6 & 7 in the Appendices.

Mangahauini Stopbanks (Tokomaru Bay)

In Tokomaru Bay about 180m of stopbanks in the Mangahauini River (Tokomaru Bay) was washed away during Gabrielle. This occurred in the area about 200m upstream of SH35 Bridge, on the southern side of the river. Refer to Photo #8 in the Appendices showing missing stopbank area.

Erosion is currently threatening houses at 22 & 24 Mangahauini Street. With the missing stopbank, there is also a risk of floodwaters flowing towards the State Highway and 4-Square during a big flood event. During Gabrielle, minor overtopping occurred beside 19 Taro Street resulting in floodwaters flowing down Taro Street towards SH35 Café.

In addition, further upstream lateral erosion on the outside of bends is threatening several houses on both sides of Mangahauini River (19 Taro Street, 27, 29, 33 Toa Street, and Te Kura Kaupapa Māori o Tokomaru School (11 Moana Road).

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

WHAT WE HAVE DONE / WHAT'S NEXT

Waipaoa Stopbank Repairs - Lavenham/Humphreys Road Scour Hole (western side)

On the protected side of the Waipaoa Stopbank alongside the scour hole, 3,500m³ of soil was compacted in place to significantly widen the stopbank. Refer to Photo #2 in the Appendices showing the completed earthworks where the stopbank was successfully widened.

To fully complete the repairs at this location, the old culvert installed in the 1950's was replaced with a new 1800mm concrete pipe.

These works started on 27 March and were largely completed by early April. Refer to Photo #3 in the Appendices showing the pipe installation work underway now. Now that the new pipe has been installed the redundant pipe will be removed, this work is expected to start in late April.

Waipaoa Stopbank Repairs – Erosion Downstream of Railway Bridge (western side)

Planning and development of the response and repair in this area is currently underway. The construction and installation of several rock-filled groynes is proposed to protect and deflect floodwaters away from the stopbank.

Following completion of the new groynes, the stopbank will be rebuilt further to the west behind the existing stopbank to retreat the asset and maintain a reasonable berm area.

Wi Pere Trust Spillway Repairs (western side)

The earth component of the spillway was rebuilt post Gabrielle to ensure there is flood protection for the Tangihanga upper terrace.

Minor works are required to reinstate rock riprap lost just downstream of the spillway structure.

Mangahauini River – Stopbank reinstatement behind 22 & 24 Mangahauini Street

The repair and rebuild of the missing Mangahauini stopbank is planned to start in early April. 4,600 tonnes of rock has been ordered from Mangatuna Quarry to rock armour the river and protect the stopbank once it is rebuilt. Work on this project started on 11 April.

Stage one is for rock armouring of the outside of the bend alignment beside 22 & 24 Mangahauini Street to be undertaken first to prevent further erosion. Then stage two is to fill the area behind the rock work to reclaim the land, and then rebuild the stopbank.

Mangahauini River - Erosion protection on bends (19 Taro Street, 27, 29, 33 Toa Street, and Te Kura Kaupapa Māori o Tokomaru School (11 Moana Road)

After the completion of works near 22 & 24 Mangahauini there are plans to armour the outside of three threatened bends with rock to protect against further erosion. These are near: 9 Taro Street, 27, 29, 33 Toa Street, and 11 Moana Road.

A funding application to support the upgrade of the Mangahauini Stopbanks and flood defences was applied for in December 2022 under the Climate Resilience Funding. A decision on this application is expected in May 2023. If approved this funding will be used in the 2023/2024 FY onwards to improve flood protection measures.

RISKS AND UNCERTAINTIES WORKING INTO RECOVERY

Risks and uncertainties that have been identified going forward working into recovery:

- Risk of further damage during bad weather in the winter. This is especially the case in the Mangahauini River.
- Availability of contractors is low given the scale and extent of region wide damage and repairs required.
- Poor weather conditions as we move closer to winter.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

- Funding – uncertainty around external funding approvals for Mangahauini upgrades next summer.

APPENDICES - PHOTOS



Photo 1 - Lavenham Road scour hole – Damage caused by Gabrielle.



Photo 2 - Lavenham Road scour hole - Waipaoa Stopbank rebuilding works completed.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE



Photo 3 - Lavenham Road – 1800mm dia pipe install works underway, 30 March 2023.

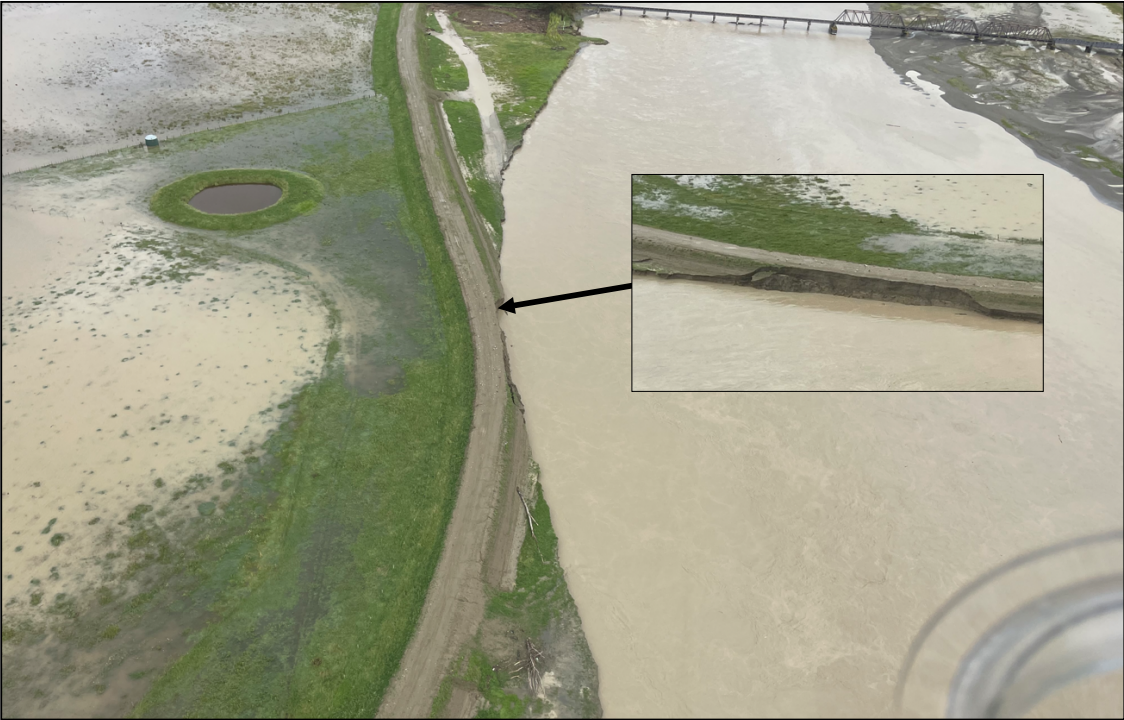


Photo 4 - Lateral erosion of the Waipaoa Stopbank near Rivermouth & KiwiRail Bridge.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE



Photo 5 - Wi Pere Trust Ring-bank in operation during Gabrielle.



Photo 6 - Wi Pere Trust Spillway in operation during Gabrielle.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE



Photo 7 - Wi Pere Trust Spillway damage post Gabrielle.



Photo 8 - Lateral erosion of the Mangahauini Stopbank post Gabrielle, 180m of stopbank lost.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Harbourmaster

WHAT HAPPENED

The port was closed for several days due to storm conditions and debris. Anchorages were closed for two days during the worst of the event.

WHAT WE HAVE DONE

The port collected debris from their area in order to be able to recommence operations. This is ongoing. Debris has been repeatedly cleaned from ramp in order to ensure its availability. Debris from bridges also removed. Boaters warned of continuing debris in Bay and of importance of travelling at safe speed and keeping a proper lookout.

WHAT'S NEXT

Debris and logs will continue to be an issue in the Bay, in the port and at the ramp. Cleanup will need to continue.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

With continued vigilance risks will return to a BAU level.



OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE



OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

4 Waters - Stormwater

WHAT HAPPENED

In respect to the overall damage, the stormwater system in the Gisborne District had not been significantly impacted. The damage that has occurred is mainly affecting urban and rural streams, including stream bank erosions and damage to the surrounding environment.

- **Ruatoria** College Creek receives a high amount of gravel from the upstream bush catchment. This causes drains and culverts along College and Bowling Green Roads to fill up, and block within a short time. Water has overtopped the drains and culverts, and led to flooding in residential areas.
- **Te Karaka** has been impacted by floodwaters and river silt. The majority of the township's stormwater system was blocked due to the accumulation of river silt.
- **Gisborne Town** The stormwater network was moderately impacted. As a result of heavy run-off, gravel and debris caused localised blockages of stormwater sumps. The urban streams are subject to ongoing erosion. High velocity and volumes of stormwater resulted in increased erosion. Fallen trees and debris in the streams caused localised blockages.

WHAT WE HAVE DONE

- **Ruatoria**
 - Contractors are tasked to extract gravel from upstream of the College Creek box culvert to ensure retention space for new gravel.
 - Fulton Hogan is tasked to jet stormwater lines and suck out sumps once road access is safe.
- **Te Karaka**
 - Civil Defence managed the clean up of Te Karaka.
 - Fulton Hogan alongside with other contractors reinstated open drains and sucked out stormwater sumps.
- **Gisborne**
 - Sumps have been cleaned and impacted catchment areas were inspected.
 - Fulton Hogan removed blockages, loose debris, vegetation and items that had blocked infrastructure or could block infrastructure in the future.
 - Fallen trees are currently cleared by third-party contractors.
 - Most erosion sites are on private property and subject to insurance claims.

WHAT'S NEXT

Stream erosion and resulting damage need to be monitored to understand the full impact on the streams. The stormwater team will continue to monitor the streams. Jointed inspections with the Freshwater Team are currently in the planning phase.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

Unknown extent and long-term effects of damage on urban streams (erosion), impacting private properties and council infrastructure.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

JOURNEYS OPERATIONS

WHAT HAPPENED

Cyclone Gabrielle caused significant damage to the road network resulting in the closure of almost the entire rural network and the complete loss of 11 bridges and 52 with significant damage requiring remediation.

WHAT WE HAVE DONE

Initial response was led by Council's maintenance contractors who also engaged a significant number of sub contractors to meet demands from the scale and scope of the damage.

Connectivity through the region within 6 weeks of the event has been crudely reestablished with some access restricted to heavy vehicles, available for 4WD vehicles or residents only in places.

Funding for initial response of \$29.3 mil (100% funded) has been approved by Waka Kotahi for work up to 30 June. This includes work to reopen roads and provide temporary access for disconnected communities.

WHAT'S NEXT

There are still areas without access, these are primarily where there is full loss of a bridge and there is no alternative route. Council is working with the contracting and consulting sector to propagate ideas to provide temporary access within the next 3-6 months.

The ongoing clearance of slips, drains and response work to return a road to its prior form and function with major defects (i.e. dropouts) safely managed while long term recovery gets underway. This work has been prioritised over some business as usual activities, like bridge maintenance, due to the likelihood of severe negative impacts if the work is not completed prior to the winter season.

Additional funding applications are being prepared to submit to Waka Kotahi for the full cost to reinstate the roading network.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

The entire rural roading network remains vulnerable to any rainfall or other significant event whilst recovery is underway. There have been no policy changes at Waka Kotahi for administering emergency works funding, so Council is currently restricted to working within these policies which, do not allow for improved resilience, adaptation or building back better.



OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Ruakaka Road, full destruction of Doneraille Bridge



Tirototo Road Bluffs to left of river



Reinstating road access



Example of a slip across the road

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Building Services

WHAT HAPPENED

Assessing all buildings in the region that we could access that had been damaged by water inundation, land movement, or riverbank scour that is threatening dwellings. Access to the remote areas of the region was severely limited and we had great difficulty in accessing some sites. There was no way at all until well after the event to get to Tokomaru Bay until very recently. Building Services sent a team around through Opotiki and Te Kaha to visit the top half off the Coast with an overnight stay. This team called into the local Civil Defence headquarters and spoke to the local coordinator who advised them of addresses that needed assessments.

- **Red Placard** – the building is too dangerous to enter – it may be threatened by a slip, undermined by stream or river scour, or have actually been damaged by land movements.
- **Yellow Placard** – the building is uninhabitable – flood water may have rendered it insanitary, or it may be threatened by land movement but can be accessed to remove valuables. The placard will state what access is allowed.

521 properties checked.

Red Placards - 25

Yellow Placards - 201

Assessments are ongoing as the region becomes more accessible and additional land movements occur.

WHAT WE HAVE DONE

Checked houses on request and worked with iwi on relocation of temporary dwellings.

WHAT'S NEXT

We are working with property owners and iwi representatives to facilitate the reoccupation of dwellings. There are two streams to this body of work. Firstly making sure that houses are safe to reoccupy. Flooded buildings must pass five tests before the yellow sticker will be lifted or modified:-

Reoccupation

Is the building electrically safe? – flooded power points must be checked by a registered electrician and proof provided that it is electrically safe.

Check any gas storage systems, (Bottles, Infinity) – the bottle may have floated and damaged the couplings.

Has the building a supply of potable water. In rural areas many houses will have pressure pumps under the floor that may be damaged. This will be part of the electrical safety check.

Is the wastewater disposal system working? In a reticulated area this may be as simple as flushing the toilet and ensuring the water level does not rise when you do and there is no discharge from the gully trap. If there is a septic tank it may require more checking. Building Services can and do offer advice.

Is the building dry? Framing has to be at 18% moisture, but it will be safe to reoccupy at a higher level. You used to be able to live at 24% before GIB changed the requirements. Any black mould must also be treated. This can be effectively done with a bleach solution and a garden sprayer.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Have all sludge / silt removed from under floor – chipboard floors require 550mm clearance to the ground and there must be adequate crawl space under buildings – approximately 250mm to 300mm under the bearers. If your building is well off the ground, you may not need to do this step. Notwithstanding this requirement we would allow reoccupation of a building as long as there is adequate air gap under the building to allow ventilation and drying. This would result in a modified yellow that permitted reoccupation with the stipulation that there was still silt to remove down to the levels above.

Temporary Accommodation

We are working closely with Toitu Tarawhiti who are placing relocatable units close to dwellings to allow people to live on their own properties while dwellings are repaired. To date three buildings have been placed in Tauwhareparae Road, Tolaga Bay and one in Te Karaka. There is ongoing work identifying where these cabins are going and when they need building consents and when they will be exempt.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

The speedy processing on any required consents. To date we have no consent applications.

Images of dwelling damage.



OPERATIONS COMMITTEE – CYCLONE GABRIELLE UPDATE

4 WATERS INFRASTRUCTURE – Water Supply

WHAT HAPPENED

Cyclone Gabrielle took out the water supply from the Waingake Water Treatment Plant requiring Waipaoa Water Treatment Plant to provide all the water to the city albeit at reduced quantities. This meant that water had to be prioritised with industrial and commercial users unable to utilise Council supplied water. This has resulted in significant additional expenditure for industry to secure alternative water sources to remain operational.

The severe damage to the Waingake supply consisted of 3 pipe bridges on the treated water trunk main, loss of bridge access to the water treatment plant, 5 pipe bridges on the raw water trunk main and 3 areas where the raw water trunk main required replacement or major repair. Extensive damage to ford crossings and access roading.

2 of the 3 dams at Mangapoike are heavily affected by silt and will present a major challenge to treat, while Sang Dam has low silt loading, it discharges into Clapcott Dam which is heavily silted. Current water turbidity in H C William 150 NTU, Clapcott 80 NTU, Sang 3 NTU

WHATS NEXT

As of 28 March, water from the Bush Intake is now delivering water to the Treatment Plant with the likelihood that water will flow to the City by Thursday 30 March. This supply relies on the Bush Catchment providing clean water (minimal rain). Normally when the Bush Catchment water quality is affected by rain, water is sourced from the Dams but given the current state of the Dams alternative treatment options need to be investigated. The Dams water quality will remain variable as the slips will continue to discharge more silt when it rains and until the slips regenerate and provide plant cover.

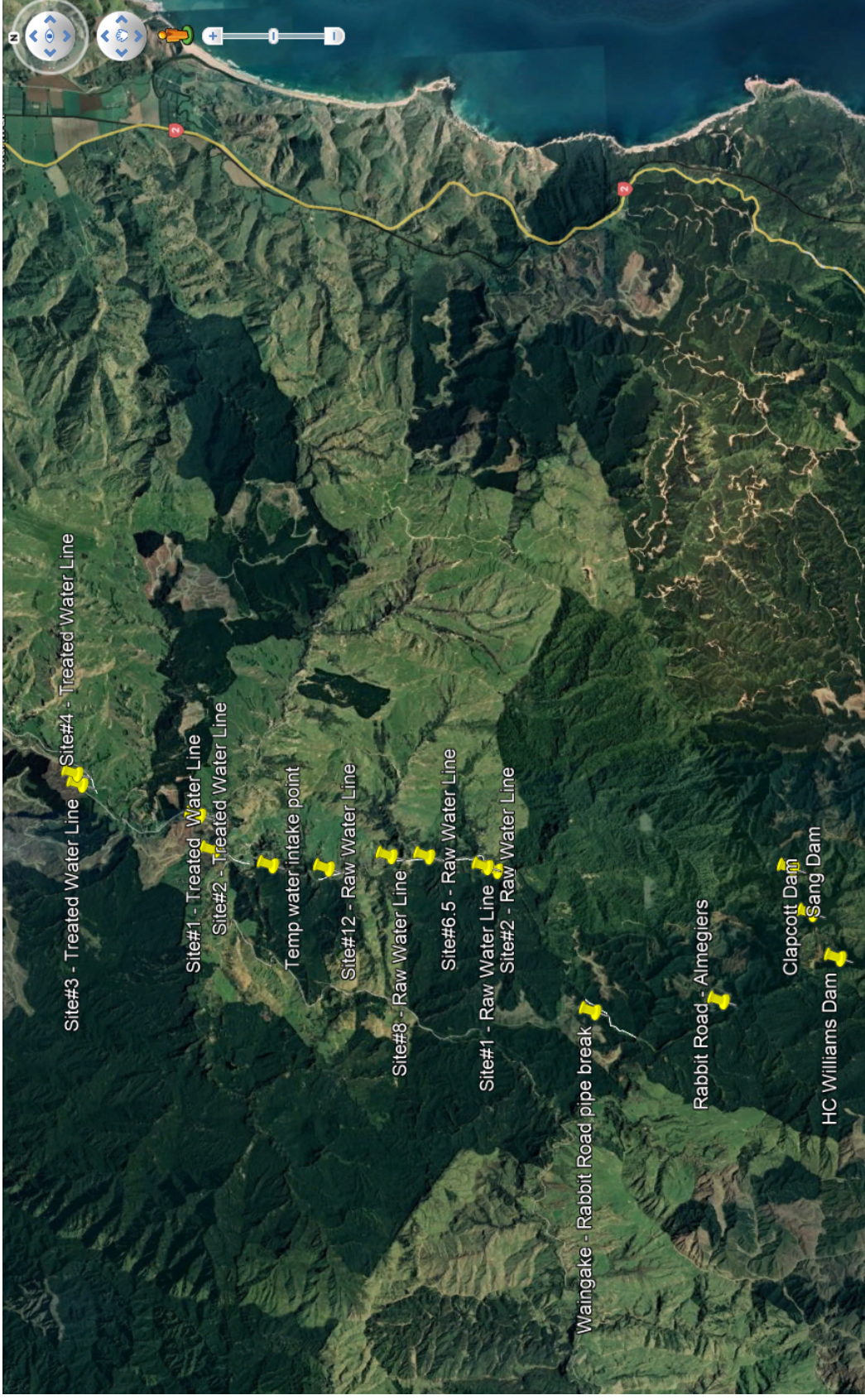
All known pipe repairs have been completed but only half of the raw water trunk main from the Mangapoike Dams to the Bush Intake has been pressure tested. It is likely that some further leaks will occur. Testing the remaining pipe is difficult with water required for the treatment plant, options are being investigated.

Actions planned:

- Investigate what water quality can be treated through the existing plant, currently up to 20NTU at reduced flow
- Investigate setting tubes/lamella plates can treat 200 NTU
- Investigate a new pipeline direct to Sang Dam utilising the cleaner water
- Test remaining raw water trunk main from Fairview Pump Station to Bush Intake.
- Repair 5 ford crossings
- Investigate need for river protection works around damage pipe bridges and pipeline failures
- Fast track installation of UV Treatment at Waingake WTP
- Final repair to access roads
- Paint all damaged pipe bridges following repairs
- Construct and install replacement access walkway over Bush Intake weir
- Investigate the need for resilience work to reduce future risk of failures
- Investigate the option of a permanent emergency take for Waingake WTP.

OPERATIONS COMMITTEE – CYCLONE GABRIELLE UPDATE

Repair Sites and Locations



OPERATIONS COMMITTEE – CYCLONE GABRIELLE UPDATE

RISKS and UNCERTAINTIES WORKING INTO RECOVERIES

Reinstatement work was shared amongst local contractors which allowed work to progress at pace and ahead of what was anticipated. As a result, we are well into the recovery of physical works but may be constrained by our ability to treat silt-laden water and therefore provide a base supply from Waingake that the city can rely on. This presents a risk to industry and commercial businesses on what to plan for.

The reinstatement work was largely like for like therefore the risks have not been mitigated, mitigation options were not achievable given the need to restore supply and would have delayed reinstatement by months to years. There will be an expectation from industrial, commercial and domestic users that future risks will be reduced, funding of such work and meeting those expectations will be a challenge especially when they are event specific.

Examples of Damage



Before RW Pipe Bridge 1



After RW Pipe Bridge 1

OPERATIONS COMMITTEE – CYCLONE GABRIELLE UPDATE



RW Pipe Bridge 1



RW Pipe Reinstatement



RW Pipe Reinstatement

OPERATIONS COMMITTEE – CYCLONE GABRIELLE UPDATE



TW Pipe Bridge 4 – Waingake School



Pipe Reinstatement Rabbit Road

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Journeys Infrastructure

WHAT HAPPENED

Cyclone Gabrielle caused an immediate halt on projects and a refocus on the response. Staff assisted with reconnecting communities but also redirecting resources to allow the movement of stock off farms. This continues to be a focus for the month of April but could not be achieved without the direction and support of PGG Wrightsons and Federated Farmers.

WHAT WE HAVE DONE

The Infrastructure team have been redirected to resolve three work streams:

Bridges

8 bridges are destroyed and we are implementing temporary crossing to regain access.

11 bridges have major structural issues and we are repairing these before they are destroyed by another flood or heavy freight use.

43 bridges have major scouring issues that again could become major structural issues if not fixed efficiently.

Tiniroto Road

1.2km of road near the Tiniroto Bluffs has been destroyed, residents have been using a convoy system through Parikanapa Road. We intend to have single lane access open before Easter but the road is very vulnerable and will be closed during a rainfall event. Staff are reviewing all options to build resilience into the final fix.

WHAT'S NEXT

Council's normal capital programme will be reshuffled for instance, the reseal and rehabilitation programme will now be diverted to other sites as the chosen sites still have access or major flood damage problems.

A heavy metalling programme will be targetted at local road state highway detours to allow for heavy freight use.

The Provisional Growth Fund Project for East Cape road - \$7.5M will be deferred to allow contractors and staff to focus on repairing roads and bridges. Kanoa -the Government representatives of managing the PGF have ben informed of the change in programme.

The roading asset management plan will continue as the impacts of Cyclone Gabrielle on bridges needs to be documented. Part of the plan will also signal what can be physically delivered and just as important what wont be delivered.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

The network is in a vulnerable state and if we experience a normal winter we will have ongoing road closures. This is going to be difficult period for the District as freight movements to support agricultural, pastoral and forestry industries and Council own recovery will be very uncertain.

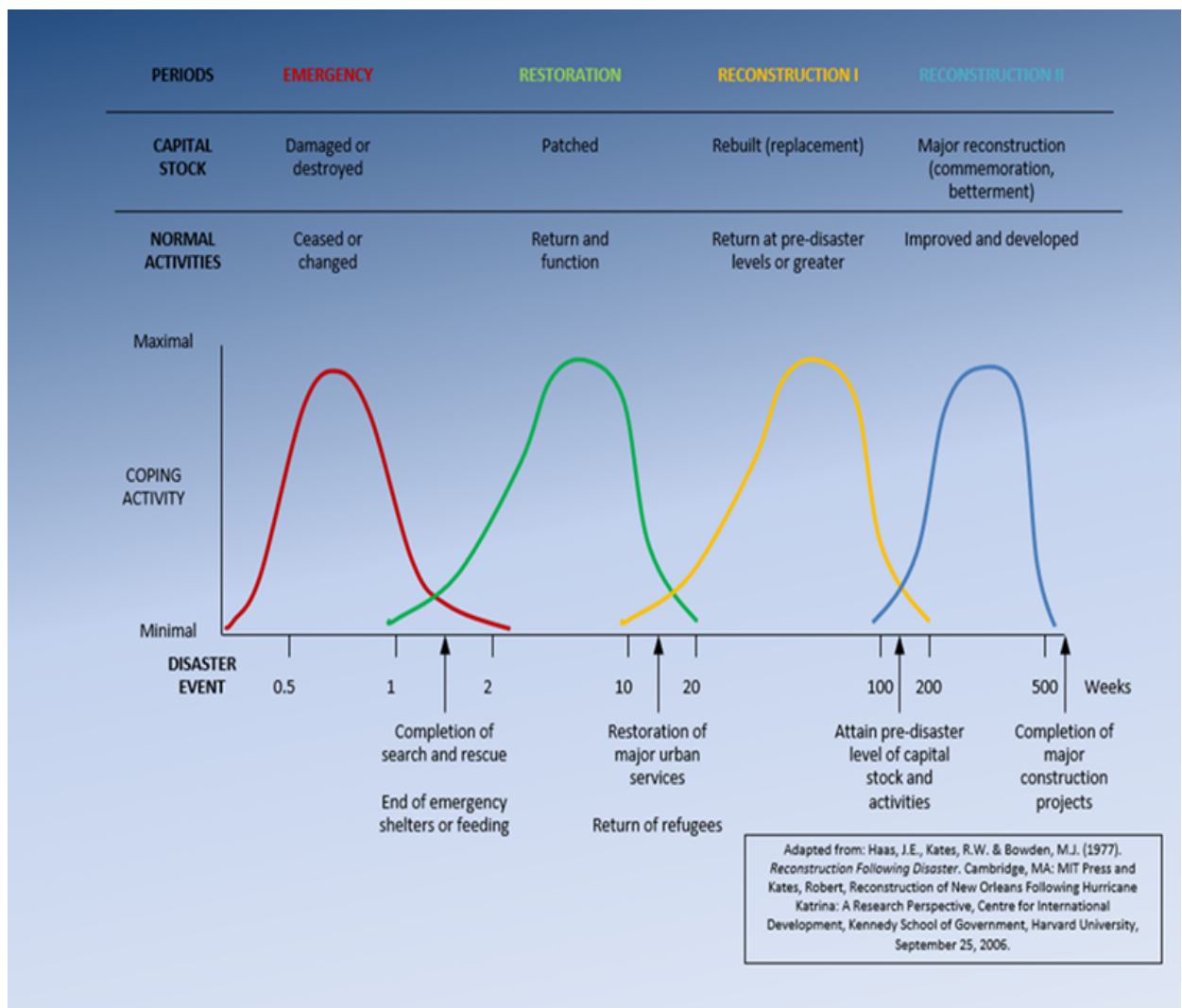
A major risk is the vulnerability of SH2 and 35, Council is trying to strengthen alternative detour routes if they are closed but they are poor SH substitutes. To start the recovery Council will need raw materials like steel, culverts, fuel and sheet piling which are produced out of District. Coastal shipping is being investigated but much of our materials are based in Tauranga.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Like many companies in Gisborne, qualified and experienced staff are a very limited resource whether its engineering, structural and/or health and safety to assist with the response. In this interim, Council has no option but to secure professional consultants to manage this surge of work, where there are insufficient Council resources to fill this surge.

Finally any emergency is going to require strong on going communications, our risk is prying the information from stretched staff who are focussed on the solutions (now and future) and keeping our community informed.

Finally there are documented evidence of our recovery phases , this graph is from Harvard University to depict the learnings from Hurricane Katrina.



OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

Gisborne Sewer Networks

What Happened

The sewer system was overloaded with rain water. This occurred initially because of some direct roof connections and as localised flooding occurred by gully traps going under water. The sewer makes a very poor storm water system.

The sewer went into overflow some time after the Civil Defence emergency occurred and after 120mm of rain. This is the first time this has happened in this order.

Five sewer pump stations went under water which flooded the switchboards and damaged the pump stations' electronics. At Gisborne District Council we hold four pump station controllers (called Swamp Foxes) three exchange units and one new. The worst of the damage was repaired immediately after the river levels dropped. The fifth pump station is waiting on a new controller but is running off-line on mechanical floats and is being manually checked daily.

When a car blocked the stream culvert in Massey Rd (technically Cyclone Hale) the upstream flooding immediately caused flooding in Mangapapa and resulted in the gravity sewer downstream becoming pressurised. This caused numerous failures (26 tomos in total) in the gravity system pipework in the area encompassing Ormond, Roebuck, Lytton and Childers Roads. It also caused lots of gully traps to overflow and quite a mess across the city. This, however, did not affect Kaiti.



Lytton/Stout Street roundabout tomo.

At Te Karaka the river went through the oxidation pond and three pump stations went underwater. Some of the anaerobic septage mud was washed out of the pond.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

WHAT WE HAVE DONE

The Sewer Pump Stations have been repaired. Apart from one (being Station Road at Te Karaka) where we are waiting on parts.

Work is progressing on the tomos. These have been triaged and are being done according to their criticality.

The 500 odd m3 of septage mud around Te Karaka oxidation pond is being cleared and taken to landfill on Thursday 30 March.

WHAT'S NEXT

Relocating the sewer server from the WWTP to the Sewer Engineers' office. This is just for operational considerations especially when the internet went down. The radio based Scada system worked perfectly.

Increasing the size of the 4" to 6" emergency sewer overflow from Oak Street SPS.

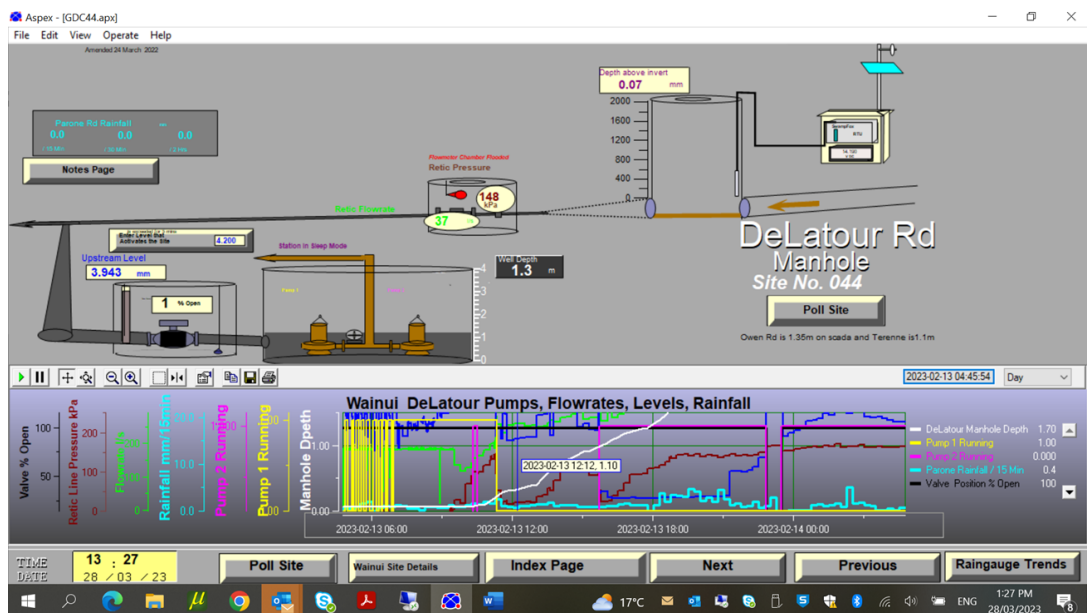
Putting in a gravity emergency overflow from Back Ormond Road at Sheehan Street.

Reinstate the emergency overflow from Steele Road SPS.

Note: The last three are all emergency management items and not part of the normal operational consent.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

Resources are going to be tight for a short while. However, the sewer system performed as expected and did not cause or contribute to breaches of the resource consent.



The Sewer Scada System continued throughout the storm during the power cut and internet shutdown with no problems.

Solid Waste

WHAT HAPPENED

Cyclone Hale was closely followed by Cyclone Gabrielle.

These weather events caused major disruptions to our waste infrastructure and transport services.

City Transfer Stations and Waste

- The city transfer station, managed by Waste Management was affected by surface flooding. The site was initially closed due to the weather event, once communication and power was lost the site was closed to the public for a period. The weighbridge and kiosk operate on power and require a wifi network.
- Kerbside collection of domestic bags was stopped for four days following the cyclone, residents were asked to hold on recycling for the first two weeks.
- Our contractor's ability to move rubbish and recycling out of region was not possible due to road closures on State Highway 2 south to Hawkes Bay and closures on State Highway 2 north through to the Bay of Plenty.
- This put strain on the region and the ability to dispose of waste due to storage capacity at the Innes Street site.
- Once roading networks were open, our ability to move waste out of region was hindered by the availability of trucks coming into region to cart waste out,
- CDEM and Solid Waste engaged ME Jukes and Tonlyn Landfill to assist with receipt of flood-related and flood-damaged waste.
- We waived gate fees / weighbridge fees at all transfer stations. City and rural.

Rural Transfer Stations and Waste

- All rural transfer stations were closed for a period during and after Cyclone Gabrielle.
- Surface flooding across all sites.
- Tikitiki Transfer Station was inundated with silt.
- At the Tokomaru Bay transfer station the river overtopped the site on both occasions. There was further erosion of the riverbank at the old landfill site. This erosion was approximately 60 cubic meters along 150 metres stretch of the riverbank.
- Tokomaru Bay was isolated due to the damage to the roading network both north and south. This has impacted the disposal of rubbish and recycling from out of Tokomaru Bay.

Flooded Homes and Property

- Many households were severely flooded due to Cyclone Gabrielle. Multiple properties across the rohe were inundated with silt and the additional requirement to remove flooded household debris.
- In some areas household flood-damaged household goods were disposed of on berms and kerbside.
- Response to heavily hit areas was to provide skip bins and kerbside pickups of rubbish and debris where it was dumped. We were reliant on the information coming in and requests for assistance.
- Contractors and volunteers pumped out the mahi to removed rubbish and debris and continued with silt removal.

WHAT WE HAVE DONE

- Waived weighbridge fees / gate fees at transfer stations up till 17 March 2023.
- Continue to offer flexi bins to those who continue to have flood related waste and debris.
- Silt removal programme from residential homes – clearing silt up to 8m from the house, carport or car garage.
- Worked with other organisations and councils to seek funding options to assist with operational cost for waste and sediment disposal.
- Kerbside collection and transfer stations have resumed to normal operations.
- Tokomaru Bay did implement a kerbside collection service limiting the volume of waste. Residents encouraged to hold as much as possible until suitable road access enables transfer of waste.

WHAT'S NEXT

- Continue to apply for funding to support ongoing costs.
- Continue to support disposal of flood related rubbish.
- Continue to support silt removal from affected properties.
- Complete legacy landfill site checks.
- Investigate options as we look to future proof our waste disposal. Need to ensure our region is resilient and has ability to store, process separate our waste streams .

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

- Ongoing volumes of waste coming in as flood damaged waste.
- Silt removal and cost for silt removal is ongoing .
- Silt from commercial areas, horticulture industry is not accounted for under the current process we are following. There is growing questions on disposal.
- Are our current transfer station sites suitable locations?
- Do we have sufficient storage or disposal sites for silt and debris?



OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

CDEM

WHAT HAPPENED

Regional emergency response activated for Te Tairāwhiti. Emergency Coordination Centre activated at Gisborne District Council with Community Link (volunteer groups) activated throughout the region. CDEM activated the preparation phase for Cyclone Gabrielle 7 days prior to the event coming into the region. This included daily briefings and planning with the community and emergency services partners. External resources and support was surged into the region and deployed. External agencies included:

- Urban Search and Rescue Teams
- NZ Rescue Teams
- NZ Police
- NZ Defence Force

Cyclone Gabrielle created extensive isolation for Te Tairāwhiti. The damage and impact on the region resulted in significant infrastructure failures, substantial isolation of communities with extensive land and road impacts, major flooding, and damaged houses with many whanau displaced and included the tragic loss of one person. Not only will financial hardship continue but increasing psychosocial and social harm issues are likely to emerge.

The damage and impact of this event is compounded given the cumulative adverse impacts of Ex-Cyclone Hale (10 January 2023) and previous severe weather events since March 2022:

- Record rain and river levels exceeded those of Cyclone Bola in 1988.
- 3 day rainfall topping at 608mm at Raparapaririki, near Ruatōria.
- Severe slips, dropouts closing State Highway 2 (north and south), State Highway 35, cutting off the region) isolating the region and creating food and fuel shortages.
- Widespread damage to roads and bridges, cutting off communities.
- Power outages across the region impacting over 6000 connections.
- Loss of telecommunications, internet affecting communication and electronic payment systems.
- Damage to the main water supply in the Waingake catchment resulting in level 4 water restrictions that remain in place with the backup treatment plant at Waipaoa now operating as the primary treatment plant.

WHAT WE HAVE DONE

Transition to Recovery Phase is currently in effect for 28 days from 17 March with powers transferred to the Tairāwhiti Group Recovery Manager. Given the scope and scale of this weather event, a dedicated regional recovery office has been set up and resourced which includes a Regional Recovery Minister.

WHAT'S NEXT

CDEM have reconfigured back into readiness operations with the community and embarking on after action reviews with Community Link Groups as well as training wananga associated to the rollout of Marae Emergency Project.

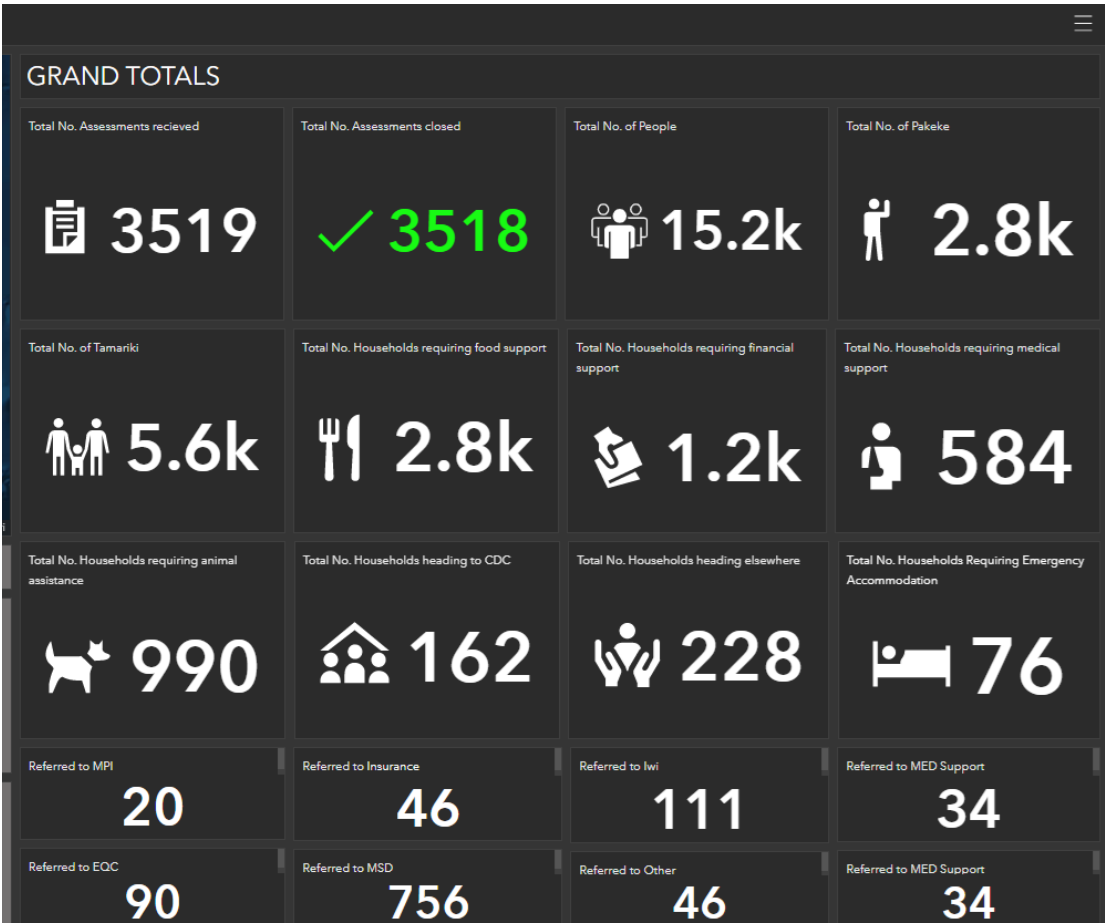
OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

The scale and impact of this event warrants reviewing all aspects of people, structure and processes associated with readiness and response. This process has commenced and will be the basis for developing the Regional readiness and response enhancements.



Snapshot of Emergency Coordination Centre Staff



Welfare support dashboard as at 30 March

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

WASTEWATER TREATMENT PLANT

WHAT HAPPENED

There was no damage as a result of the cyclone, however, communications were down and water use was restricted.

WHAT WE HAVE DONE

An app to alert the operator that they do not have internet access has been loaded by all the Wastewater Treatment Team. This alerts them that our alarm app will not work and the operator has to attend the plant until internet access is restored.

Dewatering spears were installed at the plant to source shallow ground water and to provide this to the WWTP for the purpose of washing wastewater equipment and machinery. McConnell Dowell has kept the diesel powered pump going since the request for drinking water reduction came out.



Dewatering spears and pump spears



Smaller green tank fed from dewatering spears

A system has started to be installed to use the outfall pump station water as a substitute for drinking water and/or ground water.



Pump in outfall pump station and feed tank 1



Feed tank 1 and 2 with hose to the screen room water tank

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

WHAT'S NEXT

The current app that we use to convey alarm messages to the operator needs a back up system in case the internet is offline or there is no cell phone coverage. There are a couple of options using text messaging or radio directly from the PLC.

A back up water supply needs to be established in case of water shortages in the future. The current Wastewater Treatment Plant Upgrade Project will establish a system to use recycled water from the final outflow from the UV disinfection to the plant. We are looking at putting in a bore and installing a rainwater tank as a back up for the future and to allow water to be supplied to the plant until the upgrade is finished. We have also partially installed a way to recycle the current outfall pump station water for washwater as well.

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

Contractors are in high demand with industry, the Waingake and Waipaoa Treatment Plants and pipeline repair work, and, the Wastewater Treatment Plant Upgrade. The priority appears to be the water supply to Gisborne, then industry, then the Wastewater Treatment Plant. This is for the washwater supply for the plant and the bore.

Getting consent for the bore may be a challenge for the short term high water use and for back-up supply for the future.

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

DRINKING WATER

WHAT HAPPENED

Monday 13 February - Water supply from Waingake water treatment plant stopped during the cyclone because of pipeline destruction.

Operators stationed at the Waipaoa plant started the facility early morning 14 February ready to deliver treated water. The facilities river intake screens blocked because of the silt loading and flooding levels. Overland pumping from Waipaoa river was urgently established to get water into the treatment ponds.

Connections onto two Infiltration galleries on the river assisted supply with a cleaner source of water. A new pipeline was constructed under urgency along the Waipaoa stopbank to bring water to the treatment plant.



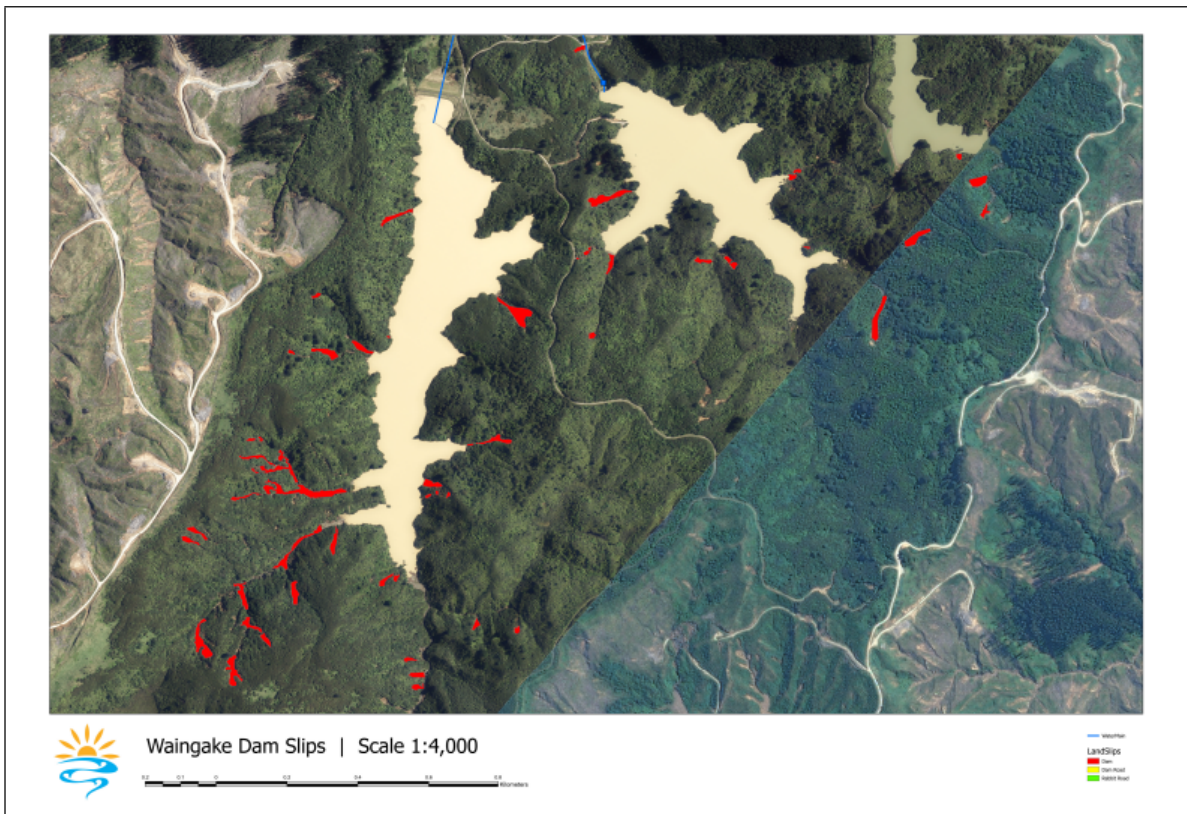
14 February – Waipaoa River at intake



Overland pumping water for treatment

OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

- In the first week the city treated water storage reservoirs were depleted to dangerously low levels.
- Severe crisis water restrictions were imposed including ban on use of treated water outdoors.
- High water use industry stopped operations until allocations were available in week two and many also found other water sources and/or changed production scale.
- Waipaoa treatment plant can produce approximately half the amount of daily water used in summer. Pumping sufficient water to the plant direct from the river and treating heavily silted water is difficult and slowed the treatment process. Iron in the river became problematic in the network causing discoloured water.
- Ensuring treated water supplied from the Waipaoa plant was safe and met compliance requirements was essential.
- The Mangapoike dams, Clapcott and Williams were silted from multiple slips making the water untreatable. The smaller Sang Dam was left undamaged.

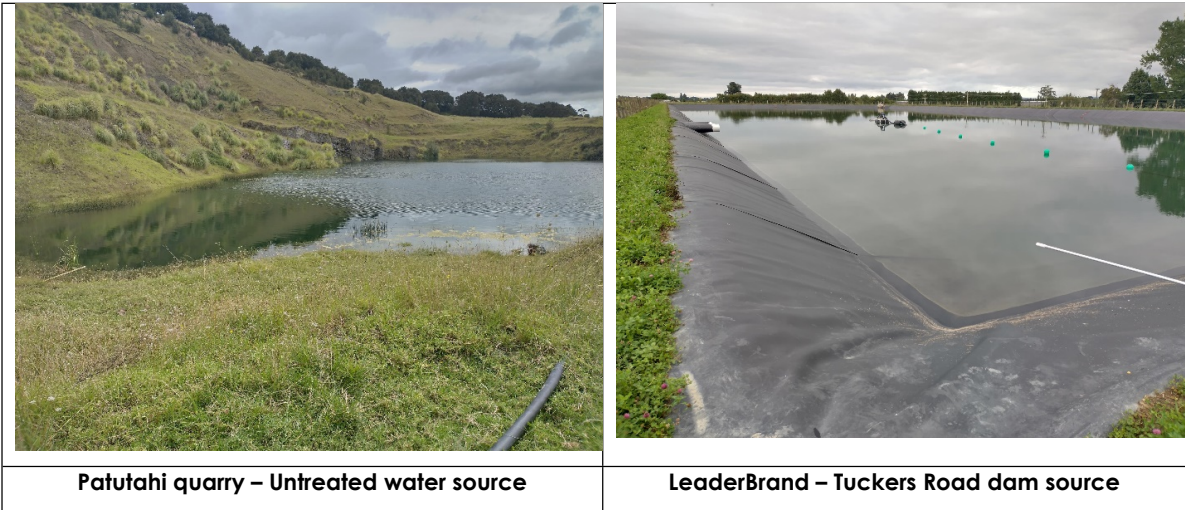


OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

WHAT WE HAVE DONE

Under the crisis water restrictions;

- Established an untreated water coordination service to link business to sources of untreated water. Patutahi quarry pond was used as a trucked untreated water source. The GHL Wash n Go facility was converted to a public collection point for 1000l or less.
- LeaderBrand – Tuckers Road dam and other sources were offered and used by industry.



- Supplied water from the Waipaoa plant to Gisborne for six weeks before being able to supplement from the Waingake plant using Waingake River water.
- Met water safety compliance requirement throughout the crisis period but with a boil water notice in place for Matawhero to Manutuke due to low chlorine in the water being supplied from the city.
- Industry allocations and crisis restrictions were lifted 30 March when some water supply was reinstated from Waingake.



OPERATIONS COMMITTEE - CYCLONE GABRIELLE UPDATE

WHAT'S NEXT

- Continue supply using Waipaoa and Waingake treatment facilities to meet demand.
- Design and install a new pipeline from Sang dam to the dams pipeline to use the clean Sang water source.
- Management of slips on the water supply dams – seeding to stabilise and monitoring.
- Design ready for retrofit of a pre-filtration system at Waingake plant to be able to treat the silty source water. Completion before October. Estimated cost 1.5M.
- Renewal of Waipaoa river intake screens and air scouring to eliminate silting and blockages.
- Scoping infiltration gallery intakes on Waipaoa River as alternative – cleaner water, easier to treat and low iron and manganese. Estimated cost 1.5M

RISKS and UNCERTAINTIES WORKING INTO RECOVERY

- Source waters are impacted by silting during rain making the water supply vulnerable until pre-treatment at Waingake is constructed and commissioned. Supply volume fluctuations are a risk without reliable source water quality.
- Keeping plant operational and staffed presents risks with prolonged operation of two treatment facilities to meet supply demands.
- Accessing sufficient funding for the scale of works required is essential for the 'new normal' presented by the changed catchment environment.

11. 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:

Decision Report

Item 11.1 23-36 Waste Collections Contract

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 11.1	7(2)(i)	Enable any Council holding the information to carry on, without prejudice or disadvantage, negotiations (including commercial and industrial negotiations).
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