

Title: 21-33 Turanganui A Kiwa Water Quality Enhancement Project Update

Section: 4 Waters Operations

Prepared by: Ally Campbell - Junior Wastewater Advisor

Meeting Date: Thursday 11 March 2021

Legal: No

Financial: No

Significance: **Low**

Report to WASTEWATER MANAGEMENT Committee for information

PURPOSE

The purpose of this report is to provide the Wastewater Management Committee (WMC) with a brief update on the Tūranganui-a-Kiwa Water Quality Enhancement Project as worked on by the KIWA Group and Gisborne District Council (Council).

The KIWA Group provides regular updates on its work to the WMC. Attached is an update report from the KIWA Group chairperson (**Attachment 1**).

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 Wastewater Management Committee:

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

Authorised by:

David Wilson - Director Lifelines

Keywords: Wastewater, KIWA Group

BACKGROUND

1. The Tūranganui-a-Kiwa Water Quality Enhancement Project is a construct of the wastewater consent through the clauses below:

Clause 18

"The permit holder shall establish, administer, retain and be responsible for the Tūranganui-a-Kiwa Water Quality Enhancement Project within three months of the issue of this permit or as soon as practical thereafter."

Clause 19

"The project shall be defined and developed by the Wastewater Management Committee (WMC) as a vehicle for integrated research, monitoring, planning and specific projects that will aim to improve the mauri and the water quality of Tūranganui-a-Kiwa."

2. As part of meeting the above, terms of reference were developed and approved by the WMC for the KIWA Group (comprising Iwi and Hapū representatives and Council) to provide expert cultural advice, stakeholder liaison and technical support in the development of the Gisborne district's wastewater management to work on the Tūranganui-a-Kiwa Quality Enhancement Project. This includes:
 - a. Providing advice to the WMC relating to integrated research, monitoring, planning and specific projects that will aim to improve the Mauri and the water quality of Tūranganui-a-Kiwa.
 - b. Guiding the development of wastewater management for the Gisborne district.
 - c. Helping identify knowledge gaps.
 - d. Facilitating the sharing of information between group members, their respective organisations and the community.

DISCUSSION and OPTIONS

3. This is provided in the report by the KIWA Group Chairperson.

ASSESSMENT of 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

This Report: Low Significance

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

ATTACHMENTS

1. Attachment 1 - KIWA Group Chairperson Update Report [21-33.1 - 8 pages]
2. Attachment 2 - KIWA Hine Tatari Gisborne Herald Article [21-33.2 - 2 pages]

Report by the KIWA Group Chairperson

<i>Manawa mai te mauri nuku</i>	<i>Embrace the mauri of the land</i>
<i>Manawa mai te mauri rangi</i>	<i>Embrace the mauri of the sky</i>
<i>Ko te mauri kei au, He mauri tipua</i>	<i>The mauri I have gathered is powerful</i>
<i>Ka pakaru mai te po</i>	<i>And shatters all darkness</i>
<i>Taumi te mauri</i>	<i>Come great mauri</i>
<i>Haumi e Hui e Taiki e!</i>	<i>Join it, gather it, it is done!</i>

1. Introduction

The Tūranganui a Kiwa Water Quality Enhancement Project is a construct of the wastewater consent. The project is a vehicle for integrated research, monitoring, planning and specific projects that will aim to improve the Mauri and the water quality of Tūranganui-a-Kiwa.

The KIWA Group was formed in order to fulfil the above by providing expert cultural advice, stakeholder liaison and technical support.

The Wastewater Management Committee (WMC) provides the KIWA Group with guidance on its work-plan, while the KIWA Group reciprocates with advice and recommendations, and provides Mātauranga Māori, Tikanga, and Te Ao Māori technical cultural input into relevant project work.

2. Previous work

Key pieces of work previously undertaken by the KIWA Group:

- A Cultural Framework for Addressing Wastewater Management in Tūranganui-a-Kiwa
- Respect & Dignity Report - A Cultural Assessment for Separating Mortuary By-products from the Municipal Sewage System
- Development of the Mauri Compass in collaboration with Maumahara Consultancy Services and Gisborne District Council (Council)
- Mātauranga Māori, Tikanga, and Te Ao Māori technical cultural input into:
 - Wastewater discharges from the marine outfall pipe into Tūranganui-a-Kiwa / Poverty Bay
 - Wastewater overflows into city rivers
 - The wetland trials and wastewater treatment processes from a Te Ao Māori perspective
 - Leachate issues from the Pa-o-Kahu landfill
 - Port pollution
 - Ad hoc Mātauranga Māori, Tikanga, Mauri, and Te Ao Māori technical cultural input as required

3. Current work

The current focus of the KIWA Group is developing Mātauranga Māori based design options for the WMC to consider and prioritising workstreams for 2021.

The dates in Tables 1, 2 and 3 are currently being revised by the KIWA Group and will be updated before the next WMC meeting.

Various media outlets have covered the story which highlights the co-operation and collaborative approach of our respective hapu, iwi and the GDC.

The Gisborne Herald article has been included as **Attachment 2**.

Table 1 outlines the work that the KIWA Group is at the present time engaged in, as approved by the WMC, with comments on progress, significant issues, and where WMC direction is required.

Table 1 Current work

Description	Start date	End target date	Tasks completed	Next tasks	Comments
<p>Separation of mortuary wastewater – progressing this project</p> <p>Bringing together western science and Mātauranga Māori and Tikanga in consideration of infrastructural and operational processes related to separation of mortuary wastewater from the conventional wastewater system.</p>	Sep 2019	Mar 2021 Construction commences (depending on bylaw and consenting processes)	<p>Review and approval of project plan.</p> <p>Eight full KIWA Group huis have been held to discuss the mortuary wastewater separation project and the Trade Waste Bylaw process. The KIWA Group held three separate sub-group meetings to discuss the cultural design, western science technical and cultural practice elements of this project in further detail.</p> <p>The KIWA Group has produced a preliminary Te Ao Maori companion Report to accompany and add cultural context to the western science design report produced by Dr Selva Selvarajah. A more extensive version of this report will be completed by early 2021.</p> <p>Members of the group visited a possible location next to the crematorium within the Taruheru Cemetery on the 5th of February. Discussions with GDC staff and contractors were constructive noting that the benefits of the site included utilising existing infrastructure and perhaps a more streamlined consenting process. Discussions have also been held with local funeral home operators.</p> <p>The KIWA Group continues to support the development of a Bylaw that will prohibit mortuary waste from entering the municipal sewerage system.</p>	<ul style="list-style-type: none"> Take design ideas to point at which a detailed design / costings, etc. can be determined. Thereafter integrate into the bylaw process. Produce an extensive version of the Te Ao Maori companion report to support the western science design. 	The WMC approved the recommendations and actions provided by the KIWA Group, which has set some of the work the KIWA Group will be working on this financial year.
<p>Management protocols related to dry and wet weather overflows</p> <p>Integrating Tikanga aspects such as the placement of Rahui and other processes.</p>	August 2020	March 2020	<p>Review and approval of overflow notification protocol.</p> <p>Nine KIWA Group meetings have been held to discuss Council's current management and notification protocols for dry and wet weather overflow events.</p> <p>The KIWA Group have reviewed and updated the overflow notification protocol and proposed changes have been made to when Iwi and Hapū groups and affected homeowners will be notified of an overflow event.</p> <p>Review of Rahui processes related to overflow events has been completed, and a summary report detailing the KIWA Group's recommendations is currently being produced. Once completed, this summary report will be sent to those at Iwi and Hapū governance level for discussion and consideration of options.</p>	<ul style="list-style-type: none"> Finalise Rahui process and review summary report before elevating to Iwi and Hapū governance for consideration. 	The WMC approved the recommendations and actions provided by the KIWA Group, which has set some of the work the KIWA Group will be working on this financial year

4. Actions stemming from the Tūranganui-a-Kiwa Water Quality Enhancement Project

Table 2 outlines the actions that the WMC has created as a result of the KIWA Group work.

Table 2 Actions

Project	Description / Recommendations	Item	Action	Progress statement / What is being done	Date Action Approved	Target commencement date	Target completion date
Wet weather discharges to rivers – engagement and Māori, Tikanga, Mauri, and Te Ao Māori technical cultural input.	Tangata whenua need to be engaged on an ongoing basis moving forward, in a meaningful, authentic, and practical manner.	1	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	<ul style="list-style-type: none"> Review / initiation of Rahui processes Implementing cultural monitoring Considering the practical aspects of the DrainWise Implementation Programme Identifying and making appropriate use of Tangata Whenua engagement channels and networks 	4 June 2020	August 2020 November 2020 January 2021 November 2020	February 2021 February 2021 March 2021 Ongoing
	All possible avenues must be explored to bring forward the DrainWise Implementation Programme, including seeking alternate sources of funding, and involving Tangata Whenua in those discussions.	2	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	<ul style="list-style-type: none"> All potential funding sources need to be explored; the GDC funding advisor to input in that regard The role of Trust Tairāwhiti (formerly the Eastland Community Trust, ECT) should be considered, as the KIWA Group consider the reduction of wastewater overflows to be a community outcome The rate of implementation should be considered in the light of community affordability and other rates-funded projects, considering prioritisation in terms of LTP funding and the practical ability to deliver the work (e.g. programming work in line with drainlayer / contractor capacity to deliver the work) Creation of a property managers forum to drive private stormwater and wastewater upgrades on tenanted properties, also taking advantage of the new Healthy Homes Act Exploring the role of PIMs, LIMs, and property data systems to promote upgrades through property sales Exploring the potential for a drainage Warrant of Fitness (WOF) that could be used to assess compliance in terms of the new Healthy Homes Act Inputting into education and awareness programmes to promote homeowners taking responsibility for their private infrastructure ('doing their bit' to stop wastewater overflows) 	4 June 2020	Ongoing January 2021 January 2021 November 2020 January 2021 January 2021 December 2020	Ongoing March 2021 March 2021 Ongoing into 2021 March 2021 March 2021 March 2021
	Tangata Whenua should be provided with opportunities to work alongside Council to resolve these issues. This is about GDC 'working alongside' Tangata Whenua.	3	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	<ul style="list-style-type: none"> Opportunities for Tangata Whenua to be 'at the table' in governance structures related to water Opportunities for Tangata Whenua to be 'at the table' in working teams related to water, providing input on a technical basis Better informing Tangata Whenua on current and upcoming GDC projects and resource consents. 	4 June 2020	September 2020	Ongoing

Project	Description / Recommendations	Item	Action	Progress statement / What is being done	Date Action Approved	Target commencement date	Target completion date
	Monitoring related to wastewater overflows should be reviewed to include cultural elements.	4	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	The KIWA Group has not had time to work on this substantial body of work. This will be looked at later and will need to include other parts of GDC and stakeholders. There needs to be a wider process (incl. State of Environment monitoring considerations), and the outcomes of the wet and dry weather wastewater overflows consent application will inform this.	4 June 2020	TBA	To be completed before the wet season in 2021 (before 1 April 2021)
	Current public health monitoring procedures and locations should be reviewed.	5	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	The KIWA Group has not had time to work on this substantial body of work. This will be looked at later and will need to include other parts of GDC and stakeholders. There needs to be a wider process (incl. Hauora Tairāwhiti considerations), and the outcomes of the wet and dry weather wastewater overflows consent application will inform this.	4 June 2020	TBA	To be completed before the wet season in 2021 (before 1 April 2021)
	Management protocols related to dry and wet weather overflows should be reviewed by the KIWA Group, integrating Tikanga aspects such as the placement of Rahui and other processes.	6	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	This will also be considered in conjunction with the review Rahui processes identified in Action 1 above. In addition, GDC will present to the KIWA Group their current management protocols, to obtain their ideas and input on what is and can be done. Nine meetings have been held with the KIWA Group to discuss Councils management protocols related to dry and wet weather overflow events, as outlined in table 1 above.	4 June 2020	August 2020	To be completed before the wet season in 2021 (before 1 April 2021)
	Tangata Whenua need to be kept informed on the DrainWise Implementation Programme and be given opportunities to input. This is about keeping Tangata Whenua informed and on an ongoing basis being 'at the table' .	7	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	This is partly included in Action 1 above – 'Considering the practical aspects of the DrainWise Implementation Programme', and Action 3. The KIWA Group will be presented with the complete DrainWise Implementation Programme and provided with opportunities to input.	4 June 2020	December 2020	Ongoing
	Projects to improve mauri should be identified.	8	Council and the KIWA Group to work together to create an action list / provide more detail on what this will look like in practical terms.	<ul style="list-style-type: none"> Catchment initiatives – the Waikanae Creek needs to be considered holistically, both in terms of stopping contaminants getting there, and remediating what has already been damaged Kopuawhakapata – this is a priority waterway that needs to be surveyed and investigated with a view to identifying discrete projects to improve the mauri of this degraded stream. Initial discussion with Whaia Tītirangi Roopu held to discuss synergies between enhancement programmes. 	4 June 2020	January 2021	TBA

Project	Description / Recommendations	Item	Action	Progress statement / What is being done	Date Action Approved	Target commencement date	Target completion date
				<ul style="list-style-type: none"> • Overall waterway management plans for city waterways should be produced, plotting a trajectory of long term improvement • <i>Spartina</i> in estuarine areas needs to be systematically eradicated • Access to marine, estuarine, and freshwater areas – in terms of customary practices and protocols • Recognition of heritage / special places (also education, plan schedules, etc.) related to waters ways / waters • Habitat improvement for key stone / sentinel species • Members of the KIWA Group have participated in two wastewater workshops convened by the Taumata Arowai (Water Services Regulator) Establishment Unit • Mauri of the port area. Two Hapū groups are separately progressing protocols with Eastland Port Limited: <ol style="list-style-type: none"> 1. Ngati Oneone and 2. Te Tai Uru. Te Tai Uru consists of EPL; GDC; Ngāi Tāwhiri; Whānau a Iwi; Ngāti Maru; Ngāti Kahutia; and Ngāti Te Rangitauwhiwhia. 			

5. Future work

Table 3 outlines the future work that the KIWA Group will be engaged in, as approved by the WMC. Additional items are added to this table when identified and approved by the WMC. Additional actions identified through this process will be added to the above actions table.

Table 3 Future work

Activity	Description
Cultural acceptance of treated wastewater	Exploring how Mauri of the water changes through the wastewater treatment and disposal process, how physical and non-physical transformation processes enable progressive improvement, delivering a cultural framework for assessing acceptability for the use or disposal of this recycled water (to accompany/partner pure water quality metrics). This work will include the topic of biotransformation. January / February 2021 – initial considerations
Wastewater Treatment Plant Upgrade	Stage 2 of the upgrade is being delivered (comprising solids removal and UV treatment); further exploring the benefits of treatment through a wetland as a through-earth process and alternative to the second Biological Trickling Filter. February / March 2021 – initial considerations
Te Karaka Oxidation Ponds	Bringing together western science and Mātauranga Māori and Tikanga in consideration of infrastructural and operational processes related to this wastewater upgrade. March / April 2021 – initial considerations
Governance structures for use of recycled water (treated wastewater)	Input into workshops and processes that seek to develop equitable and practical frameworks around the distribution and allocation of recycled water where Māori interests are concerned. 2021/22 Financial year – considerations
Integrated benefits assessment	Assessing the benefits of better wastewater quality and lower volumes of wastewater flowing out of the marine outfall (including complete removal of wastewater from the outfall) in terms of the four well-beings. April / May 2020 – initial workshops
Long Term Planning	Development of and input into a long term planning horizon for improving the Mauri of waterways in Te Tairāwhiti. December 2020 / January 2021 – initial workshops
Exploration of funding options for projects to improve Mauri	Exploring and supporting potential funding options for projects aimed at improving the Mauri of our rivers and waterways. December 2020 / January 2021 – initial workshops

6. Conclusions and Recommendations

The WMC is thanked for their time in considering the information provided.

The KIWA Group will continue with their work tasks as outlined above and provide an update at the next WMC meeting.

Whakatauki

Toitu te marae o Tane

Toitu te marae o Tangaroa

Toitu te Tangata

Guiding Principle

Protect and strengthen the land

Protect and strengthen the sea

And they will protect and strengthen the people



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Mound system returns mortuary waste to Papatuanuku



KIWA GROUP: Members of the Kiwa Group met with council staff at Taruheru Cemetery on Friday; from left, Owen Lloyd, Samuel Lewis, Wolfgang Kanz, Ian Ruru, David Hawea and Keith Katipa. Picture by Rebecca Grunwell

A HUI at the site where mortuary waste will be returned to Papatuanuku Mother Earth marks a significant step away from the culturally abhorrent practice of sending it out to sea.

Representatives from Turanganui-a-Kiwa hapu and iwi met with Gisborne District Council staff at Taruheru Cemetery on Friday.

They stood at the site where mortuary waste from the region's funeral homes will be trucked in and disposed of at a specifically designed "mound" system.

The disposal septic system will be about 22.5m by 7.5m, and one metre high. It will be covered with plants with a mixture of soils and aggregates to treat the water.

The concept is similar to that used by Native American Indians for burial purposes which forms the basis of the Wisconsin mound design, but is also based on Te Ao Maori and matauranga Maori principles.

The mortuary wastewater will be deposited in the underground tanks and treated through multiple stages of natural processes as it percolates through the soil.

Ian Ruru, who leads the KIWA group set up to provide cultural advice and technical support to the council, said the hui marked the move away from the "culturally abhorrent" practice of sending mortuary waste out to sea.

"Today signifies an important step in the process of respectfully treating the wastewater from mortuaries.

"This goes back generations, the idea or the process of tupapaku (body of deceased) preparation and that the liquid materials from funeral homes go into our sewage system and then into our rivers and ocean is culturally abhorrent.

"Local tikanga handed down through the wisdom of our elders suggests that which comes from Papatuanuku should return to Papatuanuku, hence our through-earth solution," he said.





"These sensitive materials eventually find their way out into our rivers and oceans and that's exactly where we swim, surf, and gather kai, so we're talking about protecting the practices of mahinga kai as well."

The hui followed the opening of consultation on the council's draft Trade Waste Bylaw on February 3, which seeks to remove mortuary waste from the public wastewater system.

Mortuary waste is made up of arterial blood and chemicals that mostly arise through the embalming process. On average, about one cubic metre of water (1000 litres) is required to put one body through the process.

Tangata whenua and the wider community of Tairāwhiti have long petitioned for it to be separated from the system because it is culturally unacceptable for such waste to be discharged into Te Moana o Turanganui a Kiwa (the bay).

The draft bylaw prohibits the discharge of mortuary waste into the council's reticulated wastewater system, regulates its transport, and provides for its discharge to a council-approved facility.

"It's exciting because it addressed that problem, and we've got a solution that brings together hapu, iwi and the Gisborne District Council," said Mr Ruru.

"That in itself is a cool thing."

'Cool' that solution brings together hapu, iwi and GDC

It was the first time a trade waste bylaw was being used for this purpose in New Zealand.

"We're leading the way in something that a lot of the public thought was already sorted," Mr Ruru said.

"The solution that we've got will be the first in the country, and hopefully other places, other cities will follow."

Mr Ruru thought the sensitive nature of the topic may have contributed to it being overlooked for so long.

Council project manager Wolfgang Kanz acknowledged Mr Ruru and the other iwi representatives present and the "long journey" it had taken to reach that point.

"It has really been a process of collaboration between iwi and council, and also Western science and matauranga Maori."

The change to the bylaw would wrap up later in the year and there was still work to be done to apply the "matauranga Maori lens" to the Western science parameters in terms of the disposal mound, he said.

At the hui, Nga Ariki Kaiputahi representative Owen Lloyd acknowledged those who had passed.

"I think it's important to take a moment to reflect on the past as we move forward, and also to acknowledge the dead among us."

He acknowledged the work that had gone on to reach this point and "combined effort" of the council and Maori.

"By having two cultures and two ways of thinking . . . we can see the effects of working together and we can achieve quite a lot.

"Let's hope that this is just the start of this kind of working together and this sort of way, where our cultural understanding and our Western society and also our evolution come together."

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