

IN THE MATTER OF: The Resource
Management Act 1991

And

IN THE MATTER OF: The hearing of
Resource Consent Applications
(**APP-2005011178.01** and
APP-2018201909.00) by Tararua
District Council to discharge treated
wastewater from the Eketāhuna
wastewater treatment plant into the
Makakahi River via a wetland.

DECISION OF THE HEARING COMMITTEE

DR BRENT COWIE (CHAIR), MR REGINALD PROFFIT AND MR PETER CALLANDER

11 MARCH 2019

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1 Introduction

This is the decision of a hearing committee comprising Commissioners Peter Callander, Reginald Proffit and Dr Brent Cowie (Chair), appointed jointly by the Manawatū Whanganui Regional Council (MWRC, the Regional Council) to hear and decide a suite of applications made by Tararua District Council (TDC, the Applicant) to allow the ongoing disposal of wastewater (including sewage) from the township of Eketāhuna.

The provision of sewerage networks and wastewater treatment are core functions of territorial authorities (such as TDC) under section 25 of the Health Act 1956, and sub part 2 in s10 of the Local Government Act 2002. We were aware that whatever decision we make, there will have to be ongoing discharges of wastewater from Eketāhuna to the local environment.

We inspected the existing Waste Water Treatment Plant (WWTP) on Monday 22 May 2017. We were accompanied by Mr Robert Rose of the MWRC and Mr Eric Bonny, the TDC officer responsible for the day to day management of the plant. Neither of these council officers took any part in any stage of the hearing. We saw the two existing oxidation ponds, which at present comprise the only means of treatment of wastewater and from the top of the cliff face we saw the existing point of discharge to the Makakahi River. We also went to the Eketāhuna Golf Club to see where a wetland could be constructed beside the river as a final step in wastewater treatment.¹

2 The Existing Treatment Plant

Eketāhuna is a small township with some 441 residents located on State Highway 2 near the south western end of the Tararua District. The Makakahi River, which is a tributary of the Upper Manawatū River, flows south to north just to the west of the town. A short distance upstream the Ngatahaka Stream, which is significantly degraded from non-point source discharges from intensive land use, flows into the Makakahi.

The first sewer reticulation pipelines were installed in Eketāhuna in about 1910, and there are now 220 connections to the network. The network suffered significant damage from an earthquake in 2014, after which substantial repairs had to be undertaken. In his evidence to the first hearing Mr King said these repairs cost \$1.4 million, and included relining of 4.4km (72%) of the network and replacement of 166 of the 220 lateral connections in the township. However we understand that no further work has been carried out since then to reduce stormwater ingress into the wastewater network in Eketāhuna.

The WWTP is located on Bridge Street, which is on the west side of the township. Two oxidation ponds were constructed in the 1970's, with a supplementary aeration device added in 2014. The ponds are not lined; nor is it proposed to do so as part of the present suite of applications. A fine screening system to remove coarse solids has been installed for some years, but is not yet operational. The existing point of discharge is from an overflow to the Makakahi River from the high terrace where the WWTP is located. The discharge very largely comprises wastewater from domestic or light commercial activities.

¹ Discharge via a wetland at this location eventually became a part of the applicant's proposal.

There has been no characterisation of the inflow to the Eketāhuna WWTP but some work has been carried out on effluent outflows in 2016 and 2018. These were described in Mr Crawford's evidence to the reconvened hearing. The average dry weather outflow is around 185 m³/day, the median flow about 500 m³/day, the average flow about 620 m³/d, and the maximum flow about 1,800 m³/day. The application was to discharge to water for a maximum daily flow of up to 3,200 cubic metres, although this has now been changed to a 95th percentile flow of 1,700 cubic metres.

3 The Hearing Process and the Consents Sought

This was a complex process as the hearing took part in three stages, and after the second two stages, additional resource consents were lodged such that the discharge of wastewater was to be via a constructed wetland.

The first group of applications were lodged by the applicant with the MWRC on 1 April 2015. They comprised of applications for three discharges: of treated wastewater to the Makakahi River, of seepage water from the ponds to groundwater and of odour to air. A term of 20 years was sought.²

These applications were publicly notified in April 2016 with 12 submissions received. Details of the submissions are in Ms Morton's officer report dated 7 March 2017. All submitters opposed the applications and/or the term sought.

The initial hearing took place in Pahiatua from Wednesday 5 April to Friday 7 April 2017. During that hearing we had heard from four representatives of the applicant, nine submitters, some with expert witnesses, and two reporting officers from the Regional Council.

At that hearing the applicant proposed, via the evidence of Mr Crawford, a significant upgrade to the Eketāhuna WWTP. Along with the yet to be commissioned coarse screen, this would consist of four components: a coagulant settling tank (which reduces the concentrations of suspended solids, nutrients and BOD associated with these solids), a lamella clarifier, a micro filter and a UV treatment reactor (which particularly reduces concentrations of faecal bacteria in the treated wastewater). They sought a term of seven years: one year to collect further information to characterise the discharge, three years to design, build and optimise the proposed treatment, and three years to monitor the effects of the upgraded discharge on the receiving environment of the Makakahi River.

It was proposed that the final discharge would be via a constructed wetland. However at the April 2017 hearing the Applicant could not tell us at which of two possible locations the wetland would be sited, and so where the wastewater discharge from the wetland would take place. Accordingly we formally asked them to respond to three questions when the hearing was briefly re-convened on Tuesday 23 May 2017:

² A number of submitters criticised the lack of information in the original application. We agree that they have a point, but on the other hand the previous consents had long expired and not accepting the initial applications would have meant an unsatisfactory discharge would continue to the Makakahi River, probably for several more years. In the end the proposal – much improved effluent treatment plus a final discharge via a constructed wetland is a far better outcome than continuing with the status quo.

1. Did the Applicant still wish to proceed with the present proposal to provide additional wastewater treatment with a discharge to the Makakahi River?
2. If the Applicant wished to proceed with the present proposal, could they provide more definitive information on the exact location of the proposed discharge, and whether or not wetland treatment will be provided?
3. Alternatively, did they wish us to further adjourn the hearing for a period of up to six months pursuant to s41C(3) of the RMA to allow land based treatment options to be investigated further and to discuss the design of feasible options with submitters and Horizons Regional Council?

At the re-convened hearing in May 2017 the Applicant confirmed that they wished to proceed with the present proposal, and that the proposed wetland would be located beside the Makakahi River on land owned by the local golf course. This was primarily to endeavour to meet cultural concerns about the discharge, and to enable compliance with Policy 5.11 of the One Plan. It meant that additional resource consent applications were necessary to construct and discharge from the wetland.

We advised the Applicant that the proposed discharge of wastewater via the wetland would need to be subject to Cultural Values Assessments by each of Rangitāne o Tamaki nui a Rua Inc. and Kahungunu ki Tamaki nui-a-rua Trust, and that these would need to be provided with the additional resource consents for the wetland. We also asked the applicant on what legal grounds we could further adjourn this hearing to allow time for the logistics and design of the wetland to be undertaken, and the Cultural Values Assessments carried out.

The Applicant responded more formally to our questions in a Memorandum from their solicitors dated 29 May 2017. We then informally sought further detail about when the additional consent applications would be lodged, and we were advised that this would be by 2 February 2018. We granted that request, and at the request of the Applicant we subsequently twice extended the time by which any new applications must be lodged.

Eventually on 28 June 2018 a new suite of applications to construct the proposed wetland, to discharge seepage from the wetland to the Makakahi River, and to build a bund to divert flood flows away from the wetland were lodged with the MWRC. The applications had been prepared by Opus Environmental Consultants, and were accompanied by a memorandum from legal counsel and a comprehensive Cultural Values Assessment prepared on behalf of Kahungunu ki Tamaki nui-a-rua Trust. We have referred to the inclusion of the wetland in the wastewater treatment train as the modified proposal.

Acting under delegated authority we decided that these new applications only need be limited notified to three parties under the provisions of s95B of the RMA. They were: Rangitāne o Tamaki nui a Rua Inc., who have statutory acknowledgement under the provisions of s95B (3), and who accordingly must be notified of the applications, Kahungunu ki Tamaki nui-a-rua Trust, and the Eketāhuna Golf Club, on whose land the proposed wetland would be constructed, and over whose land access will be necessary for machinery associated with construction.

One submission was received from Rangitāne o Tamaki nui a Rua Inc. It opposed the modified proposal, asserting that the proposed addition of a wetland does not adequately address the cultural and spiritual relationship that Rangitāne have with the Makakahi River and its catchment, and that adverse effects on the mauri of the awa are not avoided by the modified proposal.

On 16 August 2018 the Regional Council sought further information from the applicant under the provisions of s92 of the Act; this was provided on 21 September 2018. The hearing was then reconvened in Pahiataua on Tuesday 27 November 2018. A final right of reply was received from the applicant on 22 January 2019, and we closed the hearing on Monday 11 February 2019.

We acknowledge that this was a very long process for what should have been quite a straightforward resource consent application, had the Applicant expedited the wetland treatment proposal in a more timely way. The delays, and changes to the proposal, mean that some evidence put forward in the early stages of the hearing is now of limited relevance. For this reason our summaries of that evidence are quite brief, and we focus on what remains most relevant to our decision.

4 The Initial Hearing

4.1 The Case for the Applicant

At the initial hearing in April 2017 we heard from four witnesses for the Applicant.

Mr Blair King

Mr King is the Chief Executive Officer of the TDC. Among the main matters he covered were:

- The effects of the 2014 earthquake and subsequent upgrades to the reticulation network in Eketāhuna.
- The TDC has a declining and aging population and a small rating base. The cost of its seven community sewerage schemes are spread equally across ratepayers in all those communities. Eketāhuna is the fourth largest of the seven communities served by the schemes, which in total have 4,857 connections.
- The TDC has budgeted \$810,000 in its current 10y plan for upgrades to wastewater treatment at Eketāhuna
- The council's consultation with iwi.
- Why a term of seven years was sought for the primary resource consents.

Mr John Crawford

Mr Crawford is a wastewater engineer, who had originally been employed by Opus as the technical adviser to the wastewater project.

We have already outlined the components of the proposed wastewater treatment “package plant” that he described and which would be constructed on the Bridge Street site.

In answer to questions Mr Crawford said that he did not support lining the ponds. He noted that the sludge present in them will reduce their permeability, but that you cannot realistically assess seepage from the ponds. He said monitoring bores would be appropriate, but that still would not tell you the rate of seepage from the ponds. A water balance assessment would only give an approximation.

Dr Olivier Ausseil

Dr Ausseil is a self-employed freshwater ecologist. In addition to his pre-circulated brief of evidence, Dr Ausseil presented some very helpful supplementary evidence, and he also took us through a visual presentation of a summary of his findings.

We do not need to summarise Dr Ausseil's evidence here as we discuss it in some detail in Section 6.3 of this decision.

Ms Tabitha Manderson

Ms Manderson is a resource management planner employed by Opus and provided a detailed coverage of planning matters and proposed consent conditions.

4.2 The Submitters

Nine submitters, some represented by more than one witness, appeared at the initial hearing: Mr Phil Teal and Mr Adam Canning (Wellington Fish and Game Council), Mr Manahi Paewai and Mr Phil Percy representing Rangitāne o Tāmaki nui-ā-Rua Inc., Mr Morry Black, Ms Kate McArthur and Mr Greg Carlyon representing Kahungunu ki Tāmaki nui-a-rua Trust, Te Roopu Taiao o Ngāti Whakareta represented by Mr Robert Ketu and others, Mr Peter Wood (Mid Central Health), Mr John Bent, Mr Corny (Sharky) and Mrs Charlotte (Nanny) Andrews, Mr Kelvin Lane (representing the Manawatu Estuary Trust), and Mr Myles Stilwell (Water Protection Society). Additionally, evidence was tabled on behalf of Mr Mike Smith of the Water and Environmental Care Association.

Wellington Fish and Game Council

Wellington Fish and Game were represented at the hearing by Mr Adam Canning, who is a post graduate student studying freshwater ecology, and Mr Phil Teal, who is the regional manager.

We discuss Mr Canning's expert evidence in our assessment of the effects of the proposed discharge on water quality in the Makakahi River.

Mr Teal presented a submission which he said was focussed on advocacy for improved water quality and habitat values for trout habitat and ecosystem health. He listed nine principles that he said should be considered and supported; these included addressing cumulative effects, reducing nutrient inputs to achieve the target MCI of 120, promoting discharges to land rather than water, and a proactive approach to improving "water discharge quality" in the Manawatū catchment. He then listed nine matters of relief sought, particularly if the consents sought were to be granted. He sought land based treatment if possible. If the consents were to be

granted he considered that they should be for a short term, and include monitoring, adaptive management and frequent reporting.

Rangitāne o Tāmaki nui-ā-Rua Inc. (Rangitāne)

Rangitāne were represented by two witnesses: Mr Manahi Paewai and Mr Philip Percy.

Mr Manahi Paewai

Mr Paewai presented detailed written evidence and a summary of that evidence, and he then answered questions.

He said that all things have qualities of wairua and mauri. In regards to the tikanga of Rangitāne, if one part of the whole is being affected, it is all being affected. More specifically, he said if one part of the awa is being impacted, it has an “absolute effect” on all of Rangitāne’s taonga.

Mr Paewai referenced the Te Kauru Taioa Strategy which defines principles and values that underpin Rangitāne intentions in regard to restore the good health of the Manawatu River catchment.

Mr Paewai spoke of the historical importance of rivers such as the Makakahi and Manawatu as “highways” and sources of kai for Rangitāne. This was because historically the bush was very dense and nearly impassable, and the rivers teemed with life.³

The Rangitāne position is that there should be no discharge into waterways of treated sewerage effluent. This is because of adverse effects on values and tikanga, which Mr Paewai listed and discussed. He said any discharge of such sewerage would “unsettle the mauri of the awa”, expose traditional kai such as tuna (eels) to sewerage, have a “direct and severe impact on the mauri of Papatuanuku, and seriously impact on the mana of Rangitāne’s kaitiaki.

His responses to questions included:

- Asked if a wetland discharge would help meet cultural aspirations he said he doubted it would be enough, as it was just “a small swamp.” He strongly preferred a land based discharge option, as it would largely address Rangitāne’s concerns as “Papatuanuku would do the job rather than the awa.”
- He would accept a short term discharge to water, but reinforced that in the longer term the discharge needs to go to land. He said that we have done enough damage to water and that the “world’s surely had enough – let’s put it (the sewage) back to Papatuanuku.” That was the decision he wanted us to make.

³ Noting the name Makakahi refers to freshwater mussels or “kakahi”.

Mr Phillip Percy

Mr Percy is a planner. His evidence outlined the position of Rangitāne, and he evaluated the applications before us at that time against what saw as the relevant criteria, particularly those of the MWRC “One Plan”, such as Policies 2.1, 2.2, 2.3 and 5.11. We discuss these later in this decision.

Mr Percy also highlighted what he saw as some of the uncertainties in the application at that time. We note he also provided evidence on behalf of Rangitāne to the re-convened hearing in November 2018, and his evidence there is more relevant to the final proposal that was before us.

Kahungunu ki Tāmaki nui-a-rua Trust (Kahungunu)

Three people represented Kahungunu at the original hearing; Mr Morry Black, Ms Kathryn McArthur and Mr Greg Carlyon.

Mr Morry Black

Mr Black represents the “Mauri Protection Authority” on behalf of Kahungunu. He did not provide written evidence but was asked a number of questions. In response he said:

- He was not keen on a “partnership” with the TDC at this time.
- He did not see the possible wetland as meeting concerns about the effects of the discharge on the mauri of the Makakahi River, and that it could make water quality worse. He said it was like “an evolving process without any answers”.
- Discharge via a wetland could address the flowing through Papatuanuku, but some wetlands sit “on top of the land” and while it would take long to come up with a suite of criteria about wetland design, it would take much longer to prepare a Cultural Impact Assessment (CIA).

Asked what decision he wanted us to make, Mr Black said that “we have to grant the consent but the data is not there to make a long term decision”. The TDC needed time, but he wanted a short term consent.

Ms Kathryn McArthur

Ms McArthur is water quality scientist employed by the Catalyst Group. We do not need to summarise her evidence here as we discuss water quality the Makakahi River, and the factors that affect it in the surrounds of the WWTP, in Section 6.3 below.

Mr Greg Carlyon

Mr Carlyon is a planner employed by the Catalyst Group. His evidence focused on what he saw as the relevant planning considerations. We do not need to summarise his evidence here as we discuss all relevant planning matters in Section 6.6 and 6.7 below.

Te Roopu Taiao o Ngāti Whakaterere

Ngāti Whakaterere is a hapū of Raukawa, and is based near Longburn. Their presentation was led by Robert Ketu, who said that there were cumulative effects on Ngāti Whakaterere as they were located downstream of many wastewater discharges. He discussed the cultural impacts of these discharges.

After acknowledging the other submitters Mr Ketu introduced the others in his team. They included Adrian Hurunui, who is part of their environmental team. Mr Hurunui said that the hapū did not think they would be in this situation as his older siblings should have taken care of this. His whanau used to take kai from the Manawatu, such as tuna and trout, – but now they could not swim in the river and he can't pass it on to his children.

Moses Ketu is the younger brother of Robert, and he was speaking on behalf of four others who do Cultural Impact Assessments as a team. He said that they had grown up with the water all their lives - swimming, drinking, taking kai, inanga, tuna, and watercress, but that they could not do anything in it now. Any waste going to the water will affect the Mokopuna – the water that should be good for them is not.

Asked if incorporating a wetland into the treatment system would help, Robert Ketu said that they have a wetland in their ponds and that it is a good concept but the wai cannot take any more. They would be willing to engage in a korero about the wetlands, but “the time of zero tolerance is over” and a full discharge to land is necessary. He referred to the Shannon WWTP decision as an example of what could be done.⁴

Mr Kelvin Lane

Mr Lane appeared on behalf of the Manawatū Estuary Trust, of which he is the chairperson. He outlined the values of the estuary, and said that even if the wastewater discharge were treated by processes including UV, there would still be adverse effects on the estuary. He sought land based treatment which he said would be consistent with the One Plan, and noted that Shannon, which he said is four times larger than Eketāhuna, now has a predominantly land based treatment system.

Mr Corny (Sharky) and Mrs Charlotte (Nanny) Andrews

Mr and Mrs Andrews live in Shannon and have been married for 48 years with five children and 14 grandchildren. She affiliates to Raukawa and said she was at the hearing “for the children that have no voice” and that “we have to endure and suffer all that pollution which affects us all in many ways.” She spoke of previous times when the lower Manawatu could be used for recreation, and collecting kaimoana and water cress, but now this could not occur because of poor water quality.⁵

⁴ This treatment system discharges to land, except when there are high flows in the Manawatu River, when a discharge to water is allowed for.

⁵ There is an anomaly here as treatment of human sewage discharges throughout the Manawatu Catchment has improved greatly over the last few decades, yet water quality has declined significantly. This decline in water quality is due to land use intensification, with the Ngatahaka Stream catchment being just one example of this.

Mr Peter Wood

Mr Wood is a Health Protection Officer and Drinking Water Assessor for Mid Central Public Health. His concern was the effects of the proposed discharge on the Pahiatua public water supply, which is located about 20km downstream of the Eketāhuna WWTP. It takes water from a bore near the Mangatainoka River, into which the Makakahi flows, is graded D and is chlorinated.

He opposed the application, which he asserted should be assessed against the criteria in National Environmental Standard for Sources of Human Drinking Water 2007. We discuss this in Section 6.4 below.

Mr John Bent

Mr Bent spoke to a written submission he presented on the day. He helpfully pointed out some precedent decisions in the catchment, including those for waste water treatment at Shannon and Feilding, and the AFFCO discharge at Feilding. He said that “what comes after this needs to be the long term solution”, and he supported a term of no more than five years.

Mr Myles Stilwell

Like several other submitters, Mr Stilwell criticised the lack of information in the application, noting that very basic information about such matters as influent and effluent volumes were not known. He sought that the application be granted for only three years while basic information was collected and further consultation took place.

Mr Mike Smith (Water and Environment Care Association)

Mr Smith presented a written submission. It focused on the term sought for the Eketāhuna application, which was originally 20 years. Mr Smith sought it be granted for no more than seven years. We discuss the term granted for the present applications in Section 8 of this decision.

Other Submitters

Two submitters did not appear at the hearing. They were Mr Mike Smith, who provided a written submission as discussed above, and Mrs Christina Paton, a resident of Foxton Beach. We have taken account of what Mrs Paton said in her submission in our evaluation of the applications.

4.3 The Officer Reports

We were provided with four reports from officers of or consultants to the Regional Council prepared under the provisions of s42A of the RMA. These were taken as read. Supplementary reports were also prepared by each of Mr Brown and Ms Morton.

Mr Logan Brown

Mr Brown is a freshwater scientist and the Freshwater and Partnerships Manager at the Regional Council. His evidence focussed on the effects of the proposed discharge on instream values in the Makakahi River, which we discuss in Section 6.3.1 of this decision.

Ms Fiona Morton

Ms Morton is a consultant planner to the Regional Council. She provided a comprehensive overview of the applications and the context in which they have been made, and recommended some draft conditions of consent for our consideration (which were subsequently updated following the re-convened hearing in November 2018).

Mr Tim Baker

Mr Baker, who is a groundwater scientist, provided written evidence describing the groundwater setting in and around the wastewater treatment plant and the effects on groundwater and surface water that might arise as a result of seepage from the ponds. He also provided some proposed groundwater monitoring conditions. We discuss his evidence in Section 6.3.2 of this decision.

Ms Deborah Ryan

Ms Ryan is an air quality specialist. She provided written evidence describing the potential odour effects associated with the wastewater treatment plant and recommended some good management practices that should be included in consent conditions to avoid adverse odour effects. We discuss her evidence in Section 6.3.3 of this decision.

5 The Reconvened Hearing

At the reconvened hearing in November 2018 we heard from Counsel for the TDC, Mr King, Mr Crawford (via a phone link), Dr Ausseil, Mr MacGibbon, Ms Ella Boam (groundwater scientist) and Ms Manderson for the applicant, Mr Percy for Rangitāne (along with tabled evidence from Ms Oriana Paewai), and Mr Baker (via a phone link), Mr Brown and Ms Morton for the Regional Council.

5.1 The Applicant

Ms Esther Bennett and Mr David Allen – Counsel

Counsel for the TDC provided written submissions, which were read by Ms Bennett. They outlined how the proposed wetland was now considered an important component of the wider Eketāhuna WWTP project, and how it will enable compliance with Policy 5-11 of the One Plan. We discuss these matters in Section 6.5 of this decision.

Mr Blair King

Mr King outlined work undertaken by the TDC since April 2017, with a particular focus on engagement with tangata whenua. He said that CVA's had been sought from each of Kahungunu and Rangitāne, but only the former had provided a CVA. In response to a question he said that Kahungunu have taken a "more pragmatic approach" than have Rangitāne, whose approach he called more "hard line", being based on the belief that the river could not take any more.

Asked if all Kahungunu's recommendations had been bought forward, Mr King said apart from cultural monitoring their concerns had largely been met. The main difference is that Kahungunu want significantly more cultural monitoring than TDC considers necessary. He also spoke about the link between cause and effect, which would be clear if it were freshwater monitoring, but not so clear if it were cultural monitoring.

He cited some passages from that CVA (although we observe that despite the addition of the proposed wetland the discharge of human sewage to the awa is still considered "abhorrent"). He also responded to Rangitāne's submission on the new proposal.

Mr John Crawford

Mr Crawford answered a number of questions on a phone link. He said his key concern with the proposed wetland is that it be properly maintained, which involves three elements, namely upkeep of the plants in the wetland, and the control of both birds and weeds. He did not support a floating wetland, as he knew of examples, such as at Hokitika, where they had not worked effectively.

He noted that ammonia in the present discharge from the oxidation ponds has increased from an average of 3.1 to 5.6mg/l, which he said was still low compared with other oxidation pond effluent discharges in which ammonia could be 25 mg/l or more. Although he could see no clear reason for the increase, he suggested it could be due to increased sludge in the ponds reducing their retention time and/or some of the sludge decomposing and releasing ammonia.⁶ However DRP in the discharge has only increased very slightly.

Dr Oliver Ausseil

Dr Ausseil gave an update of his evidence, particularly in regard to the discharge from the proposed wetland. We discuss this in Section 6.3.1 below.

Mr Roger MacGibbon

Mr MacGibbon is principal ecologist for the consulting firm Tonkin and Taylor, and an expert in the design and maintenance of artificial wetlands designed to treat effluent from sources such as human wastewater and dairy sheds. He had taken part in all of the discussions with Kahungunu and Rangitāne on the design of the wetland.

⁶ Noting that ammonia concentrations in the discharge remain well below any threshold where there could be adverse effects in the receiving environment.

The proposal is for what is known as a surface flow wetland. He specified what plants should be present, what the water level should be, the length to width ratio of the wetland, and what the average and minimum water retention time should be for effective treatment to occur.⁷ He also said that a well-designed and well maintained surface flow wetland could extract over 90% of the nitrate that enters the wetland, although in response to a question he suggested that in this case a 50% reduction would be an appropriate threshold.

The wetland had been designed to store flood flows for at least 24 hours, and he had no issue with floodwaters entering the wetland on occasion as at those times there would be high flows in the river and so no issue with the discharge. The median retention time would be four days, but with the Council working to reduce infiltration, retention time could be increased.

Asked if the wetland design met the matters raised by Kahungunu in their CVA, Mr MacGibbon said he believed they did, although he could not incorporate cultural elements into the design. For instance part of the reason for the slow seepage rate was to ensure all the wastewater would have contact with both the plants and the earth (i.e. Papatuanuku).

Asked about maintenance he said this comprised three elements – control of birds and invasive weeds (e.g. willow seedlings and blackberry), and occasional mowing together with replacement of wetland plants.

Ms Ella Boam

Ms Boam is a groundwater scientist who appeared at the reconvened hearing and provided written evidence describing the geology and groundwater conditions in the vicinity of the proposed wetland.

Ms Tabitha Manderson

Ms Manderson gave some updated planning evidence in relation to the proposed wetland. She said its main purpose was to meet the requirements of Policy 5.11 of the One Plan, and that in her view the associated environmental effects would not be significant.

5.2 Rangitāne o Tāmaki nui-ā-Rua Inc.

Rangitāne were the only submitter on the wetland application. They were represented at the hearing by Mr Percy, and written evidence was tabled on behalf of Ms Oriana Paewai.

Ms Oriana Paewai

Ms Paewai is the chief executive of Rangitāne o Tāmaki-nui-ā-Rua Inc. After detailing their submission Ms Paewai explained that the reason Rangitāne chose not to prepare a CVA was because “it was to be part of the assessment of a foregone wetland discharge solution” which would not give (the TDC) any better understanding of Rangitāne’s cultural values and relationships with this area. They remained unconvinced that the proposed wetland would

⁷ We note that these are all matters that are covered in condition of consent DLW4 which requires a Technical Management Plan covering all aspects of the wetland’s design.

address the cultural issues related to the disposal of human wastewater. Three reasons were given: continued discharge of human sewage, continued discharge of contaminants and continued discharge of nutrients. Rangitāne considered this would continue to affect the waiura and mauri of the Makakahi River. They sought the application be declined, or if granted, the term be no more than five years.

Mr Phillip Percy

Mr Percy presented an evaluation of the application for wetland treatment against what he saw as the relevant criteria in the One Plan. We discuss this in Section 6.6 below.

5.3 The Officer Reports

Mr Tim Baker

Mr Baker, who is a groundwater scientist, provided written evidence describing the groundwater issues associated with the proposed wetland.

Questions regarding the groundwater issues were then put to both Ms Boam and Mr Baker (via phone) regarding their areas of agreement and disagreement regarding the groundwater issues. We discuss these matters in Section 6.3.2.

Mr Logan Brown

Mr Brown gave updated evidence which we discuss in Section 6.3.1.

Ms Fiona Morton

Ms Morton presented a comprehensive update of her previous report.

6 Statutory Assessment

6.1 Assessment Criteria

Decisions on resource consent applications for discretionary activities are made under the criteria listed in Section 104(1) of the RMA. Subject to Part 2 of the Act, we must have regard to the following matters:

- a) any actual and potential effects on the environment of allowing the activity; and
- b) any relevant provisions of
 - i. a national environmental standard;
 - ii. other regulations;
 - iii. a national policy statement;
 - iv. a New Zealand coastal policy statement;
 - v. a regional policy statement or proposed regional policy statement;
 - vi. a plan or proposed plan; and

- c) any other matter the consent authority considers relevant and reasonably necessary to determine the application.

In relation to these matters and the present applications:

- We discuss Part 2 RMA matters in Section 6.2 below.
- We see the actual and potential effects of the activities for which consent is sought as being those including: surface water quality, groundwater quality, aquatic biota, cultural values, local air quality and positive effects. We discuss these in Section 6.3.
- In his evidence Mr Wood stated that the National Environmental Standard for Sources of Drinking Water 2007 was a relevant consideration. We discuss this in Section 6.4 below.
- The relevant national policy statement is the National Policy Statement for Freshwater Management 2017, which we discuss in Section 6.5.
- The operative Regional Policy Statement and the relevant regional plan is the MWRC “One Plan” which we discuss in Section 6.6.

The wording of Section 104(1)(c) can invite debate as it is very open ended. We have decided that the other relevant matters in this instance are the Manawatū Leaders Accord, and the Cultural Values Assessment prepared on behalf of Kahungunu for the proposed wetland. Ms Morton said to her knowledge there were no relevant Iwi Management Plans, and neither Rangitāne nor Kahungunu gave us any information about any such plans.

For those activities classified as discretionary, section 104B of the Act is also relevant for our decision. Under s104B, we can either grant or refuse one or more of the consents sought. If granted, we may impose conditions under s108 of the Act. In this case we have granted all the consents sought with conditions that we consider avoid or mitigate the effects of the proposal.

The land use consent to construct the wetland is a controlled activity and so must be granted. Conditions can be imposed under s108.

6.2 Part 2 of the Act

Decisions on resource consent applications are made “subject to Part 2 of the Act”. How this is to be interpreted has been the subject of a recent Court of Appeal decision.⁸ This has meant that although decisions on resource consent applications must consider Part 2, it cannot be used to justify an outcome that is contrary to the thrust of policies where the Plan is coherent and has had due regard to Part 2 in its preparation. We consider that the Operative One Plan did have due regard to Part 2 when it was prepared, so we have not made an extensive Part 2 evaluation here.

6.2.1 Section 5 – The Purpose of the Act

Section 5 of the RMA states its purpose and defines the sustainable management of natural and physical resources. In relation to s5 we note that granting the applications will help the applicant and the community of Eketāhuna meet their social and economic needs, while the conditions on which consent is granted will avoid or mitigate most of the adverse effects of

⁸ RJ Davidson Family Trust v Marlborough DC (2018) NZCA 316 3 NZLR 283.

discharging treated wastewater to the Makakahi River. It will not however avoid or mitigate the adverse cultural effects associated with the discharge of treated wastewater to the river.

6.2.2 Section 6 – Matters of National Importance

Section 6 of the Act lists eight matters of national importance that decision makers have to recognise and provide for. Only Section 6(e), which states that the relationship of Māori and their culture and conditions with their ancestral lands, waters, sites, wāhi tapu and other taonga has to be recognised and provided for is strongly relevant in this instance.⁹

The relationship of tangata whenua with the waters of the Makakahi catchment were well covered in the submissions and evidence presented on behalf of two iwi submitters: Kahungunu ki Tāmaki nui-a-rua Trust and Rangitāne o Tāmaki nui-ā-Rua Inc. Te Roopu Taiao o Ngāti Whakaterere spoke of effects in the wider Manawatu catchment.

These views were acknowledged and well received by the applicant in coming to a greater understanding of the issues and how these could be provided for through mitigation measures in proposed consent conditions.

6.2.3 Section 7 – Other Matters

Section 7 of the Act lists other matters that we must have particular regard to in this decision. Two of these have particular relevance here.

Kaitiakitanga and the active role of the respective iwi as kaitiaki was well canvassed by iwi submitters. As stated above the applicant responded positively to the issues raised in submissions and at the hearing. There was ongoing engagement with Rangitāne and Kahungunu as kaitiaki in the area of the proposed discharge. The applicant actively worked to address issues over the period of the hearing and sought to develop proposed consent conditions to give certainty to iwi submitters.

The Makakahi River is a recognised trout fishery in the region. However, as we discuss later in this decision the evidence is that, at worst, the discharge will lead to a slight increase in the biomass of periphyton downstream of the discharge during summer low flow periods. While we accept that this could have some effect on the habitat of trout in the river, the evidence strongly suggests that this effect will be little more than minor, and not detrimental to the wider fishery values of the catchment.

6.2.4 Section 8 – The Principles of the Treaty of Waitangi

One of the four principles of the Treaty is the obligation to consult with tangata whenua. During the hearing process the applicant displayed a willingness to work with Rangitāne and Kahungunu as iwi who hold mana whenua around the point of the discharge.

We consider that the applicant used all reasonable endeavours to consult. Ngāti Kahungunu did prepare a Cultural Values Assessment for the applicant as part of the additional applications for the wetland construction and discharge permits, and in this way did engage with the applicant prior to the hearing. Rangitāne were offered the opportunity to prepare a

⁹ Mr Brown did list the native fish species that are in or migrate along the Makakahi River. These include Banded Kokopu and Long finned eels, both of which have conservation status. There was no suggestion however that the river is a significant habitat of native fish in terms of s6(c) of the Act.

CVA, but for the reasons outlined in the written evidence of Ms Paewai to the November 2018 hearing declined to do so.

6.3 Actual and Potential Effects

We see the actual and potential effects of the Applicant's modified proposal as being on surface water quality and associated aquatic biota, on groundwater quality, on air quality, on the cultural values of tangata whenua, on soil from disturbance and positive effects. We discuss these in turn.

6.3.1 Effects on Surface Water Quality and Aquatic Biota

Discharges of wastewater to rivers or streams can have adverse effects on the receiving environment downstream of the point of discharge. These potential effects include:

- i. elevated BOD₅ resulting in potential oxygen depletion (and in some instances the growth of sewage fungus) in rivers and streams;
- ii. increased ammonia concentrations, that can be toxic to fish where temperatures and pH are each elevated;
- iii. increased concentrations of the plant nutrients nitrogen (N) and phosphorus (P) leading to increased periphyton proliferations, which can in turn affect macroinvertebrate community health and potentially deplete instream dissolved oxygen during the hours immediately before sunrise due to algal respiration at night; and
- iv. faecal contaminants (as measured by the indicator species *E. coli*), which can result in sicknesses (such as gastroenteritis) in people who swim in rivers and streams.

Existing Water Quality

The factors that presently affect water quality in the Makakahi River downstream of the existing WWTP discharge were described in the evidence of Dr Ausseil for the applicant, Ms McArthur for Kahungunu, Mr Canning for Wellington Fish and Game and Mr Brown for the Regional Council. There was some broad agreement between these witnesses, although it is fair to say that Ms McArthur and Mr Canning took slightly more pessimistic views than the other witnesses. This is in part because we have to assess the cumulative effects of intensive land use on water quality in the Ngatahaka catchment, which enters the Makakahi just upstream of the existing WWTP discharges, and those of the existing WWTP discharge. We also note that there is an old "dump" near the WWTP site that may be having some adverse effects on water quality, but it is not possible to determine the extent of such effects.

In the Makakahi River there are two State of Environment (SOE) monitoring sites; one at Putara, a control site just downstream of the Tararua Forest Park, and one at Haumua, about 15km downstream of the WWTP discharge. The results of SOE monitoring at these sites for the years 2014 to 2016 were presented by Mr Brown.¹⁰ In simple terms water quality at the

¹⁰ Note that these apply only to flows that are less than the 20th percentile flow exceedance (or in other words flows in the river 80% of the time). The adverse effects on water quality and biota from degraded water quality are most notable in summer and early autumn, which is the time when sustained low flows are most likely in the river.

control site was uniformly high by all measures, whereas at Haumua there was evidence of at least moderate and occasionally severe pollution. This is best evidenced by the Macroinvertebrate Community Index (MCI), which at Putara was in the range of 133 to 140, whereas at Haumua was in the range 91 to 98 (versus a One Plan target of 120). We very much doubt that given the high contaminant loading to the upstream catchment from intensive land use, the existing discharge from the Eketāhuna WWTP makes any tangible contribution to the reduction in MCI at Haumua.

The witnesses also presented evidence on existing water quality in the Makakahi River and its tributaries in and around the WWTP. They used a range of criteria;

- Nutrient concentrations of nitrogen (N) (measured as Soluble Inorganic Nitrogen or SIN); phosphorus (P) (measured as Dissolved Reactive Phosphorus or DRP), and ammonia.
- Habitat quality as measured by the MCI, the quantitative MCI (QMCI) and periphyton abundance.
- Evidence of faecal contamination, as measured by *E. coli* counts. Note that such counts do not differentiate between faecal contaminants of human, animal or bird origin.

In relation to these measures:

1. Instream concentrations of N and P are well within One Plan standards at the control site.
2. Instream concentrations of both N and P are consistently above One Plan standards in both the Ngatahaka Creek and in the Makakahi downstream of the WWTP discharge. There is little apparent effect on instream N and P concentrations from the WWTP discharge, as degraded water quality here is dominated by inputs from the Ngatahaka Creek.
3. Ammonia concentrations are well below One Plan standards at all sites.
4. While there is a small effect on the MCI from the existing discharge, there is a much more significant effect on the QMCI, which drops well below One Plan standards. The reason for this is that the MCI only measures species presence or absence, whereas the QMCI assesses relative abundance of what are (in broad terms) groups more common in high quality watercourses (e.g. mayflies, stoneflies and caddisflies, sometimes known as EPT) versus those more common in polluted watercourses (e.g. worms and snails). The more pollution tolerant species are more common at the sampling point downstream of the discharge. Similarly, EPT abundance decreases downstream of the discharge. Several witnesses, including Dr Ausseil and Ms McArthur, considered this to be “a significant effect on aquatic life”, and we concur with that view.

5. All three sites failed to meet *E. Coli* count standards on occasions: these represented 12.5% of samples at the control site; 20% of the samples in the Ngatahaka Creek and 17% of samples downstream of the WWTP site.
6. While there is little apparent increase in periphyton abundance downstream of the WWTP discharge, this may be due in part to the downstream sampling site being shaded. Periphyton biomass exceeds One Plan standards on a reasonably frequent basis downstream of the WWTP discharge following sustained periods of low flows.

The Effects of the Proposed Discharge

The WWTP discharge to the Makakahi River will receive significant additional treatment via the package treatment plant and, to some extent, the constructed wetland. According to Mr Crawford, the package treatment plant should be able to significantly reduce both the concentrations of DRP (by alum dosing using the lamella clarifier) and the counts of *E.coli* (by UV treatment) in the discharge that leaves the plant. Nitrogen concentrations in the discharge will also be reduced slightly.

At the November 2018 hearing Mr MacGibbon said that the proposed wetland would substantially reduce N concentrations in the discharge as de-nitrifying micro-organisms will be present. Conditions of consent require a 50% reduction of N concentrations through the wetland. However the effects on P concentrations will not be significant, for although some P will be taken up by the plants the wetland will reach an equilibrium where P inputs approximate P outputs, provided that it is well maintained. *E. coli* counts could increase downstream of the wetland if bird populations become established.

Our overall conclusion is that the actual and potential effects of the proposed discharge to the river, given treatment and the performance standards we have required of the discharge from the wetland, is unlikely to have significant adverse effects on water quality or biota in the receiving environment. There may still be some small increase in DRP and SIN concentrations, but we doubt these are sufficient to cause any significant increase in periphyton abundance or reductions in habitat quality (as measured for instance by changes in QMCI). The possible exception to this is that the discharge could have elevated *E. coli* counts due to bird populations in the wetland. However *E. coli* levels leaving the treatment plant should be much reduced due to the UV contact reactor.

In our view the major contributor to degraded water quality in the reach of the Makakahi River near Eketāhuna will not be the much better treated WWTP discharge, but rather the effects of intensive land use on water quality, particularly in the Ngatahaka catchment. By its very nature the resource consent process puts a focus on point source discharges, particularly of treated human sewage, and the cultural and environmental values that are offended strongly by such discharges. However in purely environmental terms it is the effects of intensive land use that is the major contributor to degraded water quality in the Makakahi (and indeed much of the Manawatu) catchment.

6.3.2 Effects on Groundwater Quality

Based on the evidence we have heard, we understand that groundwater beneath the wastewater treatment ponds and the proposed treatment wetland is expected to move towards the Makakahi River and become incorporated into that surface flow. Mr Baker's written evidence notes that there is no current monitoring of groundwater quality in the area, but there are also no recorded groundwater abstraction bores that are likely to be at risk of contamination from the treatment ponds or the wetland.

The main issue of concern is that excessive seepage losses out the base of the treatment ponds or the wetland will migrate through the underlying alluvial gravel and sand strata into the Makakahi River. This seepage has not been fully treated through the pond process or the wetland process and so could affect water quality in the river to a greater degree than the surface discharge. The magnitude and quality of the current pond seepage is unknown due to a lack of groundwater monitoring, however the effects on the river from the pond seepage and any future wetland seepage will be incorporated into the downstream monitoring that is carried out within the river.

The experts for both the Applicant and the Regional Council have agreed that seepage can be adequately controlled by requiring that the wetland base shall be constructed such that the permeability does not exceed 1.4×10^{-7} m/s and there is an agreed consent condition that requires this to occur.

For the wastewater treatment ponds, the Applicant confirmed that there are no current plans to line the ponds. The build-up of sludge at the base of the ponds will impede any seepage losses, although the effectiveness of this barrier is not well defined. The Applicant's groundwater scientist, Ms Boam, considered that any seepage from the ponds would be naturally constrained by the presence of the underlying mudstone strata which occurs at the ground surface near to the ponds. Mr Baker was less sure about this and considered that a more permeable seepage pathway to the river could exist through the alluvial strata in the area.

Both groundwater experts discussed these matters during the reconvened hearing in November 2018 and agreed that water balance monitoring of the ponds could be used to indicate if any significant leakage was occurring. In the proposed conditions the Applicant and the Regional Council have agreed to conditions that require the pond seepage to be monitored to be kept below a seepage rate of 25 m³/day. That is considered to be an acceptably low level of seepage recognising that no groundwater users are impacted, any seepage will have passed through the ground before entering the river and that any contaminant concentrations will be significantly reduced when mixed with the surface flow in the Makakahi River.

6.3.3 Effects on Local Air Quality

Ms Deborah Ryan advised that all aspects of the treatment can be a source of odour, but particularly where untreated wastewater is exposed to air, as could occur at the primary screen at the inlet works and the first oxidation pond, or if anaerobic conditions occur within the wastewater treatment ponds. Sludge management from the ponds can also provide a source of adverse odour effects.

Ms Ryan noted that the nearest residential properties are around 200 metres from the southern treatment pond and that no odour complaints have been received from this wastewater treatment operation. She has recommended some good odour management practices, including a requirement to ensure that dissolved oxygen is kept at positive levels within the ponds to prevent the development of an anaerobic environment. We have adopted a set of consent conditions that include the implementation of the recommended good management practices.

Based on the absence of any odour complaints to date we are satisfied that consent for the air discharge can be granted with the conditions recommended by Ms Ryan and Ms Morton which will ensure that the good management of the odour effects continues.

6.3.4 Effects on Values held by Tangata Whenua

It was well established by iwi submitters that the Applicant's modified proposal, whilst an improvement within the physical realm, could have significant adverse effects within the cultural realm specifically affecting cultural values, relationships with the waters of the Makakahi River and the uses associated with water. This was not disputed by any of the parties of the hearing.

The evidence and memoranda presented by representatives of the three iwi present made it clear that a discharge of treated effluent directly to water will have significant adverse effects on the mauri of water. This again was not disputed by any parties. Rangitāne and Ngāti Whakātere sought a discharge to land as the means to avoid the cultural effects, however this was not within the scope of the applications in front of us and so could not be considered as a comprehensive alternative (see Section 7 below).

Rangitāne and Ngāti Whakātere sought that we decline the application to discharge to water. The CVA prepared by Kahungunu gave no support to the applications associated with the proposed discharge via the wetland.

We accept the direct discharge of treated effluent will have significant adverse cultural effects including that on the mauri of water.

In answer to a question Mr MacGibbon said that the wetland design met the matters raised by Kahungunu in their CVA, but that he could not fully incorporate cultural elements into the design. For instance part of the reason for the slow seepage rate was to ensure all the wastewater would have contact with both the plants and the earth (i.e. Papatuanuku). Alongside the proposed wetland system the applicant has shown further willingness to work with iwi through a range of proposed conditions to provide a more comprehensive response to cultural effects, including working with iwi to identify cultural health indicators, and define a monitoring framework and reporting mechanisms.

The Panel accepts the role of naturally occurring wetlands and the role these have for Māori as a food source. We consider however that with the conditions proposed by the applicant, along with some specific amendments to address cultural monitoring and other requirements, the treatment proposed, by way of the wetland will significantly mitigate the adverse cultural effects of the discharge to the Makakahi River.

6.3.5 Effects on Soils from Disturbance

We do not consider that there will be any significant effects on soils as a result of the excavation necessary to construct the wetland. Conditions on the land use consent will mitigate any adverse effects on water quality from the construction of the wetland.

6.3.6 Positive Effects

Disposal of community wastewater is a core function of territorial authorities. There are clear positive effects from granting the applications before us, as Eketāhuna will be able to utilise upgrades to existing infrastructure, which together with the proposed wetland will allow disposal of treated wastewater from the town to the Makakahi River. The adverse environmental effects of the discharge will be substantially lessened, with an ancillary benefit being that it will now be much more straightforward to monitor the effects of the discharge as comparable upstream and downstream sites are available (which they are not currently).

6.4 The National Environmental Standard for Sources of Drinking Water 2007

Mr Wood, a Health Protection Officer with Mid Central Health, said this should be a consideration in our decision. While we accept that the Makakahi River is a tributary of the Mangatainoka River, we think it highly unlikely that the Eketāhuna WWTP discharge will have any adverse effects on the Pahiatua Water Supply.

We have two reasons for this. First, coliform bacteria die off very rapidly outside of the gut of an animal or bird, and it is extremely improbable that any such bacteria discharged from Eketāhuna would survive long enough in the river to affect the water supply at Pahiatua, which is about 33km river distance downstream from the wetland discharge. Second, the UV reactor will reduce coliform bacteria counts in the effluent by an order of magnitude or more, so any possible future effects will be even more unlikely than they are at present.

If there was a catastrophic failure and release of wastewater from the ponds, clause 12 of the NES requires us to include a consent condition requiring the discharge consent holder to notify the downstream water supply authority. However given that TDC fill both those roles, such a condition is unnecessary.

6.5 The National Policy Statement for Freshwater Management 2017 (NPS)

The Objectives of Part A of the NPS relate to water quality and are focused on maintaining and improving water quality and safeguarding its life supporting capacity. The objectives are to be achieved by (in summary):

- a) Establishing freshwater objectives and setting water quality limits (Policy A1);
- b) Specifying targets and implementation methods to improve water quality within defined time frames (Policy A2); and
- c) Imposing conditions on resource consents to ensure that water quality limits and targets are met (Policy A3).

The MWRC considers that the One Plan largely addresses Policies A1 and A2 of the NPS. We agree with this, and so Policy A4 (which requires regional councils to amend their plans to give effect to Policy A1 and A2) does not need to be applied in this instance.

Accordingly our main concern is to ensure Policy A3 is met in this decision and in doing so we have to ensure compliance with the:

1. National Objectives Framework (NOF) which is Appendix 1 of the NPS.
2. Ammonia and nitrate toxicity criteria in the attribute tables that set “national bottom lines” in Appendix 2 of the NPS.

We are satisfied that the Applicant’s modified proposal does meet the NOF, and the effects of the discharge come nowhere near breaching either nitrate or ammonia toxicity criteria in Appendix 2. Both the upstream and downstream sites are in Band C of the NOF for periphyton, which in this case indicates “periodic short term nuisance blooms reflecting moderate nutrient enrichment and/or alteration of the natural flow regime or habitat”. It is only in Band D that water quality is regarded as unacceptable.

We note that in the proposed conditions of consent advocated for by the Regional Council Mr Brown had recommended to us that the receiving environment should be required to meet Band B of the NOF for periphyton. We have not accepted this recommendation. Dr Ausseil’s evidence¹¹ to the first hearing showed clearly that periphyton biomass is often higher in the Ngatahaka Stream than in the Makakahi River below the existing discharge. While the quality of that discharge will undoubtedly be much improved, a dominant influence on periphyton growth below the discharge point at the wetland will remain the high N and P loadings from the Ngatahaka Stream, which is not something the Applicant has any control over.

6.6 Objectives and Policies of the One Plan

Ms Morton in her Section 42A report outlined the provisions in the One Plan that are relevant to our decision. Ms Manderson broadly agreed with her about what provisions are relevant, and so do we.

In relation to Te Ao Māori the relevant provisions are:

Objective 2-1 is two pronged in that it gives direction to; have regard to mauri, and that resource management processes give particular regard to kaitiakitanga and the relationship iwi and hapū have with sites and resources are recognised and provided for.

Policy 2-1 (c), (d) and (i) give specific direction to iwi and hapū involvement in resource management processes. Conditions proposed by the applicant have addressed these through:

- The formation of a forum which iwi will be invited to play a central role. The forum will receive information and provide feedback about the operation of the WWTP. It will also

¹¹ His Figure 19 for instance

consider a future investigation of alternative methods of treatment and discharge, including land-based disposal prior to the consents we have granted expiring.

- Formalising the monitoring of the cultural health of the Mangatainoka River, in relation to the WWTP discharge over the life of the consent and inviting Kahungunu and Rangitāne to work with TDC in preparing Cultural Health Index Monitoring Protocols within the immediate environs of the WWTP site, including the river.
- Committing to ongoing engagement with Kahungunu and Rangitāne over the term of the consent.

Policy 2-3 directs consideration of mauri in light of Policy 2-1. The relevant parts of 2-1 are discussed above and no further commentary is necessary.

As a result of this we consider that Policies 2-1 and 2-3 have been satisfied.

Policy 2-4 directs us to address the matters listed in Table 2.1 of the One Plan. We consider the mitigation measures offered by the proposed wetland means that the matter listed in (a) of this table is addressed by the wetland included in the modified proposal. That is the standard of water will not prevent Māori from performing relevant tikanga or cultural activities.

We note that there were some differing views in light of Rangitāne's submission as to whether the wetland application is in full accord with Chapter 2 objectives and policies.¹² We make no finding in that regard, apart from saying that our view is even if the wetland application is not in full accord with Chapter 2, that is not a "show stopper", particularly given the very specific directions in Policy 5.11.

The main other relevant objectives and policies are in Chapter 5 of the One Plan and cover discharges to water. Many of these objectives and policies relate to long term water quality targets¹³, some of which are not met in the Ngatahaka Stream, which is upstream of the Eketāhuna WWTP discharge. This is not a matter that we, or indeed the Applicant have any control over. As already discussed in Section 5.3 of this decision, we have to evaluate the current proposal in terms of its effects on the existing environment, and the following policy assessment is made using that approach.

Objective 5.2 requires existing water quality be maintained or enhanced to meet the values in Schedule B of the Plan. These are Zone wide values and they include a range of cultural (e.g. Mauri), environmental (e.g. life supporting capacity, trout fishery, water supply) and resource use (e.g. existing infrastructure, capacity to assimilate pollution). The Applicant's proposal will enhance existing water quality by significantly improving the quality of the discharge to the Makakahi River, but it will not allow all cultural and environmental values listed in Objective 5.2 to be met.

Policy 5.6 broadly requires that groundwater quality be at least maintained. However an exception is provided for where a discharge onto or into land, as is the case with the

¹² Mr Percy and Ms Morton considered it was not in full accord; Ms Manderson considered it was.

¹³ Notably Policies 5.1 – 5.4

Applicant's proposed wetland, better meets the Purpose of the Act than a direct discharge to water. That exception applies here.

Policy 5.9 lists a set of assessment criteria for point source discharges to water. They need to be assessed in terms of what is already a degraded river upstream of the point of discharge from the WWTP to the river. As we have already discussed in Section 5.3 above, the discharge, with the additional treatment provided by the package plant and the wetland, is unlikely to have significant adverse effects on water quality or biota in the river. Accordingly we consider the provisions of this policy are met by the Applicant's proposal.

Policy 5.11 is pivotal in respect of WWTP discharges. It reads as follows:

Policy 5-11: Human sewage discharges[^]

Notwithstanding other policies in this chapter:

- (a) before entering a surface *water body*[^] all new *discharges*[^] of treated human sewage must:
 - (i) be applied onto or into *land*[^], or
 - (ii) flow overland, or
 - (iii) pass through an alternative system that mitigates the adverse *effects*[^] on the *mauri*^{*} of the receiving *water body*[^], and
- (b) all existing direct discharges[^] of treated human sewage into a surface water body[^] must change to a treatment system described under (a) by the year 2020 or on renewal of an existing consent, whichever is the earlier date

The interpretation of this policy was the subject of evidence to us by Mr Percy for Rangitāne at the November 2018 hearing. Much of what he said there was addressed by the Applicant in their right of reply. We do not need to address all that exhaustively, apart from saying that we largely agree with the Applicant on the interpretation of this policy. In particular:

- We accept that Policy 5.11 does appear to contemplate mitigating (but not avoiding) adverse cultural effects, particularly on the mauri of the receiving water body, by requiring some form of “land based treatment” prior to the final discharge.
- We do not accept that Policy 5.11 be largely read either in the context of Table 2.1 (which lists resource management issues of significance to Iwi) or Objective 5.4. Both Table 2.1 and Objective 5.4 are very broad, whereas Policy 5.11 is quite narrow in that its focus is on mitigation of the cultural effects of discharging wastewater to water.
- We strongly disagree with Mr Percy that limb (a)(iii) of Policy 5.11 should be read as applying to limbs (a)(i) and (a)(ii). The word used is or, not and, so satisfying one or more of the three limbs of Policy 5.11(a) means that the policy threshold is met.
- We also disagree with Mr Percy that the proposed treatment wetland will best fit the definition of a “lake” versus a “wetland” in the RMA. To us it much better meets the definition of a wetland, which “*include permanently or intermittently wet areas, shallow water and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions*”. It is not a natural ecosystem, but that aside, it

meets this definition much more accurately than it does that of being a “lake”. It would also commonly be referred to as a wetland.

We consider that the words of Policy 5.11 should be given their plain meaning. The inclusion of the treatment wetland in the modified proposal means that the treated wastewater “*flow(s) over land*” and so in our view meets the second limb of Policy 5.11, and accordingly meets the policy test, as the three limbs are alternatives.

6.7 Other Relevant Matters

The Manawatū Leaders Accord

This is a non-statutory document signed by a large number of parties, including TDC and MWRC, in August 2010. Its overall goal is to improve the mauri of the Manawatū catchment, such that it sustains fish species and is suitable for contact recreation in balance with social, cultural, economic activities of the community in the catchment.

Given the strength of the statutory policy framework in the NPSFM and the One Plan, we have placed very little weight on the non-statutory provisions of the Accord.

Cultural Values Assessment (CVA)

We have already discussed the CVA prepared by Kahungunu for the proposed WWTP treatment system, including the wetland. As noted, this CVA did not fully endorse the wetland option but did note the potential for significant improvement in the discharge quality as a result of the proposed wetland. Matters raised in the CVA were addressed in the application, together with a willingness expressed by the TDC for further engagement

Rangitāne were given the opportunity to also prepare a CVA, but for the reasons discussed by Ms Paewai in her written evidence to the November 2018 hearing, chose not to do so.

7 Section 105 of the RMA

Section 105(1) of the Act requires that we must, in addition to s104 considerations, have regard to:

- a) *the nature of the discharge and the sensitivity of the environment to adverse effects;*
- b) *the applicant’s reasons for the proposed choice; and*
- c) *any other possible alternative methods of discharge, including discharge into any other receiving environment.*

We have already extensively discussed the receiving environment and its sensitivity to the discharge of treated wastewater from Eketāhuna in Section 6.3 of this decision. In summary, the receiving environment of the Makakahi River is degraded upstream of the discharge, and our assessment is that the discharge is unlikely to have significant adverse effects on water

quality or biota in the river. There will be adverse effects on cultural values, particularly the mauri of the river.

Many submitters asked us to reject the Applicant's current proposal and compel them to discharge largely or entirely to land.

TDC had examined this option, having commissioned "Wai Waste" to report on options in May 2015. Their report concluded that while suitable sites for wastewater disposal to land existed nearby, a significant area would be needed, there were constraints such as small land holdings and the nearby State Highway and rail line, costs would be relatively high, and there was likely to be strong local opposition to the proposed discharge. More recently TDC had considered the option of piping Eketāhuna wastewater to the Pahiatua WWTP and discharging it there, but that option was discarded as being too expensive.

We consider that the Council has made a reasoned choice, and so in our view complies with s105 of the RMA. Whether the proposed discharge treatment system, including the wetland, will remain a satisfactory option after the consents we have granted expire is however open to some doubt.

8 Section 107 of the RMA

The provisions of s107 apply to all applications for permits to discharge contaminants to fresh or coastal water. It has two limbs; in this instance no party argued that the "exemption" provisions of s107 (2) were applicable¹⁴ and so we had to assess the modified proposal in terms of s107(1). In summary this limb states relevant to the modified proposal that "after reasonable mixing the contaminant discharged either by itself, or in combination with the same, similar or other contaminants" cannot give rise to any one of five listed characteristics, which we now discuss in turn.

We heard no evidence, nor do we think it at all probable that the discharge will "*lead to the production of any conspicuous oil or grease films, scums or foams or floatable or suspended materials*" (s107(1)(c)), result in "*any conspicuous change in colour or visual clarity*" (s107(1)(d)), cause "*any emission of objectionable odour*" (s107(1)(e)), or "*render fresh water unsuitable for consumption by farm animals*" (s107(1)(f)), As we have already discussed the modified proposal is unlikely to have "*any significant effects on aquatic life*" (s107(1)(g)).

In conclusion, we are satisfied that the modified proposal meets the criteria in s107 (1) of the RMA, and accordingly this section of the Act does not prevent us from granting the application to discharge treated wastewater from Eketāhuna to the Makakahi River.

9 Evaluation

Several submitters who appeared at the hearing, such as Mr Percy, asserted we did not have sufficient information to assess fully the effects of the modified proposal. We do not agree.

¹⁴ In summary these are: the discharge is of a temporary nature, or exceptional circumstances prevail, or the discharge is associated with essential maintenance.

Section 6.3 above summarises the comprehensive assessment we have been able to undertake from the information provided to us.

All three submitters who represented tangata whenua asked at the hearing that the consent sought at that time not be granted. If that were to be the case, it would put both the Tararua District Council and the MWRC in a very difficult position. The community will continue to discharge domestic waste to Eketāhuna's sewage network, and this will continue to flow into the oxidation ponds. It will then inevitably discharge to the Makakahi River, perhaps just from overflowing ponds.

If we did not grant the consent sought, this discharge would (theoretically at least) be illegal and the MWRC could take some enforcement action requiring that somehow the discharge cease. This would be a nonsense, as the discharge cannot cease unless all of Eketāhuna were to switch to individual on-site effluent treatment of some kind, which is utterly impracticable given the large investment in the existing wastewater reticulation and treatment network. In reality the TDC would have no option but to appeal to the Environment Court, which would add another expensive step in what has been a very protracted process. In our view it would be much better for all parties if monies were spent on improved treatment of wastewater, rather than it being "wasted" in ongoing legal expenses.

We accept that any ongoing wastewater discharge to the Makakahi River will have adverse cultural effects, particularly on the mauri of the awa. However, as we have already discussed the modified proposal put forward by the applicant to construct and maintain a wetland as the final step in the treatment of the wastewater means that effects on cultural values are at least somewhat mitigated (although certainly not avoided). Importantly, as we have already outlined the discharge also meets the criteria of Policy 5.11 of the One Plan, which was drafted in an attempt to mitigate the effects of discharges of human sewage on cultural values held by Tangata Whenua. For these reasons we have granted the consent sought in the Applicant's modified proposal.

There are of course other effects of the proposed discharge on the Makakahi River. However, as we have already discussed those effects on water quality, and aquatic flora and fauna are unlikely to be significant. This is in the context of the Makakahi River already being in a degraded state upstream of the wastewater discharge, due largely to intensive land use in the Ngatahaka catchment. If the same discharge were to a more pristine receiving environment the adverse effects on water quality and the biota would likely be significant. If the Regional Council's endeavours to improve upstream water quality in the Ngatahaka Creek by the regulation of land use to reduce the effects of existing discharges via land to water are successful, it may be that when the consent we are granting expires some additional treatment would be needed at that time to mitigate adverse effects on the aquatic biota of the river.

10 Term and Conditions

Our decision on the conditions and term on which consent is granted is appended at the end of this decision. We now explain our reasons for this.

10.1 Conditions of Consent

We were presented with what might be described as a “moving feast” of draft conditions during the hearing and subsequent legal submissions and officer and submitter comments. The most recent sets of conditions that are relevant to our decision are those from the Applicant, with comments by the MWRC officers, in January 2018. By this time many of the differences between the applicant and the regional council had been resolved.

Our decisions on the conditions of consent are appended at the end of this decision. They comprise a set of general conditions that apply to all three primary consents, and specific conditions for each of the five consents sought by the Applicant.

The decisions on three of the sets of conditions proposed are quite straightforward. There was no significant disagreement between the parties on the conditions for the land use consent to construct the wetland, the discharge to land via seepage from the oxidation ponds, or the discharge to air. We have made some amendments, but in effect they remain as largely agreed between the parties.

We found the general conditions of consent to be overlapping, confusing and inconsistent, so we have substantially amended them. In particular Condition G3 has been redrafted to make more sense, and it now incorporates the Applicant’s suggested G6. We have also made consistent references to the Manawatu Whanganui Regional Council, and particular officers within that council.

In relation to the consent to discharge treated wastewater to water via the constructed wetland we have come to the following decisions:

- In all the appropriate conditions on the permit to discharge to water we have allowed up to 30 months for construction, which is less than the 32 months sought by the applicant but more than the 24 months advocated for by the Regional Council. This allows for at least two, and more likely three construction season.
- In Condition DSW1 we agree with the Regional Council’s recommended performance standards, which we note are already being met by the applicant. We do not accept the applicant’s position that attempts to reduce ingress and infiltration will make these standards too stringent as their track record in implementing timely improvements such as these is less than impressive.
- The Regional Council sought additional clauses in Condition DSW8. We do not support either their proposed clause (d) as this narrative standard is redundant and uncertain given the inclusion of a quantitative measure via QMCI, and we do not support (k) for reasons already discussed in Section 6.5 above.
- The Applicant sought a 300m mixing zone; the Regional Council sought 100m. Our site visit suggested mixing would occur thoroughly within 150m, so that is what we have decided the mixing zone shall be.

- The Regional Council sought that proposed Condition DSW24 relating to Post Development Assurance be re-instated, which we have done. It would only apply if there were an unexplained increase in flows, which would indicate that the TDC was not dealing with ingress and infiltration.
- In places the Regional Council sought wording in an advice note that an independent scientist, who had been not been involved in the hearing, be used for water quality and biotic assessments. We see no good reason for this as there is no conflict of interest – if the TDC want to contract Dr Ausseil, who is already highly familiar with the sites of interest, to do this work, so be it.

10.2 Term of Consent

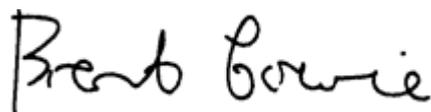
The Applicant sought terms of seven years for all the permits sought, and this was supported by the Regional Council. Conditions of consent effectively require than the land use consent to construct the wetland, and for it to be included in the wastewater treatment sequence, within 30 months of the commencement of the consents.

Submitters generally opposed the applications being granted, and if they were it should only be for a term of up to five years.

We have decided to grant the consents for a term of seven years, as sought by the Applicant. This will allow the wastewater treatment plant to be installed on site, the wetland constructed and ancillary works (such as piping the discharge to the wetland) to be put in place. Thirty months is allowed for this, which in turn gives just over three years for environmental and cultural monitoring to occur before the TDC is obliged by Condition G24 to seek Cultural Values Assessments from each of Rangitāne and Kahungunu as “to the effectiveness of the upgrades authorised by these permits on the cultural values”. That seems like a reasonable time frame to collect information for such assessments to be carried out.

11 Decision

Pursuant to the powers delegated to us by the Manawatu Whanganui Regional Council under section 34A of the Resource Management Act 1991, we record that having read both application documents, the further information provided under section 92, and the Applicant’s legal submissions and expert evidence; the section 42A officer’s reports, legal opinions and technical evidence; the lay and expert evidence presented by the submitters at the hearing; and having considered the various requirements of the RMA, we find that **APP-2005011178.01** and **APP-2018201909.00** can be granted subject to the attached five condition schedules.



Signed by Brent Cowie (Chair)
on behalf of the Hearing Panel
11 March 2019