Decision Report

AFFCO New Zealand Limited

Applications RM16-0160, RM17-0084, RM19-0782 and RM20-0862

to

Bay of Plenty Regional Council

12 September 2022

**Table of Contents**

[1 Introduction 3](#_Toc113881948)

[2 Appointments 3](#_Toc113881949)

[3 Description of the Proposal 3](#_Toc113881950)

[4 Process Issues 4](#_Toc113881951)

[4.1 Written approvals, notification and submissions 4](#_Toc113881952)

[4.2 Officer’s recommendation 4](#_Toc113881953)

[4.3 Hearing, appearances and site visit 4](#_Toc113881954)

[4.4 Consent categories 5](#_Toc113881955)

[4.5 Permitted baseline 5](#_Toc113881956)

[5 Section 104 and 104B matters 5](#_Toc113881957)

[5.1 Actual and potential effects on the environment 5](#_Toc113881958)

[5.1.1 Positive effects 6](#_Toc113881959)

[5.1.2 Groundwater quality 6](#_Toc113881960)

[5.1.3 Kaituna River water quality 6](#_Toc113881961)

[5.1.4 Kaituna River aquatic ecology 8](#_Toc113881962)

[5.1.5 Maketū Estuary water quality and aquatic ecology 9](#_Toc113881963)

[5.1.6 Human health – contact recreation 10](#_Toc113881964)

[5.1.7 Kaituna River water take 11](#_Toc113881965)

[5.1.8 Groundwater take 11](#_Toc113881966)

[5.1.9 Odour 11](#_Toc113881967)

[5.1.10 *Glyceria maxima (sweet reed grass)* 11](#_Toc113881968)

[5.1.11 Climate change 12](#_Toc113881969)

[5.1.12 Māori cultural values and interests 12](#_Toc113881970)

[5.2 National environment standards and other regulations 14](#_Toc113881971)

[5.3 National policy statements 14](#_Toc113881972)

[5.4 New Zealand Coastal Policy Statement 15](#_Toc113881973)

[5.5 Regional Policy Statement 16](#_Toc113881974)

[5.5.1 Plan Change 5 to the RPS 16](#_Toc113881975)

[5.6 Regional plans 17](#_Toc113881976)

[5.7 Te Maru o Kaituna (Kaituna River Authority) and the Kaituna River Document 18](#_Toc113881977)

[5.8 Iwi and hapū management plans 19](#_Toc113881978)

[5.9 Section 105 and 107 matters 19](#_Toc113881979)

[5.10 Consent Duration 20](#_Toc113881980)

[5.11 Other matters 21](#_Toc113881981)

[6 Part 2 matters 21](#_Toc113881982)

[7 Determination 22](#_Toc113881983)

[8 Consent conditions 22](#_Toc113881984)

**Appendix 1** Consent Conditions

# 1 Introduction

1. AFFCO New Zealand Limited (AFFCO or Applicant) has applied to the Bay of Plenty Regional Council – (BOPRC) for the renewal (replacement) of the following resource consents:

|  |  |
| --- | --- |
| **Consent** | **Description** |
| RM17‐0084‐DC.01 | Discharge Treated Wastewater to the Kaituna River |
| RM17‐0084‐DC.02 | Discharge Seepage to Groundwater from Wastewater Treatment Ponds and Wetlands |
| RM16‐0160‐DC.01 | Discharge Amenities Wastewater to Land |
| RM19-0782 | Discharge Stormwater, Cooling and Defrost Water to the Kaituna River |
| RM20-0862-WT.01 | Take Water from the Kaituna River |
| RM20-0862-WT.02 | Take Water from a Bore |

**The applications are granted for the reasons herein.**

# 2 Appointments

1. The BOPRC, acting under s34A of the Resource Management Act 1991, appointed Independent Hearing Commissioners Gina Sweetman,[[1]](#footnote-1) Siani Walker[[2]](#footnote-2) and Rob van Voorthuysen[[3]](#footnote-3) to hear and decide the applications.

# 3 Description of the Proposal

1. The proposal is described in the Applicant’s AEE[[4]](#footnote-4) and evidence and the BOPRC Section 42A Report.[[5]](#footnote-5) We adopt those descriptions, but note some of the more salient matters as follows:
* The AFFCO Rangiuru plant was opened in 1965. It now comprises sheep and bobby calf killing chains, capable of processing 180,000 calves and in excess of 1 million lambs per year,[[6]](#footnote-6) the majority of which is exported to United Kingdom and European markets. The plant operates up to seven days per week for around 48 weeks per year. AFFCO employs up to 500 staff in the peak season, not including subcontractors and consultants, and pays out approximately $30 million in salaries and contract fees on an annual basis. Around 90% of this labour resource is sourced locally;[[7]](#footnote-7)
* The meat processing effluent receives primary treatment by various combinations of screening, dissolved air flotation or sedimentation. Recovered solids are rendered or, after digestion in solids pits, are stabilised and dewatered in a solids stabilisation area. Wastewater is then biologically treated in three anaerobic ponds, two oxidation ponds and four constructed wetlands. The total area of effluent ponds and wetlands is 5.5 ha. The treated effluent is then discharged to the Kaituna River;[[8]](#footnote-8)
* The previous main discharge consent 24932 granted in 2002 required a 2-stage upgrade of the wastewater treatment system. Stage 1 works, including balance pond restructuring, were completed in 2002. Stage 2 works involving the oxidation ponds were completed in May 2004 and the wetlands were upgraded in 2005. In December 2005 AFFCO sought a variation to consent conditions to extend the completion date for construction of the pond aeration to 1 March 2008.[[9]](#footnote-9) The last upgrade to the treatment system occurred in 2009 when the wetlands were converted from parallel flow to a series flow system;[[10]](#footnote-10)
* AFFCO has a barge moored and fixed to the bank of the Kaituna River adjacent to the meat processing plant. The barge carries two pumps and inlet pipes used to take water from the Kaituna River for use in the processing plant. The discharge point from the stormwater and cooling pond is located just down river from the intake;
* AFFCO also has a bore take that is currently used as an emergency supply and which was the original plant water supply. This take will be retained as an emergency back up supply to the river take;[[11]](#footnote-11) and
* To reduce the nitrogen load on the Kaituna River AFFCO proposed to install two to four small surface mechanical aerators in the oxidation ponds within two years of the consents being granted. [[12]](#footnote-12)
1. We discuss aspects of the AFFCO operation in more detail in section 5.1 of this Decision.

# 4 Process Issues

## 4.1 Written approvals, notification and submissions

1. No written approvals were obtained.
2. The discharge consents were publicly notified as separate applications and the water take applications were limited notified to the submitters on the earlier discharge applications. Thirty submissions were lodged on the discharge applications of which twenty nine were in opposition. Four submissions in opposition were received in response to the limited notification of the water take applications.
3. A late submission was received by Don Patterson. Mr Whittaker recommended that we accept the late submission and that was not opposed by AFFCO. Accordingly, pursuant to RMA section 37(1)(b) we waive the requirement to comply with the submission timeframe for the Patterson submission which means it is treated as a valid submission.
4. The submissions are summarised in the Section 42A Report.[[13]](#footnote-13) We adopt that summary but do not repeat it here for the sake of brevity. We were provided with copies of all of the original submissions.

## 4.2 Officer’s recommendation

1. Mr Whittaker recommended that the applications be granted.

## 4.3 Hearing, appearances and site visit

1. We held a hearing in the Orchard Church in Te Puke on Tuesday 16 and Wednesday 17 August 2022.
2. Evidence[[14]](#footnote-14) and legal submissions[[15]](#footnote-15) from the applicant and evidence from two submitters[[16]](#footnote-16) was
pre-circulated in conformance with a procedural Minute that we issued. Written evidence from Ngāti Pikiao Environmental Society was tabled at the Hearing. Copies of the legal submissions and briefs of evidence are held by BOPRC. At the hearing a number of submitters spoke to their submissions.[[17]](#footnote-17)
3. We do not separately summarise the matters covered here, but we refer to or quote from that material as appropriate in the remainder of this Decision. We took our own notes of any answers given to verbal questions that we posed to Hearing participants.
4. Ms Hamm provided verbal Reply submission at the hearing and her written Reply submissions were provided to us on 5 September 2022. We closed the Hearing on 6 September 2022, having concluded that we required no further information from any of the parties.
5. We conducted a site visit on the afternoon of Tuesday 16 August 2022 accompanied by Hayden Davis (the AFFCO site engineering manager) and Marlene Bosch (BOPRC principal consents planner).

## 4.4 Consent categories

1. The applications are all discretionary activities.

## 4.5 Permitted baseline

1. When forming an opinion for the purposes of subsection 104(1)(a) of the RMA we may disregard an adverse effect of the activity on the environment if a national environmental standard or a plan permits an activity with that effect.[[18]](#footnote-18) We have not disregarded any effects associated with the application.

# 5 Section 104 and 104B matters

1. We now address the relevant aspects of the application in terms of sections 104 and 104B of the RMA.

## 5.1 Actual and potential effects on the environment

1. Having reviewed the documentation we find that we should address the following matters:
* Positive effects
* Groundwater quality
* Kaituna River water quality
* Kaituna River aquatic ecology
* Maketū Estuary water quality and aquatic ecology
* Human health – contact recreation
* Kaituna River water take
* Groundwater take
* Odour
* Glyceria maxima
* Climate change
* Māori cultural interests and values.
1. We wish to stress that listing ‘Māori cultural interests and values’ last does not intend to demean those matters. It simply reflects the fact that an assessment of those matters is often usefully informed by the preceding ‘western’ technical evidence and findings.
2. The matter of the relevant ‘existing environment’ arose during the hearing. Ms Hamm presented legal submissions on that matter and referred to relevant case law.[[19]](#footnote-19) Suffice to say that we have adopted an orthodox approach and have taken the existing environment to comprise the water quality in the Kaituna River as it is today, inclusive of the effects of authorised land use activities and other existing consented discharges, but absent any effects associated with the existing AFFCO discharges for which replacement consents are sought.
3. Having said that, we agree with Ms Hamm that not much turns on that point because the AFFCO water quality assessments are based on a comparison of the Kaituna River water quality upstream of the site and what it would be downstream of the site after reasonable mixing of the discharges with the river water has occurred.

### 5.1.1 Positive effects

1. As noted by Mr Whittaker, there is a degree of acceptance that the continued operation of the AFFCO plant will provide positive community benefits by way of substantial employment of local people. We summarised the extent of that benefit in section 3 of this Decision. The proposed upgrade of the wastewater treatment system and the resulting decrease in the nitrogen load on the Kaituna River will also result in positive outcomes for the health and mauri of the Kaituna River and the Maketū Estuary.[[20]](#footnote-20)
2. These positive effects weigh in favour of granting the applications.

### 5.1.2 Groundwater quality

1. Groundwater quality is potentially affected by the amenities wastewater discharge to land and by seepage from the base and sides of the wastewater treatment ponds.
2. Regarding the amenities wastewater discharge, Consent 60574 allows for the discharge of up to 35 m3 day of treated human ablution and amenities wastewater to land soakage. Since 2009 that discharge has been in compliance with the maximum allowable flowrate. The median daily total nitrogen (TN) load of the discharge is 0.63 kg or 229 kg annually. The BOPRC engaged Stephen Park to review the effects of the discharge. He noted that that the discharge is to ground soakage and he concluded that if the nitrogen does eventually enter the Kaituna River via ground seepage, then given the small load, the effects will be low (or minor).[[21]](#footnote-21)
3. The wastewater treatment ponds are unlined and there are losses to groundwater which under existing consent 63344 can be for up to 152 m3 a day. Compliance monitoring of potential groundwater contamination has been undertaken at three locations. Monitoring results for Bore 1[[22]](#footnote-22) have very high levels of ammoniacal nitrogen, averaging around 50 g/m3 since 2006. That indicates significant infiltration into groundwater from the ponds. While there is no abstractive use made of the groundwater between the ponds and the Kaituna River, we need to consider the impact of the contaminated groundwater on the river. Consequently, we discuss the effects of ammoniacal nitrogen (and other contaminants) in the AFFCO discharges in more detail in subsequent sections of this Decision, but suffice to say at this point that we are satisfied that the potential adverse effects of pond seepage are no more than minor.

### 5.1.3 Kaituna River water quality

1. We firstly note that under Schedule 9 of the Regional Natural Resources Plan (RNRP), the water classification at the point of the AFFCO discharge is classified as Aquatic Ecosystem with the river downstream of the SH2 bridge being classified as a Contact Recreation.
2. Consent 24932 for the discharge of up 6,500 m3 a day of treated wastewater to Kaituna River is the main source of potential adverse effects on water quality in the Kaituna River. The mean daily discharge from the treatment ponds over the period 2017 – 2020 (year-end September) ranged from 1,254 – 1,545 m3. A 300m zone of reasonable mixing extends downstream from the point of discharge.
3. In terms of potential adverse effects, summer (December to February) is the key period because that is when plant production is highest and typically river flows are lowest. The main contaminant of concern is ammoniacal nitrogen (with a mean concentration of mean 50.5 g/m3). Phosphorus levels are also high in the discharge with the dissolved reactive and bioavailable form (DRP) with a mean concentration of
10.9 g/m3 making up most of the total phosphorus present.
4. Total nitrogen is also important in terms of its potential to promote algae (periphyton) growth in the receiving waters. That is not an issue for the Kaituna River because no excessive algal growth has been observed in the river as it is relatively deep with a mobile substrate which limits algal growth. Also, with the river mouth being relatively close downstream (13km) phytoplankton blooms do not have time to establish.[[23]](#footnote-23) The Kaituna estuary is a shallow, tidal, river dominated area and by its nature it is less sensitive to eutrophication.[[24]](#footnote-24) However, total nitrogen is important in terms of potential effects on the Maketū Estuary and we discuss that in section 5.1.5 below.
5. Ammoniacal nitrogen is one of the bio-available forms of nitrogen used for algae and plant growth and is preferentially taken up by plants compared to other forms. When present at high concentrations, it can become difficult for aquatic organisms that feed on those plants or ingest the river water to excrete it, leading to a toxic build up in their internal tissues and blood, with potentially lethal effects. However, the observed levels of ammoniacal nitrogen below the AFFCO discharge (0.054 g/m3) are significantly lower than non-observed effect concentrations (NOEC) for macroinvertebrates and fish. This indicates that any increase in ammonia levels as a result of the AFFCO discharge into Kaituna River are unlikely to have adverse effects on aquatic communities. [[25]](#footnote-25)
6. It was common ground between the experts for AFFCO and the BOPRC that potential water quality effects should be assessed with reference to the National Policy Statement for Freshwater Management 2020 (NPSFM) water quality attribute states. Mr Gowing summarised those assessments in his evidence. The assessment of current ammoniacal nitrogen concentrations against the NPSFM indicates A and B Attribute States respectively above and below AFFCO’s discharge.
7. The discharge is therefore currently degrading the river water quality.
8. To address this, as we mentioned in section 3 of this Decision, AFFCO has proposed additional treatment of the wastewater. As described by Mr van Oostrom, the main mechanism for the removal of nitrogen in the treatment system is a biological process in the oxidation ponds where ammonia is first oxidised to nitrite and then nitrate in the presence of dissolved oxygen. The nitrite and nitrate are then converted to nitrogen gas and lost to the atmosphere. Ammonia oxidation in the treatment system is limited by available aeration capacity in the oxidation ponds. AFFCO proposed to overcome this limitation by installing additional mechanical aerators in the oxidation ponds within two years of the consent being granted. Mr van Oostrom expected that the additional aeration capacity would reduce ammonia loads in the discharge by at least 80% on average and by at least 90% during the summer when warmer conditions promote the growth of nitrifying bacteria.
9. Mr Gowing considered that the resulting reduction in ammonia loads would result in river concentrations below the AFFCO discharge achieving NPSFM Attribute State A, namely less than 0.03 mg/L as an annual median. That in turn would achieve a 99% species protection level[[26]](#footnote-26) which would equate to a less than minor adverse effect.
10. In terms of nitrate toxicity, Mr Gowing advised that the river below the AFFCO discharge with an annual median concentration[[27]](#footnote-27) of 0.45 mg/L currently places the river in NPSFM Attribute State A and well below the National Bottom Line of 2.4 mg/L. That means there is highly unlikely to be adverse effects even on sensitive aquatic species.
11. At the hearing we queried why it would take two years to implement the additional aeration. Ms van Oostrom advised AFFCO was wanting to use aerators that dispersed the water horizontally and those aerators were currently being trialed in NZ. More traditional vertical shaft aerators would be less effective and had to be sourced from the USA. We are not persuaded that it is appropriate to wait two years to rectify the current degrading of the Kaituna River water by ammonia in the discharge. The main discharge consent expired five years ago and there was nothing to stop AFFCO installing additional aeration long before now. We consider that any new aeration should be operational within 18 months’ time.
12. Regarding DRP we need to consider the existing or background environment. Mr Park advised that at the Maungarangi Road site upstream of the AFFCO site the DRP median and 95th percentile values for the summer period were 0.021 and 0.032 mg/L respectively (NPSFM D Band grade) as the Kaituna River receives natural geological inputs of phosphorous. Consequently, although the AFFCO discharge does not cause the DRP levels in the Kaituna River to be in D Band grade, it is further enriching a naturally high system.[[28]](#footnote-28) However, the effect of that on the river is no more than minor because the main issue with DRP is potential eutrophication and associated excessive algae growth which in turn can cause significant changes in macroinvertebrate and fish communities. However, that is not the case here as the river, as we outlined above, is not conducive to algae growth.
13. Having discussed pond seepage and the direct discharge from the wastewater treatment ponds, we now address the stormwater discharge. Consent 24925 allows for the discharge of up to 0.345 m3/s of stormwater, defrost and cooling water to the Kaituna River. Mr Park referred to AFFCO’s survey which looked at a range of common metal and organic contaminants going into the stormwater detention pond and being discharged to the river. The only metal in the discharge to exceed the ANZECC guidelines (95% species protection level) was zinc which is thought to be derived from the site’s Zincalume roofs. Mr Park noted that levels of zinc in the Kaituna River between Maungarangi Road and Te Matai are around 0.0015 g/m3 and dilution of AFFCO’s 0.345 m3/s discharge would result in a concentration of 0.0025 g/m3 after full mixing which is well below the ANZECC default trigger value of 0.008 g/m3. Also, monitoring data of sediments in Maketū Estuary show that all common heavy metals are at or close to background levels including zinc. Mr Park concluded that the stormwater discharge was likely having a negligible effect on the Kaituna River receiving environment after reasonable mixing.[[29]](#footnote-29)
14. On the evidence we are satisfied that subject to wastewater treatment aeration upgrade discussed above, the adverse effects of the discharges on Kaituna River water quality will be no more than minor.
15. We discuss potential adverse effects on human health from bacteria and pathogens in section 5.1.6 of this Decision.

### 5.1.4 Kaituna River aquatic ecology

1. In our discussion of the effects of the AFFCO discharges on Kaituna River water quality we noted that, subject to the proposed wastewater treatment upgrades, the resultant contaminant concentrations would not adversely affect aquatic species. This impact on aquatic ecology was also considered by BOPRC freshwater ecologist Alastair Suren.[[30]](#footnote-30) He noted that the Kaituna River is a deep, single thread, relatively fast flowing river with a substrate dominated by fine highly mobile small gravels, sand and mud. It also has vertical banks that drop steeply into deep water. There are few, if any, shallow gravel areas and so it is not conducive to supporting macroinvertebrates or aquatic plants.
2. Nevertheless, AFFCO has undertaken macroinvertebrate assessments using artificial substrates.
Mr Suren noted that the assessment results showed no consistent evidence of any changes to the macroinvertebrate biotic metrics such as the MCI, QMCI, and a number of EPT above and below the AFFCO discharge, suggesting that the invertebrate communities were not being adversely affected.
3. AFFCO has also undertook fish surveys in 2018. Daniel Gulliver advised that only two survey sites were selected in the direct vicinity of the AFFCO discharge point (one upstream and one downstream) on the Kaituna River as fish are not static within a catchment and migrate and occupy different habitats at different times in their lifecycle.[[31]](#footnote-31) As noted by Mr Suren, the 2018 surveys revealed that the site immediately below the discharge supported more fish than the site immediately above, and both sites supported the same species composition (longfin and shortfin eel, inanga and common bully). He concluded that any increase in ammonia levels as a result of the AFFCO discharge into Kaituna River would have been unlikely to have adversely affected fish communities.
4. Regarding the stormwater discharge, Mr Suren acknowledged that any heavy metals discharged into the river were likely to bind up with organic matter associated with the fine sediments in the river, and as such become less bioavailable. On that basis he concluded that stormwater discharge would be likely to have less than minor effects on the ecology of the Kaituna River.
5. On the evidence we are satisfied that subject to wastewater treatment aeration upgrade, the adverse effects of the discharges on Kaituna River aquatic ecology quality will be no more than minor.

### 5.1.5 Maketū Estuary water quality and aquatic ecology

1. The Kaituna River flows (in part) into the Maketū Estuary.[[32]](#footnote-32) Mr Park advised that his 2018 assessment using the New Zealand Estuarine Trophic Index (NZ ETI) tool placed Maketū Estuary in NPSFM Band D – at a very high risk of eutrophication and in a poor state in terms of macroalgal cover and extent of soft mud. He noted that nearly all estuaries are nitrogen limited (as is Maketū Estuary) and an assessment of eutrophication is made on the basis of nitrogen only.
2. Mr Park discussed modelling which showed that the annual catchment load of total nitrogen to the Maketū Estuary was 1,140 tonnes of which 11 to 13% occurred in the summer months. He considered that to return the estuary to an NPSFM Attribute Band C would require a reduction in the total catchment load of 52%. As we outlined earlier in this Decision, the impact of the AFFCO discharges is greatest in the summer months. That is also true for the estuary because the potential algal growth rates are much higher over the summer period as opposed to winter when growth rates are slow. Mr Park advised that, based on average AFFCO discharge rates, in the summer the discharge contributed 7.8% of the total annual load received by the estuary and potentially up to 8.3% if wastewater treatment pond seepage was taken into account.[[33]](#footnote-33)
3. As already discussed, AFFCO intend to upgrade the wastewater treatment system by way of additional aeration. Mr van Oostrom advised that the reduction in total nitrogen from the upgrade was difficult to predict accurately, but he expected it to average between 10% and 30% over the year and 15% to 50% during summer.[[34]](#footnote-34) If we consider the direct discharge to the river and pond seepage, the aeration upgrade would significantly reduce AFFCO’s contribution to the estuary’s summer total nitrogen load to between 7% and 4%. As noted by Mr Gowing, that will go some way to assisting with the 52% catchment load reduction target considered necessary by Mr Park.
4. Nitrate toxicity concentrations will increase slightly after the installation of additional aeration. However, Mr van Oostrom’s evidence is that following the additional aeration, the nitrate toxicity in the Kaituna River below the AFFCO discharge will still fall within Attribute Band A of NPSFM Appendix 2A Table 6 Nitrate (toxicity). Consequently, any adverse effect on the estuary will be no more than minor.
5. On the evidence we find that a consideration of the impact of the AFFCO discharges on the Maketū Estuary (effectively a consideration of cumulative effects) does not of itself weigh against a grant of consent.

### 5.1.6 Human health – contact recreation

1. The NPSFM sets out two frameworks for grading human health aspects of water quality for bacteriological contamination. NPSFM Appendix 2A Table 9 provides the Escherichia coli (*E. coli*) criteria for human contact regardless of weather and river flow conditions which results in a B (Green) grade for the Kaituna River below the AFFCO discharge. NPSFM Appendix 2B Table 22 is a more stringent guideline providing criteria for primary contact (bathing) sites during the bathing season (which only needs to be assessed from the Te Matai site some 1.5 km downstream as the river is only classified for contact recreation in the RNRP below that site) and it grades the river at Te Matai and downstream from there as “Poor” with results below the National Bottom Line.[[35]](#footnote-35) The river immediately downstream of AFFCO site sits in the “Fair” grade as does the upstream site.[[36]](#footnote-36)
2. On that basis it appears that the discharge is not adversely affecting risks arising from human contact with the river water. In saying that we note that the Pakipaki Stream enters the river 250m above the Te Matai site and that stream introduces an additional bacterial load.
3. However, *E. coli* is only an indicator of risks to human health. Mr Park noted that AFFCO had also undertaken a survey in 2019 to identify key pathogenic organisms associated with the discharge rather than relying solely on indicator bacteria. Results from the 2019 survey showed that pathogens were detectable in some cases in the discharge, but at such low levels that they represented a very low public health risk that was no more than minor. Mr Park considered that the AFFCO assessment was based on the known infectious doses of each pathogen and represented a robust approach to risk assessment.[[37]](#footnote-37)
4. Mr Gowing advised that the 2019 pathogen study referred to by Mr Park was actually based on samples undertaken quarterly over three years (between February 2014 and March 2017) for key pathogens (including Campylobacter, Salmonella, Giardia, Cryptosporidium, Yersinia and *E coli*). QMRA Data Experts Limited used those pathogen data in a Quantitative Microbial Risk Assessment (QMRA) which concluded that “*The effect of the AFFCO Plant wastewater 350 m downstream of the discharge (and beyond) is therefore not more than minor*.”[[38]](#footnote-38)
5. Mr Gowing considered that whilst *E. coli* loads in the AFFCO discharge may contribute in a minor way to the poor grading at Te Matai, the actual risk due to pathogens in the AFFCO discharge was no more than minor and the discharge of the Pakipaki Stream was acknowledged to have a significant impact on Te Matai’s “Poor” grading.[[39]](#footnote-39) We note that notwithstanding these minor adverse effects, AFFCO has nevertheless committed to review the existing treatment process, including the potential benefits, efficacy and costs of UV treatment.
6. On the evidence we find that the adverse effects of the AFFCO discharges on the risk to human health arising from contact with Kaituna River water are no more than minor.
7. Regarding the effects of the AFFCO discharges on bacteria levels in the Maketū Estuary, Mr Park concluded that the AFFCO contribution to the relevant human health guidelines not being met in the estuary was likely less than minor. He noted however that any reductions in bacterial loads discharged by AFFCO would help to improve Maketū Estuary water quality, as an across the catchment reduction was needed.[[40]](#footnote-40)

### 5.1.7 Kaituna River water take

1. The AFFCO abstraction from the Kaituna River is essentially a zero net take because 95% of the abstracted water is returned back to the Kaituna River around 50m downstream of the point of take. AFFCO has also determined that the currently consented maximum rate of take represents only 0.14% of the total flow in the river at MALF[[41]](#footnote-41) (29.1 m3/s). Mr Whittaker considered that given the high percentage of return flow back into the Kaituna River and the fact that the inlet and outlet are located within close proximity to one another, any adverse effects from the water take will be less than minor and that the water take does not affect the hydrology of the Kaituna River.[[42]](#footnote-42) We agree.

### Groundwater take

1. AFFCO has sought a maximum annual groundwater water take of 49,080m3 which is based on 30 days emergency use that includes:
* Fire fighting;
* Earthquake / flood damage to existing supply, such as barge dislodgment;
* Upstream pollution event to the river requiring a clean supply;
* Loss of supply of water from the barge to the cooling towers; and
* Use as a source of drinking water or for sanitation purposes in times of a natural disaster.
1. Mr Whittaker advised there were no submissions from other bore owners who were limited notified of the groundwater take application. He concluded that because the groundwater bore will only be used as an emergency back-up supply and the maximum take at 30 days emergency supply is less than 1% of the available groundwater catchment allocable volume, it was appropriate for the emergency water take to be re-consented.[[43]](#footnote-43) We agree.

### 5.1.9 Odour

1. Odour was an issue of concern to some submitters and Ms Biel representing the Ngāti Moko Marae Committee addressed this at the hearing. She said that the smell from the river had been ongoing for some time. Mr Whittaker advised that AFFCO holds air discharge consent (67131) which was granted in 2012 for the discharge of combustion gases from existing gas fired boilers and odorous gases from the existing rendering plant and effluent treatment system. On that basis and from his own observations during site visits, he considered that any odour emissions associated with the site are not directly a function of the discharge consents.[[44]](#footnote-44) We agree and do not consider odour issues further.

### 5.1.10 *Glyceria maxima (sweet reed grass)*

1. The Maketū Ongatoro Wetland Society raised a concern regarding the Giant Sweet Grass *Glyceria* *maxima* which is utilised in the wastewater treatment wetlands. Representing the Society, Julian Fitter considered that plant to be an invasive alien species which was having significant deleterious ecological impacts, as well as economic implications for its control and removal. Mr Fitter was particularly concerned about *Glyceria* in Te Huari o te Kawa, previously known as the Borrow Pits, located on the true right bank of the Kaituna around 4.5km downstream of the AFFCO plant. That area is being developed as a habitat and spawning area for inanga.
2. The Society sought that AFFCO remove all *Glyceria* from the wastewater treatment wetlands.
3. We understand that *Glyceria* was chosen specifically for use in the wetlands as it is highly beneficial for nitrogen removal. Mr Park noted that floating rafts of Glyceria in the wetlands helped to reduce effluent algal and suspended solids levels. He considered that given the plant is already fully established on the Kaituna River and is limited as to where it can grow, the presence of it in the AFFCO wetlands would not affect its abundance in the river.[[45]](#footnote-45)
4. In his end of hearing report to us, Mr Whittaker advised that because *Glyceria* is widespread throughout waterways in the lower Kaituna River catchment, then in the absence of *Glyceria* being identified as a priority by the community and BOPRC and in the absence of an intensive control programme throughout the catchment, any conditions to remove *Glyceria* at the AFFCO site were unlikely to achieve a positive environmental outcome.
5. We accept the evidence of Mr Park, Mr Suren and Mr Whittaker and note that Condition 15.1(a) on consent
17‐0084‐DC.01 is that within two years of the consent commencing AFFCO must provide a report to BOPRC that includes:

“the operational efficiency of the wetland component of the wastewater treatment plant including attention to weed control and maintenance, along with recommendations to improve efficiency if necessary. Particular attention shall be given to the selection of wetland plants as alternatives to existing *Glyceria maxima”*

1. We find that to be an appropriate response to the concerns of the Maketū Ongatoro Wetland Society.

### 5.1.11 Climate change

1. Many of the submissions sought that the application should consider the impacts of climate change, including that there be an assessment of the impacts of climate change on the plant’s overall operation, takes and discharges and the consideration of adaptive measures to safeguard its performance[[46]](#footnote-46). While not raised in the original submission, the expanded statement from the Maketū Ongatoro Wetland Society also expressed concerns about the impact of climate change on the treatment system and queried whether the applicant had considered both climate change and sea level rise. The uncertainty of the impacts of climate change was a reason also cited by submitters as warranting a shorter term of consent than that sought by the applicant, which we address later in this decision.
2. Mr Whittaker’s Section 42A Report did not separately address climate change. Mr Venus addressed sea level rise in supplementary evidence[[47]](#footnote-47) before the hearing. During the hearing, Mr Venus confirmed it may be appropriate to consider climate change in the conditions of consent. In his end of hearing report to us, Mr Whittaker recommended that it would be appropriate to include climate change as part of the review conditions.
3. However, the revised review conditions submitted with the right of reply did not include climate change. Accordingly, in that absence, we have included an additional clause in respect of the s128 condition in Discharge Treated Wastewater to the Kaituna River 17-0084-DC.01. We consider the clause is not necessary for the other permits, given the broader nature of the s128 review conditions in those permits.

### 5.1.12 Māori cultural values and interests

1. No cultural values assessment or cultural impact assessments were provided in support of the applications.
2. The submissions of Ngāti Pikiao Environmental Society, Ngāti Moko Marae Committee, Te Maru o Kaituna Authority and the Biel whānau explained that iwi and hapū (as tangata whenua) have significant values and interests in waterways.[[48]](#footnote-48) These submitters outlined that the Kaituna River (awa) was considered to be a taonga (treasure) and tupuna (ancestor) and how iwi and hapū have a whakapapa (connection) and unique relationship with the awa and its tributaries, which lies at the heart of their spiritual and physical wellbeing, and their tribal culture and identity. That gave rise to their responsibilities to protect the mana and mauri of the awa, the tribal kaitiaki and taniwha at certain parts of the awa, and the lower sections of the Kaituna River and the Maketū Estuary.
3. Given the importance of the Kaituna River and the Maketū Estuary to the iwi submitters we summarise our understanding of the matters they raised at the hearing as follows.

*Ngāti Pikiao Environmental Society*

1. Raewyn Bennett[[49]](#footnote-49) expressed concern regarding the cumulative effect that discharges to the Kaituna River had on the Maketū estuary. She opposed the AFFCO applications and considered there was no strategy to address environmental matters over the requested 35-year term, which in her view did not recognise kaitiaki expectations for the care and wellbeing of the River and the Estuary.

*Biel whānau*

1. Rawiri Biel presented his submission in te reo Māori, assisted by an interpreter. He outlined the significance and connection of Tapuika iwi to the Kaituna River and their role and responsibilities as kaitiaki. He expressed concern about River water flows, the desirability of having clean and clear water to drink, the smell of water (and air), and how spiritual aspects that would be maintained as customary practices were getting lost in the ‘paru’[[50]](#footnote-50)’. Mr Biel opposed the applications and sought for AFFCO to work with iwi and hapū in the spirit of goodwill to meaningfully discuss the wellbeing of the Kaituna River. He appeared to support the proposed Kaitiakitanga – Restoration and Monitoring Committee (KRM Committee) and suggested additional matters that could fall within its scope, such as scholarships and the promotion of rangatahi studies.

*Ngāti Moko Marae Committee*

1. Helen Biel spoke to the Ngāti Moko Marae Committee submission which opposed the applications. She echoed and helpfully expanded on the matters raised earlier by Ms Bennet and Mr Biel. She was open to building a relationship with AFFCO going forward, but stressed that the Marae Committee sought that there ultimately be no discharge of contaminants to the Kaituna River, and that treatment methods for any ongoing discharges should exemplify industry best practice. Ms Biel saw a role for Tapuika iwi to implement cultural inductions and to undertake water quality and mātauranga Māori monitoring as ways of achieving meaningful outcomes for the Kaituna River.

*Te Maru o Kaituna Authority*

1. Dean Flavell is the Chair of Te Maru o Kaituna Authority (the “Authority"). He advised that the Authority opposed the applications and supported the iwi and hapū submitters. Mr Flavell said the Authority held high expectations for change in the Kaituna River catchment and for discharges to apply industry best practice discharge treatment methods. He emphasised how AFFCO actions could demonstrate industry leadership and he agreed that the establishment of the KRM Committee was a priority, and that it should be fully resourced, with iwi to determine membership and reporting transparency. Mr Flavell advised the Authority would be open to building a relationship with AFFCO.
2. In light of the above submitter evidence, we understand that tangata whenua opposition to the applications is centred on their connection, both spiritual and physical, with their taonga, the Kaituna River and the Maketū Estuary, together with their kaitiakitanga responsibilities for it. We understand and appreciate their desire for discharges of treated wastewater to the river to cease or otherwise be treated using ‘best practice’ methods, and note that to be a commonly held aspiration. We also note the strong support for the proposed KRM Committee.
3. In that regard, in answer to our written questions (as he could not attend the hearing) Mr Miles confirmed that the KRM Committee would be part management and part advisory in nature as it would comprise both AFFCO management and iwi members. The AFFCO Directors would be advised of the KRM Committee outcomes as part of monthly reporting on consents and developments. He advised the role of the KRM Committee was:

*“ …to facilitate the long term guardianship and protection of the Mauri of the river. AFFCO will look to work with Iwi and the concerns they may have with restoring the environment and recognising their relationship with the river”*

1. In the applicant’s Reply submissions Ms Hamm said that “*AFFCO are making steps to address the mauri of the awa, both through the additional aeration and through the mechanism of the Kaitiakitanga – Monitoring and Restoration Committee which includes projects directed at restoration and improvement of mauri*”[[51]](#footnote-51).
2. We acknowledge AFFCO’s intent as expressed by Mr Miles and Ms Hamm and note that the recommended conditions of consent appropriately codify that intent, particularly through the applicant’s commitment to enable the KRM Committee to:
* Foster and encourage mutual understanding between the consent holder, tangata whenua and other stakeholders on the performance and effectiveness of the wastewater treatment process and plant operation and the effect of all consented activities which may affect the Kaituna River and the Maketū Estuary;
* Identify specific ways to incorporate mātauranga Māori into the monitoring of consented activities;
* Identify projects, scholarships, options and implementation programmes that will enhance and restore the mauri and well-being of the Kaituna River and Maketū Estuary; and
* Provide assistance to AFFCO with staff induction and ongoing awareness training on the significance and importance of the Kaituna River to tangata whenua and the need to be mindful of this importance when undertaking work on the AFFCO Rangiuru site.
1. We find the proposed KRM Committee to be an appropriate response to the concerns raised by the iwi submitters and note that part of its purpose (as set out above) includes the wider matters referred to by Mr Biel and Ms Biel.

## 5.2 National environment standards and other regulations

1. No relevant national environmental standards or regulations were brought to our attention and we are not aware of any.

## 5.3 National policy statements

1. The NPSFM is applicable. Our own assessment follows.
2. The sole Objective 2.1(1) of the NPSFM is:

*The objective of this National Policy Statement is to ensure that natural and physical resources are managed in a way that prioritises:*

*(a) first, the health and well-being of water bodies and freshwater ecosystems*

*(b) second, the health needs of people (such as drinking water)*

*(c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future*

1. The applications are primarily directed at achieving Objective 2.1(1)(c). However, we are satisfied that the current treatment of the wastewater and the proposed upgrade of the treatment system appropriately prioritises the health and well-being of water bodies and freshwater ecosystems. The evidence is that the discharges will not have an adverse effect of human health associated with contact recreation in the Kaituna River. We are satisfied that Objective 2.1(1) does not weigh against granting the applications.
2. Given that the applications involve discharges to groundwater and surface water we consider the most relevant NPSFM policies to be Policies 1, 2, 3, 7, 9, 11, 13 and 15.[[52]](#footnote-52)
3. Policy 1 is to manage freshwater in a way that gives effect to Te Mana o te Wai. The NPSFM states that Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. This largely replicates NPSFM Objective 2.1 which we addressed above.
4. Policy 2 is that tangata whenua are actively involved in freshwater management (including decision making processes) and Māori freshwater values are identified and provided for. In this case that was achieved through AFFCO’s consultation, the prehearing meetings, and going forward it can be achieved by way of the proposed KRM Committee and associated reporting and review requirements.
5. Policy 3 is that freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments. The proposed upgrade of the wastewater treatment system and the associated reduction in the discharge of ammoniacal nitrogen reflects an awareness of the need for a whole-of catchment approach.
6. Policy 7 is that loss of river extent and values is avoided to the extent practicable. We find that the proposed wastewater treatment system (inclusive of the proposed upgrade to the oxidation ponds by way of the additional aerators) will avoid the further loss of Kaituna River values to the extent practical. In that regard we discuss the lack of practical alternative treatment and discharge options in section 5.9 of this Decision.
7. Policy 9 is that the habitats of indigenous freshwater species are protected. The fishery survey information discussed above indicates that the indigenous freshwater species are in the same condition both upstream and downstream of the wastewater discharge and so this requirement is being met.
8. Policy 11 is that freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided. The primary take from the Kaituna River is largely non-consumptive which in our view demonstrates an efficient use of that water. The groundwater take will only be exercised in emergency situations, and we find that to be an efficient use of that resource.
9. Policy 13 is that the condition of water bodies and freshwater ecosystems is systematically monitored over time, and action is taken where freshwater is degraded, and to reverse deteriorating trends. We understand that a comprehensive monitoring programme covering the discharges, the receiving water quality and the aquatic ecosystems is proposed and will be required by conditions of consent. The proposed upgrade of the wastewater treatment system and the associated reduction in the discharge of ammoniacal nitrogen will assist with reversing the deteriorated state of the Kaituna River and the Maketu Estuary.
10. Policy 15 is that communities are enabled to provide for their social, economic, and cultural well-being in a way that is consistent with the NPSFM. Granting the applications would achieve that outcome for AFFCO and its employees.
11. In overall terms we find that the application is consistent with the NPSFM.

## 5.4 New Zealand Coastal Policy Statement

1. The New Zealand Coastal Policy Statement is not directly relevant given that the discharge is to fresh water (the Kaituna River) and the applicant loses control of the discharge thereafter. Nevertheless, we briefly address the Regional Coastal Plan is section 5.6 of this Decision.

## 5.5 Regional Policy Statement

1. The Bay of Plenty Regional Policy Statement (RPS) became operative on 1 October 2014. The RPS provisions were assessed in the applicant’s AEE and by Mr Whittaker. The AEE simply stated that the proposal was “generally consistent with the relevant objectives and policies“ of the RPS. Mr Whittaker provided a fulsome ‘thematic’ assessment.[[53]](#footnote-53) We note key elements of his assessment as follows:
* there has a been a genuine opportunity to discuss and understand the issues raised by tangata whenua and to recognise their concerns in relation to the discharge and water take;
* proposed conditions can ensure that there is transparent monitoring and reporting incorporating Mātauranga Māori;
* the rivers and streams in the Kaituna catchment have been impacted by cumulative land use practices and the effects of the AFFCO discharge and opportunities for a reduction in nutrient loadings must be considered in the context of an all of catchment approach;
* the net take and use of water is a very minor take in terms of the Kaituna River flow;
* the AFFCO discharge and water take applications demonstrate high standards of monitoring and reporting which affirm that the effects on the Kaituna River are minor in terms of the existing water classification standards and the minimum attribute standards set out in the NPSFM; and
* the recent commitment from AFFCO to upgrade the treatment process is a positive step in reducing contaminant loadings and demonstrates that AFFCO accepts that it has a shared responsibility to help improve and restore the water quality of the Kaituna River and Maketū Estuary.
1. Mr Whittaker concluded that the AFFCO discharge and water take consents will be consistent with the Operative RPS. We agree.

### 5.5.1 Plan Change 5 to the RPS

1. Proposed Change 5 (Kaituna River) to the RPS is intended to recognise and provide for the vision, objectives, and desired outcomes of the Kaituna River Document, as required by s 123(1) of the Tapuika Claims Settlement Act 2014.[[54]](#footnote-54) PC5 was notified for in June 2021 and we understand a hearing is scheduled for October 2022 under the Freshwater Planning Process.
2. Ms Hamm helpfully noted that section 123(3) of the Tapuika Claims Settlement Act 2014 provides that:

*Until the obligation under subsection (1) is complied with, where a local authority is considering an application for a resource consent to authorise an activity to be undertaken within the catchment of the Kaituna River, the local authority must have regard to the Kaituna River document*

1. Ms Hamm submitted that the requirement to have regard to the Kaituna River Document itself applies to our decision-making process given that the PC5 process has not yet been completed.[[55]](#footnote-55) We accept this advice.
2. Given the timing of the AEE, it understandably did not address PC5. However, the proposed PC5 provisions were both subsequently assessed by Mr Venus[[56]](#footnote-56) and Mr Whittaker[[57]](#footnote-57). We note the key elements of their assessments as:
	* there is an opportunity to establish a committee or forum to share information and understanding of iwi and hapū relationships with the river;
	* there may be opportunities for restoration works along the river banks or within the Maketū Estuary;
	* there are no increases in contaminant concentrations or nutrient loads expected, and further improvements proposed will further reduce nutrient loading and improve water quality in the river;
	* the proposed conditions can ensure that there is transparent monitoring and reporting incorporating Mātauranga Māori;
	* the applications need to be assessed in the context of the whole catchment and cumulative land use practices;
	* conditions can provide for a reduction in contaminant loading as a result of new aeration and any future attribute standards;
	* the net use of water is a very minor take of the river flow; and
	* the assessment of effects has included effects on the Maketū Estuary, and the upgrading of the treatment process will help with total nitrogen reductions targets, while recognising that bespoke reduction targets are still to be discussed and agreed with the community
3. Mr Whittaker concluded that the consents can support the new policy directives forming PC5. We agree, on the basis that the consent conditions allow for regular and ongoing reviews and the adoption of best practice measures.

## 5.6 Regional plans

1. The relevant regional plan is the RNRP.
2. The AEE[[58]](#footnote-58) addressed the objectives in Part 4.1.2 and the policies in Part 4.1.3 of the BOP Regional Water and Land Plan which preceded the amalgamated RNRP. In summary, that assessment concluded that the proposal would avoid adverse effects on groundwater and would avoid, remedy or mitigate “adverse effects on the environment as appropriate to the values, uses and existing environmental quality of the activity site, particularly via the incorporation of the wetland and the determination that water quality effects are no more than minor”. It also stated that the water quality downstream of the AFFCO Rangiuru was consistent with the Schedule 9 standards for both the Aquatic Ecosystem Classification at the point of discharge and the downstream Contact recreation Classification.
3. Mr Whittaker provided a comprehensive assessment of the relevant provisions of the RNRP, including the On-site Effluent Treatment Regional Plan (OSET Plan) which now forms part of the RNRP. We consider his key considerations to include:
* the concerns and issues of tangata whenua have been brought forward through the consultation, submissions and prehearing meeting process;
* the existing AFFCO treatment system has proven itself to be a robust and reliable system and AFFCO has been managing and operating the treatment process with high levels of compliance and appropriate contingency plans in place;
* the discharge is treated and is unlikely to have an adverse effect on groundwater outside of the wetland area as this groundwater flows toward the Kaituna River;
* the discharge has been assessed to be in accordance (after reasonable mixing) with the classification criteria for Aquatic Ecosystem and Contact Recreation (downstream) waterway in accordance with Schedule 9 of the RNRP. While the AFFCO discharges are consistent with the current policy settings, they were likely to fall short of the NPSFM policy direction to prioritise the health and well-being of the Kaituna River. However, the proposed upgrade of the treatment process will improve the quality of the discharge and that is a positive step that will help to align the consents with the NPSFM;
* discharge quality limits, monitoring of the discharge, provision for a new KMR Committee, and reporting and review requirements in the recommended conditions of consent will mitigate effects from the discharge;
* both the river and bore water takes are an efficient use of the water resource and they are necessary to support the processing plant;
* the existing amenities wastewater system utilises old and fairly rudimentary methods to treat the wastewater but the system is performing reasonably well; and the AFFCO site is a significant contributor to the local economy in terms of providing local employment and is a major physical resource.
1. Mr Whittaker concluded that the AFFCO discharge and water take applications were capable of meeting the policy directives of the RNRP insofar as the current provisions serve the purpose of the RMA while noting that these are yet to be amended to give effect to the NPSFM.
2. We agree, particularly regarding relevant aspects of the key RNRP discharge objectives DW 01, DW 04, DW 05 and policies DW P1, DW P9, DW P10 and DW P11 which require that:
* Discharges of contaminants to lakes, streams and rivers meet the water quality classification of the receiving water bodies, avoid, remedy or mitigate adverse effects on the environment as appropriate to the values, uses and existing environmental quality such that any adverse effects are less than minor;
* Discharges of contaminants to water are in a manner that takes into account the cultural values of tangata whenua;
* Direct discharges of contaminants to lakes, rivers and streams shall only be accepted where they are unlikely to have adverse effects on water quality;
* Discharges meet the water quality classification of the lake, river or stream after reasonable mixing; and
* For discharges to rivers and streams that flow directly to the open coast, or are tributaries of harbours and estuaries, the effect on the water quality of coastal waters will be given full regard. This includes cumulative effects.
1. In that regard we refer to our assessments in sections 5.1.2 to 5.1.12 of this Decision.
2. Mr Whittaker[[59]](#footnote-59) also assessed the Regional Coastal Plan (RCP) as the Maketū Estuary forms part of the coastal environment. He noted that to a large extent the matters addressed by the RCP overlapped with the matters of the RNRP, including the need to apply an integrated management approach to resource management issues and the effects of activities. He concluded the provisions of the RCP (specifically its Objective 1) had been duly considered. We agree and refer to our assessment in section 5.1.5 of this Decision.

## 5.7 Te Maru o Kaituna (Kaituna River Authority) and the Kaituna River Document

1. Mr Whittaker’s Section 42A Report included a summary of the Kaituna River Document[[60]](#footnote-60), as well as the background of Te Maru o Kaituna (the Kaituna River Authority). In summary, Te Maru o Kaituna is a co-governance partnership resulting from the Tapukia Claims Settlement Act 2014, between local authorities and iwi that share an interest in the Kaituna River. Its purpose is the restoration, protection and enhancement of the environmental, cultural and spiritual health and well-being of the Kaituna River including monitoring of the implementation and effectiveness of the Kaituna River Document. The vision of the Kaituna River Document is:

*E ora ana*

*te mauri o*

*te Kaituna,*

*e tiakina ana*

*hoki mō ngā*

*whakatupuranga*

*ō nāianei*

*ō muri nei hoki*

*The Kaituna River is in a healthy state and protected for current and future generations.*

1. The Kaituna River Document forms the basis of PC5, which we addressed earlier.
2. Ms Hamm submitted that the application will assist to achieve the objectives of the Kaituna River Document. Te Maru o Kaituna submitted on the applications and was represented by Dean Flavell at the hearing. Key points made by Mr Flavell included that:
	* The applicant needs to be more involved in their community other than economically;
	* The applicant could be a great contributor to the health and wellbeing of the Kaituna River; and
	* A 10 year consent term would align with the 10 year action plan for the Kaituna River catchment.
3. Mr Whittaker did not raise any concerns regarding the Kaituna River Document, rather identifying that its objectives, policies and environmental issues had been considered through the submissions and pre-hearing meeting process. He also identified the opportunity through consent conditions to ensure that the applications are consistent with the Document. We agree with Mr Whittaker. While the applications in themselves will not achieve the Vision of the document, the required upgrade to the wastewater treatment oxidation ponds and associated review conditions will ensure that there is a trajectory of improvement in the quality of the discharges which will assist to achieve the Vision.

## 5.8 Iwi and hapū management plans

1. Mr Whittaker listed three iwi and hapu management plans (IHMP) that contain information relating to cultural values, historical accounts, descriptions of areas of interest (hapū/iwi boundaries/rohe) and consultation / engagement protocols for resource consents.
2. Policy 1 of the Tapuika Environmental Management Plan 2014 states that Tapuika oppose the direct discharge of contaminants, especially wastewater to rivers and streams. That is consistent with the views of the iwi submitters we heard from. The Ngāti Whakaue ki Maketu Hapū Management Plan 2018-2028 advocates integration of mātauranga based tools, cultural monitoring, and the use of wetlands to provide additional treatment to manage the effects of discharge on freshwater and coastal water quality. We note that, as we outlined in section 5.1.12 of this Decision, the proposed KMR Committee will be enabled to address those matters. The Waitaha Iwi Management Plan 2014 addresses matters that are important to Waitaha and outlines their environmental expectations, including for the Kaituna River.
3. It is unsurprising that discharging treated wastewater to the Kaituna River is inconsistent with the outcomes sought by the IHMPs. However, we consider that subject to the imposition of appropriate consent conditions, there is the opportunity to develop an effective working relationship between Tapuika iwi and AFFCO which can recognise and support Tapuika iwi in maintaining and enhancing their relationship with their taonga, the Kaituna River.

## 5.9 Section 105 and 107 matters

1. Under s105 of the RMA we must have regard to the nature of the discharge and the sensitivity of the receiving environment, the Applicant’s reasons for the proposed choice and any possible alternative methods of discharge including into another receiving environment.
2. We are satisfied that the assessments we refer to in sections 5.1.2 to 5.1.12 have had appropriate regard to the sensitivity of the Kaituna River and Maketū Estuary receiving environments. AFFCO has understandably chosen to continue to utilise its existing wastewater treatment system because of the significant capital investment that it represents, coupled with its historical good performance and compliance with the existing conditions of consent. Regarding alternatives, Mr Whittaker noted that there were two principal alternative discharge options, namely an alternative land based discharge and utilising the development of the Rangiuru Business Park as a means to reticulate the AFFCO wastewater discharge to the Te Puke Wastewater Treatment Plant (Te Puke WWTP).
3. On the evidence we are satisfied that neither of those alternatives are viable. We accept the applicant’s advice that the land area required for a land-based disposal system would be around 800ha with a capital cost in the order of $15 - $30 million. The Te Puke WWTP has a maximum discharge volume of 9,000m3 per day and the AFFCO discharge to the Kaituna River allows for up to 6,500m3 per day. The WWTP simply does not have the capacity to accept the AFFCO wastewater. The evidence of Mr Venus confirmed that to be the case.
4. We find that a consideration of section 105 matters does not weigh against a grant of consent.
5. Section 107 requires that no discharge permit shall be granted that allows certain listed effects in the receiving waters after reasonable mixing. On the evidence we are satisfied those effects will not occur.

## 5.10 Consent Duration

1. As we noted earlier AFFCO sought a consent duration of 35 years.
2. In his written hearing evidence and at the hearing submitter Barry Roderick sought a duration of ten years. In his written hearing evidence for the Maketū Ongatoro Wetland Society Julian Fitter suggested a duration of 20 years, but at the hearing he appeared to amend that to ten years. For Forest and Bird Tom Kay suggested five years. Tangata whenua submitters sought durations of either two or five years.
3. For AFFCO Mr Miles and Mr Venus set out the reasons why AFFCO sought a 35 year duration. Those reasons included:
* long term strategic commercial decisions on the investment of significant capital expenditure required a reasonably secure commercial, legislative and regulatory environment and a term of 35 years was needed to provide AFFCO with sufficient certainty from a corporate governance perspective to allow for the necessary investment to keep the plant commercially viable;[[61]](#footnote-61)
* case law[[62]](#footnote-62) had concluded that commercial viability was an important consideration in determining in favour of a longer term of consent;
* the use of review clauses as a condition of consent, together with relevant monitoring and reporting conditions, would provide BOPRC with a sufficient mechanism by which the ongoing performance of the site can be monitored and assessed;[[63]](#footnote-63)
* the AFFCO Rangiuru plant has been operating for many years and its track record as exemplified by the low level of complaints and high degree of consent compliance was such that the effects of its discharges were well understood;[[64]](#footnote-64) and
* monitoring data and surveys undertaken to date provided certainty of the potential effects, so there was no need to limit the term due to uncertainty. Any uncertainties arising from future planning framework and catchment wide water quality goals could be addressed through review conditions.[[65]](#footnote-65)
1. Ms Hamm submitted that because the applications are for replacement resource consents, the value of the investment of the existing consent holder is a relevant consideration under section 104(2A) of the RMA.[[66]](#footnote-66) The evidence of Mr Miles for AFFCO is that the Rangiuru plant has a valuation in excess of $100 million. We note that to be a sizeable investment which weighs in favour of a longer duration.
2. We also acknowledge the rationale for a long duration as set out in AFFCO’s evidence and legal submissions. On that basis we reject suggestions for durations of ten years or less as being unreasonable and not justified on the evidence presented.
3. Mr Whittaker recommended a duration of 20 years on the basis that a 20-year duration would provide an appropriate balance of providing certainty to AFFCO while also allowing a full reconsenting process and evaluation after 20 years.
4. At the hearing Ms Hamm advised AFFCO still sought a duration of 35 years but submitted that if we were not minded to grant a 35-year term then a suitable ‘starting range’ would be in the order of 20 to 35 years. She also suggested aligning the replacement consents with the duration for the plant’s air discharge consent which expires in November 2047.
5. We asked Mr Miles about the durations granted to other AFFCO plants. Setting aside the Malvern plant (which is a discharge to land) the other AFFCO plants[[67]](#footnote-67) had consent durations ranging from 16 to 30 years with an average of 22 years.
6. Having considered the above matters we consider that a duration (from the date of grant) of 20 years is appropriate. We note that equates to an effective duration of 25 years from the expiry of the main wastewater discharge consent 17‐0084‐DC.01 to the Kaituna River. That exceeds the average duration imposed on other AFFCO plants and sits within (albeit at the bottom end) of the ‘starting point’ range suggested by Ms Hamm.
7. To provide certainty, we have imposed an expiry date on all of the consents of 30 September 2042.
8. Having said that, we acknowledge the merits of aligning the durations of all of the resource consents for the site. However, there is nothing to prevent AFFCO seeking to replace the air discharge consent as part of an overall ‘replacement consent package’ before its expiry in 2047.
9. Under RMA section 113(1)(b) we must state the reasons for deciding on a shorter duration if we impose one that is shorter than what was specified in the application (namely 35 years).
10. In this case we consider that the BOPRC’s implementation of the NPSFM is highly likely to introduce a new regime for freshwater management that will affect consent holders as well as catchment wide land management practices. The potential extent of those changes is unknown and the length of time it will take for them to become operative is also unclear, as are any transitional or implementation timeframes that might be associated with them. In addition, the pending replacement of the RMA with the Natural and Built Environments Act and the consolidation of all of the existing national policy statements and national environmental standards into the new national planning framework adds a further level of uncertainty about the outcomes that future decision-makers will be required to adhere to, as well as any timeframes for their implementation. However, we surmise that there may well be long transitional timeframes associated with the new regime.
11. This legislative and policy regime uncertainty makes it difficult to anticipate what might be considered environmentally acceptable in ten to fifteen years’ time let alone 35 years’ time. However, because the AFFCO Rangiuru plant has been operating for many years with a low level of complaints and a high degree of consent compliance with its discharge standards, we are comfortable with enabling the continued operation of the plant for another twenty years and an associated expiry date of 2042. We note that will provide AFFCO with ample lead time to amend their operation, if that proves necessary, to comply with whatever the new legislative and policy regime requires.

## 5.11 Other matters

1. No other relevant matters were brought to our attention, and we are not aware of any.

# 6 Part 2 matters

1. Following the Court of Appeal’s judgement on *RJ Davidson Family Trust v Marlborough District Council* we have not separately assessed Part 2 matters as we consider that the relevant plan provisions have clearly given effect to Part 2 and so assessing the Part 2 matters *"would not add anything to the evaluative exercise"*.

# 7 Determination

1. Pursuant to the powers delegated to us by the Bay of Plenty Regional Council under section 34A(1) of the Resource Management Act 1991, we record that having read AFFCO’s application documents, evidence and legal submissions; the BOPRC Section 42A Report; the submissions and submitter evidence, and having considered the various requirements of the RMA, we find that:
2. Based on the evidence before us, the actual and potential adverse effects of the application are either no more than minor or can be suitably avoided, remedied or mitigated by readily enforceable consent conditions;
3. The application if granted will have substantial positive effects; and
4. The applications are consistent with the provisions of the relevant existing statutory instruments.
5. We therefore **grant** the applications lodged by AFFCO New Zealand Limited for the renewal (replacement) of the existing resource consents outlined in section 1 of this Decision. Our reasons are set out above and are expanded upon in the body of this Decision.
6. Having made that decision, we acknowledge that tangata whenua oppose discharges of wastewater to the Kaituna River, but in this case there are no practical alternatives if the AFFCO Rangiuru plant is to be enabled to continue in operation. As we noted earlier, Mr Miles’ evidence sets out the valuation of the AFFCO Rangiuru Plant as being in excess of $100 million, it employs up to 500 staff in the peak season not including subcontractors and consultants and pays out approximately $30 million in salaries and contract fees on an annual basis.
7. In light of those substantial social and economic factors, the absence of demonstrable adverse effects on water quality and aquatic ecosystems, and the processes in place through conditions of consent which require iwi engagement in respect of operational performance, we consider it would be unduly onerous to require cessation of the discharges to the Kaituna River as that would necessarily preclude the ongoing operation of the Rangiuru plant.
8. We were also encouraged that AFFCO has responded to concerns raised by both the submitters and the BOPRC and committed to install additional aeration in its oxidation pond which will lead to improvements in the quality of the discharge to the river. The new Kaitiakitanga Monitoring and Restoration Committee provides the opportunity for AFFCO to build and maintain a better ongoing relationship with tangata whenua.

# 8 Consent conditions

1. Mr Whittaker recommended a comprehensive suite of conditions as part of his Section 42A Report. In his evidence Mr Venus generally accepted those recommended conditions subject to some amendments that were based on the advice of the AFFCO technical experts.
2. Submitter Barry Roderick wanted the conditions to require percentage reductions for total nitrogen and ammoniacal nitrogen to be specified in conditions. We understand him to be seeking a 50% reduction in current levels. We find that would be premature as a period of monitoring data is required to determine the actual percentage reduction in those contaminants that will result from the additional aeration.
3. We asked Ms Hamm to attach a suite of recommended conditions to her Reply submissions that indicated where wording had been agreed with the BOPRC Section 42A Reporting team and where any areas of disagreement remained. We have carefully examined the suite of conditions attached to the Reply and find them to be largely acceptable in principle. However, we have made numerous amendments to them to amongst other things: use modern language, correct grammar, impose enforceable obligations on the consent holder and ensure that the conditions are clear and certain on their face.
4. The conditions imposed are attached as Appendix 1 to this Decision. We have not shown our amendments using a ‘track changes’ format. We acknowledge that this will require the Applicant, the BOPRC and submitters to undertake a careful reading of the conditions.
5. It is conceivable that the conditions may still contain minor errors or omissions. Accordingly, should the applicant or the Council identify any minor mistakes or defects in the attached conditions, then we are prepared to issue a revised schedule of amended conditions under s133A of the RMA correcting any such matters. Consequently, any minor mistakes or defects in the amended conditions should be brought to our attention prior to the end of the 20-working day period specified in section 133A of the RMA.

Signed by the commissioners:



Gina Sweetman



Siani Walker



Rob van Voorthuysen (Chair)

Dated: 12 September 2022

1. Commissioner Sweetman is an experienced Independent Commissioner. She has a planning qualification and is a full member of the New Zealand Planning Institute. Her experience includes Te Ao Māori. In 2020 she was appointed as a Freshwater Commissioner by the Minister for the Environment [↑](#footnote-ref-1)
2. Commission Walker is an Independent Commissioner. She has a planning qualification and is a full member of the New Zealand Planning Institute (NZPI), and Chair of Papa Pounamu Tāmaki Makaurau a special interest group of NZPI. Her experience includes Te Ao Māori including Māori and corporate governance. [↑](#footnote-ref-2)
3. Commissioner van Voorthuysen is an experienced Independent Commissioner, having sat on over 370 Hearings throughout New Zealand since 1998. He has qualifications in natural resources engineering and public policy. In 2020 he was appointed as a Freshwater Commissioner by the Minister for the Environment. [↑](#footnote-ref-3)
4. AFFCO New Zealand Limited, Rangiuru Processing Plan, Discharges to the Kaituna River, Resource Consent Applications, Assessment of Effects on the Environment, February 2017 [‘*the AEE’*], section 2 “Description of the Activity” [↑](#footnote-ref-4)
5. Bay of Plenty Regional Council, Officer’s Report for a publicly and limited notified resource consent applications, Section 42A Resource Management Act 1991 (RMA), Todd Whittaker, consultant planner, 22 July 2022, paragraphs 4.13 to4.47. [↑](#footnote-ref-5)
6. Our site visit revealed that the plant no longer processes beef cattle. [↑](#footnote-ref-6)
7. EIC Tony Miles [↑](#footnote-ref-7)
8. EIC Paul Rolleston [↑](#footnote-ref-8)
9. Section 42A Report, page 705. [↑](#footnote-ref-9)
10. EIC van Oostrom. [↑](#footnote-ref-10)
11. Section 42A Report. [↑](#footnote-ref-11)
12. EIC van Oostrom. [↑](#footnote-ref-12)
13. Section 5, Notification and submissions. [↑](#footnote-ref-13)
14. Tony Miles (AFFCO Chief of Operations), Paul Rolleston (Plant Manager), David Whyte (consultant hydrogeologist), Albert van Oostrom (waste management consultant), Daniel Gulliver (freshwater ecologist), Luke Gowing (water quality), Garry Venus (planning). [↑](#footnote-ref-14)
15. Legal Submissions on behalf of the Applicant, Vanessa Hamm, 11 August 2022. [↑](#footnote-ref-15)
16. Barry Roderick and the Maketu Ongatoro Wetland Society (Julian Fitter). [↑](#footnote-ref-16)
17. Julian Fitter; Barry Roderick; Tom Kay for Royal Forest and Bird Protection Society, Raewyn Bennet for Ngāti Pikiao Environmental Society; Rawiri Biel for Te Uarangi Teepa and Te Atatohea Biel; Helen Biel for Ngāti Moko Marae Committee and the Tapuika Iwi Authority; Dean Flavell for Te Maru O Kaituna River Authority. [↑](#footnote-ref-17)
18. Section 104(2) of the RMA. [↑](#footnote-ref-18)
19. We were provided with copies of the cases and note that we were already familiar with them. [↑](#footnote-ref-19)
20. Section 42A Report, Executive Summary. [↑](#footnote-ref-20)
21. Section 42A Report, page 712. [↑](#footnote-ref-21)
22. This bore is situated between the riverside edge of the ponds and the river. See Figure 2 on page 706 of the Section 42A Report. [↑](#footnote-ref-22)
23. Section 42A Report, page 712. [↑](#footnote-ref-23)
24. Ibid, page 713. [↑](#footnote-ref-24)
25. Ibid, pages 723 and 724. [↑](#footnote-ref-25)
26. As set out in Table 5 of Appendix 2A of the NPSFM that means there was no observed effect on any species tested as part of the derivation of the standard. [↑](#footnote-ref-26)
27. Total Oxidisable Nitrogen (nitrate + nitrite). [↑](#footnote-ref-27)
28. Section 42A Report, page 712. [↑](#footnote-ref-28)
29. Section 42A Report, page 712. [↑](#footnote-ref-29)
30. Section 42A Report, pages 719 to 725. [↑](#footnote-ref-30)
31. EIC Gulliver, paragraph 3.8. [↑](#footnote-ref-31)
32. The BOPRC has recently rediverted some of the river flow back into the estuary. [↑](#footnote-ref-32)
33. Section 42A Report, page 714. [↑](#footnote-ref-33)
34. EIC van Oostrom, paragraph 7.8. [↑](#footnote-ref-34)
35. The estimated risk of Campylobacter infection has a > 5% occurrence, at least 5% of the time. [↑](#footnote-ref-35)
36. The estimated risk of Campylobacter infection has a 1 – 5% occurrence, 95% of the time. [↑](#footnote-ref-36)
37. Section 42A Report, page 711 [↑](#footnote-ref-37)
38. EIC Gowing, paragraph 3.10. [↑](#footnote-ref-38)
39. EIC Gowing, paragraph 3.13. [↑](#footnote-ref-39)
40. Section 42A Report, page 715. [↑](#footnote-ref-40)
41. Mean annual low flow. [↑](#footnote-ref-41)
42. Section 42A Report, page 28. [↑](#footnote-ref-42)
43. Section 42A Report, paragraph 8.53. [↑](#footnote-ref-43)
44. Section 42A Report, paragraphs 8.57 to 8.59. [↑](#footnote-ref-44)
45. Section 42A Report, page 716. [↑](#footnote-ref-45)
46. Forest and Bird (Te Puke and Tauranga branches and Bay of Plenty Regional Conservation Manager), Te Maru o Kaituna [↑](#footnote-ref-46)
47. Supplementary evidence Venus, paragraph 4.6. [↑](#footnote-ref-47)
48. Tapuika Environmental Management Plan 2014-2024. [↑](#footnote-ref-48)
49. Ms Bennett is a volunteer for Ngāti Pikiao iwi resource management matters. [↑](#footnote-ref-49)
50. Māori Dictionary online: Dirty (stative); Sewerage (noun). [↑](#footnote-ref-50)
51. Reply Submissions on Behalf of the Applicant, paragraph 29. [↑](#footnote-ref-51)
52. The remaining policies relate to procedural matters; BOPRC plan making, the use and development of land, monitoring and information provision; or features that are not present here (natural inland wetlands and outstanding water bodies). [↑](#footnote-ref-52)
53. Section 42A Report, section 11. [↑](#footnote-ref-53)
54. Legal submissions, paragraph 11. [↑](#footnote-ref-54)
55. Ibid, paragraphs 13 and 14. [↑](#footnote-ref-55)
56. Argoenvironmental dated 5 July 2022 [↑](#footnote-ref-56)
57. Section 42A Report, section 11. [↑](#footnote-ref-57)
58. Section 8.6.1. [↑](#footnote-ref-58)
59. Section 42A Report, section 13. [↑](#footnote-ref-59)
60. Section 42A Report, section 14. [↑](#footnote-ref-60)
61. EIC Tony Miles [↑](#footnote-ref-61)
62. *Crest Energy Kaipara Ltd v Northland Regional Council* [2011] NZEnvC 26; [2011] NZRMA 420 (3 February 2011. [↑](#footnote-ref-62)
63. EIC Tony Miles. [↑](#footnote-ref-63)
64. EIC Gary Venus [↑](#footnote-ref-64)
65. Ibid. [↑](#footnote-ref-65)
66. Legal submissions, paragraph 15. [↑](#footnote-ref-66)
67. The AFFCO plants at Moerewa, Horotiu, Wairoa, Imlay, Manawatu and Awarua. [↑](#footnote-ref-67)