

17 April 2020

AFFCO Rangiuru

1562 Te Puke Highway
Paengaroa 3186

Attention: Adam Grant

Re: Consultation Addendum for the reconsenting of the treated wastewater discharge to the Kaituna River from the AFFCO Rangiuru Meat Processing Facility

INTRODUCTION

AFFCO New Zealand Limited (AFFCO) submitted a resource consent application to Bay of Plenty Regional Council (BoPRC) in February 2017 for the continued discharge of treated wastewater from the Rangiuru meat processing facility into the Kaituna River, in advance of the expiring resource consent for the discharge (Consent No. 24932).

The consent application was lodged more than 6 months prior to expiry of Consent 24931, and therefore under Section 124 of the *Resource Management Act 1991 (RMA)* AFFCO can continue operating under Consent 24932 until a decision has been made on the application and Assessment of Environmental Effects (AEE), and all appeals have been finalised. Under Section 92 BoPRC requested that further stakeholder consultation be undertaken by AFFCO to support the consent application. Argo Environmental Ltd (Argo) was commissioned by AFFCO to undertake this additional consultation.

This Consultation Addendum sets out:

- an overview of consultation that has been undertaken associated with lodgement of the AEE;
- identifies stakeholders that required further engagement; and
- summarises consultation undertaken, the key parties consulted and the issues raised during consultation since lodgement of the AEE.

PREVIOUS STAKEHOLDER ENGAGEMENT / CONSULTATION UNDERTAKEN

Prior to AEE Lodgement in February 2017

Consultation has been undertaken with local stakeholders since 2016. These stakeholders included local tāngata whenua identified by BoPRC, as well as freshwater user groups in the area.

Iwi Consultation

On advice from BOPRC, Argo (on behalf of AFFCO) consulted extensively with Tapuika Iwi Authority (*Tapuika*) as Tangata Whenua. Engagement with *Tapuika* began in October 2016 and included:

- an initial meeting between Argo (Garry Venus) and Tapuika (Mr Hohepa Maxwell) on 28 October 2016;
- various email exchanges;
- a site visit by Mr Maxwell on 2nd February 2017; and
- follow-up visits by Tapuika to the AFFCO site.

A consultation document was prepared by AFFCO which summarised the operation, monitoring results, and the consent application for the purpose of informing stakeholders of all the known key issues associated with AFFCO's Rangiuuru consent application. 15 copies of the Consultation Summary document were provided to *Tapuika*.

At these meetings *Tapuika* representatives emphasised the significance of the Kaituna River to *Tapuika*, pointing out that *Tapuika*'s relationship with the Kaituna River lies at the heart of the spiritual and physical wellbeing of *Tapuika*. As such, this gives rise to their responsibilities to protect the mana and mauri of the Kaituna River.

Tapuika advised of the presence of an important recreational area at the confluence of the Pakipaki Stream and the Kaituna River, approximately 1.5 km downstream of the AFFCO Rangiuuru site, and expressed concern about potential health risks associated with the discharge.

AFFCO took these matters into account in preparing the AEE and consent application, with a view to maintaining ongoing discussions with *Tapuika* to identify any other issues of concern to *Tapuika* so they could be addressed in the consenting process.

Other Stakeholders

Consultation was also undertaken with the Kaituna Maketū Freshwater Community Group. The Community Group members include a broad range of representatives with interest in how water quality and quantity is used and managed in the local area, including local residents, iwi, businesses, councilors, industry, agency, recreation and environmental groups.

A copy of the Consultation Summary document was provided to Mr Warren Webber, a Kaituna Maketu Freshwater Community Group member, followed up by a telephone conversation and offer to provide any further information to the Kaituna Maketu Freshwater Community Group.

Between AEE Lodgement (February 2017) to December 2018

Based on direction from BoPRC in May 2017, further engagement was undertaken by Argo/AFFCO with iwi groups not originally consulted with. These groups included:

- Waitaha
- Ngāti Rangiwewehi
- Ngāti Pikiao ki Maketu/Ngāti Pikiao ki Tai.

The consultation involved review of iwi management plans and environmental plans for each iwi, and telephone and in-person meetings to identify issues of concern and potential mitigation options.

STAKEHOLDER ENGAGEMENT / CONSULTATION SINCE JANUARY 2019

Stakeholder Identification and Consultation Plan

Mr Todd Whittaker, planning consultant engaged by BoPRC to assist in processing the consent application, stated in an email dated 21 December 2018 that further consultation was required with potential affected stakeholders.

Mr Whittaker identified in his email that iwi in particular are key stakeholders for the application, and that the following iwi groups have statutory acknowledgements over the Kaituna River:

- Ngāti Pikiao
- Ngāti Rangiwewehi
- Tapuika

- Ngāti Pūkenga
- Ngāi Te Rangī
- Waitaha

Of these groups, Ngāti Rangiwewehi and Tapuika Iwi Authority have statutory acknowledgement on the Kaituna River at AFFCO's discharge location; Ngāti Pūkenga has statutory acknowledgement on the coastline; and Waitaha has statutory acknowledgement on the Kaituna River downstream of the discharge location.

Of this list, the iwi groups not yet engaged by Argo/AFFCO as part of previous consultation activities include Ngāti Pūkenga and Ngāi Te Rangī.

A Consultation Plan was prepared in March 2019 and provided to BoPRC, which set out an overview of consultation that had been undertaken to date, identified stakeholders that required further engagement, and proposed a list of key stakeholders that are to be engaged, or reengaged, in order to satisfy BoPRC consenting officers as part of the s92 information request for Consent No. 24932.

Tāngata whenua were identified as the primary stakeholders in the area, and BoPRC provided a list of iwi groups that have statutory acknowledgements over the Kaituna River. No other stakeholder groups were specifically identified by BoPRC as requiring further consultation.

A meeting was held on 27 September 2019 between Argo/AFFCO and BoPRC, which included Adam Grant (AFFCO), Luke Gowing and Daniel Gulliver (Argo), Todd Whitaker and Marlene Bosch (BoPRC). During this meeting the outstanding information requested by BoPRC was discussed, including the proposed scope of further consultation. BoPRC confirmed that the iwi are considered the primary key stakeholders that require engagement, and that all of the groups identified above are potentially affected and need to be consulted to identify potential cultural effects.

AFFCO subsequently engaged Vanessa Hamm (Holland Beckett Law) to facilitate the required iwi consultation given her recent experience and relationships with many of these groups. Mrs Hamm proposed that the *Te Maru O Kaituna River Authority* be added to the list of iwi groups to be consulted.

Consultation with Tāngata Whenua

All of the groups identified above were engaged and consulted with between October and December 2019. The scope of the consultation included all resource consent applications currently being applied for from the BoPRC, including the treated wastewater discharge to the Kaituna River application, and the Stormwater, Defrost and Cooling Water Discharge application.

An application summary document was prepared which summarized the consent applications being applied for in a brief format appropriate for consultation purposes with various stakeholders (provided in Appendix A). The application summary document was circulated to the identified stakeholders via email as well as in person during meetings.

A Consultation Register was maintained, including key outcomes of that consultation (provided in Appendix B), along with detailed meeting notes from the iwi groups that were consulted in person (provided in Appendix C and Appendix D). The further consultation undertaken is summarised in Table 1 below.

AFFCO intends to maintain ongoing discussions with the iwi groups engaged, in particular those actively involved in resource consent matters such as the Tapuika Iwi Authority and Ngāti Pīkiao, to identify any other issues of concern so they can be addressed in the consenting process.

Table 1: Summary of further iwi consultation undertaken relating to the application.

Iwi Group	Nature of Consultation / Engagement	Outcomes/Comments
Tapuika Iwi Authority	Email correspondence (numerous) between 23 October 2019 and 15 November 2019. Provision of consultation summary document outlining project and application. Provision of ongoing monitoring data. Meeting with Mr Maxwell at AFFCO Rangiuuru site and site visit on 6 November 2019.	Provision of Pathogen monitoring report to Mr Maxwell. Meeting notes provided in Appendix C.
Ngāti Pūkenga	Email correspondence between 23 October 2019 and 4 November 2019. Provision of consultation summary document outlining project and application.	Ngāti Pūkenga do not wish to be actively involved but differ to (i.e. leave matter with) mana whenua iwi at point of discharge (refer Appendix B).
Ngāi Te Rangi	Email correspondence between 23 October 2019 and 8 November 2019. Provision of consultation summary document outlining project and application. Phone call with Pia Bennett on 8 November 2019	Ngāi Te Rangi do not wish to be actively involved in proposal, but supports mana whenua iwi that actively exercise kaitiakitanga and their kaitiaki decision-making (refer Appendix B). AFFCO provided summary of outcome of meetings and feedback with other iwi.
Waitaha	Email correspondence between 24 October 2019 and 1 November 2019. Provision of consultation summary document outlining project and application.	Waitaha do not wish to be actively involved in proposal, but supports any responses from Tapuika Iwi Authority.
Ngāti Rangiwewehi	Email correspondence between 24 October 2019 and 2 December 2019. Provision of consultation summary document outlining project and application.	Iwi hui planned for early December 2019. Ngāti Rangiwewehi stated they would come back to AFFCO after the hui.
Ngāti Pikiao	Email correspondence (numerous) between 24 October 2019 and 27 November 2019. Provision of consultation summary document outlining project and application. AFFCO attended hui at Te Awhe Marae on 22 November 2019 to present the application and invite feedback from the iwi. Handout provided to hui attendees.	Meeting notes provided in Appendix D.
Te Maru O Kaituna River Authority	Email correspondence on 24 October 2019. Provision of consultation summary document outlining project and application.	No response received from Te Maru O Kaituna River Authority

Consultation with Other Stakeholders

No other stakeholders were identified as being potential affected by this specific application either by AFFCO or BoPRC, in addition to those already consulted with such as the Kaituna Maketū Freshwater Community Group.

However, Mr Whittaker stated in his email dated 21 December 2018, that:

“Other affected parties are dependent on the potential effects and downstream uses of the river (e.g. water takes or recreational activities). If the effects are more than minor or the discharge affects the swimability of the river, then it warrants public notification (the Kaituna River is classified as having contact recreation water quality in the Natural Resources Plan).”

Water quality and ecological monitoring undertaken within the Kaituna River has not indicated that the discharge of treated wastewater from AFFCO’s facility is resulting in more than minor effects on the ecological functions, or swimability of the River ^{1, 2 & 3}. While the lower reach of the Kaituna River is classified as ‘Contact Recreation’ in the BoPRC Natural Resources Plan, the Kaituna River in the location of AFFCO’s discharge is classified as an ‘Aquatic Ecosystem’, and does not become ‘Contact Recreation’ at a point approximately 1.7 km downstream of the discharge location.

As there is no indication that AFFCO’s discharge is resulting in a more than minor effect on the River, and the discharge is not within an area identified as ‘contact recreation’, there is no reason to expect the discharge will affect downstream users, or the swimability of the River.

Therefore, further consultation with other stakeholders was not considered necessary at this stage of the application process.

¹ Argo, 2017, “Rangioru Processing Plant: Discharges to Kaituna River Resource Consent Applications – Assessment of Effects on the Environment”, Report prepared by Argo Environmental Ltd for AFFCO New Zealand Limited, February 2017

² Argo, 2020, “Monitoring of the AFFCO Rangioru Discharge to the Kaituna River: Macroinvertebrate Monitoring Survey 2018 and 2019”, Report prepared by Argo Environmental Ltd for AFFCO New Zealand Limited, Interim Report, April 2020.

³ Argo, 2019, “Kaituna River Fish Survey Report”, Report prepared by Argo Environmental Ltd for AFFCO New Zealand Limited, Final Draft Report, March 2019.

Appendix A Stakeholder Consultation Summary Document

RANGIURU PROCESSING PLANT – DISCHARGE TO KAITUNA RIVER RESOURCE CONSENT APPLICATIONS

Stakeholder Consultation Summary Document

Introduction

AFFCO New Zealand Ltd (AFFCO) operates a meat processing facility at Rangiuru, about 6 km east of Te Puke. The plant is located on land between SH2 and the Kaituna River; and the site is owned and occupied by AFFCO (see Figure 1).

The AFFCO Rangiuru facility is capable of processing 90,000 beef, 230,000 calves and in excess of 1 million lambs per year.

AFFCO Rangiuru is one of the largest employers in the Te Puke area. The site employs up to 600 staff in the peak season not including sub-contractors and consultants, and pays out approximately \$23 million in salaries and contract fees annually. Around 90% of this labour is sourced locally.

The AFFCO Rangiuru facility has been in operation since December 1965, and has been considerably redeveloped and modernized.

Over the past 10 years, AFFCO, has invested significant new capital across its plants, including the Rangiuru Plant. Upgrade initiatives at Rangiuru have been undertaken at a capital cost of \$11.7 million, including \$1.8 million for the Rendering Plant alone.

Resource Consent Application

AFFCO currently holds a resource consent (Consent No. 24932) with the Bay of Plenty Regional Council (BoPRC) to discharge treated abattoir wastewater to the Kaituna River. An associated resource consent (Consent No. 63344) allows discharge treated wastewater to land via seepage from the base of the treatment ponds.

The most recent consents to discharge treated wastewater to land and water were granted in August 2002 and expired on 31 August 2017.

AFFCO lodged a new application to replace these consents on 24 February 2017, which included an Assessment of Environmental Effects (AEE). The consent application is currently on hold under Section 92 of the *Resource Management Act 1991* (RMA), awaiting further information relating

to the ecological health of the Kaituna River, and AFFCO is exercising Consent No. 24932 & 63344, under Section 124(3) of the RMA.

As part of this Section 92 request, additional environmental monitoring was undertaken which required an extended monitoring period to ensure sufficient environmental data was collected to assist with assessing potential effects of the discharge on the environment.

In addition, an application for replacement of resource consent to discharge treated amenities wastewater to land (Consent No. 60574) was lodged with BOPRC on 14 April 2016. While this consent expired on 31 October 2016, BoPRC considered it appropriate to bundle this application together with Consents 24932 and 63344 and process concurrently. AFFCO continues to operate under Section 124(3) of the RMA.

An application to replace the existing Consent 24925 regarding the discharge to stormwater and defrost water (expiring 30 June 2020), is also currently being prepared, and will be lodged with BoPRC no later than December 2019, which is to be processed concurrently as the other applications.

This Document discusses the replacement resource consents being sought (refer Table 1), to assist with consultation with key stakeholders.

Table 1: Resource Consents being renewed.

Consent No.	Activity Authorised	Expiry
24932	Discharge of treated wastewater from the meat processing plant to water (Kaituna River)	31-08-17*
63344	Discharge of treated wastewater to land via seepage	31-08-17*
60574	Discharge treated amenities wastewater to land	31-10-16*
24925	Discharge Stormwater and Defrost Water	30-06-20

* Processing of application on hold under Section 92 of the RMA.

AFFCO is proposing the same conditions as in the currently held consents, and a term of 35 years.



Figure 1: Site Location

Wastewater Treatment and Solids Management

Discharge of treated meat processing wastewater to the Kaituna River (Consent No. 24932)

AFFCO's Rangiuuru Processing Plant operates up to 7 days per week; around 48 weeks per year. Ponds and wastewater systems are run continuously.

Processing effluent is initially treated by screening, dissolved air flotation or sedimentation (in a Save-all and/or "solids pits"), or various combinations of these treatments. Depending on the source, the recovered solids are rendered or, after digestion in solids pits, stabilised and dewatered in a solids stabilisation area. The wastewater is then biologically treated in three anaerobic ponds, two oxidation ponds and four constructed wetlands (with a total surface area of 5.5 ha (see Figure 2)).

Treated effluent is discharged to the Kaituna River at a maximum permitted dry-weather discharge

volume of 6,500 m³ per day. The maximum daily volume of effluent discharged for in the 12 months to July 2016 was 5,161 m³ (average over that period of 1,629 m³ per day).

The fully treated wastewater from the wetlands is discharged to the Kaituna River through a 300 mm diameter PVC pipe.

The treatment system was upgraded in 2005/2006, and the consent limits for nutrients (including total nitrogen and total phosphorous load) were reduced. Once the upgraded system was operational the discharged nitrogen load showed noticeable improvement.

All consent limits, including discharge volume, biological oxygen demand, total nitrogen load, total phosphorous load, and *enterococci* have been adhered to, and in many cases the treated wastewater discharged is well below the consent limits.

A pathogen study undertaken between 2014 and 2016 indicated that there was no or very low risk, to human health from the discharge.

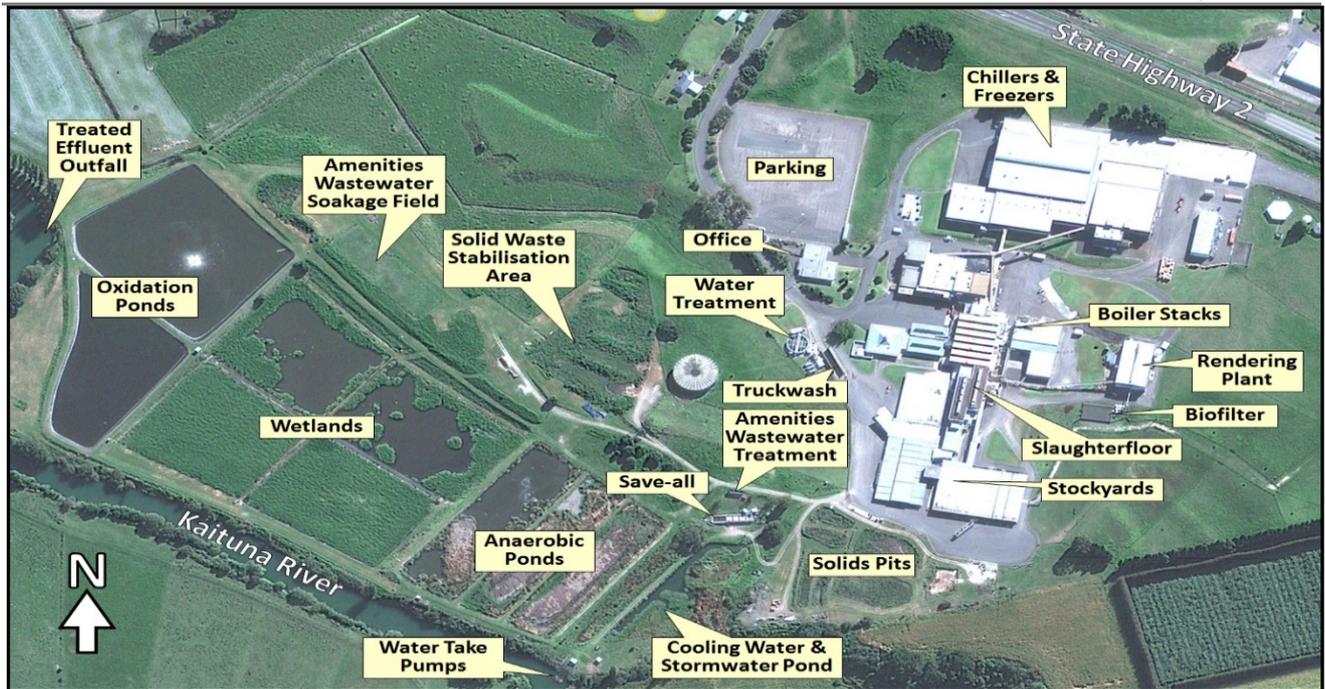


Figure 2: AFFCO Rangioru Plant layout

Pond Seepage (Consent No. 63344)

In 2003 AFFCO was granted consent to discharge a daily volume of up to 152 m³ for seepage from the base of the recently constructed oxidation ponds, and changes to existing constructed wetlands, associated with the treatment system for Kaituna River Discharge Consent (No. 24932).

Consent was granted for a period expiring 31 August 2017, to coincide with the expiry of Consent 24932.

Amenities Wastewater (Consent No. 60574)

Amenities wastewater (containing human wastes from ablution facilities and food waste from site kitchens) is pumped to a package treatment plant where it is treated by an activated sludge process. The treated wastewater flows by gravity to a soakage field.

Discharge Consent No. 60574 authorises the discharge of up to 35 m³/day of treated effluent to the soakage field. The mean daily flow rate over the past 10 years has been 15.4 m³ per day.

The field consists of five groups of 10 soakage trenches. The field is mounded to ensure that stormwater falling outside the area of the soakage field is diverted away from the soakage field.

Discharge Stormwater and Defrost Water (Consent No. 24925)

In July 2000, AFFCO received non-notified consent to discharge stormwater, and defrost water (0.345 m³/s) and cooling water (3.2 m³/s except where a 1 in 50 yr storm event is exceeded) to the Kaituna River at a point adjacent to the water take pumps. The consent expires on 30 June 2020.

Receiving Environment (Kaituna River)

The Kaituna River in the vicinity of the AFFCO plant, approximately 14 km from the sea, is characterised by a wide, deep channel, ranging from in width from 20-50 m and is dominated by a sand substrate. The vegetation along the riverbanks is typically grazed pasture or low growing weeds and shrubs with scattered stands of willow common along its length.

Growth of aquatic plants from the AFFCO plant to the river mouth is generally limited to a narrow strip along the river margins, due to water depth, the mobile nature of the substrate and relatively high water velocity.

The macroinvertebrate (small aquatic animals) community is dominated by the freshwater snail (*Potamopyrgus antipodarum*) and the caddisfly (*Triplectides* sp.).

Environmental Effects

Environmental effects of AFFCO's river discharge, pond seepage, amenities wastewater discharge and stormwater/cooling water discharge are briefly summarised below. Detailed information will be provided in the full AEE.

Surface Water Quality

AFFCO has undertaken water quality and ecology surveys in the Kaituna River since 1982. Recent studies (since 2005) surveyed seven sites along the River and in the Maketu Estuary for water quality, changes in aquatic flora, changes in aquatic fauna, impact on bathing water quality and on traditional food sources and food gathering areas within the Kaituna River, and the effects of ammonia on aquatic ecosystems.

No significant difference in the water quality of the Kaituna River was observed for the majority of the physical parameters (temp, DO, pH, turbidity, TSS, cBOD5), nutrients (TKN, TON, DRP) and bacteria (*E.coli*, *enterococci*, faecal coliforms) upstream and downstream of the discharge.

However a difference was observed directly upstream and downstream of the discharge for total ammoniacal nitrogen (NH₃-N), total nitrogen (TN) and total phosphorous (TP) with an increase in concentrations immediately downstream of the discharge before returning to close to background concentrations at sites further downstream.

Based on a comparison with the ANZECC (2000) trigger value and NPS-FW (2014) Attribute States, ammonia concentrations in the discharge would not result in an environmental effect that is more than minor. TN and TP concentrations exceed the ANZECC (2000) trigger value for 95% protection however as a large proportion of the TN is organic nitrogen, no adverse effects as a result of the discharge are anticipated.

Overall, it is concluded that the wastewater discharge from the AFFCO plant at Rangiuru is having no more than minor effect on the water quality of the Kaituna River therefore is highly unlikely to be affecting freshwater ecosystems.

Mixing / Dispersion Zone

A study was undertaken in March 2019 to confirm the dilution of the discharged treated wastewater being achieved by the diffusers.

Sampling was undertaken in the Kaituna River, and was designed to determine the 'worst-case' potential for mixing i.e., at low tide and at Mean Annual Low Flow (MALF).

Ammonia was shown to be fully mixed at 100 m downstream of the discharge.

Freshwater Ecology

Macroinvertebrates

Studies on the macroinvertebrate assemblages within the Kaituna River upstream and downstream of the discharge location have been undertaken in 2005, 2007, 2012, 2016 and 2018/2019.

Analyses of the 2018/19 survey data confirmed that there was no difference in mean macroinvertebrate abundances, numbers of species and mean MCI scores between upstream and downstream sites. MCI scores indicated 'probable severe enrichment' at all sites, including upstream of the discharge.

The macroinvertebrate survey results indicate that the discharge is resulting in no more than minor effect on the ecological health of the River.

Fish

A fish survey was undertaken in December 2018. Fish species identified during the survey included Longfin eel (*Anguilla dieffenbachia*), Short-finned eel (*Anguilla australis*), Inanga (*Galaxias maculatus*), Common bully (*Gobiomorphus cotidianus*), Common smelt (*Retropinna retropinna*) and Mosquito fish (*Gambusia affinis*).

The survey did not identify any observable differences in the type of species present or their abundances in River and tributary sites, indicating the discharge is unlikely to be affecting fish communities in the River.

Groundwater Quality

Pond Seepage

The main effect of pond seepage on groundwater quality relates to increased concentrations of ammonia and phosphorus in the groundwater.

Groundwater monitoring, focusing on nutrients and bacteria, is undertaken quarterly from three monitoring bores in the vicinity of the treatment system. Nutrient and faecal bacteria levels appear not to be significantly.

The measured groundwater flow is towards the Kaituna River, so any groundwater quality effects will be localised to the relatively small area beneath the ponds, and between the ponds and River on AFFCO's property. There are no groundwater abstractions that could potentially be affected by the discharge.

Groundwater monitoring shows that the treatment that occurs as the effluent passes through the soil is superior to that provided by the ponds and wetlands system. Contaminant loadings will all be much lower in the seepage than for the same volume discharged direct to the River.

The seepage accounts for a very small proportion of the contaminant load discharged to the River. Overall, any potential adverse effects on River water quality, biota, water abstractions and recreational activities are considered to be less than minor.

Amenities Wastewater Discharge

The average loading rate of 13 mm/day is well within the 30-50 mm/day rates recommended as design maxima for soils such as occur at Rangiuru according to NZS 1547:2012. Soil infiltration tests have shown the capacity of the soil at the soakage field is acceptable. Therefore environmental effects of the discharge, including on groundwater quality, will be less than minor.

In addition, there is extensive buffer area around the disposal area, with groundwater flows towards the AFFCO Rangiuru wastewater treatment ponds. Therefore the risk of adverse effects is considered to be less than minor.

Iwi Considerations

Iwi consultation is an integral element of any re-consenting programme involving discharges to natural waters. There are a number of iwi with direct interests in the River. BoPRC has identified the following iwi groups that have statutory acknowledgements over the River:

- Ngāti Pikiao
- Ngāti Rangiwewehi
- Tapuika
- Ngāti Pūkenga
- Ngāi Te Rangi
- Waitaha

Ngāti Rangiwewehi and Tapuika have statutory acknowledgement on the Kaituna River at AFFCO's discharge location; Ngāti Pūkenga has statutory acknowledgement on the coastline; and Waitaha has statutory acknowledgement on the Kaituna River downstream of the discharge.

Some of these groups were consulted in 2016/2017 during and after preparation of the consent application lodged with BoPRC in February 2017. AFFCO will consult with all of these groups prior to resubmission of the full AEE and consent application.

The following sections briefly summarise iwi interests known to AFFCO at this time.

Te Maru o Kaituna River Authority

Te Maru o Kaituna River Authority (the Authority) is the co-governance partnership set up by the Tapuika Claims Settlement Act 2014. The Authority is a permanent joint committee of the BOPRC, the Rotorua DC, the Tauranga CC, and the WBOPDC; and consists of eight members.

The purpose of the Authority is "*the restoration, protection, and enhancement of the environmental, cultural and spiritual health and well-being of the Kaituna River.*" The Authority is also explicitly empowered to have regard to the social and economic well-being of people and communities.

To achieve this goal, the Authority has prepared the "Kaituna River Document" (the Document) which was approved by the Authority in June 2018, and took effect from August 2018.

Kaituna River Action Plan 2019-2029

The Authority is currently preparing an action plan that outlines what will be done over the next ten years (2019 to 2029) to deliver on the vision, objectives and outcomes of the Document. A total of 15 priority actions have been identified.

Tapuika Claims Settlement Act 2014

The Tapuika Claims Settlement Act 2014 date of assent was 16 April 2014. In accordance with Schedule 1, the Kaituna River is a statutory area of Tapuika. This is relevant for both resource consent applications and for consent authorities to recognise the statutory status given to Tapuika in terms of the Kaituna River and any environmental effects under the RMA.

Tapuika EMP

The Tapuika Environmental Management Plan (EMP) was developed and released in 2014. It is a formally recognised Iwi Management Plan, and as such, has weight under the RMA. The Kaituna River falls within the rohe of Tapuika Iwi.

Tapuika were previously consulted with in 2016/2017 on the iwi's priority issues, expected outcomes and policies for water.

Ngati Whakaue ki Maketu Iwi Resource Management Plan

The Ngati Whakaue ki Maketu Iwi Resource Management Plan (August 2011); is a formally recognised Iwi Management Plan, and as such, has weight under the RMA. The Kaituna River and Maketu Estuary falls within the rohe of Ngati Whakaue ki Maketu, with the AFFCO facility falling within the Registered Interest Area.

Alternatives

The only valid alternative to a river discharge for the AFFCO's Rangiuru facility would be complete discharge to land. In order to develop a land-based treatment and disposal system, access to a large parcel of contiguous land would be required. AFFCO does not own any additional land which would be suitable for land disposal.

Acquiring a suitable area for land disposal of treated wastewater would take considerable time and expense, and would incur a need for a change of land use to allow the activity.

Based on the expected annual nitrogen loading the irrigation land required for the current consented discharge volume could be as much as 350 ha (including buffer zones). No such area of land is available in close proximity to the AFFCO Rangiuru facility. Further storage of the wastewater would also be required during wet weather when irrigation is not practicable.

Whilst no specific costing has been applied to a land disposal scheme indicative capital costs could be in the order of \$10-15 million, including both infrastructure and land acquisition. There would also be significant ongoing operational costs. Such an arrangement would be uneconomic.

Conclusions

This document sets out the background to AFFCO Rangiuru's re-consenting programme. It will be used as the basis for consultation to provide information for applications and supporting documentation.

Current monitoring of the discharge and receiving environment does not indicate any exceedence of consent limits, or a more than minor impact on the environment as a result of the exercise of the existing resource consents.

Appendix B Iwi Consultation Engagement Schedule and Outcomes (October to December 2019)

AFFCO Rangioru

Kaituna River Discharge Consent Applications

Iwi consultation/engagement October-December 2019

Iwi	Date/purpose	Outcomes/comments
Tapuika Iwi Authority	<p>Email from Vanessa Hamm to Hohepa Maxwell on 23 October 2019.</p> <p>Invitation to Rangioru site to:</p> <ul style="list-style-type: none"> • Discuss further work on treated wastewater discharge consents; and • Pending resource consent application for discharge of stormwater, defrost and cooling water. 	Meeting arranged for 6 November 2019.
	Email from Hohepa Maxwell on 23 October 2019 to Vanessa Hamm requesting confirmation of meeting date.	Email from Vanessa Hamm to Hohepa Maxwell on 23 October 2019 confirming date and time of meeting.
	<p>Email from Hohepa Maxwell to Vanessa Hamm on 23 October 2019 outlining concerns with:</p> <ul style="list-style-type: none"> • Required upgrades to AFFCO systems to safeguard against water borne viruses; • Proximity of discharge to a recreational swimming area; • History of engagement with AFFCO. <p>Stated that Tapuika welcomed meeting with HOBEC and AFFCO.</p>	
	Email from Vanessa Hamm to Hohepa Maxwell on 31 October 2019 confirming meeting and attaching AFFCO summary consultation document.	
	Email from Hohepa Maxwell to Vanessa Hamm on 1 November 2019 noting meeting time.	Email from Vanessa Hamm to Hohepa Maxwell on 1 November 2019 confirming meeting time.
	Email from Hohepa Maxwell to Vanessa Hamm on 1 November 2019 outlining Tapuika's greater interest than the public, and outlining data required as well as preference to commence weekly monitoring of discharge.	
	Email from Hohepa Maxwell on 1 November 2019 confirming meeting at Wednesday 6 November at 10am, but that he may arrive at 10.30 as he is coming from another meeting.	
	Email from Vanessa Hamm to Hohepa Maxwell on 4 November 2019 that the requested flow data could be accessed at http://harvest.com/12147 . Username: rangi. Password: nitrogen. Confirmed meeting on Wednesday 10am, and that Hohepa Maxwell may arrive at 10.30 and needs to leave at 12.45pm.	
	Email from Hohepa Maxwell to Vanessa Hamm on 6 November 2019, thanking for meeting and requesting a colour hard copy of the Water Quality Monitoring work specific to the upgrade discharge of animal waste into the Kaituna River.	

Iwi	Date/purpose	Outcomes/comments
	Email from Vanessa Hamm to Hohepa Maxwell on 7 November 2019 confirming that a hard copy of the Water Quality Monitoring will be sent.	
	Email from Hohepa Maxwell to Vanessa Hamm stating that the discharge of animal waste to the Kaituna River is analogous to the discharge of human waste into the Waiari, and that it is unacceptable. Mitigation and avoidance of risks/hazards to human health for Iwi/Hapu is the close monitoring of pathogens.	
	Email from Vanessa Hamm to Hohepa Maxwell on 8 November 2019 attaching notes from meeting on Wednesday and requesting confirmation that they reflect discussions.	
	Email from Luke Gowing to Hohepa Maxwell on 11 November 2019 circulating amended meeting notes.	See AFFCO meeting notes. Email from Hohepa Maxwell to Luke Gowing on 13 November 2019 acknowledging receipt of email.
	Email from Luke Gowing to Hohepa Maxwell on 15 November 2019 stating that Pathogen Report is in the mail.	
Ngāti Pūkenga	Email from Vanessa Hamm to Buddy Mikaere 23 October 2019. Invitation to Rangiuuru site to: <ul style="list-style-type: none"> • Discuss further work on treated wastewater discharge consents; and • Pending resource consent application for discharge of stormwater, defrost and cooling water. 	
	Email from Vanessa Hamm to Buddy Mikaere on 31 October 2019 (re-sending AFFCO email).	
	Email from Buddy Mikaere to Vanessa Hamm on 2 November 2019 outlining Ngāti Pūkenga happy to leave matter with mana whenua iwi at point of discharge from works.	Email from Vanessa Hamm to Buddy Mikaere on 4 November 2019 acknowledging receipt of email.
Ngāi Te Rangi	Email from Vanessa Hamm to Pia Bennett 23 October 2019. Invitation to Rangiuuru site to: <ul style="list-style-type: none"> • Discuss further work on treated wastewater discharge consents; and • Pending resource consent application for discharge of stormwater, defrost and cooling water. 	
	Telephone call, and text message from/to Pia Bennett on 8 November 2019 following up on email to see if keen to come to site to discuss discharge consents to the Kaituna River.	
	Email from Pia Bennett on 8 November 2019: <ul style="list-style-type: none"> • Ngai Te Rangi does not wish to be actively involved in the proposal, but supports tribes that actively exercise kaitiakitanga and support their kaitiaki decision-making. 	Email from Vanessa Hamm to Pia Bennett on 8 November 2019 that will come back to Ngāi Te Rangi in due course. Further email to Pia Bennett on 10 December 2019 with a brief update of engagement to date.

Iwi	Date/purpose	Outcomes/comments
	<ul style="list-style-type: none"> Requests brief summary of outcomes of AFFCO engagement with Ngati Pikiao and Tapuika, a copy of proposed/volunteered consent conditions/other agreements particularly in relation to cultural issues/effects. <p>The above will allow Ngai Te Rangi to know whether it can support outcome or not.</p>	
Waitaha	<p>Email from Vanessa Hamm to Vivienne Robinson on 24 October 2019.</p> <p>Invitation to Rangiuru site to:</p> <ul style="list-style-type: none"> Discuss further work on treated wastewater discharge consents; and Pending resource consent application for discharge of stormwater, defrost and cooling water. 	<p>Email from Vivienne Robinson to Vanessa Hamm on 25 October 2019 acknowledging email, anticipating response within a week.</p>
	<p>Email from Vanessa Hamm to Vivienne Robinson on 31 October 2019 touching base on meeting request.</p>	
	<p>Email from Vivienne Robinson to Vanessa Hamm on 1 November 2019 stating that Waitaha supports any responses by Tapuika, and thanking for consultation.</p>	<p>Email from Vanessa Hamm to Vivienne Robinson on 1 November 2019 acknowledging response.</p>
Ngāti Rangiwewehi	<p>Email from Vanessa Hamm to Te Tari Taiao 24 October 2019.</p> <p>Invitation to Rangiuru site to:</p> <ul style="list-style-type: none"> Discuss further work on treated wastewater discharge consents; and Pending resource consent application for discharge of stormwater, defrost and cooling water. 	
	<p>Email from Vanessa Hamm to Te Tari Taiao on 31 October 2019 following up on 24 October email.</p>	
	<p>Email from Te Tari Taiao to Vanessa Hamm on 2 December 2019 that they were meeting tomorrow and would come back to us after that.</p>	
Ngāti Pikiao	<p>Email from Vanessa Hamm to Raewyn Bennett and Joe Tahana 24 October 2019.</p> <p>Invitation to Rangiuru site to:</p> <ul style="list-style-type: none"> Discuss further work on treated wastewater discharge consents; and Pending resource consent application for discharge of stormwater, defrost and cooling water. 	
	<p>Email from Joe Tahana to Vanessa Hamm on 30 October 2019 inviting to meet at Te Awhe Marae on 15 November 2019.</p>	
	<p>Email from Vanessa Hamm to Joe Tahana on 31 October 2019 offering dates for elders to visit site for tour/korero.</p>	
	<p>Email from Piki Thomas to Vanessa Hamm on 1 November 2019 that the hui was moved to 22 November 2019, same time and place.</p>	

Iwi	Date/purpose	Outcomes/comments
	Email from Vanessa Hamm to Piki Thomas on 7 November 2019 requesting a time for meeting on 22 November 2019, and suggesting an hour long meeting would be sufficient. Requested number to call and discuss.	
	Email from Vanessa Hamm to Piki Thomas on 15 November 2019 following up on above email, requesting a phone number to discuss/confirm logistics of meeting on 22 November 2019.	
	Email from Piki Thomas to Vanessa Hamm on 18 November 2019: <ul style="list-style-type: none"> • Gave contact details of Ellen Tamati (0272684364) (noting that she was in Wellington); Noted that chair of meeting requested a condensed version of the presentation as hui only lasts 3hrs max and needed to cover off other major discussion points.	
	Phone call from Vanessa Hamm to Ellen Tamati/Chairman of Ngati Piakiao on 20 November 2019. Key points were: <ul style="list-style-type: none"> • Arrive at marae at 10am (Te Awhe Road marae, Te Awhe Road); • They will find time for AFFCO to present; • Presentation needs to be condensed; • Verbal presentation is preferred with handouts if anything (size 14 font); and May be 60 people attending.	
	AFFCO attendance at Te Awhe Marae on 22 November 2019 at 10am. (Vanessa Hamm, Dean Tucker, Adam Grant, Luke Gowing and Daniel Gulliver). Handout presented and notes of questions/feedback taken.	See attached handout given to attendees of meeting at marae, and AFFCO's record of questions/feedback from the meeting.
	Email from Vanessa Hamm to Piki Thomas and others on 27 November 2019 thanking Ngāti Pikiāo for invitation to Te Awhe Marae and confirming open invitation to visit the Rangiuuru site.	
Te Maru O Kaituna River Authority	Email from Vanessa Hamm on 24 October 2019. Request for date for presentation to: <ul style="list-style-type: none"> • Discuss further work on treated wastewater discharge consents; and • Pending resource consent application for discharge of stormwater, defrost and cooling water. 	No response as at 10 December 2019.

Appendix C Meeting Notes with Tapuika Iwi Authority (6 November 2019)

AFFCO NZ LIMITED

Meeting with Tapuika Iwi Authority

6 November 2019

AFFCO Rangiuru site

10am

Attendees:

Hohepa Maxwell, Tapuika Iwi Authority (HM)
Adam Grant, AFFCO Rangiuru Plant Manager (AG)
Luke Gowing, Argo Environmental, Environmental Scientist (LG)
Daniel Gulliver, Argo Environmental, Environmental Scientist (DG)
Vanessa Hamm, Holland Beckett Law (VH)

Introduction

1. Following introductions, HM introduced Tapuika's interest in the consents, saying that it had some history and that the concern from the Iwi point of view was the animal waste discharged to the Kaituna River. This is particularly with respect to the Pakipaki Stream which is in proximity to the AFFCO Rangiuru site and has been a recreational camping area for Tapuika's people for hundreds of years. Tapuika is particularly concerned from a health / medical point of view about waterborne viruses coming down the river from the plant to the recreational area.
2. Monitoring is also a point of issue for Tapuika. It would like to monitor before and after the point of discharge.
3. HM also set out that he was keen to understand the volume of the discharge by year, month and week. LG, DG and VH confirmed that the annual average was 1629m³ per day which works out to 600,000m³ on an annual basis.

Treatment process

4. HM had questions concerning the treatment process and LG confirmed that the process was as discussed previously. In particular the save all removes fats not removed earlier in the process before the waste stream goes into the three anaerobic ponds. From there it goes into the oxidation ponds and then the wetlands. It spends approximately 40 days in the treatment process.
5. HM was keen to know how to verify this length of time. LG said it could be dye-tested if necessary, but has been worked out by the engineers.

Sampling

6. There was a discussion about what sampling AFFCO does as part of its resource consent, what it has been doing in relation to the resource consent applications, and to take a sample himself.
7. There was a general discussion around the influence of the Kaituna River levels as a result of the Bay of Plenty Regional Council's control at Okere. However LG confirmed that the sampling which he had undertaken on behalf of AFFCO had been undertaken at low flows to show a worse case effect. HM said sampling which Tapuika had undertaken had also seemed to be concentrated.
8. LG asked how far downstream of the plant Pakipaki Stream was. HM said three to four kilometres downstream. LG confirmed that the sampling he had been undertaking of the treated effluent prior to

discharge shows that there are no pathogens present. This had included looking at six or eight different types of pathogens that could potentially be in the animal waste stream (as distinct from a human waste stream). HM would like to get a copy of this sampling report – LG is to confirm with AFFCO that this can be released (as it has not yet been submitted to the Bay of Plenty Regional Council).

9. In respect of sampling required pursuant to the AFFCO resource consents, LG confirmed that this is undertaken by an AFFCO staff member on a weekly basis. (Subsequently, on site HM was able to meet Kevin who undertakes the sampling and explained what his sampling regime is. It involves weekly sampling on site every Thursday, as well as sampling in the river from 1 November until the end of March each year).
10. VH asked HM if AFFCO could have the sampling results from the samples which Tapuika had previously collected.

Stormwater / defrost / cooling water discharge

11. AG and LG outlined the stormwater / defrost / cooling water discharge, for which the replacement resource consent is to be lodged later this year. They confirmed that the defrost and cooling water is just water (from a water quality perspective). The cooling water is taken out of the Kaituna River, it heats up through the condenser unit and is cooled down before it is discharged back to the river. The defrost water is water that is generated when the refrigerators are defrosted.

Other matters

12. LG outlined the other work which Argo Environmental had undertaken in relation to fisheries, macroinvertebrates and extent of mixing zone studies.
13. HM wanted to take a sample of the wastewater. (This was subsequently done on site at the pipe within the wetlands before it goes underground to discharge into the river). VH asked if Tapuika would provide a copy of the results of the sampling.
14. HM sought confirmation of the units processed. AG confirmed that in the last financial year it had been 500,000 units of lamb / mutton and 80,000 units of calves.
15. HM is keen to have post-consent lwi monitoring. VH asked what this would involve and he said it would involve water quality sampling. VH confirmed that there could be a conversation about this – this should consider who is doing what sampling so that there is coordination and different people are not sampling the same thing.

Action points:

- AFFCO to provide a hard copy of the pathogen report to Tapuika lwi Authority.

Post Script:

Argo Comment

To clarify the issue with regard to wastewater pathogens outlined in 8. above:

1. The treatment process removes a significant proportion of pathogens in the wastewater prior to discharge.
2. Key pathogens are either undetectable or at very low numbers.
3. Those pathogens that are present are highly unlikely to cause a risk to human health due to their very low numbers.

Appendix D Meeting Notes with Ngāti Pikiao (22 November 2019)

Presentation to Ngāti Pikiao, Te Awhe Marae, Maketu (22 November 2019)

1. Vanessa Hamm (Holland Beckett), Dean Tucker (AFFCO), Adam Grant (AFFCO), Luke Gowing and Daniel Gulliver (Argo Environmental) attended the Elders Meeting at Te Awhe Marae on 22 November 2019. Following introductions, Daniel spoke to the monitoring work that is undertaken and the further survey work that had been done in relation to the resource consent applications (as set out on the **attached** handout, which was handed out at the meeting).
2. The following questions and comments were made at the meeting for AFFCO's consideration:
 - (a) With pathogens, these need riparian planting to protect them from going into the river.
 - (b) In relation to root crops, water and waste need to be separate.
 - (c) Secondary use water, for example from the rooves of the sheds, also needs to be taken into account.
 - (d) Ngāti Pikiao is not just interested in the river/fish but the fish, birds, trees and life force/mauri of the 'awa' (river).
 - (e) Clarification was sought about the outlet to the river, and Luke Gowing explained that the discharge goes from the wetlands through a pipe below ground to the river. The question was asked that if the water was ok, why could it not be rediverted back into the plant for re-use. Dean Tucker explained that EU regulations state that water must be of potable water quality, but AFFCO could potentially use the water to wash livestock.
 - (f) The question was raised about flooding and safety measures with the treatment system. Luke Gowing confirmed that in a flood event the wastewater is so heavily diluted that any overflow is ok, but the engineering of the ponds is also designed to withstand any flooding impact. Adam Grant also clarified that the discharge pipe can be shut off with a valve, which is automatic (does not have to be manually closed).
 - (g) Don't agree that effects are minimal.
 - (h) The question was also raised as to whether the cooling water could be recycled. Although there are no additives to the cooling water (only heat), there was commentary that the temperature is higher so that is adding heat back to the river, and it would be good to work out whether there can be a closed loop system for the cooling water. Pauanui was mentioned as a good example of a wastewater system.
 - (i) In relation to emerging contaminants, the question was asked as to whether these have been tested. Luke Gowing clarified that they had not been tested, and AFFCO was asked to consider doing some testing in the ponds because of the connection between antibiotic discharges and antibiotic bacteria (superbugs).
3. The Chairman summed up by saying the gist of the feedback is that Ngāti Pikiao have major reservations with what AFFCO is proposing. They want to participate and be engaged with AFFCO until they are satisfied that they don't have further issues.
4. In 1985, the Ngāti Pikiao icons met and made a declaration that there should be no waste in the waterways. The council of elders are holding to how they don't want waste in the water. In this respect, the food basket is a metaphor for the wellbeing of the people and the environment.