

AFFCO RANGIURU PROCESSING PLANT

Kaituna River and Bore Water Takes

Resource Consent Application
Assessment of Environmental Effects

FINAL



December 2020

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argo**environmental**

DOCUMENT REVISION SCHEDULE

Revision Status / Number	Revision Date	Description of Revision	Prepared By	Approved By
Rev0	8 December 2020	Final Draft	Gary Venus	Luke Gowing
Rev1	10 December 2020	Amended based on Comments received by Client	Gary Venus	Luke Gowing

Statement of Limitations

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Environmental conditions change with time. Argo Environmental Ltd do not imply that the site conditions described in this report are representative of past or future conditions.

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APPLICATION FOR RESOURCE CONSENT

PURSUANT TO SECTION 88 OF THE RESOURCE MANAGEMENT ACT 1991

To: Bay of Plenty Regional Council
PO Box 364
Whakatāne 3158

AFFCO NZ Limited Ltd (AFFCO) is applying to the Bay of Plenty Regional Council (BOPRC) for a replacement of Consent 02 0194/1 to take water from the Kaituna River and from a bore for use in an abattoir in relation to the AFFCO Rangioru meat processing plant.

This consent expires on 1st October 2026 (pursuant to Section 396 of the Resource Management Act 1991).

Appendices 2 and 3 of this Assessment of Effects on the Environment (AEE) set the application in terms of completed BOPRC Forms 5A and 5B in the prescribed form.

Background

AFFCO is one of New Zealand's leading meat companies, processing and exporting more than 150,000 tonnes of quality beef and lamb products every year. The company operates ten strategically located processing sites across the North Island of New Zealand, employing over 2,800 people nationwide.

AFFCO Rangioru comprises beef and sheep killing chains, capable of processing 90,000 beef, 230,000 calves and in excess of 1 million lambs per year.

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 on an annual basis. Around 90% of this labour resource is sourced locally with a small proportion being sourced from outside Rangioru when necessary. AFFCO Rangioru is one of the largest employers in the Te Puke area.

Legal Description

Pukaingataru Block B No. 3 Section 5A and 5B Block III Maketu SD

Owners / occupiers of land to which the proposal relates

AFFCO NZ Limited is the owner and occupier of the subject property.

Description of the Activity

The activities associated with AFFCO Rangioru for which consent is sought is as follows:

- Take water from the Kaituna River and from a bore for use in an abattoir in relation to the AFFCO Rangioru Meat Processing Plan (existing Consent 02 40194/1).


Other than as described in this application there are no other activities that are part of the AFFCO Rangioru operation, and which require resource consent applications at this time other than those that are currently on hold pending a s92 request for further information.

AFFCO is applying for the maximum 35 year term of consent provided for in the RMA.

Effects on the Environment

An AEE is attached to this application, prepared in accordance with the Fourth Schedule of the Resource Management Act 1991 (RMA) and in the detail that corresponds with the scale and significance of the effects that the proposed activity may have on the environment.

Signature



Name: Adam Grant
Plant Manager
AFFCO New Zealand Limited
Rangiora Plant
State Highway 2, Rangiora
P O Box 132, Te Puke 3153
Date: 26 August 2019

Address for Service:	Address for invoicing:
<p>Argo Environmental Limited PO Box 105 774 Auckland 1143</p> <p>Attention: Luke Gowing</p>	<p>AFFCO NZ Limited Rangiora Plant P O Box 132, Te Puke 3153</p> <p>Attention: Adam Grant</p>

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1. Introduction

1.1 Overview

AFFCO New Zealand Limited (AFFCO) operates a meat processing facility at Rangioru, about 5 km east of Te Puke (Figure 1-1 to Figure 1-3). The plant is located on land between State Highway 2 and the Kaituna River; and the site is owned and occupied by AFFCO New Zealand Limited.

This document sets out applications for the consent expiring on 30th June 2020 - Consent 02 0194/1 to take water from the Kaituna River and from a bore for use in an abattoir.

An application for replacement of Consents 24932, 63344, and 60574 was lodged on 14th April 2016.

1.2 AFFCO New Zealand Limited

AFFCO is one of New Zealand's leading meat companies, processing and exporting more than 150,000 tonnes of quality beef and lamb products every year.

The company operates ten strategically located processing sites across the North Island of New Zealand, employing over 2,800 people nationwide. AFFCO is represented on six continents through a network of overseas offices and agents. In addition to meat exports, AFFCO is a major meat supplier on the domestic market, supplying high value premium meat cuts for the retail, hotel and restaurant trade.

In the past decade the meat industry has faced significant issues including exchange and finance cost rate, foreign protectionism; aging plant; falling stock numbers due to drought, dairy conversions and farming viability generally, over-capacity that has been exacerbated by falling stock numbers; and more recently recessions in some main markets. These issues have affected the viability of the industry as a whole and individual companies and plants. Notwithstanding this, AFFCO recognises the need to modernise and streamline plants in order to ensure the viability of group operations, and as explained in this AEE, the company has invested significantly in AFFCO Rangioru.

1.3 AFFCO Rangioru Processing Plant

The AFFCO Rangioru processing plant incorporates beef and sheep killing chains, capable of processing 90,000 beef, 230,000 calves and in excess of 1 million lambs per year.

AFFCO Rangioru 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 on an annual basis. Around 90% of this labour resource is sourced locally with a small proportion being sourced from outside Rangioru when necessary.

Since 2003 AFFCO, within the financial constraints imposed by the economic climate within which the company operates, has invested significant new capital in its plants, including the Rangioru Plant. Upgrade initiatives at Rangioru have been undertaken at a capital cost of \$11.7 million over the past 10 years, including \$1.8 million relating to the Rendering Plant alone.

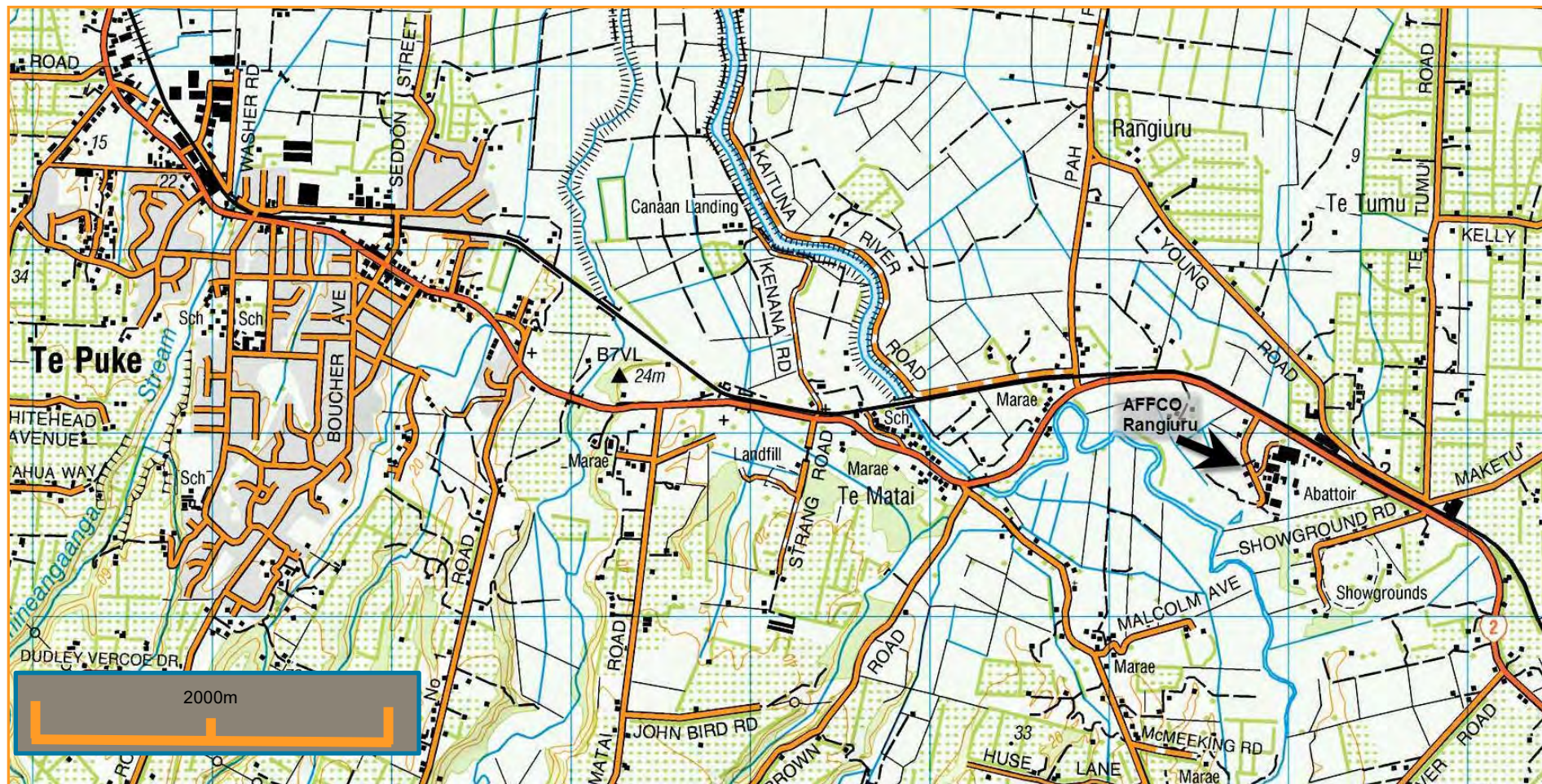


Figure 1-1: Site Location – topographic plan



Figure 1-2: Site Location – aerial photo

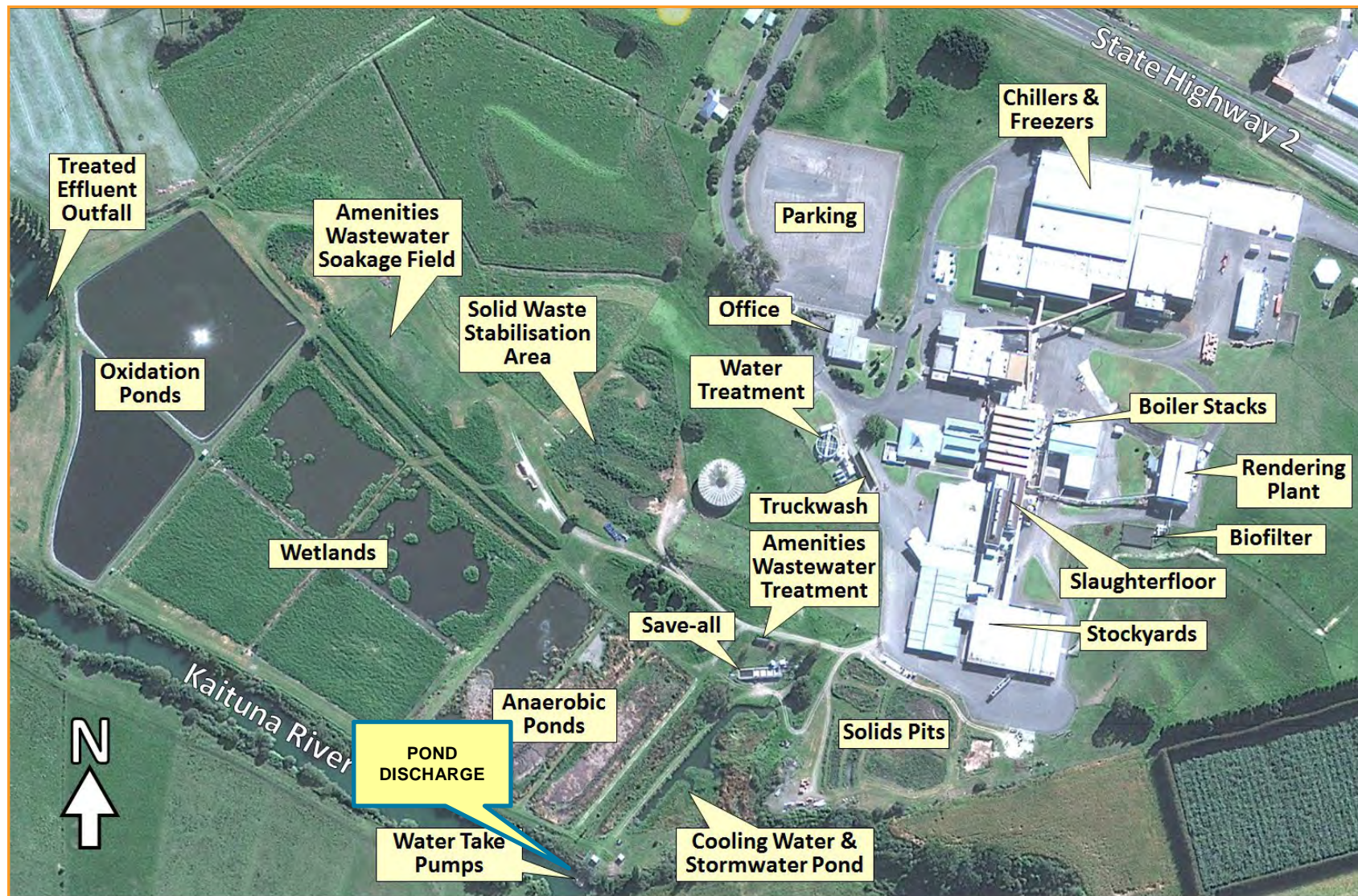


Figure 1-3: AFFCO Rangiuru Plant layout

1.4 Resource Consents held by AFFCO

AFFCO has applied for replacement consents for the four Rangiora site resource consents set out as (a)-(d) in Table 1-1. The fifth consent (e) in Table 1-1, the subject of this application, expires 01-10-2026.

Given there are multiple consent applications being applied for, BoPRC indicated that it would be appropriate for AFFCO to combine the consultation for both this application (river take and bore) and the treated wastewater from the Rangiora meat processing facility, and that it is likely that the applications would be processing concurrently by BoPRC. Aligning these consents also assists with managing compliance for the Consent holder (AFFCO).

Table 1-1: AFFCO Rangiora Consents due to expire

	Consent Number	Activity Authorised	Expiry
(a)	24932	Discharge treated abattoir waste water to Kaituna River.	31-08-17
(b)	63344	Discharge seepage from treatment ponds to land.	31-08-17
(c)	60574	Discharge meat processing plant amenities wastewater to land.	31-10-16
(d)	24925	Discharge Stormwater and Defrost Water.	30-06-20
(e)	020194/1	Take Water from Kaituna River and Bore.	01-10-26

AFFCO also hold five other resource consents for the Rangiora plant, none of which are due for replacement in the near future or relevant to this application (Table 1-2).

Table 1-2: List of other Resource Consents held by AFFCO Rangiora

Consent number	Purpose	Approved	Expiry
30096	Rendering Plant Air Discharges	07-12-12	30-11-47
66657	Discharge Anaerobic Sludge To Land	06-09-11	30-06-31
50169	Placement & Replacement Outfalls: Kaituna	03-06-93	30-06-28
50942	Place Structure In Kaituna River	31-10-01	31-10-36

1.5 Ownership and Legal Description

The site is located on State Highway 2 at Rangiora. The legal description of the site is:

Pukaingataru Block B No. 3 Section 5A and 5B Block III Maketu SD

A Certificate of Title is provided in Appendix 1.

1.6 Content of this AEE

A completed BoPRC Form 5A is provided as Appendix 2. Part 6 of Form 5A requires information as follows, cross references against the location in this AEE (Table 1-3).

Table 1-3: BoPRC Form 5A (Part 6) required information and location within this AEE

Form 5A Section	Content	Location in AEE or comment
6. Assessment of Environmental Effects	Describe the actual or potential environmental effects associated with your water take, including:	
	(a) Effects on the stream bed during construction of the intake structure:	n/a <i>The existing intake structure (barge) is authorised under Consent 50942.</i>
	(b) Long-term effects on the watercourse from intake structure:	n/a <i>The existing intake structure (barge) is authorised under Consent 50942.</i>
	(c) Effects on instream ecology and fish passage from water take:	Refer Section 3
	(d) Other effects (e.g. groundwater reduction):	Refer Section 3
	(e) Effect of allocation on the water body:	Refer Section 3
	(f) Effects on recreation:	Refer Section 3
	(g) Effects on existing authorised/downstream users:	Refer Section 3
	(h) Degree of connectivity between groundwater and surface water:	Refer Section 3
	(i) Effects on wetland:	Refer Section 3
	(j) Proposed mitigation methods:	Refer Section 7
	(k) Consideration of alternatives	Refer Section 6
7 Efficiency of use	Describe the water distribution system, including efficiency measures, control systems, and management regime. Include plans where relevant.	Refer Section 2.1
8. Cultural effects assessment	The Regional Policy Statement is clear that only tangata whenua can identify their relationship with an area. It is good practice to consult with tangata whenua about your application so that you can provide an accurate assessment of cultural effects.	Refer Section 4
9. Assessment against relevant objectives & policies of the relevant plan/s	Provide an assessment of the proposal against the relevant objectives and policies of the operative Regional Natural Resources Plan. You can use the on our website https://www.boprc.govt.nz/do-it-online/consent-forms/ under 'Water'	Attached Water Take and Use Policy Assessment form (Appendix 1 Annex 1)
10. Affected persons	For your application to be considered for non-notification you must gain written approval from all persons who may be affected by the proposal.	n/a

This AEE responds to the matters raised above along with the explicit requirements of Schedule 4 of the Resource Management Act 1991 (RMA) which requires applicants to prepare an assessment of environmental effects (AEE) in support of their consent applications, and include the information relating to the activity, including an assessment of the activity's effects on the environment, as required by Schedule 4 of the Act (refer s.88 (2)(b)).

Clause 1 of the RMA Fourth Schedule requires that information must be specified in sufficient detail to satisfy the purpose for which it is required. Table 1-4 identifies the information to be provided as set out in Clause 2 of the Fourth Schedule, cross-referenced against relevant sections of this AEE.

Table 1-4: RMA Schedule 4 Requirements and location within this AEE

Fourth Schedule Matters to be Included:	Section in this AEE
Clause 2) Information required in all applications	
(1) An application for a resource consent for an activity (the activity) must include the following:	
(a) a description of the activity:	2
(b) a description of the site at which the activity is to occur:	1, 2
(c) the full name and address of each owner or occupier of the site:	1.5
(d) a description of any other activities that are part of the proposal to which the application relates:	2
(e) a description of any other resource consents required for the proposal to which the application relates:	1.4
(f) an assessment of the activity against the matters set out in Part 2:	5.2.5
(g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b).	5.2.2, 5.2.3, 5.2.4
(2) The assessment under subclause (1)(g) must include an assessment of the activity against—	
(a) any relevant objectives, policies, or rules in a document; and	5
(b) any relevant requirements, conditions, or permissions in any rules in a document; and	5
(c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).	5
(3) An application must also include an assessment of the activity's effects on the environment that—	
(a) includes the information required by clause 6; and	See Clause 6 below
(b) addresses the matters specified in clause 7; and	See Clause 7 below
(c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.	3
Clause 3) Additional information required in some applications	
An application must also include any of the following that apply:	
(a) if any permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates that it complies with the	n/a

Fourth Schedule Matters to be Included:	Section in this AEE
requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1)):	
(b)if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A)):	n/a
(c)if the activity is to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, an assessment of the activity against any resource management matters set out in that planning document (for the purposes of section 104(2B)).	n/a
Clause 4) Additional information required in application for subdivision consent	n/a
Clause 5) Additional information required in application for reclamation	n/a
Clause 6) Information required in assessment of environmental effects	
(1)An assessment of the activity's effects on the environment must include the following information:	
(a)if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:	Effects considered to be no more than minor. Alternatives Section 6
(b)an assessment of the actual or potential effect on the environment of the activity:	3
(c)if the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment that are likely to arise from such use:	n/a
(d)if the activity includes the discharge of any contaminant, a description of—	
(i)the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and	3
(ii)any possible alternative methods of discharge, including discharge into any other receiving environment:	Not a discharge
(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:	Effects considered to be no more than minor
(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:	Section 4
(g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:	Effects are considered to be no more than minor
(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).	Effects considered to be no more than minor.
(2) A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.	5

Fourth Schedule Matters to be Included:	Section in this AEE
(3) To avoid doubt, subclause (1)(f) obliges an applicant to report as to the persons identified as being affected by the proposal, but does not— (a) oblige the applicant to consult any person; or (b) create any ground for expecting that the applicant will consult any person.	n/a
Clause 7 - Matters that must be addressed by assessment of environmental effects	
(1) An assessment of the activity's effects on the environment must address the following matters:	
(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:	3
(b) any physical effect on the locality, including any landscape and visual effects:	3
(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:	3
(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:	3
(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:	3
(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.	n/a
(2) The requirement to address a matter in the assessment of environmental effects is subject to the provisions of any policy statement or plan	5

2. Description of Activity

2.1 Kaituna River Take

Set out below is a description of the AFFCO Rangiuru river take (hereafter referred to as the 'Take'). Photographs on the intake structure and screens are set out in Appendix 5.

Pursuant to Consent 50492 AFFCO Rangiuru has deployed a barge moored and fixed to the bank of the Kaituna River adjacent to the meat processing plant (Appendix 5, Figure D). The barge carries 2 pumps and inlet pipes used to take water from the Kaituna River for use in the processing plant.

Two pump lines come from the barge: a 150 mm diameter line to the water treatment plant fed by 1 X 30 kW (125 x 400) pump; and a 250 mm diameter line to the refrigeration system for cooling fed by 4 X 55kW (125 x 400) pumps. The majority of water abstracted (approximately 95%) is used as refrigeration plant condenser cooling water which is a single pass use returned to the River near the point of water take via the stormwater system and cooling pond. The 150 mm water plant line is fed by one pump running at 2.6 m³/min (close to maximum rate) and the 250 mm non potable supply line is currently running at 8.6 m³/min with two pumps.

In winter, the site runs one pump only and in summer two pumps. The site can use three pumps in extreme circumstances (but this is the exception).

Each line has an electromagnetic flowmeter located close to the barge. The flowmeters are connected to the www.harvest.com telemetry system and flows are logged at 15-minute intervals.

In terms of water use efficiencies, 30% of potable water made is heated to make approximately 1 million litres of hot water daily. For production, all hot water flows are measured and recorded and controlled by the plant scada system. The site holds monthly energy meetings attended by relevant staff to address measures to optimise energy efficiency.

There is minimal loss of water through the system and consequently the water take volumes and rates of take are a very close approximation of the cooling water discharge volumes. Table 2-1 presents a summary of this data collected since February 2017.

Table 2-1: Maximum Daily Volume (m³) and rate of take (L/s) Feb 2017 – Nov 2020 (n=1,084)

Type	Minimum	Median	Maximum
Maximum Daily Volume (m ³)	5,085	10,902	16,695
Maximum Daily Rate of Take (L/s)	67	136	203

The water intake volume approximately equates to discharge volumes. Water abstracted from the Kaituna River by AFFCO for processing purposes and condenser cooling is permitted under Consent 020194/1 which allows:

- Daily quantity of take shall not exceed 27,270 m³; and
- Maximum rate of take of 400 L /s.

As shown in Table 2-1 since 2017 the actual maximum daily take (16,695 m³) and rate of take (203 L/s) represents only 61% and 50.7% respectively of the consented limits over that period.

As a worst case the currently consented maximum rate of take represents only 0.14% of the total flow in the River at MALF (29.1 m³/s) but, more importantly, 95% if the cooling water flow is discharged back into the river in close proximity to the point of intake. *Therefore, in real terms, the AFFCO Rangiuru Take represents **zero net take** from the River.*

The River take structure is located approximately 600 mm below the water surface. The intake structure utilises eight screens along the length of the intake. Each screen is 600 x 1200 mm and are comprised of a coarse and fine screen. The coarse screen is 16.8 mm square and the fine screen is 6.6 mm square.

The length of screen then is 4800 x 600 = 2.88 m². With three pumps running as at present, there is a flow of 10.2 m³/min (or 170 l/s) which flows through 2.88 m² giving 0.059 m/s velocity through the screens. Extrapolating to the 400 l/s applied for this equates to a velocity of 0.14 m/s.

2.2 Bore Take

AFFCO commissioned a groundwater investigation by Terra Aqua Consultants Limited (TACL) to provide technical expertise to support the assessment of the potential groundwater take from an existing bore. TACL's report is provided in full in Appendix 4 of this AEE.

The bore had limited information available on its construction and the lithological units it penetrates. The bore is currently used as an emergency supply and was the original plant water supply. AFFCO's intention is to use the bore to access energy by using the warm water to assist with heating and cooling the plant.

The bore is 150 mm diameter finished at an unknown depth with the pump installed on 7 lengths of 6.5 m rising main (i.e. at a depth of 45.5 m below the top of the casing). Given that the water being accessed by the bore is a constant 27-28°C, it can be assumed that it is probably between 110 and 130 m with casing to at least 100 m. The currently installed pump can operate at more than 20.4 L/s. The bore has a BoPRC ID of BN-4037. Note that the location indicated on the council web site is incorrect.

Testing consisted of 72-hours of constant rate testing (13 November till 16 November 2020) at 20.4 L/s followed by recovery monitoring (16 Nov to 18 Nov 2020). Conductivity measurements were made throughout the pumping phase of the test and indicated no significant changes to indicate increased salinity with time.

Analysis shows that the aquifer has a late time transmissivity calculated at between 152.6 and 171.56 m²/d. Test data confirms that the bore is more than capable of providing a daily take volume of 1,763 m³/d at least.

3. Assessment of Effects on the Environment

3.1 The Kaituna River

The Kaituna River is approximately 50 km in length and carries water from Lake Rotoiti and Lake Rotorua to the sea at Maketu in the Bay of Plenty. In the upper 25 km the river flows through a deep gorge in the ignimbrite plateau. Through this section the river drops 260 m and includes a number of water falls and an incised gorge; it is fast flowing and turbulent. The remaining 28 km is slower, dropping another 20 m to the sea. The residence time over the whole river from lake to sea is relatively short not taking much longer than a day.

The total Kaituna River catchment area including the lakes is around 1,218 km². The catchment feeding directly into the Kaituna River or the lower Kaituna catchment is around 580 km² or 47.6% of the total. The sub-catchments in the lower Kaituna are shown in Figure 3-1

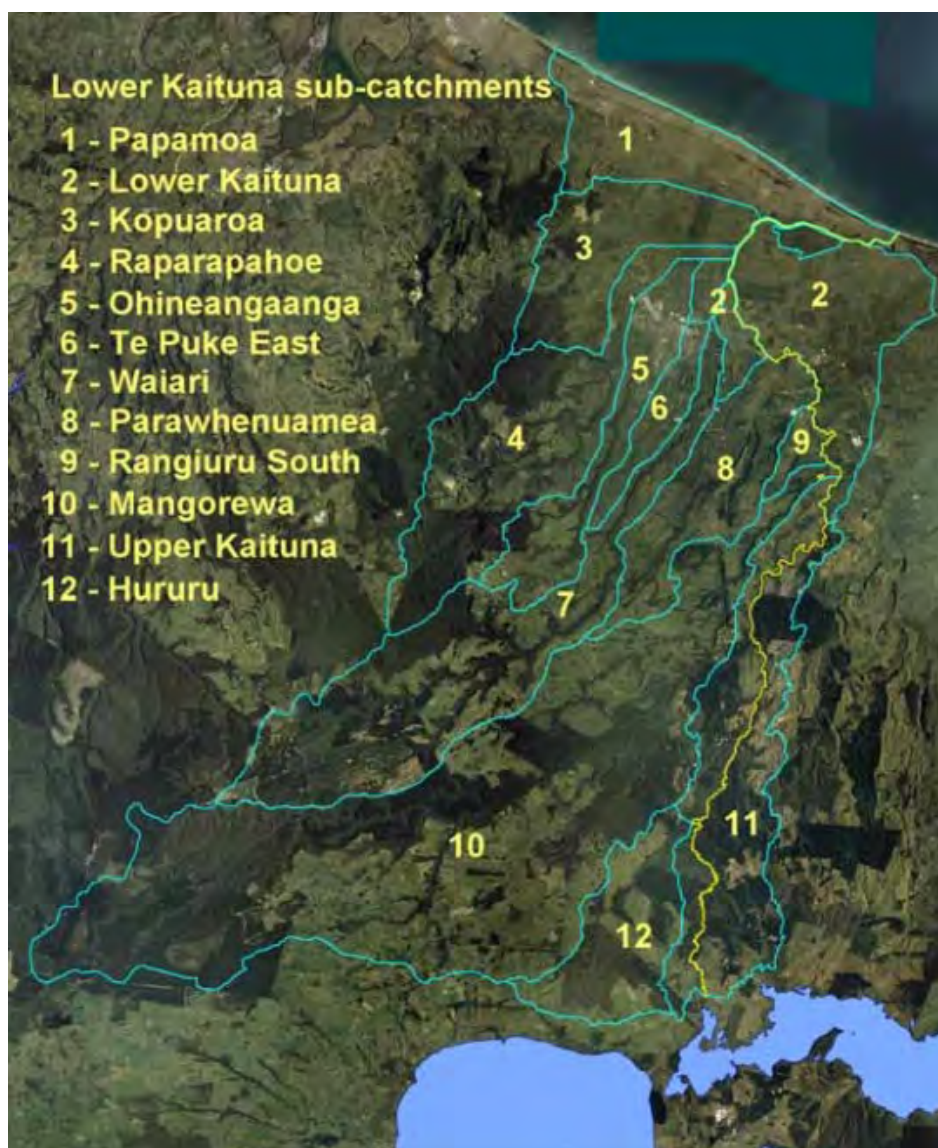


Figure 3-1: Sub-catchments of the lower Kaituna Catchment¹

¹ From <https://www.boprc.govt.nz/media/276288/lower-kaituna-catchment-and-water-quality.pdf>

The AFFCO Rangiora River take is located approximately 2.5 km upstream of the Te Matai hydrological station. Given that the AFFCO river water take is a zero-net take abstraction it is appropriate to use Te Matai hydrological information for evaluating likely relative take percentages as a basis for assessing consequential effects.

Data for the Te Matai sampling station where the Kaituna River passes under State Highway 2, is summarised in Table 3-1.

Table 3-1: Kaituna River hydrology summary information².

Statistical Summary			
Flow (l/s)			
Minimum Flow	20576	Maximum Flow	376797
Mean Annual Minimum Flow	29158	Mean Annual Maximum Flow	134660
Mean Flow	39519	Mean Summer Flow	36448
Median Flow	37565	Mean Autumn Flow	37728
Mean Specific Flow (l/km ²)	42	Mean Winter Flow	41897
		Mean Spring Flow	41300
Low Flow Distribution Fit	GEV	Peak Flow Distribution Fit	Assessed
7 day Low Flow (Minimum)	22054	Peak Flow (5 yr Return)	170000
7 Day Low Flow (Mean Annual)	28953	Peak Flow (10 yr Return)	230000
7 day Low Flow (5 yr Return)	26043	Peak Flow (20 yr Return)	300000
7 Day Low Flow (10 yr Return)	24133	Peak Flow (50 yr Return)	405000
		Peak Flow (100 yr Return)	

The take involves abstraction of water at a maximum rate of 203 L/s which corresponds with approximately 0.92% of the 7 day Low Flow, with around 95% of the take being discharged back into the Kaituna River in very close proximity to the intake point.

From a hydrological perspective the take is less than minor in comparison with Kaituna River flows, and consequently any other environmental effects of the take will be less than minor.

3.2 Other Resources

3.2.1 Ecology

An assessment of the ecological resources present in the lower Kaituna River has been presented in the AFFCO Rangiora Discharge AEE Report³ and supplementary reports⁴ describing fisheries and macroinvertebrate communities of the River adjacent to the point of discharge to the River. In summary, the macroinvertebrate survey report concluded that the discharges from the AFFCO facility is resulting in a no more than minor adverse effect on the ecological health of the Kaituna River. The fish survey report concluded that due to the lack of any observable differences in the type of species present and their abundances between sites located upstream and downstream of the AFFCO site, that operations are having no more than minor effect on fish communities within the River.

² <http://monitoring.boprc.govt.nz/MonitoredSites/summary.pdf> . Accessed 10 October 2016

³ Argo 2017. Discharges to Kaituna River. Assessment of Environmental Effects. Report prepared for AFFCO NZ Limited Rangiora Processing Plant. February 2017.

⁴ Argo 2020. Macroinvertebrate Monitoring Survey 2018-2019. Report prepared for AFFCO NZ Limited Rangiora. April 2020.

Argo 2019. Kaituna River Fish Survey Report. Report prepared for AFFCO NZ Limited Rangiora. March 2019.

The other potential effect of the water take operation relates to potential uptake impingement of native fish on the intake screens. The existing intake structure has 3.6 mm diameter holes (based on 6.6 mm square aperture) on the screens which is less than the Regional Plan requirement of less than 5 mm diameter holes (or 5 mm x 30 mm) to minimise potential uptake and impingement of juvenile and adult fish. As a result, no more than minor effects are anticipated.

There are no wetlands in close proximity in the AFFCO Rangioru site that would be potential affected by the AFFCO Rangioru Take.

As described in Section 2.1, as the AFFCO Rangioru Take represents **zero net take** from the River the potential effects relating to potential ecological effects will be less than minor.

3.2.2 Waterbody Allocation Effects

The total volume of water allocated to water users through resource consents has reached or exceeded regional default thresholds for most of the Kaituna WMA's rivers and streams⁵.

However, as described in Section 2.1, as the AFFCO Rangioru Take represents **zero net take** from the River the potential effects relating to allocation of water will be less than minor.

3.2.3 Recreation

Consultation with the local community undertaken as part of the 2016 Te Puke WWTP Consent Renewal process identified a number of activities that are undertaken along the lower Kaituna River. These include the following:

- Kayaking/canoeing and waka amo (outrigger canoes);
- Eeling, food gathering, and trout fishing;
- Boating from Bell Road boat ramp (rowing boats, small dinghies and power boats for water skiing, wake boarding and sea-biscuiting);
- Swimming, paddling, rafting and picnic type gatherings/BBQs on stream/river banks; and
- Customary and traditional practices for local Iwi/Hapu groups.

In addition, feedback received during public consultation as part of the discharge consent application³ indicated that swimming in the Kaituna River is undertaken at Te Matai.

As described in Section 2.1 as the AFFCO Rangioru Take represents **zero net take** from the River the potential effects on recreational River users will be less than minor.

3.2.4 Groundwater

As previously described, AFFCO commissioned TACL to undertake a groundwater investigation to support the assessment of the potential for a continued groundwater take from the existing AFFCO bore. Key conclusions of the TACL's report are summarised below and the full report is provided in in Appendix 4.

⁵ Brown, S. 2018. The Science Story. Environmental Summary Report. Kaituna - Pongakawa – Waitahanui. Water Management Area. Report prepared by Opus for BoPRC.

Connectivity with Kaituna River

Connectivity to surface water bodies was assessed based on several factors including:

- Assumed geology (based upon available drillers logs)
- Depth and nature of aquifer (deep confined)
- Distance (lateral and vertical) from nearest surface water body (Kaituna River)

The above factors all suggest that connectivity with surface water bodies is poor.

Stream depletion effects have been modelled based on a simple two-layer aquifer⁶, which is considered to be a conservative approach as it does not allow for any natural recharge during the period modelled nor for intermittent pumping of the bore. Figure 3-2 indicates that calculated depletion due to pumping is minimal attaining less than 0.3 L/s after 100 days of continuous pumping.

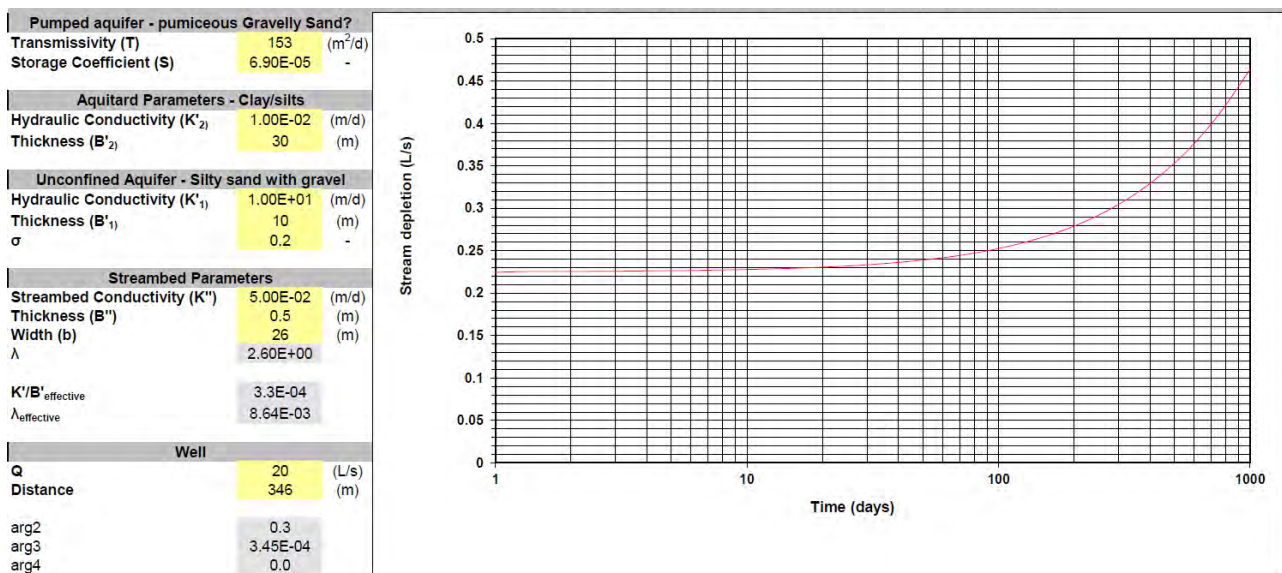


Figure 3-2: Stream Depletion Analysis– Confined Aquifer (based on Hunt & Scott 2007)

Drawdown Effects

Drawdown and recovery data for the AFFCO bore is presented in Appendix 4. Examination of the data shows that the drawdown is continuous and steady and there does not appear to be any significant hydrological barriers encountered within this pumping period. In addition, recovery is steady and although not fully recovered within 72-hours is at least 82% recovered within that time.

Other Groundwater Users

The location of other groundwater bores in close proximity to the AFFCO bore is presented in Figure 3-3. Unfortunately, none of the neighbouring bores within 1 km were suitable for monitoring as all lack an access tube to enable installing a data logger or even permitting access for a water level sounder.

⁶ Hunt B; Scott D., 2007. Flow to a Well in a Two-Aquifer System. Journal of Hydrologic Engineering pp 146-155

However, bores located in close proximity to the AFFCO bore (e.g., BN-4422, BN-4074 and BN-10931) are cold water bores and located in a shallower aquifer at depths ranging from 20 to 122m. As a result, it is considered the AFFCO bore will have no more than minor effect on adjacent groundwater users.



Figure 3-3: Bore locations

4. Consultation & Tāngata Whenua Participation

4.1 Introduction

AFFCO recognises that consultation is a key component of the resource consent application process. Accordingly, AFFCO has undertaken consultation in a way that provides opportunities for key stakeholders to identify issues of concern, and to clarify, where possible, any such issues during the pre-consenting process.

Consultation in relation to AFFCO Rangioru's consents has been undertaken with local stakeholders since at least 2016, associated with other resource consent application for AFFCO's Rangioru site. These other stakeholders included local tāngata whenua identified by BoPRC, as well as freshwater user groups in the area.

The majority of this consultation was associated with the resource consent application for the continued discharge of treated wastewater from the Rangioru meat processing facility into the Kaituna River (Consent No. 24932). The consent application is currently on hold, pending additional information requested by BoPRC under s92 of the RMA, including further stakeholder consultation (amongst other items).

Given that there are multiple consent applications being applied for, BoPRC indicated that it would be appropriate for AFFCO to combine the consultation for both this application (river take and bore) and the treated wastewater from the Rangioru meat processing facility, and that it is likely that the applications would be processing concurrently by the BoPRC.

The consultation undertaken, the key parties consulted and the issues raised during consultation are discussed below.

4.2 Consultation Plan and Register

A Consultation Plan was prepared in March 2019 and provided to BoPRC, which set out an overview of consultation has been undertaken to date, identified stakeholders that require further engagement, and proposed a list of key stakeholders that are to engaged, or reengaged, in order to satisfy BoPRC consenting officers as part of the s92 information request for Consent No. 24932. This Consultation Plan is appended to the AEE Addendum for the discharge of treated wastewater from the Rangioru meat processing facility into the Kaituna River consent application.

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 (discussed in Section 5.3 below). No other stakeholder groups were specifically identified by BoPRC as requiring consultation prior to lodgement of the AEE.

4.3 Consultation with Tāngata Whenua

Consultation with tāngata whenua associated with various discharges from AFFCO's Rangioru site has been ongoing since 2016. On advice from BOPRC, this commenced with AFFCO and their consultants engaging with the *Tapuika Iwi Authority*, including phone calls, email exchanges, meetings, and site visits to the Rangioru facility from October 2016 to February 2017. Fifteen copies of a consultation summary document, which summarised the operation and the consents being applied for, were also provided to the *Tapuika Iwi Authority*.

Engagement was also undertaken with *Waitaha*, *Ngāti Rangiwewehi* and *Ngāti Pikiao ki Maketu/Ngāti Pikiao ki Tai* in early 2017.

In early 2018 BoPRC provided a list of iwi groups that have statutory acknowledgements over the Kaituna River, and that may have an interest in the proposed consent applications being applied for by AFFCO. These groups included:

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

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

AFFCO subsequently engaged a lawyer (Vanessa Hamm of Holland Beckett Law) to assist in facilitating 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.

All of the groups identified above were engaged and consulted between October and December 2019.

While the above consultation related to all current consent applications currently being applied for by AFFCO, stormwater, defrost and cooling water matters were outlined as a specific item for discussion and consultation in the documents provided to the iwi groups and during meetings with the *Tapuika Iwi Authority* and *Ngāti Pikiao*. The application documentation for stormwater, defrost and cooling water included water take quantities.

The only response received specifically related to the stormwater, defrost and cooling water discharge arose during the hui with Ngāti Pikiao held at Te Awhe Marae on 22 November 2019. A question was asked about whether the cooling water could be recycled through the plant rather than discharged to the Kaituna River. AFFCO acknowledged this comment and agreed to consider the feasibility of this. This consideration remains ongoing.

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 Pikiao*, to identify any other issues of concern so they can be addressed in the consenting process.

4.4 Consultation with Other Stakeholders

No other stakeholders were identified as being potential affected by this specific application either by AFFCO or BoPRC.

5. Statutory Framework

5.1 Introduction

The Resource Management Act (1991) (RMA) provides the statutory framework for the consideration of resource consent applications, as part of which the applicant is required to provide information about the activity and an assessment of the activity's effects on the environment.

Set out below is an analysis of the relationship of the AFFCO river take with respect to the RMA and BoPRC Plan requirements.

5.2 Resource Management Act 1991

5.2.1 Purpose of the RMA 1991

The Act's central purpose is sustainable management of natural and physical resources (s.5(1)). In terms of section 5 of the RMA, the AFFCO Rangioru plant provides people and communities to provide for their social and economic well-being and for their health and safety through a significant local and regional contribution, including through the creation of a significant component of regional employment, whilst ensuring that adverse effects on the environment associated with this activity are less than minor.

5.2.2 Section 104 Consideration of applications

This application has been prepared in accordance with section 104 of the RMA and the report takes into account relevant national environmental standards, other regulations, national policy statements and the relevant provisions of the Regional Policy Statement, Regional Air Plan and Regional Natural Resources Plan.

Under s104(2), the consent authority may consider the permitted baseline approach, taking into account the effects of the existing AFFCO meat processing plant activities, as part of the existing environment.

Under s104 RMA, the consent authority is, subject to Part 2, to have regard to the actual and potential effects on the environment of allowing the activity, any relevant planning documents, and any other matters considered to be relevant before exercising an overall broad judgement whether or not to grant the application.

In this regard, the assessment requires a comparison of the overall benefits of retaining AFFCO Rangioru's activities as proposed, with any adverse effects on the environment. The Assessment of Environmental Effects in Section 4 demonstrates that the actual and potential effects of taking Water for AFFCO Rangioru on the existing environment will be less than minor.

Under Section 104(2A) of the Act, the consent authority must also have regard to the value of investment of the existing consent holder, when considering an application affected by Section 124 RMA. In this regard, significant investments have been made by AFFCO to establish and maintain the Rangioru plant, where AFFCO, has invested \$11.7 million over the past 10 years, including \$1.8 million relating to the Rendering Plant alone.

5.2.3 Section 104B Determination of applications for discretionary or non-complying activities

After considering an application for resource consent for a discretionary or non-complying activity, a consent authority may grant or refuse the application, and if it grants the application, may impose conditions under Section 108.

5.2.4 Section 108 Conditions of Resource Consents

As noted under Section 104B RMA above, conditions may be imposed under Section 108 RMA, when granting consent. The existing consent includes conditions quantities taken. It is proposed that similar conditions of consent will be provided for the water take permit.

5.2.5 Part 2 – Purpose and Principles

5.2.5.1 Section 5 Purpose and Principles

The purpose of the RMA in Section 5 (1) is “... *to promote the sustainable management of natural and physical resources.*” Sustainable management is defined in Section 5 (2).

The ongoing water take for processing and cooling water for AFFCO Rangiuru is consistent with section 5 of the RMA and represents sustainable management of natural and physical resources for the following reasons:

- The take is a zero net take in respect of flows in the Kaituna River.
- The AFFCO Rangiuru Plant (and take, which is essential to the ongoing operation of the plant) will better enable people and communities to provide for their social, cultural and economic wellbeing through the provision of jobs and economic contributions to both the community and the region, and through the maintenance and enhancement of the existing built environment;
- The take will result in less than minor or minor adverse effects on the environment.

5.2.5.2 Section 6 Matters of National Importance

Section 6 of the RMA sets out the matters of national importance that must be recognised and provided for in managing the use, development and protection of natural and physical resources:

- (a) *The preservation of the natural character of the coastal environment (including coastal marine area) wetlands and lakes and rivers and their margins and the protection of them from inappropriate subdivision, use and development:*
- (b) *The protection of outstanding natural features and landscapes from inappropriate subdivision, use and development:*
- (c) *The protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:*
- (d) *The maintenance and enhancement of public access to and along the coastal marine area, lakes and rivers:*
- (e) *The relationship of Maori and their culture and traditions with their ancestral lands, water, waahi tapu, and other taonga;*
- (f) *The protection of historic heritage from inappropriate subdivision, use and development;*
- (g) *The protection of recognised customary activities.*

It is considered that granting consent for the take of processing and cooling water, which represents a zero net take in respect of flows in the Kaituna River, is consistent with Section 6 of the RMA.

5.2.5.3 Section 7 Other matters

Section 7 lists other matters for regard to be given to, of which the following are relevant to the proposal:

- (a) *Kaitiakitanga:*
- (aa) *The ethic of stewardship:*
- (b) *The efficient use and development of natural and physical resources:*
- (c) *The maintenance and enhancement of amenity values:*
- (d) *Intrinsic values of ecosystems:*
- (f) *Maintenance and enhancement of the quality of the environment:*

Consultation has been undertaken with tangata whenua and other stakeholders as kaitiaki and stewards of natural and physical resources in relation to these Section 7 matters in regard to the full range of consents held by AFFCO. The Kaituna River is recognised by AFFCO as highly significant to the local iwi/hapu groups.

5.2.6 Section 8 Treaty of Waitangi

Section 8 of the RMA states:

“In achieving the purpose of this Act, all persons exercising functions and powers under it, in relation to managing the use, development, and protection of natural and physical resources, shall take into account the principles of the Treaty of Waitangi (Te Tiriti o Waitangi).”

Consultation with tangata whenua representatives has been undertaken and maintained in an ongoing, open, transparent manner.

The proposed water quality standards will ensure existing natural and physical resources are protected when considering the principles of the Treaty of Waitangi. Refer to Section 6 of this Report for further details on consultation.

5.2.7 National Environmental Standards

There are no national environmental standards considered directly applicable in this instance.

5.3 NPS for Freshwater Management 2020

The National Policy Statement for Freshwater Management 2020 (NPS-FM) provides local authorities with updated direction on how they should manage freshwater under the Resource Management Act 1991. It came into force on 3rd September 2020.

In respect of water takes, NPS-FM 2020, Policy 11 requires that “Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided”. The AFFCO Rangiuru water take is a zero net take activity and is therefore consistent with this policy.

5.3.1 Bay of Plenty Regional Plan Framework

Relevant Regional Plan matters are addressed in the response to Form 5A set out in Appendix 2 of this application.

In addition, the relevant part of BW R5 (Rule 52) for permitted surface water intake structures (not specified in Form 5A) states that:

The use, erection, reconstruction, placement, alteration and extension of a surface water intake structure in, on, under or over the bed of a river, stream or lake, and associated bed disturbance, is a permitted activity subject to the following conditions:

- (c) *The intake structure shall be screened with a mesh aperture size:*
 - (ii) *Not exceeding five (5) millimetres by 30 millimetres or five (5) mm diameter holes in any other area that is not in the tidal area of a river or stream.*

As described in Section 2.1 the current intake structures comply with this requirement and potential effects, as described in Section 3.2.1, are expected to be no more than minor.

5.3.2 Other Relevant Matters

5.3.2.1 Kaituna River Re-diversion and Ongatoro/Maketu Estuary Enhancement Project

Since 1956 almost all of the Kaituna River's freshwater has been diverted to sea at Te Tumu to protect the low-lying farmland from flooding and improve drainage. The diversion has had adverse ecological effects on the Ongatoro/Maketu Estuary, and the BoPRC intends to re-divert almost a quarter of the Kaituna River's flow back into the estuary. The extra water is predicted to improve the estuary's health and will restore some of the mauri of the area by allowing salt marsh and other wetlands to return. It will also create more suitable conditions for a range of shellfish and fish species and may reduce the rate at which sand fills in the estuary.

Accordingly, BoPRC has facilitated the Kaituna River re-diversion and Ongatoro/Maketu Estuary Enhancement Project's application for resource consents and a notice of requirement to designate land; and these applications have been lodged with the relevant authorities (BoPRC and Western Bay of Plenty District Council (WBoPRC) respectively) and were publicly notified in mid-September 2014.

The project proposes to re-divert approximately 20% of flows from the Kaituna River back into the Ongatoto/Maketu Estuary via Ford's Channel for the purpose of enhancing the Ongatoro/Maketu Estuary, to establish new wetlands and to provide associated recreational opportunities.

This project has no direct impact on the proposed renewal of the resource consents for AFFCO Rangioru given the effects of the take are less than minor.

5.3.2.2 Kaituna River Authority - Te Maru O Kaituna

The Kaituna River Authority (the Authority) was established under Part 9 of the Nga Punawai o Te Tokotoru Claims Settlement Act. 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.

The Authority is a permanent joint committee of the BoPRC, the Rotorua District Council, the Tauranga City Council, and the WBoPDC; and consists of eight members:

- The Tapuika Iwi Authority Trust
- The Tapuika Iwi Authority Trust and Te Kapu o Waitaha
- The Te Pumautanga o Te Arawa Trust
- The Te Tahuhu o Tawakeheimoa Trust

- The Bay of Plenty Regional Council
- The Rotorua District Council
- The Tauranga City Council, and
- The Western Bay of Plenty District Council.

The Authority has prepared the Kaituna River Document intended to promote the restoration, protection, and enhancement of the environmental, cultural and spiritual health and well-being of the Kaituna River.

The AFFCO Rangioru water take is a zero net take activity and is therefore consistent with the Kaituna River

5.3.2.3 Tapuika Claims Settlement Act 2014

In recent years, there have been various settlement claims within the Bay of Plenty under the Treaty of Waitangi, including claims by Tapuika. The Tapuika Claims Settlement Act 2014 date of assent was 16 April 2014. In accordance with Schedule 1 Statutory areas of Tapuika, Part 1 Areas subject to statutory acknowledgement, the Kaituna River is a statutory area of Tapuika, and this is shown on plan OTS-209-26. This is relevant for both resource consent applications and for the consent authorities to recognise the statutory status given to Tapuika in terms of the Kaituna River and any environmental effects under the RMA.

5.3.2.4 Tapuika Environmental Management Plan

The Tapuika Environmental Management Plan⁷ (TEMP) was developed and released in 2014; and is a formally recognised Iwi Management Plan, and as such, has weight under the Resource Management Act 1991.

The Waiari Stream and Kaituna River fall within the rohe of Tapuika Iwi. The AFFCO Rangioru water take is a zero net take activity and is therefore consistent with the TEMP.

5.3.2.5 Ngati Whakaue ki Maketu Iwi Resource Management Plan Phase 2

The Ngati Whakaue ki Maketu Iwi Resource Management Plan Phase 2 was updated in August 2011; and is a formally recognised Iwi Management Plan, and as such, has weight under the Resource Management Act 1991.

The Kaituna River and Maketu Estuary falls within the rohe of Ngati Whakaue and the Te Puke WWTP and Waiari Stream are Registered Interest Areas. The AFFCO Rangioru water take is a zero net take activity and is therefore consistent with the Iwi Resource Management Plan).

5.4 Statutory Framework Conclusions

The relevant provisions of the RMA for considering this application are Sections 104, 104B, 105, 107, 108 and 124. In summary, these provisions require consideration of Part 2 matters, relevant objectives and policies, and environmental effects. This is particularly relevant in determining whether or not any adverse effects will be more than minor and whether or not the activities will be contrary to the relevant objectives and policies.

⁷ "Tapuika Environmental Management Plan 2014-2014", Tapuika Iwi Authority. Te Puke

Relevant objectives and policies of the NPS for Freshwater Management 2020, the Regional Policy Statement and regional plans have been provided for. Overall, the proposed activity is consistent with these objectives and policies.

Consideration has also been given to objectives of relevant Iwi Management Plans and given that the AFFCO Rangioru water take is a **zero net take** activity it is therefore consistent with said plans.

6. Economics & Alternatives to the Take

6.1 Introduction

In accordance with the requirements of the Resource Management Act, alternative methods of water take have been considered as set out below.

6.2 Economic Considerations

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 on an annual basis. Around 90% of this labour resource is sourced locally with a small proportion being sourced from outside Rangioru when necessary. AFFCO Rangioru is one of the largest employers in the Te Puke area.

Since 2003 AFFCO, within the financial constraints imposed by the economic climate within which the company operates, has invested significant new capital in its plants, including the Rangioru Plant. Upgrade initiatives at Rangioru have been undertaken at a capital cost of \$11.7 million over the past 10 years, including \$1.8 million relating to the Rendering Plant alone.

6.3 Alternatives to the Take

The only realistic alternative to a river take for the AFFCO Rangioru facility would be commercial purchase.

Given that the AFFCO Rangioru water take is a zero net take activity such an option is not warranted.

7. Proposed Conditions

AFFCO proposes that largely the same conditions currently in Consent 020194/1 should be inserted in the replacement consent as follows:

QUANTITY AND RATE

Kaituna River:

The daily quantity of water taken shall not exceed 27,270 cubic metres and the maximum rate of taking shall not exceed 400 litres per second.

Bore:

The daily quantity of water taken shall not exceed 1,636 cubic metres and the maximum rate of taking shall not exceed 37.9 litres per second.

8. Notification Determination

8.1 Public Notification

Under s.95A(1) of the RMA a consent authority has discretion in deciding whether to publicly notify an application for resource consent. Under s.95A(2) public notification is, however, required if:

- a) The activity will have or is likely to have adverse effects on the environment that are more than minor; or
- b) The applicant requests public notification; or
- c) A rule or national environmental standard requires public notification.

Under s.95A(3) a consent authority must not publicly notify the application if a rule or national environmental standard precludes notification and the applicant has not otherwise requested notification. Notwithstanding this, a consent authority may still publicly notify an application if it decides that special circumstances exist in relation to the application (s.95A(4)).

8.2 Limited Notification

Under s.95B(1) of the RMA, if an application is not publicly notified then the consent authority must decide if there are any 'affected persons' in relation to the activity. Any affected person must be given limited notification of the application, unless a rule or national environmental standard precludes limited notification (s.95B(2)).

Under s.95E(1) a consent authority must decide that a person is an affected person if the activity's adverse effects on that person are minor or more than minor (but are not less than minor). In making its decision, the consent authority may disregard an adverse effect of the activity on the person if a rule or national environmental standard permits an activity with that effect (s.95E(2)).

Notwithstanding the above, a consent authority must decide that a person is not an affected person if that person has otherwise given their written approval to the activity (s.95E(3)).

Given there is no indication that AFFCO's take is resulting in a more than minor effect on the River, AFFCO considers that limited notification is appropriate. As Iwi groups are interested party to the Application, AFFCO considers that limited notification is appropriate.

9. Conclusions

The environmental effects of AFFCO Rangiora's river take have been assessed as being no less than minor.

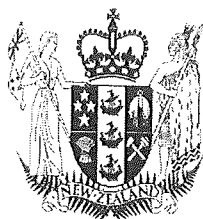
It is concluded that the proposal is not contrary to the purposes and principles of the RMA 1991, nor is it contrary to the provisions of relevant Regional Plan Rules.

Accordingly, it is considered consent should be granted.

Appendices

Appendix 1 Certificate of Title

Rangitimu



COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



Search Copy


R.W. Muir
Registrar-General
of Land

Identifier SA30D/275
Land Registration District South Auckland
Date Issued 30 November 1983

Prior References
SA33C/281

Estate	Fee Simple
Area	26.6089 hectares more or less
Legal Description	Part Pukaingataru B5B Block

Proprietors
Affco New Zealand Limited

Interests

S598991 Gazette Notice declaring the adjoining State Highway 2 (Pokeno to Wellington) to be a limited access road - 11.4.1973 at 2.35 pm
Subject to a gas pipeline right (in gross) over part marked C on Plan S31933 in favour of Natural Gas Corporation of New Zealand Limited created by Transfer H472544
H930799.4 Mortgage to Bank of New Zealand - 7.2.1990 at 9.00 am



**Report on Computer Register(s)
identified as potentially having a
status of Maori Land**



Affected Computer Register(s) identified as potentially Maori Land

SA30D/275

***** End of Report *****

E.C.M.T Rl.wy State Highway No 2
(over 20.12)

Pt. B5B.

26.6089 ha. 9053

603.85

491.15

515.79

Kaituna River.

ML9661

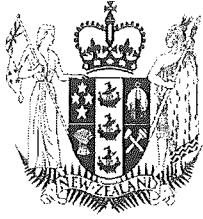
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COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952

Search Copy



R. W. Muir
Registrar-General
of Land

Identifier **SA356/281**
Land Registration District **South Auckland**
Date Issued 29 March 1920

Part-Cancelled

Prior References

SAPR141/24

Estate Fee Simple
Area 9.4595 hectares more or less
Legal Description Pukaingataru B3 Block

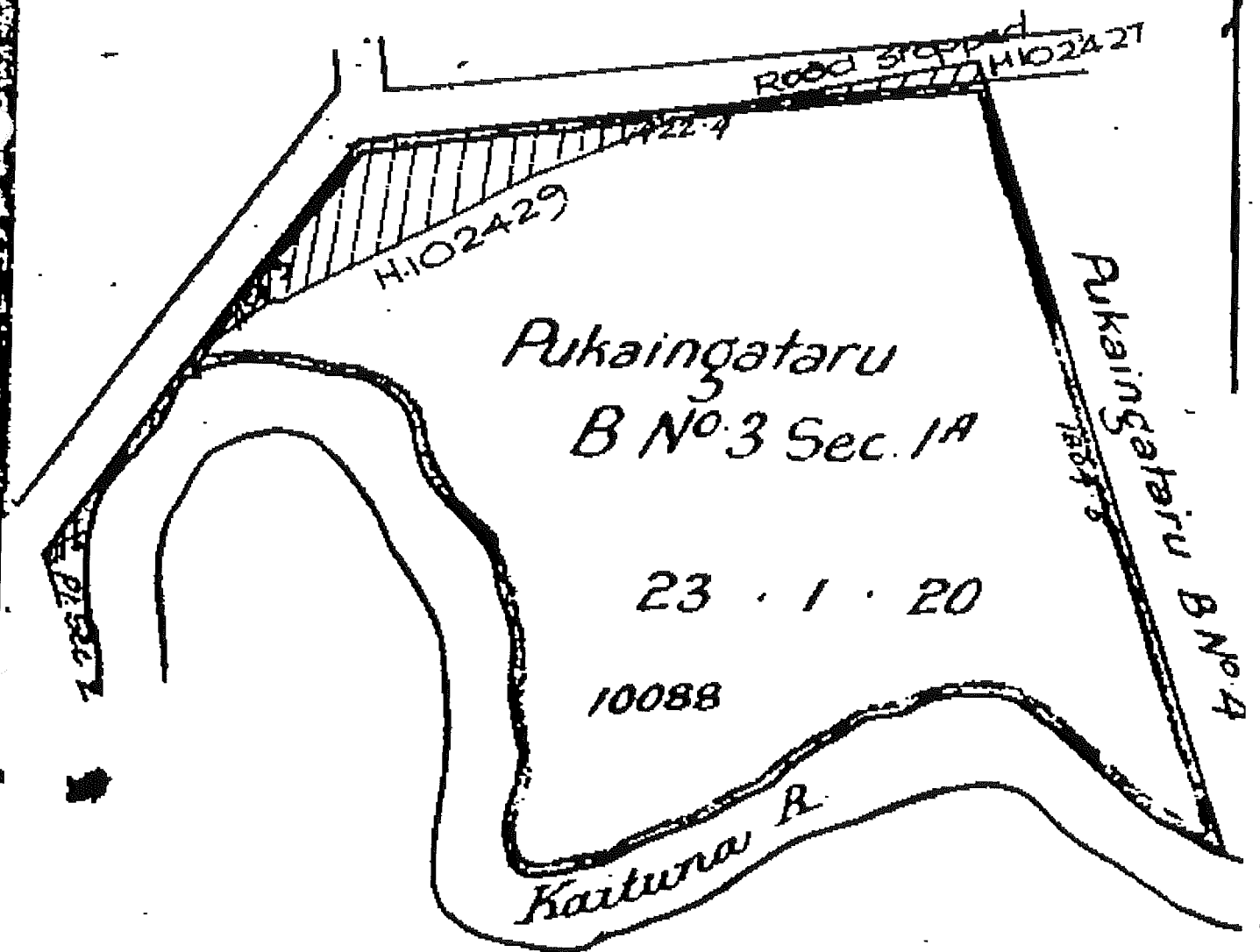
Proprietors

Affco New Zealand Limited

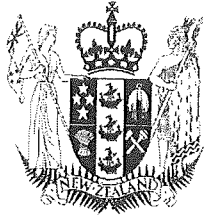
Interests

S598991 Gazette Notice declaring No. 2 State Highway (Pokeno to Wellington) fronting the within land to be a limited access road - 11.4.1973 at 2.35 pm
H102429 Gazette Notice taking within land (5185 square metres) for a Limited Access Road - 7.10.1976 at 2.43 pm
H930799.4 Mortgage to Bank of New Zealand - 7.2.1990 at 9.00 am

III Maketu S.D.



Metric Area: 9.4595 ha

**COMPUTER FREEHOLD REGISTER
UNDER LAND TRANSFER ACT 1952****Search Copy**
R.W. Muir
Registrar-General
of Land

Identifier SA399/175
Land Registration District South Auckland
Date Issued 05 November 1924

Part-Cancelled**Prior References**
SAPR170/41

Estate	Fee Simple
Area	4.9878 hectares more or less
Legal Description	Pukaingataru B5A Block
Proprietors	
Affco New Zealand Limited	

Interests

S598991 Gazette Notice declaring the adjoining State Highway No. 2 (Pokeno to Wellington) to be a limited access road - 11.4.1973 at 2.35 pm
H102429 Gazette Notice taking part within land (259m²) for a limited access road - 7.10.1976 at 2.43 pm
H930799.4 Mortgage to Bank of New Zealand - 7.2.1990 at 9.00 am

Image Quality due
to Condition
of Original

III Maketu, S.D.

B N° 5 B

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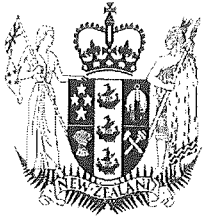
13-6-89

H.102429

3461 B
Pukaingalaru B N° 5 B
12-1-12 3461 B
12-1-12 3461 B

Sec 1

Balaua
Puka



COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952

Search Copy




R.W. Muir
Registrar-General
of Land

Identifier SA22A/1139
Land Registration District South Auckland
Date Issued 04 May 1977

Prior References
GN H102427

Estate	Fee Simple
Area	1.8392 hectares more or less
Legal Description	Section 20-22 Block III Maketu Survey District

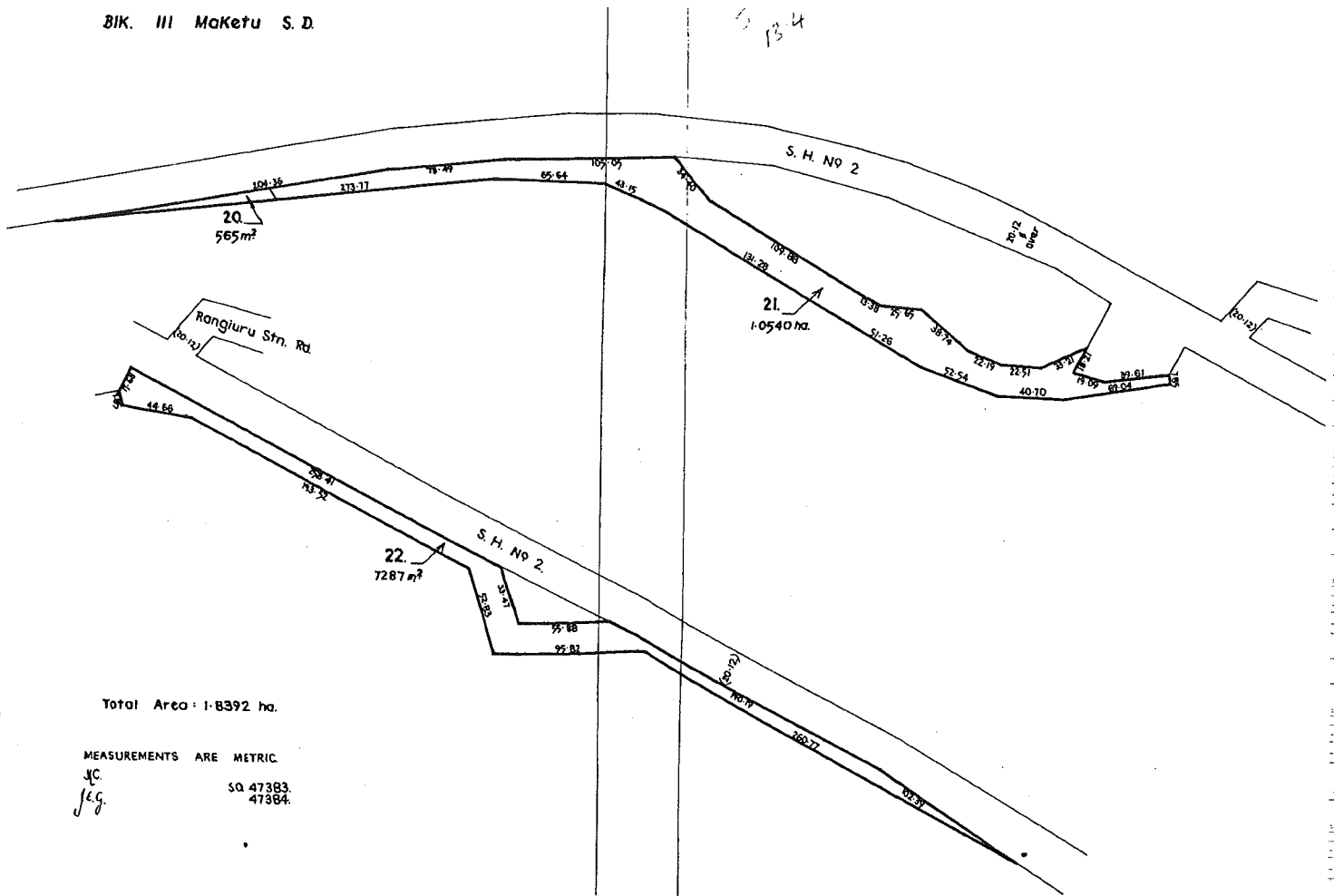
Proprietors
Affco New Zealand Limited

Interests

Subject to Section 168A Coal Mines Act 1925
S598991 Gazette Notice declaring State Highway 2 fronting the within land to be a limited access road - 11.4.1973 at 2.35 pm
Subject to a gas pipeline right (in gross) over part marked B on DPS 31933 in favour of Natural Gas Corporation of New Zealand Limited created by Transfer H472544 - 29.6.1983 at 11.50 am

BIK. III Maketu S. D.

134

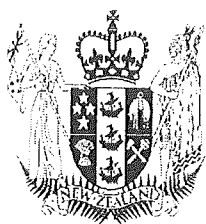


Total Area : 1.8392 ha.

MEASUREMENTS ARE METRIC.

MC
J.C.G.

SA 47383.
47384.



COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952

Search Copy



R. W. Muir
R. W. Muir
Registrar-General
of Land

Identifier 25165
Land Registration District South Auckland
Date Issued 18 September 2003

Prior References

SA32B/950 SA356/277

Estate Fee Simple
Area 29.5492 hectares more or less
Legal Description Part Pukaingataru B4 Block and Lot 2-4
Deposited Plan 306416

Proprietors

Affco New Zealand Limited

Interests

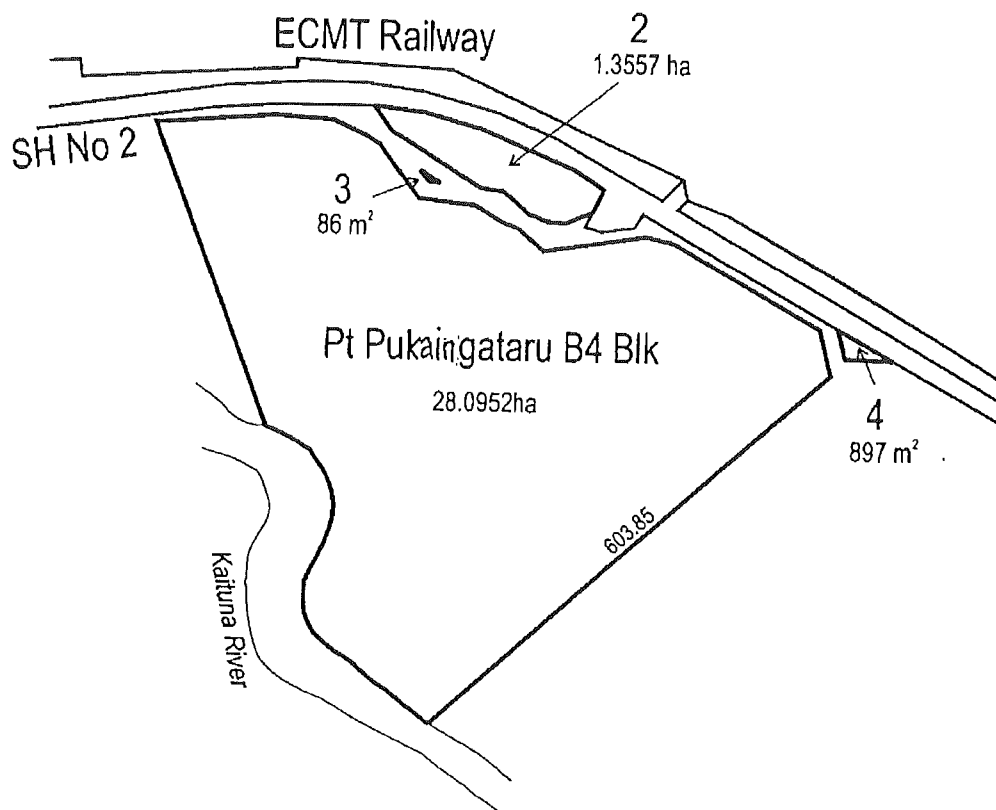
S406286 Compensation Certificate by Minister of Works - 11.6.1968 at 9.00 am (affects Part Pukaingataru B4 Block)
S598991 Gazette Notice declaring No. 2 State Highway (Pokeno to Wellington) fronting the within land to be a limited access road - 11.4.1973 at 2.35 pm
H930799.4 Mortgage of Part Pukaingataru B4 Block to Bank of New Zealand - 7.2.1990 at 9.00 am
Subject to Sections 241(2) and 242(1) Resource Management Act 1991(affects DP 306416)

Title Diagram 25165

Cpy - 01/01, Pgs - 001, 30/09/03, 12:53



DocID 5111716866



Total Area : 28.5492 ha

Appendix 2 BoPRC Form 5A



**BAY OF PLENTY
REGIONAL COUNCIL
TOI MOANA**

- A** PO Box 364, Whakatāne 3158
- P** 0800 884 880
- F** 0800 884 882
- E** info@boprc.govt.nz
- W** www.boprc.govt.nz

File ref:

	SEEN		SEEN

Office use only

Application for resource consent – Resource Management Act 1991 (s88)

5A Take and use surface water

We recommend you discuss your application with a Consents Planner before you apply. The first hour is free and will save you time and money in the long run. After the first hour, we will charge you for the service. We'll let you know before we start charging.

Call the Consents Duty Planner on 0800 884 880 with consents questions.

See **Notes to Applicant** (last pages of form) before filling in this application form.

Surface water takes are subject to rules in the Regional Natural Resources Plan (RNRP). The plan is on our website: <http://www.boprc.govt.nz/knowledge-centre/plans/>.

Call the Consents Duty Planner on 0800 884 880 for help determining the **allocation status** of the water body.

RNRP rules that apply to your activity: 43

Activity status of your consent application:

- ☐ Controlled
- ☐ Restricted Discretionary
- ☒ Discretionary

National Environmental Standard for Freshwater:

Is the proposed activity within 100m of a wetland?

- ☐ Yes
- ☒ No

I apply for resource consent under section 88 of the Resource Management Act 1991 (RMA).

If you have already completed Part 1 on another form (if applying for more than one activity), go straight to Part 2 of this form.

PART 1

1 Applicant/s name *(name/s to be on the consent)*

Surname:

First names:

OR

Trust and trustee names *(if application on behalf of a trust)*

Trust name:

Trustees' names:

Trustees' contact details:

OR

Company name: AFFCO NZ Limited

Contact person: Adam Grant, Plant Manager

NZ Companies Register number: 70827

2 Applicant/s contact details

Postal address: P O Box 132, Te Puke 3153

Phone *(select preferred)*

☐ Residential

☐ Business

07-573 0034

☐ Cell

Email

3 Consultant details *(or other person authorised to apply on behalf of applicant)*

Company name: Argo Environmental Limited

Contact person: Luke Gowing

Postal address: PO Box 105 774 Auckland 1143

Phone *(select preferred)*

☐ Business

☐ Cell 021 323 310

Email lgowing@argoenv.com

Send all **correspondence** relating to this application(s), including **invoices**, to:

☒ Applicant ☐ Consultant

4 Owner/occupier name and address *(of site relating to application)*

Owner: AFFCO NZ Limited

Postal address: P O Box 132, Te Puke 3153

☐ Residential

☒ Business

Occupier: As above

Postal address: As above

☐ Residential

☐ Business

If the applicant does not own the land to which the activity relates, then it is good practice to provide landowner written approval with the application.

5 Consent(s) being applied for from Bay of Plenty Regional Council

(a) **District** the activity is located in:

☐ Whakatāne District

☐ Ōpōtiki District

☐ Rotorua District

☐ Kawerau District

☒ Western Bay of Plenty District

☐ Tauranga District

☐ Taupō District

(b) Application is to **replace an existing or expired consent(s)**: ☒ Yes ☐ No

If yes, consent number(s): 020194/1

(c) Consent **duration** sought:

35 years months

Start date

Completion date *(if applicable)*

(d) Resource consent(s) also required from a **district council**? ☐ Yes ☒ No

Type of consent required

Has it been applied for? ☐ Yes ☐ No

Has it been granted? *(If Yes, please attach)* ☐ Yes ☐ No

6 Activity location/s

Site address/es AFFCO Rangioru Plant State Highway 2, Rangioru

Legal description/s *(from Certificate of Title, valuation notice, or rate demand)*

Pukaingataru Block B No. 3 Section 5A and 5B Block III Maketu SD

Map reference/s NZTM: E 1897643, N 5811500

Is your water take in a fully allocated catchment?

☐ Yes ☒ No

If you are unsure, ask the Consents Duty Planner: 0800 884 880.

PART 2

1 Description of activity

(a) Purpose of water take *(select all that apply)*

- ☒ Industry/municipal
- ☐ Frost protection
- ☐ Irrigation
- ☐ Temporary for bore drilling or dust control
- ☐ Spraying
- ☐ Dairy shed
- ☐ Other *(specify)*

Under s14(3)(b) of the RMA, water can be taken without resource consent for:

- (i) An individual's reasonable domestic needs.
- (ii) The reasonable needs of an individual's **or** animals' for drinking water.

and:

the taking or use does not, or is not likely to have an adverse effect on the environment.

(b) Name of watercourse Kaituna River

(c) Type of watercourse

- | | |
|---|--|
| <input checked="" type="checkbox"/> River or stream | <input type="checkbox"/> Modified river or stream |
| <input type="checkbox"/> Lake or pond | <input type="checkbox"/> Main-made drain privately managed |
| <input type="checkbox"/> Man-made drain managed by the Bay of Plenty Regional Council | |
| <input type="checkbox"/> Other <i>(specify)</i> | |

2 Water intake structure

- (a) If your intake structure can meet rule BW R5 of the Regional Natural Resources Plan (RNRP), no consent is required for the structure. If not, a separate consent for your intake structure is required.

- (b) Can your intake structure meet Rule BW R5 of the RNRP?

Yes

- (c) Attach detailed **plan/s**, to scale, of the intake structure and its placement over/in the bed of the watercourse. Please also include photos. **See Attached document.**

- (d) **Screen details**

Mesh size - **Coarse screen 16.8mm square slots; fine screen 6.6mm square**

Diameter of intake screen **n/a - flat screen**

Length of intake screen **4800 mm**

Depth of screen **600mm**

Pumping velocity through screen (**@ 400 l/sec**) **0.14 m/s**

3 Water take information

Notes about water take applications:

- We will check the efficiency of the volume of water you are applying for, using the model 'SPASMO'.
- For frost protection and spraying use, we may compare previously consented volumes (for replacement applications) with actual use, and may reduce the volume accordingly.
- Some water bodies are considered to be near or fully allocated. Contact the Consents Duty Planner for more information.
- Metering, monitoring and reporting requirements will be included in conditions of resource consent (if consent is granted).
- Larger volumes/rates of take are likely to be subject to more stringent monitoring/reporting requirements with higher ongoing charges associated with the consent.

- (a) **Industry/municipal**

Rate of take 400 litres per second (per existing consent)

Maximum time 24 hours per day

Maximum volume 27,270 m³ per day (per existing consent)

- (b) **Irrigation**

Rate of take litres per second

Maximum time hours per day

Maximum volume m³ per day **AND** m³ per week

Area hectares

Crop(s) *Provide the exact irrigation land area/s and a breakdown of area for each crop on a map. Specify the variety if kiwifruit, e.g. green, gold, red.*

Irrigation days per year:

(c) **Frost protection** (*attach previous use records for replacement applications*)

Rate of take litres per second

Maximum time hours per day

Maximum volume m³ per day

Area hectares

Crop(s)

Frost days per year: *For replacement consents, base this on previous use records. For new consents, use records from neighbouring orchards to estimate the likely maximum number of annual frost days. Attach relevant use records to support your application. Provide additional supporting information if your application requires a greater number of days.*

Lowest temperature frost event designed for

(d) **Spraying agrichemicals** (*attach spray diary for replacement applications*)

Rate of take litres per second

Events per year at 1500 L/ha

Events per year at 2000 L/ha

Annual volume m³

(e) **Domestic supply**

# of Bedrooms	Demand (L/day/person)	Total (m ³ /day)
	200	

Annual volume m³

(f) **Stock watering** (*see Horizons Regional Council (2007) Reasonable Stock Water Requirements Guidelines for Resource Consent Applications*)

Stock type	# of stock	Demand (L/day/animal)	Total (m ³ /day)
Milking cows			
Sheep			
Horses			
Grazing cattle			

Annual volume m³

(g) **Dairy shed wash down and cooling water**

# of Milking Cows	Rate (L/cow/day)	Days Annually

Annual volume m³

(h) **Temporary take**

Rate of take litres per second

Maximum time hours per day

Maximum volume m³ per day

Number of occurrences per year

(i) **Other** (*specify*)

4 **Site description**

Describe the site, including aquatic ecology, species present, streambed substrate, wildlife habitats (wetland, etc.). Please include photos.

See attached documentation

[Continue on a separate page if necessary]

5 **Site plan**

Provide a site plan showing the location of the activity and surrounding environment in relation to property boundaries.

You can use our mapping system (www.boprc.govt.nz keywords 'regional mapping'). The maps have property boundary and contour layers. You can search by property, view and print topographic maps and aerial photographs.

See attached documentation

6 Assessment of environmental effects (AEE)

Describe the actual or potential environmental effects associated with your water take, including:

- (a) Effects on the stream bed during construction of the intake structure:

n/a – existing authorised structure

- (b) Long-term effects on the watercourse from intake structure:

n/a – existing authorised structure

- (c) Effects on instream ecology and fish passage from water take:

Nil – zero nett take – see attached documentation

- (d) Other effects (e.g. groundwater reduction):

nil

- (e) Effect of allocation on the water body:

Nil – zero nett take – see attached documentation

- (f) Effects on recreation:

Nil – zero nett take – see attached documentation

- (g) Effects on existing authorised/downstream users:

Nil – zero nett take – see attached documentation

- (h) Degree of connectivity between groundwater and surface water:

None

- (i) Effects on wetland:

None

- (j) Proposed mitigation methods:

Zero nett take – see attached documentation

- (k) Consideration of alternatives:

Nil – zero nett take – see attached documentation

It is not adequate to state that there are no environmental effects.

It is important to provide a well-prepared AEE, otherwise we may:

- not accept your application,
- turn down your application,
- ask for more information, delaying the time taken to process your application, or
- commission someone else to review your application at a cost to you.

For more information, see the Ministry for the Environment's *Good Practice Guide on How to Prepare an AEE*, and *Everyday Guide to the RMA: Applying for a Resource Consent*, at www.mfe.govt.nz/publications/rma

More information on the resource consent process and consultation is on our website.

7 Efficiency of use

Describe the water distribution system, including efficiency measures, control systems, and management regime. Include plans where relevant.

See attached documentation

[Continue on a separate page if necessary]

8 Cultural effects assessment

The Regional Policy Statement is clear that only tangata whenua can identify their relationship with an area. It is good practice to consult with tangata whenua about your application so that you can provide an accurate assessment of cultural effects.

We can provide a list of iwi and hapū with an interest in the site. Iwi and hapū management plans are on our website www.boprc.govt.nz (key words 'iwi management plans'). We can provide details about identified archaeological sites and Statutory Acknowledgements.

Contact the Consents Duty Planner on 0800 884 880 for more information.

Provide an **assessment of cultural effects** associated with the proposal:

Zero nett take – see attached documentation

[Continue on a separate page if necessary]

9 Assessment against relevant objectives & policies of the relevant plan/s

Provide an assessment of the proposal against the relevant objectives and policies of the operative Regional Natural Resources Plan. You can use the Water Take and Use Policy Assessment form on our website <https://www.boprc.govt.nz/do-it-online/consent-forms/> under 'Water'.

Attached to this Form 5A – Annex 1.

10 Affected persons

*For your application to be considered for **non-notification** you must gain written approval from all persons who may be affected by the proposal. We can help you identify people/organisations likely to be affected. Affected persons may include neighbouring land owners and occupiers, downstream water users, organisations such as the Department of Conservation, Land Information New Zealand (LINZ), Eastern Region Fish and Game Council, iwi, hapū and/or community groups.*

The form 'Affected Person's Written Approval' can be filled out by the affected party and attached to this application. It is on our website: www.boprc.govt.nz keywords 'resource consent forms'.

Provide details of persons who may be affected by your proposal. If you have discussed your proposal with any of these persons, record their comments and your response, and submit with your application:

Non identified - Zero nett take – see attached documentation - obviously iwi engagement will be important.

Name

Address

☐ Written approval attached

Name

Address

☐ Written approval attached

Name

Address

☐ Written approval attached

[Continue on a separate page if necessary]

11 Extending timeframes

The RMA specifies timeframes for processing resource consent applications. Timeframes can be extended with the applicant's agreement.

May we extend the consent processing timeframe?

- ☒ Yes, provided that I can continue to exercise my existing consent until this application is processed (*renewal application only*).
- ☐ Yes, provided the extension is to discuss and try to agree on consent conditions.

- ☐ Yes, provided the application is processed before
- ☐ No.

12 Deposit

A **\$2700** including GST deposit is required with this application. This can be paid online, by cheque or eftpos at a Regional Council reception desk.

- Bay of Plenty Regional Council's bank account number is **06 0489 0094734 00**. Use the applicant's name as the reference. We will issue a GST invoice marked "PAID" when we receive payment.
- The application will not be accepted until the deposit is paid. We are happy to hold the forms, but processing will not start until we receive payment.
- **Additional charges are usually incurred**, depending on the resource we use in processing your application (*e.g. staff time, technical reviews, complexity and completeness of application*). Staff can give an estimate of expected costs. Please see the schedule of fees attached.

Checklist

Name of **staff member** you discussed your application with: Todd Whittaker

The following information must be included in your application:

- ☒ Complete all details applicable in this application form
- ☒ Assessment of environmental effects (AEE), as set out in Schedule 4 of the RMA
- ☒ Assessment of cultural effects
- ☒ Assessment of the activity against the relevant objectives and policies in the relevant regional plan/s
- ☒ Written approval from all affected parties, and/or summary of consultation carried out
- ☒ Site plan
- ☒ Details, plans and photos of water intake structure
- ☒ Sign and date the application form
- ☒ Pay the deposit
- ☒ Other relevant information (*e.g. Certificate of Title, details from the Companies Register etc.*)

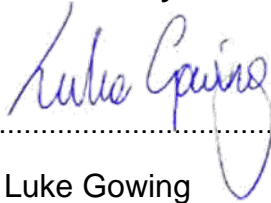
Unchecked boxes may result in your application being returned under s88 of the RMA.

Information privacy

The RMA requires this information to process the application and assist in managing the region's natural and physical resources. Information in this application is regarded as **official information**.

Bay of Plenty Regional Council will hold this information, and it is subject to the Local Government Official Information and Meetings Act 1987 and the Privacy Act 1993. **This information will generally be available to the public. If you would like any of this information to remain confidential, please let us know.**

- 1 I have authority to sign on behalf of the party/ies named as applicants for this consent.
- 2 I have read, and understand, all information in this application form, including the requirement to pay additional costs incurred.
- 3 All information provided is true and correct. I understand that inaccurate information could result in my resource consent being cancelled.

Signature 

Date: 10/12/20

Name: Luke Gowing

NOTES TO THE APPLICANT

READ THIS BEFORE FILLING OUT THE APPLICATION FORM

Call the **Consents Duty Planner on 0800 884 880** for consents questions.

- 1 **We will not begin processing your application until the \$2700 deposit is paid**, unless prior arrangement is made. **Processing costs are likely to exceed the deposit; you will be invoiced for the balance.**
- 2 You may be required to pay a **resource management charge** associated with holding a consent (s36 of the RMA). Accounts are payable by the 20th of the month following date of invoice. Where costs are more than \$2000 above the deposit, you may be requested to make interim payments towards the final total cost.
- 3 The **coastal marine area** is the area from the outer limit of the territorial sea (12 nautical miles) to the line of mean high-water springs. For activities at river mouths, contact the Consents Duty Planner for clarification.
- 4 Let us know if your application includes **trade secrets** and/or **commercially or culturally sensitive material**. Section 42 of the RMA enables protection of sensitive information.
- 5 Schedule 4 of the RMA sets out the **information you must provide**. If insufficient information is provided, we may put the application on hold or return it as incomplete.
- 6 **Identify every consent required** for the proposal. We may put the application on hold until you apply for all resource consents required (s91 of the RMA).
- 7 If we request **further information** (s92 of the RMA), the application will be put on hold and processing will not restart until all information is received.
- 8 An application does not need to be publicly notified if the environmental **effects are minor and written approval has been obtained** from everyone adversely affected by the granting of the consent (s95D and s95B of the RMA). Written approval forms are on our website: <https://www.boprc.govt.nz/do-it-online/consent-forms/> under 'Other forms'.
- 9 We may **review any consent** at any time if the application contains inaccuracies that materially influence the decision made (s128(1)(c) of the RMA).

How to prepare an assessment of environmental effects

Key points of Schedule 4 of the RMA

The amount of information in your assessment of environmental effects (AEE) should correspond to the scale and significance of the proposal's environmental effects. Your AEE must include:

- A full description of the proposal, including the site and locality; a site plan and plans of your proposal.
- A description of the environmental effects, including the significance and nature of the effects. Address specific environmental effects and refer to issues identified in the relevant regional plan/s.
- A discussion of effects that may need to be controlled or monitored, how the control or monitoring will be carried out, and by whom.
- A description of alternatives to avoid, remedy or mitigate environmental effects.
- An assessment of risks to the environment from hazardous substances and/or discharge of contaminants.
- An assessment of the activity against the relevant objectives and policies in the relevant regional plan/s.
- A record of consultation: names and comments of people you discussed the proposal with.

You may need specialist advice for more complex applications. Call the **Consents Duty Planner** on **0800 884 880** for more information.

It is not adequate to state that there are no environmental effects.

If your AEE is not sufficient, we may:

- not accept your application
- turn down your application
- impose many conditions on your resource consent
- ask for more information, delaying the time to process your application, or
- commission someone else to review the application at your cost.

For more information see the Ministry for the Environment's *Good Practice Guide on How to Prepare an AEE* and its brochure on making resource consent applications, at www.mfe.govt.nz/publications/rma

Hourly charges for staff & consultants

Group	Hourly charge (including GST)
Administration	\$110
Consents Planners	\$160
Senior Consents Planners	
Engineers/Scientist/Regulatory Project Officers (RPO)/ Environmental Data Officer/Laboratory Technicians	
Compliance Monitoring Officer (externally contracted)	
Maritime Officer	
Team Leaders/Senior RPO/Works Engineer/Senior Maritime	\$180
Senior Engineer/Senior Scientist/Harbourmaster	
Pou Ngaio (Technical/Cultural RMA Specialist)	
Managers/Regional Harbourmaster	\$260
Consultants/Contractors	As charged by consultant/contractor
Regional Council staff mileage	Current applicable IRD rate

The full **Charges Policy** is on our website:

<http://www.boprc.govt.nz/knowledge-centre/policies/section-36-charges-policy/>

ANNEX 1

Water-take and use policy assessment

Water-take and use policy assessment

The Resource Management Act 1991 requires you to make your own assessment of your proposal against relevant policies.

Table 1 below contains a list of objectives and policies relevant to water take consent applications. There is space in the table for your comments, or alternatively you can provide your own policy assessment. Please note: this is not a full list of potentially relevant policies however these are applicable for the majority of applications.

Some more general objectives and policies will contain pre-filled comments and will ask whether or not you agree with these.

Other policies are more specific to individual applications and therefore require you to demonstrate whether your proposal is consistent with them. Please comment in the table for below in these cases and also refer to any assessment documents where necessary.

Regional planning documents

Bay of Plenty Regional Natural Resources Plan [Bay of Plenty Regional Natural Resources Plan](#); and Tarawera Catchment Plan [Tarawera River Catchment Plan](#); and the Regional Policy Statement <https://www.boprc.govt.nz/your-council/plans-and-policies/policies/regional-policy-statement>

Please click the above links to ensure you have looked at all relevant objectives or policies.

Table 1 Objectives and policies relevant to water take consent applications.

Bay of Plenty Regional Natural Resources Plan (2008)		
Relevant provisions	Policy, Objective or Method	Assessment
Kaitiakitanga		
KT P1 (Policy 1)	To recognise that tangata whenua, as indigenous peoples, have rights protected by the Treaty of Waitangi (Te Tiriti o Waitangi) and that consequently the Act accords Maori a status distinct from that of interest groups and members of the public.	Agree: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Comment:
KT P2 (Policy 2)	To take into account the Treaty of Waitangi in the management of land, water and geothermal resources.	<input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Comment:
KT P10 (Policy 10)	To identify the extent of cultural values associated with rivers, streams, lakes, wetlands, geothermal resources and land, where this is considered appropriate by tangata whenua.	Comment: The AFFCO Rangiora river take is a no-net take activity other than a 45 m stretch of the Kaituna River between the intake and the point of discharge. No culturally significant values have been identified in relation to this stretch of the river. Groundwater drawdown test from bore indicates effects of groundwater extraction are no more than minor.
KT Policy 13 (Policy 13)	To advise and encourage resource consent applicants to consult directly with tangata whenua where it is necessary to identify the relationships of Maori and their culture and traditions with their ancestral lands, waters, sites, waahi tapu and other taonga, and the actual and potential adverse effects of proposed activities on that relationship.	Consultation undertaken with tangata whenua: <input checked="" type="checkbox"/> Y / <input type="checkbox"/> N Comment: Extensive consultation with tangata whenua as part of the broader suite of applications
KT Policy 16 (Policy 16)	To recognise that different iwi and hapu may have different water, land and geothermal resource management concerns, practices and management methods.	Comment: Extensive consultation with tangata whenua and other iwi as part of the broader suite of applications

Bay of Plenty Regional Natural Resources Plan (2008)

Relevant provisions			Policy, Objective or Method	Assessment
KT Policy 18 (Policy 18)			To avoid, remedy or mitigate adverse effects on water, land and geothermal resources or sites of spiritual, cultural or historical significance to tangata whenua, where these resources and sites have been identified by tangata whenua.	Comment: This river take is a no-net take activity other than a limited stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.
KT (Policy 19)	Policy	19	To encourage tangata whenua to recommend appropriate measures to avoid, remedy or mitigate the adverse environmental effects of the use and development of water, land and geothermal resources.	Comment: Extensive consultation with tangata whenua and other iwi as part of the broader suite of applications
KT (Policy 20)	Policy	20	To assess effects of proposed development activities on the cultural and historic values and sites of water, land and geothermal resources in consultation with tangata whenua.	<p>Consultation undertaken with tangata whenua:</p> <p><input checked="" type="checkbox"/> Y / <input type="checkbox"/> N</p> <p>Comment:</p> <p>This river take is a no-net take activity other than a 650 m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater. Groundwater drawdown test from bore indicates effects of groundwater extraction are no more than minor.</p>
KT (Method 20)	Method	20	Where appropriate to the scale and magnitude of effects, or location of the activity, require resource consent applicants to supply a record of consultation with all tangata whenua who are affected by the proposed activity.	<p>Record of consultation with all tangata whenua supplied:</p> <p><input checked="" type="checkbox"/> Y / <input type="checkbox"/> N</p> <p>Comment: Part of Extensive consultation with tangata whenua and other iwi as part of the broader suite of applications</p>

Bay of Plenty Regional Natural Resources Plan (2008)

Relevant provisions	Policy, Objective or Method	Assessment
Water		
RNRP Method 168, Objective 39, Policy 73 Efficient Use	<p>Efficient use of water resources in the Bay of Plenty.</p> <p>Assess the efficiency of the water use of a proposed activity on a case by case basis relative to the proposed use with consideration to the following:</p> <ul style="list-style-type: none"> (a) For irrigation activities – soil moisture deficit, evapotranspiration, and reasonable water coverage for crop type. Efficient irrigation use is the minimum volume of water required to optimise production while avoiding or mitigating adverse effects on the environment, using current best management practices. (b) For commercial, trade and industrial processes – sufficient to meet the needs of the use with minimal waste of water. (c) For municipal or community water takes – sufficient to meet the needs of the urban area, including projected population growth based on Census figures. (d) Efficient allocation as well as use of water resources in the Bay of Plenty. 	<p>I have provided an assessment of the efficiency of my water use relative to the proposed use(s) and based on best management practices.</p> <p><input type="checkbox"/> Y / <input type="checkbox"/> N</p> <p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater. Groundwater drawdown test from bore indicates effects of groundwater extraction are no more than minor.</p>
RNRP Objective 43 and Policy 70 Sustainability	<p>Abstraction of groundwater at a volume and rate that does not:</p> <ul style="list-style-type: none"> (a) Permanently or unsustainably lower water levels or decrease groundwater quality in aquifer systems. (b) Permanently or unsustainably lower water levels in streams or rivers where groundwater and surface water bodies are linked. <p>Allocate groundwater at a sustainable yield ...</p>	<p>Comment: Refer to separate groundwater evaluation. Groundwater drawdown test from bore indicates effects of groundwater extraction are no more than minor.</p>

Bay of Plenty Regional Natural Resources Plan (2008)

Relevant provisions	Policy, Objective or Method	Assessment
RNRP Policies 166, 72 and 67 Existing Consents	<p>To ensure that any allocation of water does not derogate from any existing consents.</p> <p>Give preference to existing holders of resource consents for the take and use of water when allocating water in pressure abstraction catchments and existing consent are being replaced...</p> <p>To take into account adverse effects of water abstraction from rivers and streams on existing downstream water users, including non-consumptive users.</p>	<p>I acknowledge that existing authorised water abstractors will be given priority when considering the renewal of resource consents and when allocating water in pressure catchments.</p> <p><input checked="" type="checkbox"/> Y/ <input type="checkbox"/> N</p> <p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.</p>
RNRP Policy 74 Groundwater Linked to Surface Water	<p>To investigate the linkage between groundwater and surface water bodies to determine if groundwater takes are adversely affecting water flows in streams, rivers and springs.</p>	<p>Comment: Groundwater drawdown test from bore indicates effects of groundwater extraction are no more than minor..</p>
RNRP Objectives 41, 42, 45 and 46 Policies 64, 65, 79 and 80 Instream Values, Flow Variability and Low Flow	<p>Water flows in streams and rivers are maintained to:</p> <ul style="list-style-type: none"> (a) Provide protection for existing aquatic life in the water body (b) Maintain identified significant ecological values, landscape values, Māori customary values and traditional instream uses of rivers and streams. (c) Maintain water quality relative to the assimilative capacity and water quality classification of the water body. (d) Avoid or mitigate adverse effects on downstream environments, and existing uses of the water resource. <p>Instream flow variability is maintained to sufficient levels to allow for instream biota and steam flushing requirements.</p> <p>Water abstractions account for water availability limitations during drought events.</p> <p>Adequate flows are restored to rivers, streams, including individual reaches where allocation or diversion causes</p>	<p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.</p>

Bay of Plenty Regional Natural Resources Plan (2008)

Relevant provisions	Policy, Objective or Method	Assessment
	<p>water flow to be at or below the Instream Minimum Flow Requirements set in Schedule 7.</p> <p>To allow for flow variation in streams and rivers when allocating water, and controlling the effects of damming and diversion activities.</p>	

Tarawera River Catchment Plan

If your activity is located in the Tarawera Catchment, please consider the relevant objectives and policies of the [Tarawera River Catchment Plan](#).

Regional Policy Statement

Regional Policy Statement (RPS) [Operative Regional Policy Statement](#).

Regional Policy Statement (RPS)		
Reference	Summary/Theme	Comment
Iwi Resource Management		
Policies IW 2B, IW 3B, IW 4B, IW, 5B and IW 6B.	<p>Proposals which may affect the relationship of Māori and their culture and traditions must ... recognise that only tangata whenua can identify and evidentially substantiate their relationship and that of their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga.</p> <p>Recognise matters of importance to Maori, avoid adverse effects of matters of significance to Maori and involve tangata whenua in the cultural effects assessment process.</p>	<p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater – refer attached documentation. Groundwater drawdown test from bore indicates effects of groundwater extraction are no more than minor.</p>

Regional Policy Statement (RPS)

Reference	Summary/Theme	Comment
Water Quantity		
Policy WQ 1A	<p>Promoting efficient water use, water harvesting and water transfers.</p> <p>Promote the efficient use of water, enable water harvesting where adverse effects on the environment can be avoided, remedied or mitigated, and enable the transfer of water permits in whole or in part.</p>	<p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.</p>
Policy WQ 3B	<p><i>Allocating water</i></p> <p>Have regard to the following matters when allocating and reallocating freshwater:</p> <ul style="list-style-type: none"> (a) The demands and availability of water within catchments or areas; (b) Making water available to meet existing and reasonably foreseeable domestic, marae or municipal water supply needs with priority for essential drinking and sanitation requirements; (c) The relative economic benefits of the proposed end use of the water, when allocation limits are exceeded, or are close to being exceeded; (d) The benefits of maintaining instream flows to protect and enhance the cultural values of a waterbody, including its mauri; (e) Requiring the volume of water allocated and taken to be reasonable and justifiable with regard to its intended use; (f) The value of investments that existing consent holders have made which depend on the water abstracted; 	<p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.</p>

Regional Policy Statement (RPS)		
Reference	Summary/Theme	Comment
	<p>(g) The availability of the water for other uses, including cultural uses;</p> <p>(h) The availability of water for other uses, including cultural uses;</p> <p>(i) The benefits to be derived from the use of water for, or directly associated with electricity generation from renewable sources; and</p> <p>(j) The benefits to be derived from the use of water for rural production activities.</p>	
Policy WQ 4B	<p><i>Establishing common expiry review dates for the taking of water</i></p> <p>Establish and implement common review dates for the taking and use of surface and groundwater within specified catchments.</p>	Comment: AFFCO generally concurs subject to receiving sufficient duration relative to capital investment in Rangiuru plant.
Policy WQ 6B	<p><i>Ensuring water availability</i></p> <p>When applying for designations, plan changes, land use and/or subdivision consent the applicant should ensure that there is sufficient water available at the location to support the activity.</p> <p>Explanation: Before seeking consent for a new development or particular activity the applicant should check that there is sufficient water available to sustain it. The Regional Council can advise a potential applicant regarding the availability of water at the location of their proposed development so they can make an informed decision about whether or not to proceed with their proposal.</p>	Comment: Less than minor take relative to MALF - consented maximum rate of take represents only 0.14% of the total flow in the River at MALF (29.1 m ³ /s), This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.

Regional Policy Statement (RPS)

Reference	Summary/Theme	Comment
Policy WQ 7B	<p><i>Reducing water demand</i></p> <p>When applying for land use and/or subdivision consent the applicant shall consider alternative sources of water, and where reasonable, implement water conservation measures and the benefits of water collection and reuse and/or recycling.</p>	<p>Comment: This river take is a no-net take activity other than a 45m stretch of the Kaituna River between the intake and the point of discharge of treated wastewater.</p>
Policy WQ 8B	<p><i>Managing consented water takes to ensure efficient use</i></p> <p>When considering an application for resource consent to take water, regard shall be given to:</p> <ul style="list-style-type: none"> (a) The extent to which water users have demonstrated a reasonable need for the rates and volumes sought; (b) The extent to which water users have demonstrated that the water will be used efficiently; (c) The extent of potential adverse effects on other authorised users; (d) Specifying the maximum allowable water use as well as maximum abstraction rates; (e) Requiring the consent holder to measure and report the actual amount of water taken; (f) Whether water is able to be taken within pressure catchments and aquifers that are nearing full allocation; (g) Preventing saltwater intrusion; (h) The reasonably foreseeable impacts of climate change; 	<p>Comment:</p> <ul style="list-style-type: none"> (a) Historical use demonstrates need (b) Zero net take application (c) Zero net take application (d) Agree (e) Agree (f) Zero net take application (g) n/a (h) n/a - Zero net take application

Regional Policy Statement (RPS)

Reference	Summary/Theme	Comment
	<ul style="list-style-type: none"> (i) Establishing and applying a consent term of no more than 15 years, unless: <ul style="list-style-type: none"> (i) The take and use of water is necessary to enable the use or development of regionally significant infrastructure; (ii) The take and use of water is for a non-typical activity such as dewatering and the access to, and use and development of mineral resources; or (iii) A longer term is demonstrated by the applicant to be appropriate in the circumstances; (j) The benefits to be derived from the use of water for, or directly associated with electricity, generation from renewable sources. 	<ul style="list-style-type: none"> (i) Regionally significant infrastructure – zero nett take. (j) n/a

National planning documents

National Environmental Standard for Sources of Human Drinking Water ([link here](#)) [NES for Sources of Human Drinking Water](#)

Does your proposed activity affect, or potentially affect, a drinking water supply that provides for between 25 and 501 people or more for at least 60 days of the year?

☐ Y / ☒ N

National Policy Statement for Freshwater Management ([link here](#)) [NPS for Freshwater Management](#)

Does your proposed activity involve taking and/or using water or discharging a contaminant to water (e.g. stormwater, dewatering water, land drainage water)?

☐ Y / ☒ N

Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 ([link here](#)) [Resource Management Regulations - Measurement and Reporting of Water Takes](#)

Does your proposed activity involve the taking of water at a rate of 5 litres per second or more?

☒ Y / ☐ N

Resource Management Act (RMA)

Part II Sections 5, 6, 7 and 8

- Purpose and principles
- s6 Matters of national importance
- s7 Other matters
- s8 Treaty of Waitangi

Please review Part II Sections 5, 6, 7 and 8 of the RMA which can be viewed at the below link.

[Part II - Resource Management Act 1991](#)

Do you consider that the matters relevant to your application listed in Part II of the RMA, have been given adequate regard in the above documents (Bay of Plenty Regional Natural Resources Plan and the Regional Policy Statement (RPS) and therefore agree it is not necessary to provide a separate assessment of the application against Part II of the RMA?

☐ Y / ☒ N

If no, and you think there are matters relevant to your application listed in Part II of the RMA, which have not been given adequate regard in the above documents (Bay of Plenty Regional Natural Resources Plan and the Regional Policy Statement (RPS) please provide a separate assessment of the application against Part II of the RMA.

s124 of the RMA Assessments of investment values (renewal of existing, current consents only)

Important: you must complete this question if your application is intended to replace a current resource consent, and this application will be lodged with Bay of Plenty Regional Council at least 6 months before that consent expires.

Provide an assessment of the value of your investment. You need to:

Specify the value of investment of the activities/infrastructure that are reliant on the resource consent/s you are applying for here.

This must be the 'book value' of the investment (not the replacement value).

- | | | |
|---|---|---|
| <input type="checkbox"/> < \$10,000 | <input type="checkbox"/> \$10,000 to \$50,000 | <input type="checkbox"/> \$50,000 to \$250,000 |
| <input type="checkbox"/> \$250,000 to \$1,000,000 | <input type="checkbox"/> \$1 Million to \$5 Million | <input checked="" type="checkbox"/> \$5 Million to \$50 Million |
| <input type="checkbox"/> > \$50 Million | | |

Include evidence that supports the assessment.

Appendix 3 BoPRC Form 5B



A PO Box 364, Whakatāne 3158
P 0800 884 880
F 0800 884 882
E info@boprc.govt.nz
W www.boprc.govt.nz

File ref:

	SEEN		SEEN

Office use only

Application for resource consent – Resource Management Act 1991 (s88)

5B Take and use groundwater

We recommend you discuss your application with a Consents Planner before you apply. The first hour is free and will save you time and money in the long run. After the first hour, we will charge you for the service. We'll let you know before we start charging.

Call the Consents Duty Planner on 0800 884 880 with consents questions.

See Notes to Applicant (last pages of form) before filling in this application form.

Groundwater takes are subject to rules in the Regional Natural Resources Plan (RNRP). This plan is on our website: <http://www.boprc.govt.nz/knowledge-centre/plans/>.

For water availability please use the *Indicative Groundwater Allocation Map Tool* on our website to determine the **allocation status** of your location:

<https://www.boprc.govt.nz/environment/fresh-water/water-use/#groundwater-tool>

RNRP rules that apply to your activity: 43

Activity status of your consent application:

☒ Discretionary

National Environmental Standard for Freshwater

Is the proposed activity within 100m of a wetland?

☐ Yes

☒ No

I apply for resource consent under section 88 of the Resource Management Act 1991 (RMA).

If you have already completed Part 1 on another form (if applying for more than one activity), go straight to Part 2 of this form.

PART 1

1 Applicant/s name *(name that will be on the consent)*

Surname:

First names:

OR

Trust and trustee names *(if application on behalf of a trust)*

Trust name:

Trustees' names:

OR

Company name:

Contact person:

NZ Companies Register number:

2 Applicant/s contact details

Postal address:

Telephone *(tick preferred contact number)*

☐ Residential

☐ Business

☐ Cell

Email

3 Consultant details *(or other person authorised to apply on behalf of applicant)*

Company name:

Contact person:

Postal address:

Telephone *(tick preferred contact number)*

☐ Business

☐ Cell

☐ Cell

Email

Send all **correspondence** relating to this application(s), including **invoices**, to:

☐ Applicant ☐ Consultant

4 Owner/occupier name and address *(of the site relating to application)*

Owner:

Postal address:

☐ Residential

☐ Business

Occupier:

Postal address:

☐ Residential

☐ Business

If the applicant is not the owner of the land to which the activity relates, then it is good practice to provide written approval from the landowner with the application.

5 Consent(s) being applied for from Bay of Plenty Regional Council

(a) **District** the activity is located in:

☐ Whakatāne District

☐ Ōpōtiki District

☐ Rotorua District

☐ Kawerau District

☐ Western Bay of Plenty District

☐ Tauranga District

☐ Taupō District

(b) Is this application to **replace an existing or expired consent(s)**? ☐ Yes ☐ No

If yes, consent number(s):

If yes, the value of the investment:

(c) Consent **duration** sought:

 years months

Start date

Completion date *(if applicable)*

(d) Resource consent(s) also required from a **district council**? ☐ Yes ☐ No

Type of consent required

Has it been applied for? ☐ Yes ☐ No

Has it been granted? *(If yes, please attach)*

☐ Yes ☐ No

Name of **Consents staff member** you discussed your application with:

6 Activity location

Site address/es:

Legal description/s *(from Certificate of Title, valuation notice, or rate demand)*

Map reference/s NZTM:

Is your water take in a fully allocated catchment?

☐ Yes ☐ No

If you are unsure call the Consents Duty Planner on 0800 884 880.

PART 2

1 Purpose of water take *(select all that apply)*

- ☒ Industry
- ☐ Municipal
- ☐ Irrigation
- ☐ Frost protection
- ☐ Temporary for bore drilling or dust control
- ☐ Dairy shed
- ☐ Spraying
- ☐ Other *(please specify)*

Under s14(3)(b) of the RMA, water can be taken without resource consent if the take or use does not, or is not likely to, have an adverse effect on the environment and is for:

- (i) An individual's reasonable domestic needs,
- (ii) The reasonable needs of a person's animals for drinking water,

2 Bore and water take information

Bore consent number *(from top right corner of well driller's log):* BN-4037

Notes about water take applications:

- We will check the efficiency of the volume of water you are applying for, which will involve assessing the volume against the area of land, the crop and soil type the water is to be applied to. We use the SPASMO model to check efficiency for irrigation.

- Some aquifers are considered to be near or fully allocated. Contact the Consents Duty Planner for more information.
- We may compare previously consented volumes (for replacement applications) with actual use, particularly for frost protection. We may reduce the volume accordingly.
- Metering, monitoring and reporting requirements will be included in conditions of resource consent (if consent is granted).
- Larger volumes and rates of take are likely to be subject to more stringent monitoring/reporting requirements with higher ongoing charges associated with the consent.

(a) **Industry/municipal**

Rate of take 20.4 L per second

Maximum time 24 hours per day

Maximum volume 1,763.00 m³ per day

(b) **Irrigation**

Rate of take L per second

Maximum time hours per day

Maximum volume m³ per week AND m³ per year

Area ha

Crop(s) *Provide the exact irrigation land area/s and a breakdown of area for each crop on a map. Specify the variety if kiwifruit, e.g. green, gold, red.*

Additional water for commissioning the water system immediately before starting irrigation:

☐ Yes ☐ No m³

(c) **Frost protection** (*attach previous use records for replacement applications*)

Rate of take L per second

Maximum time hours per day

Maximum volume m³ per day

Area ha

Crop(s)

Frost days per year: *For replacement consents, base this on previous use records. For new consents, use records from neighbouring orchards to estimate the likely maximum number of annual frost days. Attach relevant use records to support your application. Provide additional supporting information if your application requires a greater number of days.*

Lowest temperature frost event designed for °C

Rate of application mm/ha

Application method

Maximum volume m³ annually

(d) **Spraying agrichemicals** (*attach spray diary for replacement applications*)

Rate of take L per second

Events per year at 1500 L/ha

Events per year at 2000 L/ha

Annual volume m³

(e) **Domestic supply**

# of Bedrooms	Demand (L/day/person)	Total (m ³ /day)
	200	

Annual volume m³

(f) **Stock watering** (*see Horizons Regional Council (2007) Reasonable Stock Water Requirements Guidelines for Resource Consent Applications*)

Stock type	# of stock	Demand (L/day/animal)	Total (m ³ /day)
Milking cows			
Sheep			
Horses			
Grazing cattle			

Annual volume m³

(g) **Dairy shed wash down and cooling water**

# of Milking Cows	Rate (L/cow/day)	Days Annually

Annual volume m³

(h) **Temporary take**

Rate of take L per second

Maximum time hours per day

Maximum volume m³ per day

Number of occurrences per year

Purpose

(i) **Other** (*specify*)

3 **Assessment of environmental effects (AEE)**

Attach a separate report detailing effects where appropriate. As a minimum, the following topics should be each covered:

- a) **Drawdown effects** on neighbouring bores, based on a 24 (or 72) hour pump and recovery test with monitoring of two observation bores and analysis by a suitably qualified groundwater scientist/hydrologist.
- b) Effects on **surface water and wetland(s)**.
- c) If the bore is close to the coast, include an assessment of the risk of **saltwater intrusion** based on sodium, chloride and electrical conductivity data from the bore, depth of bore and distance to the mean high water springs.
- d) **Resource sustainability** – refer to the Indicative Groundwater Allocation Map Tool on the Bay of Plenty Regional Council website.
- e) Reasonable and **efficient use** of water – provide reasoning for the volume of water sought; use applicable industry standards and site specific information and water use records to support your application.
- f) **Cultural effects** – this can be informed through consultation with tangata whenua.
- g) Any other effects.

It is not adequate to state that there are no environmental effects.

It is important to provide a well-prepared AEE, otherwise we may:

- not accept your application,

- turn down your application,
- ask for more information, delaying the time taken to process your application, or
- commission someone else to review your application at a cost to you.

For more information, see the Ministry for the Environment's *Good Practice Guide on How to Prepare an AEE*, and *Everyday Guide to the RMA: Applying for a Resource Consent*, at www.mfe.govt.nz/publications/rma

4 Assessment against relevant objectives & policies of the relevant plan/s

Provide an assessment of the proposal against the relevant objectives and policies of the operative Regional Natural Resources Plan to the Regional Natural Resources Plan. You can use the Water Take and Use Policy Assessment form on our website

<https://www.boprc.govt.nz/do-it-online/consent-forms/> under 'Water'.

Refer Appendix 1 Annex 1 of this application document

5 Affected persons

Affected persons or parties may include neighbouring land owners and occupiers, iwi, hapū, and/or organisations such as the Department of Conservation, Eastern Region Fish and Game Council and community groups.

For your application to be considered for non-notification you must gain written approval from all persons who may be affected by the proposal. We can help you identify people/organisations likely to be affected. The 'Affected Person's Written Approval' form can be filled out by the affected party and attached to this application; it is on our website: www.boprc.govt.nz keywords 'resource consent forms'.

Under Schedule 4 of the RMA, the application must include identification of the persons affected by the activity, consultation undertaken, and any response to the views of any person consulted. We will make the final assessment of whether a person/party is affected by your proposal; it is best practice to consult with those persons.

Provide details persons/parties who may be affected by your proposal. If you have discussed your proposal with any of these parties, **record their comments and your response, and submit with your application.**

Name

Address

☐ Written approval attached

Name

Address

☐ Written approval attached

Name

Address

☐ Written approval attached

[Continue on a separate page if necessary]

6 Extending timeframes

The RMA specifies timeframes for processing resource consent applications. Timeframes can be extended with the applicant's agreement.

May we extend the consent processing timeframe?

- ☒ Yes, provided I can use my existing consent until this application is processed (*renewal application only*).
- ☐ Yes, provided the extension is to discuss and try to agree on consent conditions.
- ☐ Yes, provided the application is processed before
- ☐ No.

7 Deposit

A **deposit** of **\$2700** including GST is required with this application. This can be paid online, by cheque or eftpos at a Regional Council reception desk.

- Bay of Plenty Regional Council's bank account number is **06 0489 0094734 00**. Use the applicant's name as the reference. We will issue a GST invoice marked "PAID" when we receive payment.
- An application will not be accepted until the deposit is paid. We're happy to hold the forms, but processing will not start until we receive payment.
- **Additional charges are usually incurred**, depending on the resource we use in processing your application (*e.g. staff time, technical reviews, complexity and completeness of application*). Staff can give a cost estimate. Please see the schedule of fees attached.

Checklist

The following information must be included with your application:

- ☒ Complete all contact details in this application form
- ☒ Assessment of environmental effects (AEE), as set out in Schedule 4 of the RMA
- ☒ Assessment of cultural effects
- ☒ Pump test results and analysis
- ☒ Site plan showing the bore location, storage tanks and the area supplied with water

- ☒ Water use records, previous frost use analysis and spray diary for replacement consents.
- ☐ Sodium, chloride and electrical conductivity data (if the bore is within 5km of the coast)
- ☐ SPASMO information for irrigation applications
- ☐ Written approval from all affected parties, and/or summary of consultation carried out
- ☒ Water Take and Use Policy Assessment (*form available on BOPRC website*)
- ☒ Sign and date the application form
- ☒ Pay the deposit
- ☒ Other relevant information (*e.g. Certificate of Title, details from the Companies Register*)

Unchecked boxes may result in your application being returned under s88 of the RMA.

Information privacy

The RMA requires this information to process the application and assist in managing the region's natural and physical resources. Information in this application is regarded as **official information**.

Bay of Plenty Regional Council will hold this information, and it is subject to the Local Government Official Information and Meetings Act 1987 and the Privacy Act 1993. **This information will generally be available to the public. If you would like any of this information to remain confidential, please let us know.**

- 1 I have authority to sign on behalf of the party/ies named as applicants for this consent.
- 2 I have read, and understand, all information in this application form, including the requirement to pay additional costs incurred.
- 3 All information provided is true and correct. I understand that inaccurate information could result in my resource consent being cancelled.

Signature 

Date 10/12/20

Name: Luke Gowing

NOTES TO THE APPLICANT

READ THIS BEFORE FILLING OUT THE APPLICATION FORM

Call the **Consents Duty Planner on 0800 884 880** with consents related questions.

- 1 **We will not begin processing your application until the \$2700 deposit is paid**, unless prior arrangement is made. **Processing costs are likely to be more than the deposit**; you will be invoiced for the balance.
- 2 You may be required to pay a **resource management charge** associated with holding a consent (s36 of the RMA). Accounts are payable by the 20th of the month following date of invoice. Where costs are more than \$2,000 above the deposit, you may be requested to make interim payments towards the final total cost.
- 3 The **coastal marine area** is the area from the outer limit of the territorial sea (12 nautical miles) to the line of mean high-water springs. For activities at river mouths, contact the Consents Duty Planner for clarification.
- 4 Let us know if your application includes **trade secrets** and/or **commercially or culturally sensitive material**. Section 42 of the RMA enables protection of sensitive information.
- 5 Schedule 4 of the RMA sets out the **information you must provide**. If insufficient information is provided, we may put the application on hold or return it as incomplete.
- 6 **Identify every consent required** for the proposal. We may put the application on hold until you apply for all resource consents required (s91 of the RMA).
- 7 If we request **further information** (s92 of the RMA), the application will be put on hold and processing will not restart until all information is received.
- 8 An application does not need to be publicly notified if the environmental **effects are minor and written approval has been obtained** from everyone adversely affected by the granting of the consent (s95D and s95B of the RMA). Written approval forms are on our website: <https://www.boprc.govt.nz/do-it-online/consent-forms/> under 'Other forms'.
- 9 We may **review any consent** at any time if the application contains inaccuracies that materially influence the decision made (s128(1)(c) of the RMA).

Hourly charges for staff and consultants

Group	Hourly charge (including GST)
Administration	\$110
Consents Planners	\$160
Senior Consents Planners	
Engineers/Scientist/Regulatory Project Officers (RPO)/ Environmental Data Officer/Laboratory Technicians	
Compliance Monitoring Officer (externally contracted)	
Maritime Officer	
Team Leaders/Senior RPO/Works Engineer/Senior Maritime	\$180
Senior Engineer/Senior Scientist/Harbourmaster	
Pou Ngaio (Technical/Cultural RMA Specialist)	
Managers/Regional Harbourmaster	\$260
Consultants/Contractors	As charged by consultant/contractor
Regional Council staff mileage	Current applicable IRD rate

The full **Charges Policy** is on our website:

<http://www.boprc.govt.nz/knowledge-centre/policies/section-36-charges-policy/>

Appendix 4 TACL Bore Evaluation Report

TERRA AQUA CONSULTANTS LIMITED

31 OXFORD STREET, FAIRFIELD, HAMILTON 3214
MOBILE 021 664 559

PUMP TEST REPORT FOR AFFCO RANGIURU

Prepared for:

AFFCO Rangiuru

1562 Te Puke Highway,
Paengaroa 3186

November 2020
2020018

Prepared by: David Whyte

TERRA AQUA CONSULTANTS LIMITED

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Distribution List

Report submitted to:	Report Status	Date of Issue	No. of Copies:	Sent by:
	Draft		1	DEW

EXECUTIVE SUMMARY

This report has been prepared by David Whyte of Terra Aqua Consultants Limited (TACL). David is an experienced hydrogeologist with over 28 years' experience in geohydrological testing and reporting.

TACL was first contacted to assist the Argo Environmental by providing technical expertise to support the assessment of the potential groundwater take from an existing bore.

The bore has limited information available on its construction and the lithological units it penetrates. The bore is currently used as an emergency supply and was the original plant water supply. The intention is to use the bore to access energy by using the warm water to assist with heating and cooling the plant.

The bore is a 150 mm diameter bore finished at an unknown depth with the pump installed on 7 lengths of 6.5 m rising main (i.e. at a depth of 45.5 m below the top of the casing). Given that the water being accessed by the bore is a constant 27-8° C, it can be assumed that it is probably between 110 and 130 metres with casing to at least 100 metres. The currently installed pump can operate at more than 20.4 Ls⁻¹. The bore has a Bay of Plenty Regional Council ID of BN-4037. Note that the location indicated on the council web site is incorrect.

Testing consisted of 72-hours of constant rate testing (13 November till 16 November 2020) at 20.4 Ls⁻¹ followed by recovery monitoring (16 November till 18 November 2020). Barometric pressure was also monitored. Conductivity measurements were made throughout the pumping phase of the test and indicated no significant changes to indicate increased salinity with time.

Analysis shows that the aquifer has a late time transmissivity calculated at between 152.6 and 171.56 m²d⁻¹. Unfortunately, none of the neighbouring bores with 1,000 metres was suitable for monitoring as all lack an access tube to enable installing a data logger or even permitting access for a water level sounder.

Test data confirms that the bore is more than capable of providing a daily take volume of at least 1,763 m³d⁻¹.

1 Introduction

1.1 Background and Description of Proposal

AFFCO Rangiuru operates a freezing works that processes sheep and cattle for the export market. It is located approximately 5 kms east of Te Puke. As such they are interested in utilising the warm water able to be extracted from an existing bore with the legal description of XX. The site has an existing bore which was installed November 1979. The bore is a 150 mm diameter bore fitted with a 150 mm diameter submersible pump capable of providing water at 20.4 Ls⁻¹.

The resource is not full allocated in the area according to the Bay of Plenty Regional Council web site.

The location of the bore BN-4037 is indicated on Figure 1. Closest neighbouring bores are also indicated on Figure 1.

1.2 Scope and purpose of testing

The testing is intended to provide confirmation that the bore and aquifer can supply the take and that it is sustainable and will not have any adverse impacts on either existing user or the wider environment.

The plant may wish to operate the bore over the period that the plant is operating, and water may be required on each day, with the maximum take rate most likely to be during the summer season.

Testing was conducted by Terra Aqua Consultants Limited (TACL) over the days of 13 to 18 November 2020. Testing comprised the following: -

- 24-hour constant rate test plus recovery monitoring
- Data analysis and interpretation.

1.3 Climate

As for most of the Bay of Plenty the site has a subtropical, temperate maritime climate with warm humid summers and relatively mild winters. Annual rainfall is estimated to be between 1,300 and 2,000 mm.

1.4 Site Geology

Groundwater in the area is found within a regional, fault bounded basin, known as the Te Puke Basin, which has been in-filled with a sequence of rhyolitic lavas, dacitic and rhyolitic ignimbrites and tephra derived from the Coromandel and Taupo Volcanic zones. Many of the units identified are re-worked by fluvial processes and re-deposited between the more extrusive volcanic formations¹.

¹ Gordon in Rosen, M. R; White, P, A. Groundwaters of New Zealand. The Caxton Press, Christchurch, New Zealand.

Late Pliestocene to Holocene aged alluvium, consisting largely of airborne sands and some peaty materials overlies these older deposits to significant depths in some locations.

According to published data² the geology, consists of “Late Pliestocene sediments underlain by welded to partially welded ignimbrite inferred to be Mamaku Ignimbrite³. Mamaku Ignimbrite lenses towards the north, into Late Pliestocene sediments, and at approximately 4 kms south of Paengaroa, it is interpreted in the range of 60 to 150 metres in depth. Approximately 2 kms north of Paengaroa, Mamaku Ignimbrite is at 100 metres depth and is approximately 10 metres thick.”

Based upon available drilling logs, the aquifer targeted by BN-4037 appears to be a confined aquifer comprising coarse gravels overlain by a sequence of clays, fine sands, tight pumice, marine silts and clays. The available drilling logs indicate that the aquifer could best be described as a confined aquifer. There is no evidence supplied by the drilling logs to suggest that the drillers had penetrated the distinctive “pink” Mamaku Ignimbrite at these locations. Although apparently the drillers log for bore ID 951 and 952 refers to rhyolite and ignimbrite.

1.5 Aquifer Recharge

Recharge to the aquifer system is by direct rainfall infiltration in the head of the basin located in the vicinity of the Mamaku Plateau and Rotoehu Forest areas. Rainfall in the area is typically 2,000 mm per annum at higher elevations declining to approximately 1,300 mm near the coast (Figure 5.1 in GNS Report 2009).

In the GNS report (2009) they have broken the rainfall recharge into two zones for simplicity. In areas of higher elevation, they assume a minimum effective recharge of 50% and for areas of lower elevation a figure of 30%. Using this method GNS calculate that recharge to the aquifers in the Paengaroa-Matata area to be in the order of 14,400 Ls⁻¹ with some 15,800 Ls⁻¹ as stream base flow (Section 5.3.3). This leads to them claiming a deficit of some 1,400 Ls⁻¹ in the water balance, effectively meaning that the groundwater aquifers are losing water into the streams.

GNS state that the available water is 1,444 Ls⁻¹ while using Council figures they indicate that 51% (Table 6.4 GNS Report 2009) of this is currently allocated for use. However, Council estimate that the actual use is only 343.1 Ls⁻¹ or 25% of the available water.

In other published GNS report (Rotorua Lakes Area) and in previous unpublished reports⁴, Terra Aqua Consultants presented conclusive proof that these figures are significantly less than the actual rainfall recharge to these aquifers. This has a significant bearing on the water budget calculations as GNS has underestimated the recharge and hence available or allocatable water.

As we have indicated in previous applications, GNS are using an incorrect and inappropriate value for stream base flow. GNS used a median flow which bears no relationship to the internationally recognised definition of a stream base flow. By using this median value GNS overestimate the base flow figure by up to 50% and therefore the volume of allocatable water is

² page 7 of GNS Science Consultancy Report 2008/139, Jan 2009

³ CH2M Beca Ltd. 2005. Pongakawa Production Well Completion Report. Prepared for Western Bay of Plenty District Council. 18p.

⁴ Schultz Family Trust Application 66133, Hearing evidence letter dated 2nd July 2010.

significantly reduced. Thus, the conclusion based upon the calculation by GNS that results in 51% of the available groundwater being already allocated is flawed and incorrect.

Similarly, the figure the GNS calculate which purports to show that the groundwater resource is over allocated and that there is a shortfall of groundwater recharge (of 1,400 Ls⁻¹ in this area) is also incorrect. If in fact the shortfall was occurring the water levels would show consistent declines over time, and GNS produce evidence that this is in fact not occurring.

1.6 Constant Rate Test BN-4037

The constant rate test commenced at 12:00 on 13 November 2020 and recovery monitoring was completed on 18 November 2020. The rate was set and maintained throughout the test at 20.4 Ls⁻¹ which at the end of 72-hours had produced a drawdown of 5.86 metres.

The drawdown and recovery for BN-4037 is presented as Figures 2 and 3 in Appendix A.

Full data of the drawdown and recovery is presented in Appendix B.

Examination of Figure 2 shows that the drawdown is continuous and steady. There does not appear to be any significant hydrological barriers encountered within this pumping period and the bore removed 5,287.7 cubic metres during this time.

Figure 3 confirms that the recovery is steady and although not fully recovered within 72-hours is at least 82% recovered within that time.

Hydrological parameters from this data are calculated using the straight-line method of Cooper-Jacob⁵. Results for the drawdown and recovery phases are given in Table 1.

TABLE 1. – AQUIFER PARAMETERS CALCULATED FROM CGC PW

	Early Time Transmissivity (m²d⁻¹)	Late Time Transmissivity (m²d⁻¹)	Storativity
CGC PW Drawdown	322	152.6	0.000069
CGC PW Recovery	314.7	152.3	0.000069

The late time data is more representative of the actual aquifer transmissivity and is a narrower range of values being 152.6 to 152.3 m²d⁻¹. The storativity value is typical of a confined aquifer.

1.7 BN-4037 Bore Capacity

The 24-hour specific capacity can be used to assess the theoretical maximum take rate from that bore. For BN-4037 the capacity is 367 m³ per m of drawdown. With a water level of 5.99 m below ground level and the pump installed at 45.5 m this gives a total water column of (45.5 - 5.99) 39.41 m. If we reduce this by at least 5 m to allow for pump dimensions and head over the top of the

⁵ Cooper, H.H. and C.E. Jacob, 1946. A generalized graphical method for evaluating formation constants and summarizing well field history, Am. Geophys. Union Trans., vol. 27, pp. 526-534.

pump this gives a total of 34.41 m. This gives a theoretical 24-hour maximum take from this bore of up to 12,625 cubic metres.

1.8 Connectivity to Surface Water Bodies

Connectivity to surface water bodies is assessed via several factors including the following: -

- Assumed geology (based upon available drillers logs)
- Depth and nature of aquifer (deep confined)
- Distance (lateral and vertical) from nearest surface water body (Kaituna River)

The above factors all suggest that connectivity with surface water bodies is poor.

Stream depletion effects are modelled using the Hunt method⁶ and reducing the aquifer system as a simple two-layer aquifer (even though the onsite evidence it is at least a three-layer system). This approach is extremely conservative since it does not allow for any natural recharge during the period modelled nor for intermittent pinging of the bore.

The method involves considerable oversimplification of the aquifer system. Some of the required parameter inputs are very uncertain e.g. aquitard and stream bed characteristics. Despite these limitations, the analytical approach taken gives an indication of possible order of magnitude of depletion which could otherwise require more expensive investigation and numerical modelling. This modelling has been performed and results summarised in Figure 4.

A mixture of known parameters (calculated from the pump test data) and assumed average parameters for various lithological units are used. The drilling results are also incorporated in terms of the thickness of various units. The known drawdown at a distance from the pumped well, is used to calibrate the aquifer parameters of transmissivity and storativity values to match the measured drawdown. Once this is achieved, the production pumping rate is then entered along with the distance to the closest surface water boundary and the calculations made.

Examination of Figure 4 shows that the depletion calculated due to pumping is minimal, attaining less than 0.3 Ls^{-1} after 100 days of continuous pumping. The most sensitive parameter is streambed conductivity (and this is also the hardest to measure accurately). We have modelled with an aquitard vertical conductivity of 0.01 md^{-1} (which may not accurately reflect the known low leakage situation).

David Whyte
Hydrogeologist

TERRA AQUA CONSULTANTS LIMITED

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⁶ Hunt B; Scott D: Flow to a Well in a Two-Aquifer System, 2007. Journal of Hydrologic Engineering pp 146-155

APPENDIX A: Figures

Figure 1. Bore Locations



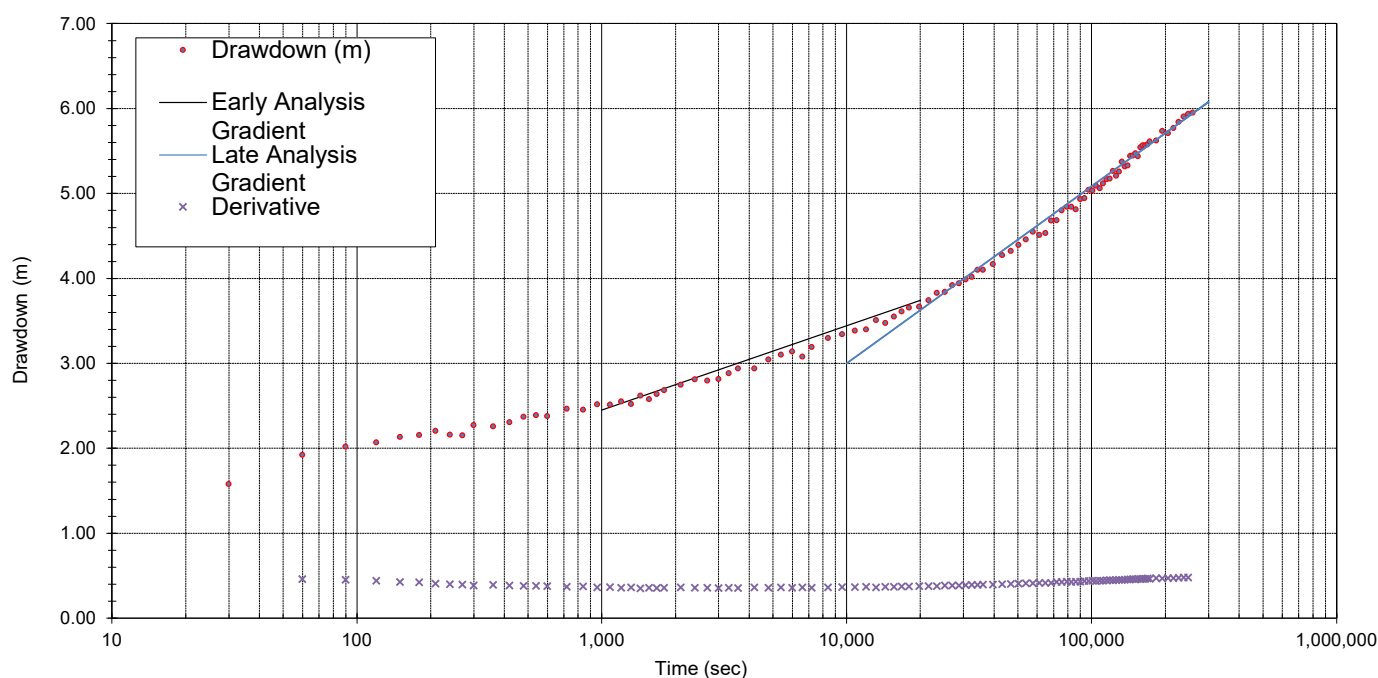
11/28/2020, 4:50:30 PM

Well/Bore Locations

● Cold Water

1:9,028
0 0.07 0.15 0.3 mi
0 0.1 0.2 0.4 km
Sourced from the LINZ Data Service and licensed for re-use under the Creative Commons Attribution 4.0 New Zealand licence , Bay of Plenty Regional Council

Figure 2: Cooper-Jacob Analysis Drawdown in BN-4037



Conditions for Analysis

if $t > 25r_c^2/T$ well storage is neglected. **151** seconds
 If $t < cS/20$ then leakage is negligible. **298** seconds (c assumed at 1,000 days)

INPUTS

Parameter	Source	Symbol	Value	Unit
Flow Rate	Measured	$Q =$	1,745.3	$m^3 d^{-1}$
Casing Diameter	Measured	$d_c =$	0.300	m
Annulus Diameter	Measured	$d_w =$	0.350	m
Screen / Open Hole Length	Measured	$L =$	100.000	m

Depth Information

Depth to Water Level	Measured		5.99	m
Top of Aquifer	From drill log		90	m
Base of Aquifer / Hole	From drill log		100	m

Aquifer Thickness	Calculated	$b =$	10	m
Transmissivity (Early)	Calculated	$T =$	322.02	$m^2 d^{-1}$
Transmissivity (Late)	Calculated	$T =$	153.21	$m^2 d^{-1}$
Hydraulic Conductivity	Calculated	$k =$	32.20	m/d
Storativity	Estimated	$S =$	6.90E-05	

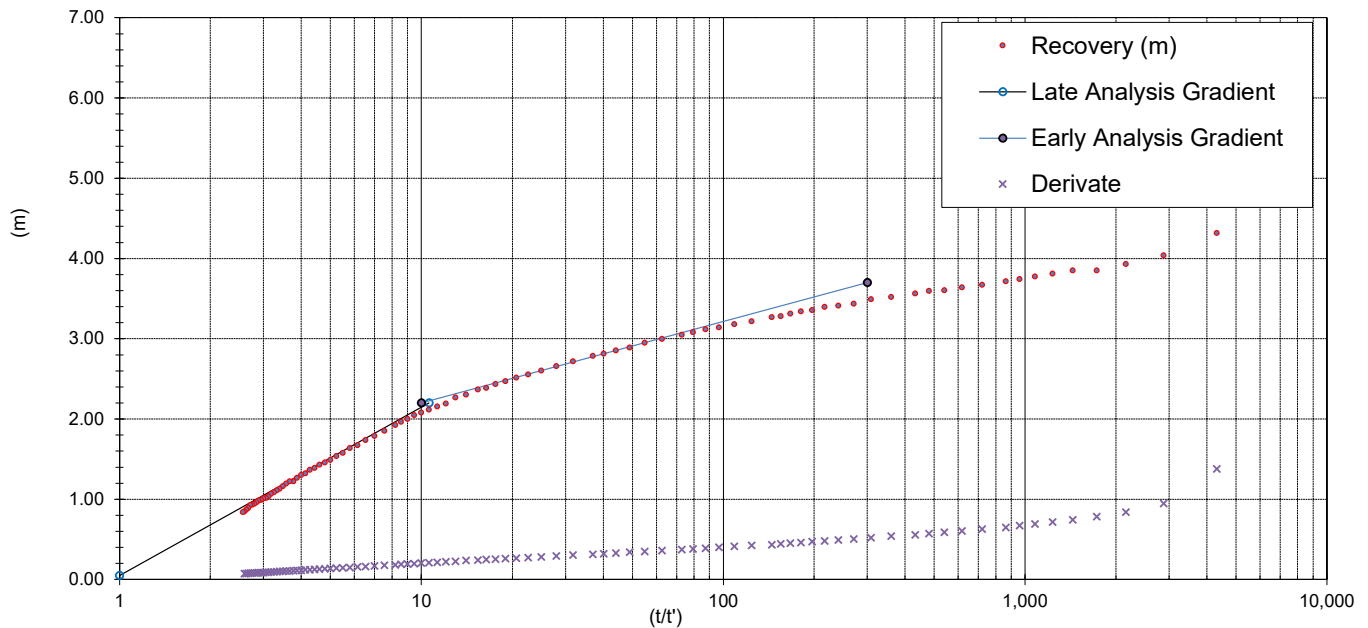
Early Analysis Gradient

(t_1, s_1)	Measured	1000	2.45
(t_2, s_2)	Measured	20000	3.741
Drawdown per log cycle	Calculated	Δs	0.992

Late Analysis Gradient

(t_1, s_1)	Measured	10000	3
(t_2, s_2)	Measured	300000	6.08
Drawdown per log cycle	Calculated	Δs	2.085

Figure 3: Cooper-Jacob Analysis Recovery in BN-4037



Conditions for Analysis

if $t' > 25r_c^2/T$ well storage is neglected.

5 minutes

If $t < cS/20$ then leakage is negligible.

5 minutes

(c assumed at 1,000 days)

INPUTS

Parameter	Source	Symbol	Value	Unit
Flow Rate	Measured	$Q =$	1,745.3	$\text{m}^3 \text{d}^{-1}$
Casing Diameter	Measured	$d_c =$	0.300	m
Annulus Diameter	Measured	$d_w =$	0.350	m
Screen / Open Hole Length	Measured	$L =$	100.000	m

Depth Information

Depth to Water Level	Measured		5.99	m
Top of Aquifer	From drill log		90	m
Base of Aquifer / Hole	From drill log		100	m

Aquifer Thickness	Calculated	$b =$	10	m
Late Transmissivity	Calculated	$T =$	152.33	$\text{m}^2 \text{d}^{-1}$
Early Transmissivity	Calculated	$T =$	314.72	$\text{m}^2 \text{d}^{-1}$
Hydraulic Conductivity	Calculated	$k =$	1.52E+01	m/d
Storativity	Estimated	$S =$	6.90E-05	

Late Analysis Gradient

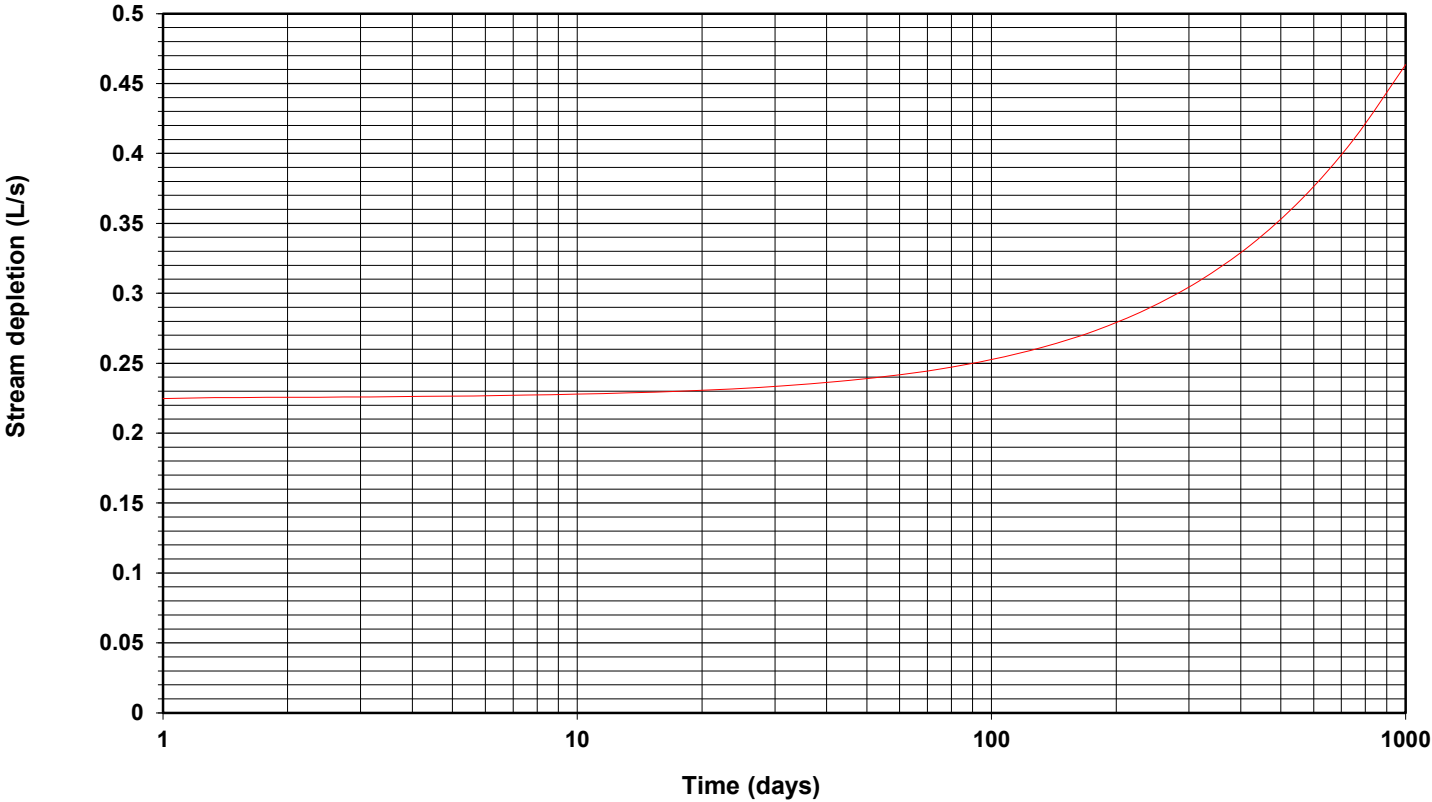
(t_1, s_1)	Measured	1	0.05
(t_2, s_2)	Measured	10.6	2.2
Drawdown per log cycle	Calculated	Δs	2.097

Early Analysis Gradient

(t_1, s_1)	Measured	10	2.2
(t_2, s_2)	Measured	300	3.7
Drawdown per log cycle	Calculated	Δs	1.015

FIGURE 4: STREAM DEPLETION ANALYSIS - CONFINED AQUIFER (Hunt & Scott)

Pumped aquifer - pumiceous Gravelly Sand?		
Transmissivity (T)	153	(m ² /d)
Storage Coefficient (S)	6.90E-05	-
Aquitard Parameters - Clay/silts		
Hydraulic Conductivity (K' ₂)	1.00E-02	(m/d)
Thickness (B' ₂)	30	(m)
Unconfined Aquifer - Silty sand with gravel		
Hydraulic Conductivity (K' ₁)	1.00E+01	(m/d)
Thickness (B' ₁)	10	(m)
σ	0.2	-
Streambed Parameters		
Streambed Conductivity (K'')	5.00E-02	(m/d)
Thickness (B'')	0.5	(m)
Width (b)	26	(m)
λ	2.60E+00	
K'/B' _{effective}	3.3E-04	
λ _{effective}	8.64E-03	
Well		
Q	20	(L/s)
Distance	346	(m)
arg2	0.3	
arg3	3.45E-04	
arg4	0.0	



APPENDIX B: Data

Appendix 5 Figures

A	Schematic representation of intake structure
B	Location of intake structure relative to AFFCO Rangiuru Plant
C	Intake structure layout
D	Barge with Intake Pumps
E	Inlet Pipes
F	Intake Pipes leading to Plant
G	Coarse Screen
H	Fine Screen
I	Screen Alignment

Figure A
Schematic Representation of
Intake Structure

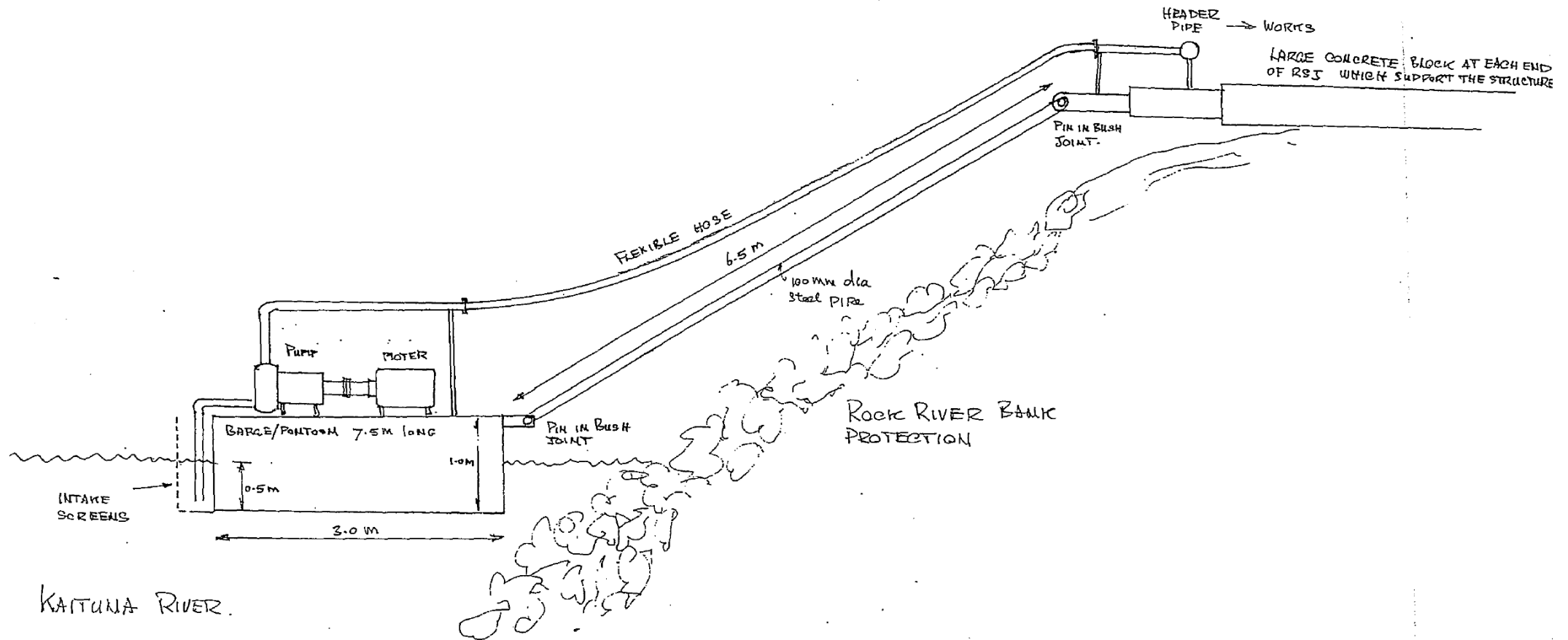
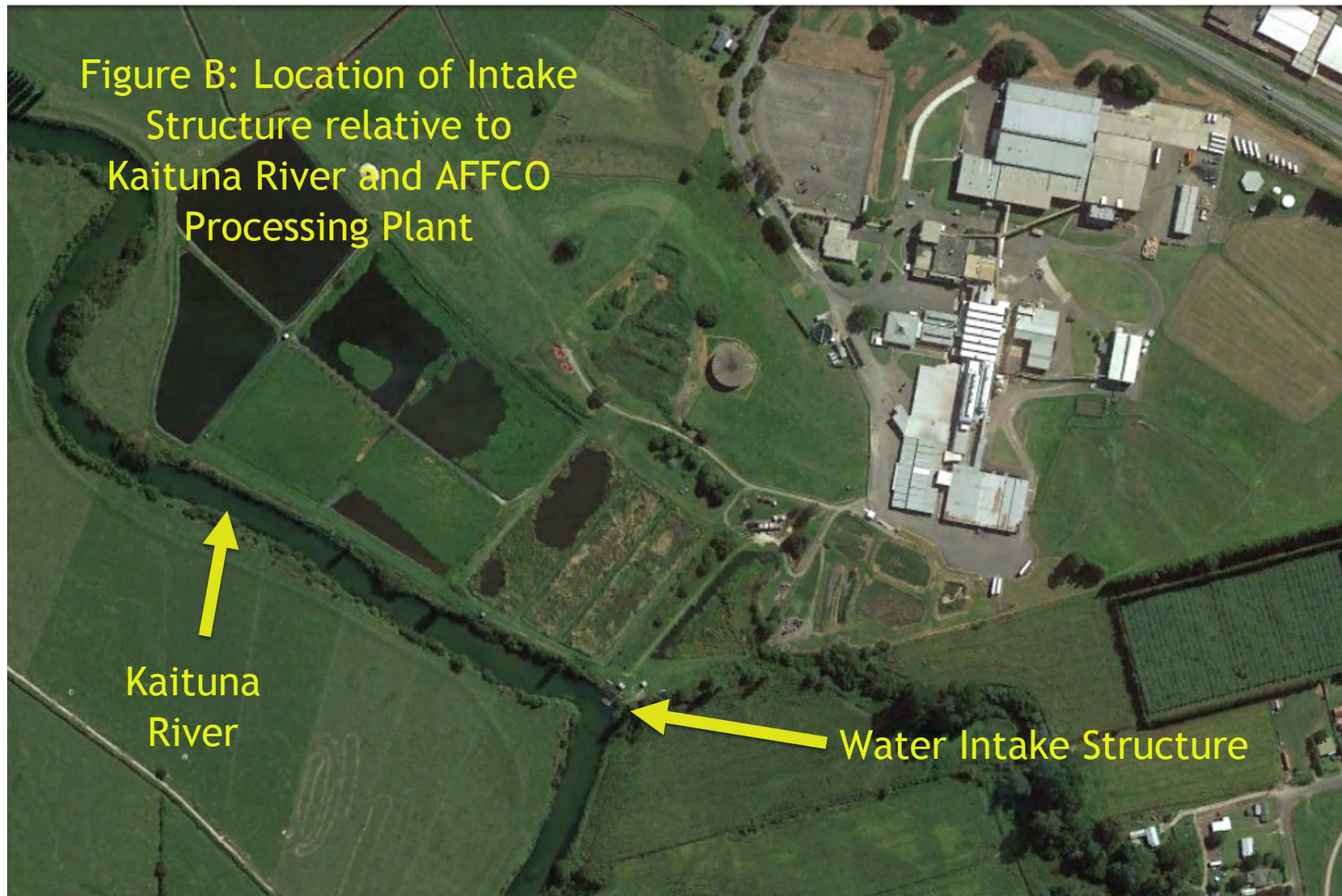


Figure B: Location of Intake
Structure relative to
Kaituna River and AFFCO
Processing Plant



Kaituna
River

Water Intake Structure

Figure C Intake Structure
Layout

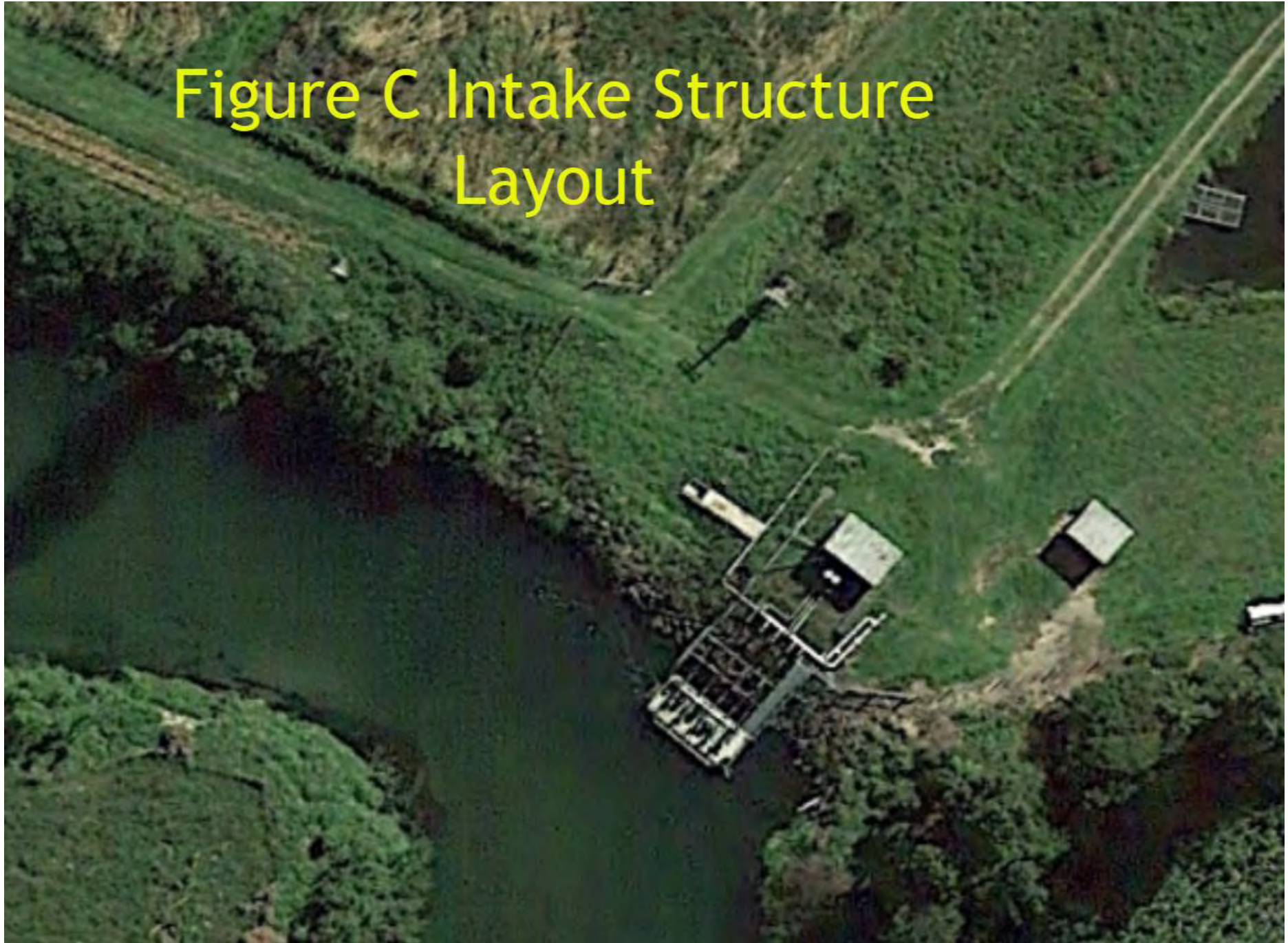


Figure D – Barge with Intake Pumps



Figure E – Inlet
Pipes



Figure F – Intake Pipes leading to Plant



Figure G – Coarse Screen

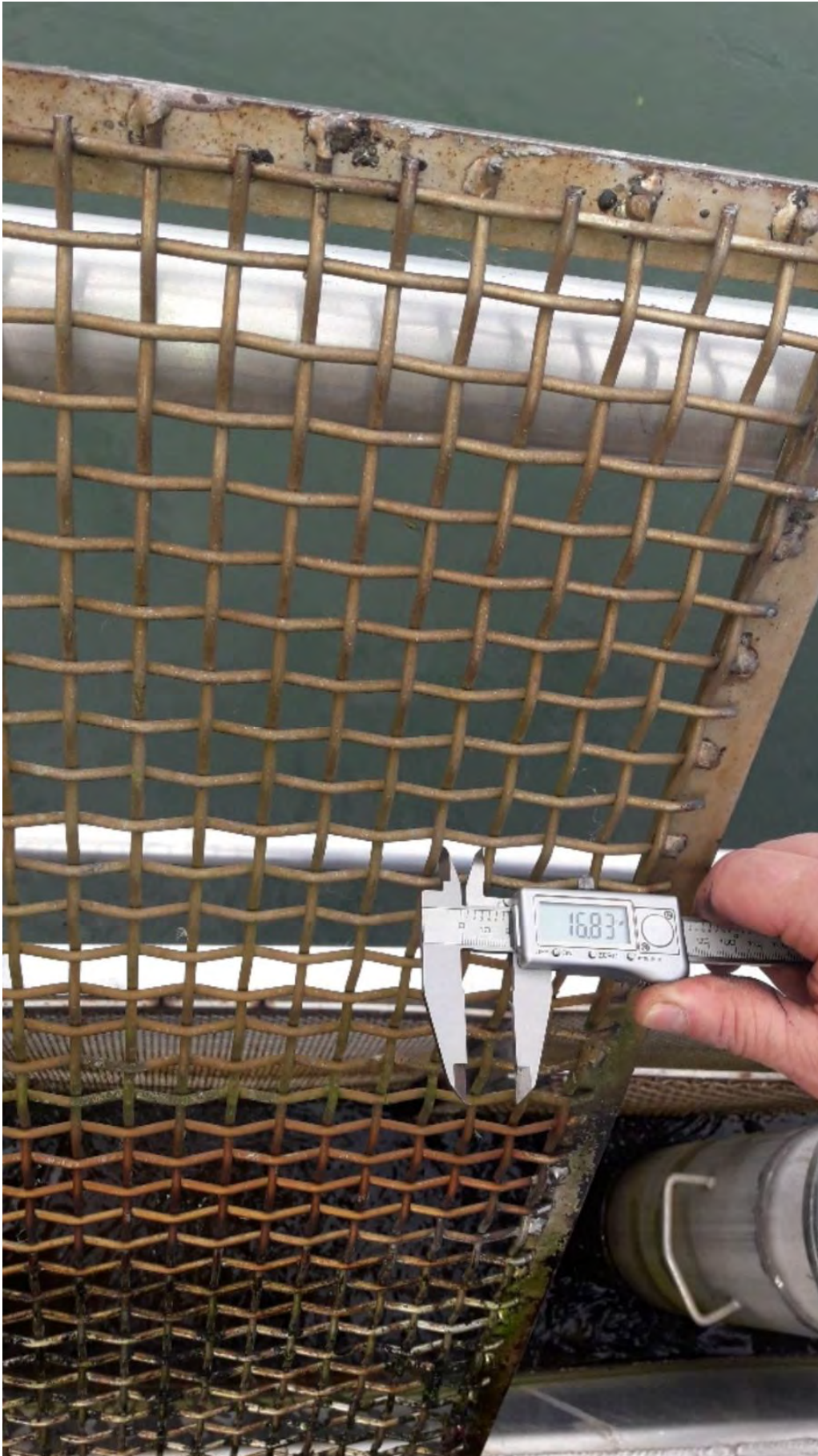
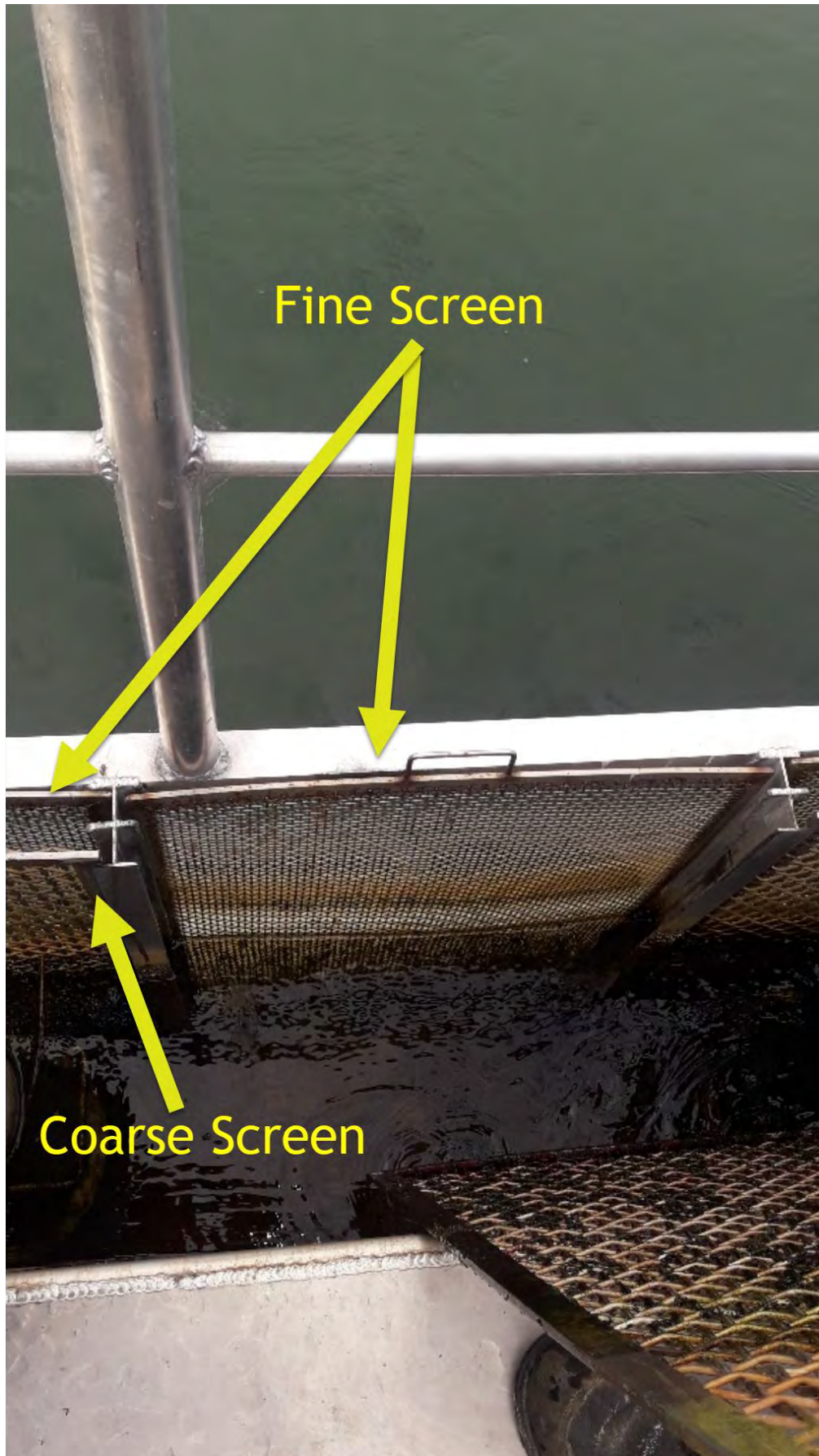


Figure H – Fine Screen



Figure I – Screen Alignment

(Right coarse screen removed)



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