# Notification/Non-Notification Decisions

# (Sections 95A to 95F Resource Management Act 1991)

**Important: If, having gone through the following process, the officer is still uncertain regarding notification, the default should be to err on the side of caution. Also, note that the guidelines cannot cover every possible circumstance, and that reference should be made to the legislation where the processing officer is uncertain of the correct steps or criteria.**

**There is no longer a presumption that a council must publicly notify a resource consent application. Instead a council is required to public notify an application for resource consent if:**

- **the adverse effects on the environment are, or are likely to be more than minor; or**
- **an applicant requests that an application be notified; or**
- **a plan or national environment standard requires the application to be notified.**

**The council also has the general discretion to publicly notify an application or if special circumstances apply.**

**The council must not publicly notify an application if a plan rule or national environmental standard says that it is not to be notified, <u>unless</u> the applicant has requested notification, OR special circumstances apply.**

## Application details

**Application number:** **RM17-0424-AP**

**Applicant:** **Creswell NZ Limited**

**Location of activity:** **57 Johnson Road, Otakiri**

Activities for which Consent is sought and whether restricted coastal activity, discretionary, restricted discretionary or controlled:

## Summary of the proposal

Beca have applied on behalf of Creswell NZ Limited (the applicant) for resource consent from the Bay of Plenty Regional Council to take and use groundwater for water bottling purposes, undertake earthworks associated with the expansion of the existing water bottling plant, discharge stormwater and treated process water to water, and discharge treated wastewater effluent to land at the above location (see figure 1 below).

The applicant has also applied to Whakatāne District Council for resource consent (land use) under the National Environmental Standard for Contaminated Land and a change (variation) to consent conditions of an existing land use consent. The Processing Officer for the District Council consent applications will assess effects associated with those activities, therefore I have only considered effects in this report associated with the Regional Council applications.

The location of the subject site falls within the coverage area of the Operative Regional Plan for the Tarawera River Catchment. Where that plan does not contain any relevant rules for the activities as proposed, rules contained within the Bay of Plenty Regional Water and Land Plan prevail.

As this resource consent application was lodged on 04 August 2017, the amendments to the Resource Management Act which came into effect on 18 October 2017 do not apply.

The Bay of Plenty Regional Council amalgamated all current Regional Plans (excluding the Bay of Plenty Regional Coastal Environment Plan) into one plan now known as the Operative Regional Natural Resources Plan (no content change to any of the plans; only formatting). Likewise, as this resource consent application was lodged before the Operative Regional Natural Resource Plan was made operative (14 September 2017), references made throughout this report refer to the previous individual regional plans.

Authorisation is required to undertake the following activities:

a) A water permit under section 14(2)(a) of the Resource Management Act 1991 and Rule 16.8.5(f) of the Regional Plan for the Tarawera River Catchment and Rule WQ R11 of Plan Change 9 to the Bay of Plenty Regional Water and Land Plan to undertake a discretionary activity to **Take and Use Groundwater from a Bore**; and

b) A land use consent under section 9(2)(a) of the Resource Management Act 1991 and Rule 1C of the Bay of Plenty Regional Water and Land Plan to undertake a discretionary activity being to **Carry out Earthworks**; and

c) A discharge permit under section 15(1)(a) of the Resource Management Act 1991, Rule 15.8.4(m)(b) of the Regional Plan for the Tarawera River Catchment and Rule 37 of the Bay of Plenty Regional Water and Land Plan to undertake a discretionary activity being to **Discharge Sediment Contaminated Stormwater to Water**; and

d) A discharge permit under section 15(1)(a) of the Resource Management Act 1991, Rule 15.8.4(m)(b) of the Regional Plan for the Tarawera River Catchment and Rule 37 of the Bay of Plenty Regional Water and Land Plan to undertake a discretionary activity being to **Discharge Treated Process Wastewater to Water**; and

e) A discharge permit under section 15(1)(b) of the Resource Management Act 1991 to **Discharge Septic Tank Treated Wastewater to Land** as a discretionary activity under section 87B (b) of the RMA.

In regards to the proposed discharge of septic tank treated wastewater to land, Advisory Note 3(a) of Rule 5 requires the application to meet the requirements of Schedule 2 of the OSET Plan. Schedule 2 requires the system to be designed in accordance with the relevant New Zealand Standards and lists a number of criteria that the system and discharge must meet.

The system does not meet the permitted rules, due to the proposed volume of discharge. However Schedule 2(a) of the OSET Plan states that the discharge must not exceed 2000 litres. Given this limitation of the OSET Plan, there is no other Rule that provides for larger discharges and no Rules prohibiting larger discharges within the Plan.

I therefore consider that section 87B(1)(b) of the RMA applies, making this activity a discretionary activity. While the OSET Plan does not provide an activity status, it is wholly aimed at addressing the effects of this proposal. Therefore the Objectives and Policies of the Plan are relevant.


The applicant has applied to take a maximum volume of 5,000 cubic metres per day ($m^3$/day) of groundwater from an existing bore on the property (BN-932) and a new bore recently drilled under resource consent RM16-0480 (bore number: BN17-0056) for water bottling purposes.

There is an existing resource consent relating to BN-932 (resource consent 20595) which authorises the consent holder to take 158$m^3$/day of groundwater at a rate of 2.74 litres per second (l/s) for irrigation purposes, 1,580$m^3$/day of groundwater at a rate of 44l/s for frost protection purposes and 1,200$m^3$/day of groundwater at a rate of 13.9l/s for water bottling purposes.

As an expansion/redevelopment of the current water bottling facility known as Otakiri Springs is proposed, the applicant seeks to undertake earthworks.

The applicant has advised existing kiwifruit vines and internal poplar shelter belts will be removed however the boundary shelter belts will remain.

The proposal involves a volume of up to 23,000$m^3$ of earthworks and an area of up to 4.5 hectares associated with the excavation of topsoil on site, construction of a wastewater disposal field, construction of stormwater swales and pond, shallow foundations for the new building and a new access way and laydown areas (described in section 4.8 of the application document). The applicant has also applied to continue earthworks during the winter period.

The applicant has applied to discharge stormwater from the site via stormwater detention swales on the western and southern boundaries of the site to a stormwater detention pond. Originally, the proposal was to discharge via a 375mm diameter pipe at a controlled rate of 170 litres/second during a 10 year event to Hallett Drain to the east of the site (described in section 4.5 of the application document). However after discussions and advice from Peter Blackwood (Principal Technical Engineer, Bay of Plenty Regional Council), the applicant has amended their stormwater system design to have adequate storage to cater for the 72 hour 100 year design event storm. The applicant amended their design to cater for this type of event and submitted correspondence on 29 November 2017 (Objective ID A2753742) to demonstrate this. This is discussed further in Step 6 (d) Section 5 below.

The schematic of the site layout is shown in Figure 1 below.

In addition to the stormwater discharge, the applicant also seeks authorisation to discharge process waste water generated from the water bottling operation to the stormwater detention pond. This includes reject streams of water from the membrane filtration processes and clean in place (CIP) process wastewater (described in section 4.6 of the application document and discussed further in detail in Step 6 (d) below).

Due to the proposed bottling plant expansion, the applicant proposes to install an on-site wastewater treatment system to treat wastewater generated from toilets, lunchroom facilities, wash basins, showering facilities and a laundry and discharge the treated effluent to land. The applicant has applied to discharge a maximum daily volume of 5.2$m^3$/day of treated effluent via an aerated wastewater treatment system to

conventional piped trenches (described in section 4.7 of the application document and discussed further in detail in Step 6(d) below).

Figure 1 below illustrates the proposed site layout for the proposed plant expansion.

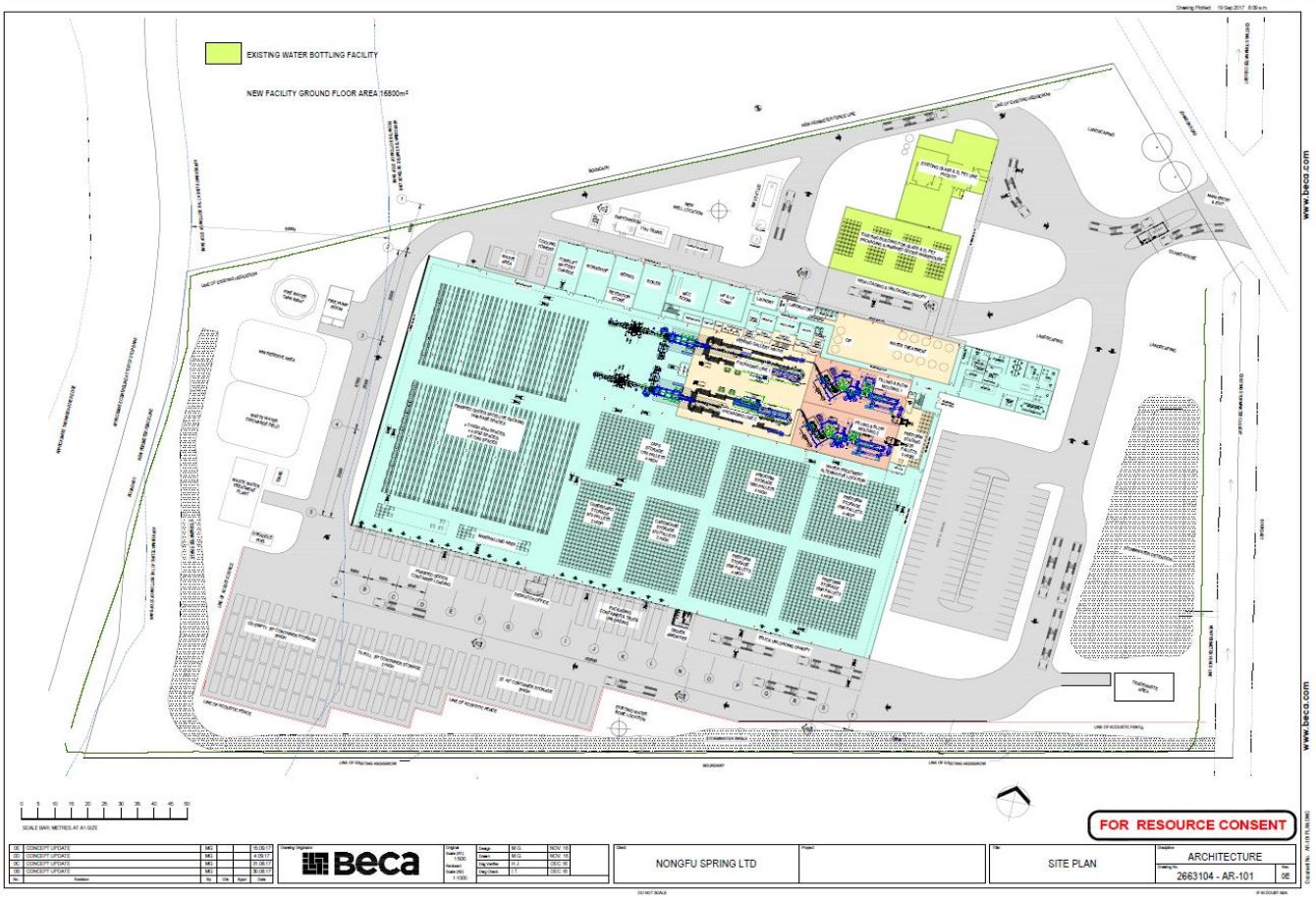


**Figure 1. Site Plan for proposed development at 57 Johnson Road, Otakiri.**

## Is Public Notification required?

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## Step 1

**Has the applicant requested that the application be publicly notified (s95A(2)(b))?**

☐ Yes – PUBLICLY NOTIFY

Note date and method of request:

☒ No - go to Step 2.

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## Step 2

**Does a rule or a national environmental standard (NES) require public notification (s95A(2)(c))?**

☐ Yes – PUBLICLY NOTIFY

☒ No - go to Step 3.

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## Step 3

**Has a request for further information (s92(1)) been made or has the applicant been notified of the intention to commission a report (s92(2))?**

☒ Yes – go to Step 4.

☐ No - go to Step 5.

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## Step 4

**Has the applicant failed to respond by the deadline specified, refused to provide the information requested or refused to agree to the commissioning of the report (s95C)?**

A further information request was sent to the applicant on 07 September 2017 (Objective ID A2692303). A request to extend the deadline for providing the information was agreed upon with the applicant from 27 September to 20 October 2017. The applicant provided a response to the further information request on 19 October 2017 (Objective ID A2729625). The majority of the information request was determined as being fulfilled however, there was an absence of information or rather the information provided still did not address the request specifically in the identification of issues of concern (potential effects) on various tangata whenua groups.

It is acknowledged that the applicant has engaged and consulted with the various tangata whenua groups however identification of potential effects of the proposal on tangata whenua (generally presented in the form of a Cultural Impact Assessment) have not been provided by tangata whenua to the applicant despite various attempts to obtain this information.

Therefore, I have continued with the assessment of the resource consent application under the preceding sections of the Resource Management Act 1991 detailed below.

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## Step 5

**Does a rule or an NES preclude public notification (s95A(**3**)(a))?**

☐ Yes – go to Step 7.

Identify rule and plan (Rule: , Plan: ); or

Identify NES:

☒ No - go to Step 6.

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## Step 6

**Determination of whether the adverse effects of the activity on the environment will be or are likely to be more than minor (s95A(2)(a) and s95D).**

(a) In forming this opinion, you must disregard any effect:

1 On persons who own or occupy the land on which the activity will occur or any land adjacent to that land (s95D(a)). Have you disregarded any effects under this provision?

☒ No – go to 2.

☐ Yes – Identify any effects that you have disregarded on this basis. Go to 2.

2 Trade competition and the effects of trade competition (s95D(d)). Have you disregarded any effects under this provision?

☒ No – go to 3.

☐ Yes – Identify any effects that you have disregarded on this basis. Go to 3.

3 On a person who has given written approval to the relevant application (s95D(e)). Have you disregarded any effects under this provision?

☐ No – go to (b).

☒ Yes – Identify any effects that you have disregarded on this basis and the relevant parties who have provided written approval. Go to (b).

The applicant has obtained written approval from the owners of the subject site; Mr Jim and Mr Don Robertson at 57 Johnson Road, Otakiri therefore I have disregarded any flooding effects on the subject property, drawdown effects on other bores (well numbers BN-922 and BN-394) on the subject property not associated with the proposed water take and any effects of erosion and sedimentation resulting from the proposed earthworks activity onsite.

(b) In forming this opinion, you may disregard an adverse effect of the activity if a rule or NES permits an activity with that effect (s95D(b)) (Note - this can include a district plan). Have you disregarded any effects under this provision? Note that that the discretion to disregard any effects should consider whether it is consistent with the purpose of the RMA to do so.

☒ No – got to (c).

☐ Yes - Identify any effects that you have disregarded on this basis.

(c) In the case of a controlled or restricted discretionary activity (RDA), you must disregard an adverse effect of the activity that does not relate to a matter for which a rule or national environmental standard reserves control or restricts discretion (s95D(c)).

Are any of the activities a controlled activity or an RDA?

☒ No – go to (d).

☐ Yes.

Identify rule and plan (Rule: , Plan: )

Have you had regard to any effect that does not relate to a matter specified in the plan or proposed plan to which Council's discretion is restricted?

☐ No – go to (d).

(d) Taking account of (a), (b) and (c) above, identify whether that the activity will have or is likely to have adverse effects on the environment that are more than minor:

# 1 Site Values

Section 3 of the resource consent application document contains a description of the site:

*"The subject site is located at 57 Johnson Road, Otakiri. The site is approximately 3km to the south west of Otakiri and 8km to the south west of Edgecumbe in the Whakatāne District of the Bay of Plenty. The site is approximately 7ha, legally described as Lot 4 DPS 27652 and is zoned as Rural Plains within the Whakatāne District Plan.*

*The site is generally flat and is currently occupied by the existing Otakiri Springs water bottling plant and kiwifruit orchard. The surrounding land is a typical managed rural area consisting of open pasture/paddocks, orchards and collections of lifestyle residential properties."*

The subject property is surrounded by existing farmland and scattered orchards, so is considered to already be modified. The Tarawera River is located directly west of the property and a portion of associated stopbank which forms part of the Rangitāiki-Tarawera River Scheme stopbank and drainage system managed by the Rivers and Drainage section of the Bay of Plenty Regional Council as asset owners. There are restrictions in relation to works on and around stopbanks and these are managed by the Bay of Plenty Regional Council Floodway and Drainage Bylaw 2008 (discussed further in section 4.5 of this report below). A drain known as "Hallett's Drain" runs along the eastern boundary of the site.

According to the Bay of Plenty Regional Council's Geoview2 program, the nearest archaeological sites are located approximately 100 metres southwest of the property boundary on the opposite site of the Tarawera River (V15/1193; cultivated soil) and 160 metres south of the southwestern boundary of the property (V15/518 colonial cheese factory site).

The subject property is identified in Geoview2 as a Hazard Activities and Industries List (HAIL) site (Site ID WHK_230) with the HAIL summary citing *"persistent pesticide use."*

According to Geoview 2, the nearest identified significant areas are located approximately one kilometre northwest of the applicant's property on the opposite side of the Tarawera River and is described as *Mangaone Stream Wetlands*.

According to Geoview2, there are no identified high value ecological sites, outstanding natural features and landscapes, protected natural areas or significant natural areas on, or in the immediate vicinity of the applicant's property.

I do not consider the above identified features will be affected by the activities as proposed.

# 2 Groundwater Take and Use

## 2.1 Efficiency

The inefficient use of groundwater resources can have adverse effects on water quantity (and therefore quality) and potentially the health of aquatic ecosystems, and limit others access to water. Method 168 of the Bay of Plenty Regional Water and Land Plan states that the efficiency of water use must be assessed on a case by case basis relative to the proposed use with consideration to the following (for commercial, trade and industrial processes); sufficient to meet the needs of the use with minimal waste of water.

A water use efficiency assessment has been undertaken for the requested use of water bottling and is included in section 4.4.1 of the resource consent application document.

This assessment demonstrates how the volumes of water proposed to be taken will be used with very little waste/losses in comparison to irrigation or use of water in dairy sheds for example, and any

associated losses are minimal. I agree with the applicant's assessment that the proposed water use is an efficient use of the water resource.

## 2.2 Effects on Neighbouring Bores and Surface Water

In the application document lodged with the Bay of Plenty Regional Council (Regional Council) on 04 August 2017, the applicant presented the results of modelling to predict the environmental effects of the proposed increased water take. A 3D geological model and groundwater flow model were presented in Appendix D of the application document. The applicant also presented an assessment of effects based on this model in section 6.1.

An independent technical review of this information undertaken on behalf of Bay of Plenty Regional Council's Science department by Blair Thornburrow (Pattle Delamore Partners Limited) (Objective ID A2692227) outlined several technical deficiencies with the modelling and associated assessment.

Due to the fact that the applicant, was at the time, in the process of drilling and flow testing the new bore on site (BN-4857), to address the deficiencies in information, a further information request was sent to the applicant on 07 September 2017 (Objective ID A2692303) requesting the results and analysis of the 7 day test undertaken on the above bore, amongst other information.

This information was received by the Regional Council on 19 October 2017 and further reviewed by Mr Thornburrow on 02 November 2017 (Objective ID A2735135).

Mr Thornburrow made the following comments in respect of the further information provided (abridged):

*"The Applicant's consultant has undertaken a new assessment of drawdown, using both analytical methods based on analysis of the pumping test, and an updated 3D numerical flow model.*

*Analytical model predictions of drawdown at the four observation bores were made using the Theis solution and based on an aquifer transmissivity of 8,500m$^2$/day and storativity of 0.002. The method was initially applied using the tested rate (80 L/s). Drawdown predictions at 7 days compared reasonably well to test observations indicating that the method can be considered appropriate for making longer term predictions. Long term drawdown predictions were then made based on the long term average proposed pumping rate (34.9 L/s) and the proposed peak pumping rate (58 L/s). Drawdown predictions for all four observation bores remained below 1 m for both pumping rates after 25 years.*

*Drawdown predictions are presented for 18 shallow bores (<100 m depth) and 12 deep (>100 m depth) or unknown depth bores within a 2 km radius of PW2. As expected, the greatest drawdown effects are predicted to occur in nearby bores at a similar depth to the Applicant's bore. The maximum predicted drawdown is 2.3 m in BN-4857, located 32 m from the Applicant's bore. Predicted drawdown in the WDC production bores is 1.5 m, located around 180 m distant. Negligible drawdown responses were predicted in the shallow bores. These levels of drawdown are considered less than minor, particularly in consideration of the significant available artesian pressures in the aquifer and bore depths."*

The Regional Council received email correspondence from Michael Van Tilburg (Manager Three Waters – Assets and Planning, Whakatāne District Council) on 25 August 2017 (Objective ID A2750547) identifying potential effects of the proposed activities on Whakatāne District Council's assets. In this case; the nearby Johnson Road bores (bore numbers BN-2510 and BN-2511) operated under resource consent RM15-0017 to take and use water for municipal supply.

Mr Van Tilburg identified concerns relating to potential drawdown effects and the ability for the Whakatāne District Council to continue to take water when the applicant may also be drawing water from their bore and the effect on the District Council's bores when the applicant is purging/cleaning their existing bore making water in BN-2510 and BN-2511 turbid.

The applicant has undertaken consultation with Whakatāne District Council in regards to their concerns regarding potential effects.

The assessment of drawdown effects have been described above. Additional flow testing and modelling and an independent technical review of that information has deemed these effects less than minor.

In regards to Mr Van Tilburg's second point, the applicant has proffered the following consent condition which Whakatāne District Council has agreed to (Objective ID A2750752):

*"The consent holder shall notify the Whakatane District Council Waters Department at least five working days prior and again at least 48 hours prior to undertaking any purging or cleaning of either bore on the site for the purpose of coordinating the timing of those activities to ensure that any potential adverse effects, including increased turbidity, on the Council water supply may be avoided.*

*In the event that the Whakatāne District Council Waters Department advises the consent holder that the purging or cleaning of either bore may have the potential to unacceptably compromise the Council water supply, the consent holder shall ensure that there is an alternative water supply available for Council use during the purging or cleaning.*

***Advice note:***

*For the avoidance of doubt, should the consent holder be prohibited from purging or cleaning either bore for any reason, the consent holder may at any subsequent time seek to undertake purging or cleaning of either bore by notifying the Whakatāne District Council Waters Department in accordance with the requirements of Condition [number of above condition]."*

I agree the above condition mitigates and addresses the potential effect of turbidity occurring in the Whakatāne District Council municipal supply bores utilised to supply potable drinking water to areas of the Whakatāne district.

The applicant also undertook an assessment in regards to the effects of the proposed take on any surface water bodies and included this information in section 6.1.4 of the application document and an updated assessment in section 6.3.2 the report entitled *"Well PW-2 Completion and Testing Report with an Assessment of Environmental Effects"* dated 18 October 2017 and provided in response to the further information request. The applicant's assessment concluded that the proposed activity was *"unlikely to have any detectable impact on base flows to surface water bodies."*

Mr Thornburrow also reviewed this information and commented *"given the depth and degree of confinement of the aquifer, the effects of pumping on surface water bodies are considered less than minor."*

Testing and modelling provided by the applicant and an independent technical review of that information concludes that the proposed take will have no more than minor adverse environmental effects on neighbouring bores or surface water bodies.

## 2.3 Effects of Potential Saline Intrusion and Subsidence

The applicant has discussed the potential of saline intrusion and land subsidence due to the proposed groundwater take in sections 6.3.2 and 6.3.3 of the above stated report.
In regards to saline intrusion, the applicant has commented *"Saline intrusion is not likely to occur given the distance of the site from the coast (about 14 km) and the significant hydraulic head in areas down gradient of the site."*
And in regards to land subsidence, *"Aquifer settlement and land subsidence are not likely to occur given the formation lithology and the significant hydraulic head present in the area."*

Mr Thornburrow reviewed the assessment presented by the applicant and commented in regards to saline intrustion *"potential saline intrusion effects are considered less than minor"* and in regards to land subsidence *"I consider it very unlikely that the proposed water take would result in any land subsidence effects".*

I therefore consider that any potential effects of the proposed groundwater take regarding saline intrusion and land subsidence will be less than minor.

## 2.4 Effect of Annual Allocation on the Groundwater Catchment

The subject water take is from the "Awaiti Canal" groundwater catchment as referenced in the Bay of Plenty Regional Council Estimates of Water Availability and Allocation Estimation Report[1]

[1] *Kroon, G. (2016): Assessment of water availability estimates of current allocation Levels October 2016. Tauranga: Bay of Plenty Regional Council.*

*2 White, P.A.; Rabier,M.;Begg J.; Freeman J and Thorstad,J.L. (2010) : Groundwater resource investigations of the Rangitāiki Plains stage 1 – conceptual geological model, groundwater budget and preliminary groundwater allocation assessment. Taupō: Geological and Nuclear Sciences Limited*

Raoul Fernandes (Science Team Leader, Bay of Plenty Regional Council) was asked to comment on the robustness of the scientific information currently held by the Regional Council in relation to the groundwater resource in the Bay of Plenty region. Mr Fernandes provided the following response (Objective ID: A2770021):

*"In regards to the groundwater component of the assessment of water availability and estimates of the current allocation levels, this report was prepared by Kroon (2016)[1] and involves two components; the groundwater resource investigation reports completed by White et al. (2010)[2] and the determination of a limit. My comments are in relation to the scientific confidence of the works completed by White et al., (2010)[2].*

*The groundwater resource investigations of the Rangitāiki Plains stage 1 – conceptual geological model, groundwater budget and preliminary allocation assessment (White, 2010)[2] is a catchment scale groundwater budget that uses rainfall, evapotranspiration and base flow and groundwater flow to estimate groundwater budgets. These types of models are commonly referred to as mass balance models and are a scientifically acceptable method of determining groundwater budgets.*

*The methodology has been correctly applied with reasonable assumptions in regards to the relevant inputs, assumptions of flows and the derivation of the mass balance. "The report brings together all available information on the geology, groundwater level and surface water flows (White et at., 2010)[2]". Appropriate consideration has been given to using the correct data and parameters that are the crucial components of this model. The assumptions upon which the model is bases are reasonable and clearly justified.*

*In my opinion the approach and methodology used in this report is scientifically acceptable and is a reasonable methodology to use. The figures derived in this report are conservative and the best available information that we have at this stage."*

Glenys Kroon (Senior Policy Analyst (Water Policy), Bay of Plenty Regional Council) and author of the *'Assessment of water availability and estimates of current allocation levels 2016'* report previously mentioned, also commented (Objective ID: A2770039):

*"The Assessment of water availability and estimates of current allocation levels report (AWA) notes the limits are interim and are based on the relationship between flow and ecological values for surface water and sustaining the characteristics of aquifers for groundwater. Plan change 9 and the data in the report are the first step to set NPSFM compliant limits to allocation and minimum flows/levels. As such these limits are based on simple hydrological statistics and while generally conservative do not take into account other aspects such as cultural values, existing uses, economic impact etc."*

The Awaiti Canal groundwater catchment is referenced as having an 'available allocation' status with 167.1 l/sec currently allocated (as at date of above report; October 2016) and 267.4 l/sec available for allocation. These figures are based on a maximum allocation = 35% of the catchment's average annual recharge rate of 764 l/s under Policy WQ P5 of Proposed Plan Change 9 to the Regional Water and Land Plan which was publicly notified on 18 October 2016.

The proposed annual allocation of 1,100,000 $m^3$ per year will further add allocation to the current allocated flow of the subject aquifer.

To determine the effect of the proposed annual allocation on the total available allocation of the groundwater catchment, the annual allocation in $m^3$ needs to be transferred to litres/sec:

1,100,000 $m^3$ x 1000

= 1,100,000,000 litres

= 1,100,000,000 litres ÷ 365 days ÷ 24 hrs ÷ 60 mins ÷ 60 secs (to transfer to l/sec)

= 34.88 l/sec.

To understand the applicant's proposed allocation in relation to the available annual allocation of the Awaiti Canal groundwater catchment, the catchment's allocable flow in l/sec is transferred to $m^3$:

267.4 l/s x 60 secs x 60 mins x 24 hours x 365 days (to transfer from litres/sec to litres/year)

= 8,432,726,000 litres per year (to simplify, transfer to $m^3$ ÷ by 1000)

= 8,432,726 $m^3$.

In summary, the applicant's proposed take of 1,100,000$m^3$/year is a small portion of the total allocation available based on the above allocation policy.

The total allocated flow (including the applicant's proposed take) would equate to 201.98 l/s therefore there is still 65.42 l/s (average annual rate of take) available for allocation from the Awaiti Canal before the 35% of the catchment's average annual recharge rate is reached.

This is demonstrated in Figure 2 below which details the above allocation as prescribed by Policy WQ P5 of Proposed Plan Change 9 to the Bay of Plenty Regional Water and Land Plan.

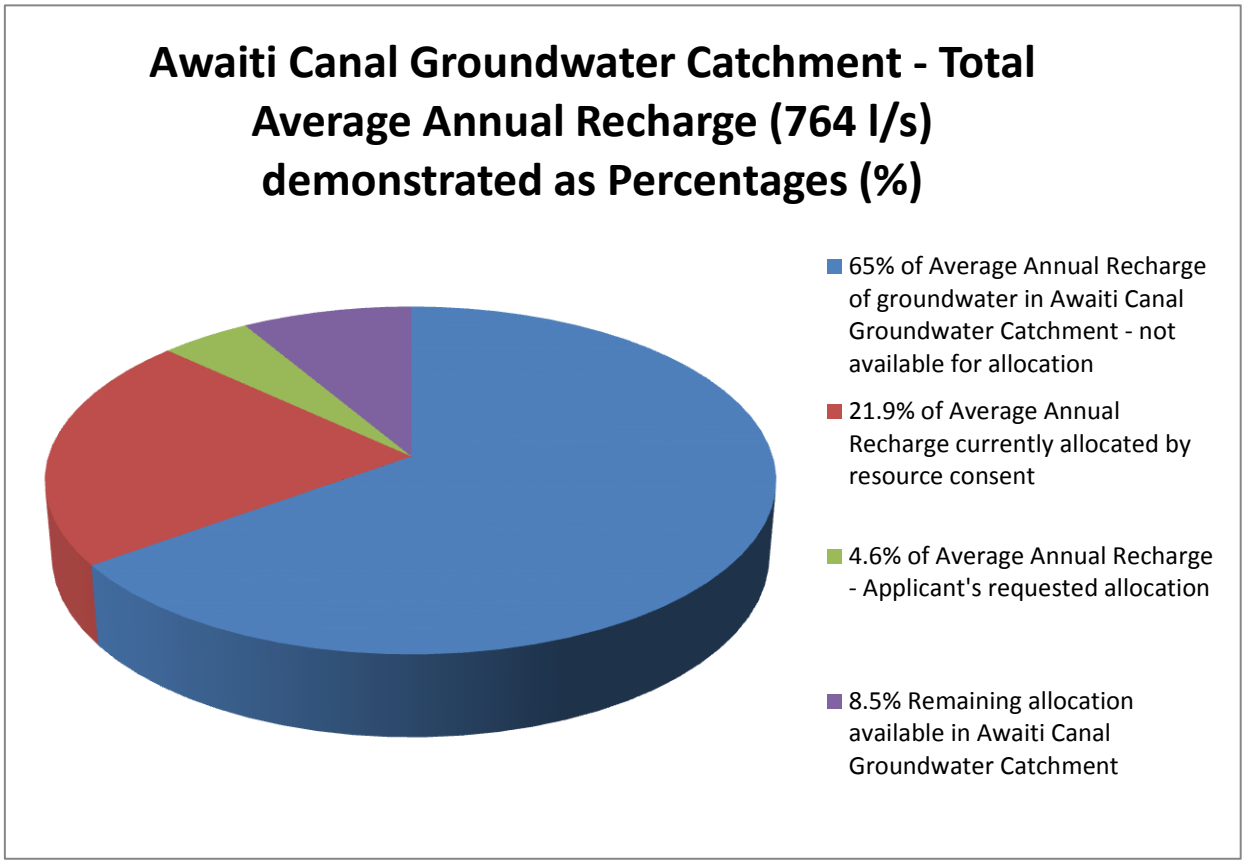


**Figure 2. Graph showing allocation calculations from the Awaiti Canal Groundwater Catchment**

I consider that the conclusions of the above assessment undertaken by Mr Thornburrow demonstrate the proposed water take is sustainable. The inclusion of a maximum annual allocation in any resource consent conditions will mitigate any potential effects of the take on the availability for other users to access groundwater and limit the applicant to only a volume deemed sufficient to meet their needs.

It is therefore considered the total annual allocation of 1,100,000$m^3$ per year is sustainable, and will have less than minor effects on the sustainability of groundwater in the aquifer based on the above proposed policy of Proposed Plan Change 9 to the Bay of Plenty Regional Water and Land Plan.

# 3 On-site Effluent Wastewater Discharge

## 3.1 Effects of Discharge on Soil/Land

The proposed maximum daily volume of 5.2$m^3$ has been calculated by the applicant and based on Table H4 of AS/NZS 1547:2012 for a rural factory source on bore-water supply as detailed in table 1 below.

Table 1. Calculations of Total Daily Maximum Proposed Treated On-site Effluent Discharge

| Number of People | Design Flow (L/person/day) | Total Volume (L) including 20% contingency | Laundry Facility (litres/day) | Total Volume ($m^3$) |
|---|---|---|---|---|
| 70 | 50 | 4,200 | 1,000 | 5.2 |

The proposed discharge is for a maximum daily volume of 5.2$m^3$ of treated wastewater to land from an aerated wastewater treatment system. The applicant proposes to install a Hynds On-site Membrane Biorector (MBR) plant (or suitable alternative). The system comprises of a two compartment septic tank, aeration zone, membrane filtration and effluent storage with pumped distribution via low pressure effluent disposal (LPED) to the land application area. The system is proposed to be fitted with a high level alarm.

The land application area proposed by the applicant includes 300 lineal m of septic tank soakage trench laid (15 x 20 metres), approximately 0.6 m wide and spaced 1 metre apart.

The proposed land application area will give an effective application area of 460 $m^2$, with 5.2 $m^3$ of effluent being discharged daily. This gives a soil loading rate of 11.3 mm.

The proposed land application area is within the subject property and is surrounded by a perimeter shelter belt. A 100% reserve area has been set aside and this area has been identified on the Beca Drawing No. 2663104-AR-101 included in Appendix G submitted with the application documentation for resource consent.

The applicant has undertaken a site assessment of the soils on site and to determine percolation rates. This information is included in Appendix G of the application document. Soil analysis presented by the applicant demonstrates the soil as having good to moderate drainage.

Bay of Plenty Regional Council's Geoview2 programme identifies the soil type as being a combination of *'Rangitāiki sand (Ran)'* at the western edge of the property and *'Onepū soils (Onp)* for the remainder of the property (see figure 3 below).


Figure 3. Map of subject property demonstrating soil types onsite.

The information provided categorises the soil as category 3-4. The soil description is consistent with Table E1 of the standard AS/NZS 1547:2012. According to Table L1 of the standard AS/NZS

1547:2012, the recommended maximum design loading rate to these types of soils (category 4 for conservativeness) for secondary treated effluent is 30 mm per day.

The proposed discharge will load the soil within the recommended level for this type of soil.

Mr Terry Long (Senior Project Implementation Officer, Bay of Plenty Regional Council) has undertaken a review of the system design and provided technical advice and input both before the application was lodged, and during the consent process.

Mr Long has provided the following comments in respect of the proposal (Objective ID A2691306) *"An MBR is suitable technology to treat the wastewater. The application refers to a loading rate of 30 mm/day which is consistent with NZS 1547:2012 Table L1. On this basis an area of 460 $m^2$ and a 100% reserve area. This design is sufficiently conservative."*

I therefore consider any adverse environmental effects of the proposed discharge of on-site treated wastewater on land and soil will be no more than minor.

## 3.2 Effects of Discharge on Groundwater and Surface Water

The proposed land application area is located approximately 140 metres from the nearest groundwater bores (applicant's bores BN17-0056; northeast of the proposed land application area and BN-932; southeast of the proposed land application area).

Mr Long has provided the following comments in relation to separation distances between the land application area and the nearest known groundwater bores identified above (abridged) (Objective ID A2691306):

*"NZS 1547:2012 Appendix R provides some guidance on separation distances between a bore and a land application system. The range given is 15-50 metres. I don't think this is an appropriate tool to use in this case. I think a higher level of scrutiny is required. A tool such as the ESR guidelines could be used."*

A further information request (s92 RMA) was sent to the applicant on 07 September 2017 requesting evidence of an assessment of the proposal against the Environmental Science and Research Limited (ESR) *Guidelines for separation distances based on virus transport between on-site domestic wastewater systems and wells*.

This information was provided by the applicant on 19 October 2017.

The assessment undertaken concluded that the separation distance was satisfactory. This information was further reviewed by Mr Long who commented (Objective ID A2748625) *"The assumptions seem valid and the resulting number is less than zero. Therefore this is OK."*

A resulting number of 0 or less in the above assessment in accordance with the ESR Guidelines concludes that the *"separation distance is satisfactory".*

The proposed land application area is located approximately 40 metres from the nearest surface water body; being the Tarawera River to the west.

The applicant has undertaken an assessment regarding potential effects of the proposed discharge on the Tarawera River in section 6.5.2 of the application document.

The applicant has stated that the nutrient loads of the treated effluent to land in grams per day (g/d) from the proposed system are as follows:

- Biochemical oxygen demand (BOD) – 26 g/d
- Total Nitrogen (TN) – 79 g/d.

And commented regarding this discharge *"Provided the wastewater treatment process is compliant with AS/NZS 1547:2012 the additional BOD and TN load to the Tarawera River from the effluent disposal system would result in a 0.001%-0.03% increase in the in-stream concentration of BOD and TN.*

*If secondary treated effluent from the on-site wastewater treatment system were to enter the Tarawera River (undiluted and with no additional natural treatment) the result would be a negligible change in instream BOD and TN concentrations. The overall potential effect on the Tarawera River is expected to be negligible. It is unlikely that the change in concentration would be measurable after reasonable mixing."*

Paul Scholes (Science Team Leader – Water Quality, Bay of Plenty Regional Council) has reviewed the applicant's assessment and provided the following comments (Objective ID A2725753):
*"The applicant has assessed to nutrient loading potential to the Tarawera River and shown that after reasonable mixing no increase in nitrogen concentration would be perceptible. Nitrogen or more accurately nitrate-nitrogen, is the contaminant that would travel through groundwaters, depending on soil and plant uptake. This assumption seems reasonable given the projected loadings from the effluent treatment system.*

*Further information has been undertaken to evaluate the virus movement in effluent using the ESR separation distance guidelines. Using the same parameters used in the assessment and a separation distance of 40m to the river indicates there is potential for viruses to reach the river (see diagram below). It is unlikely that faecal indicator bacterial would be present due to membrane filtration and soil renovation. If viruses were to be transported to the river they would be in low number (less than log 2), and there would be rapid dilution and uv inactivation within the river. As dilution would be in the order of greater than 10,000 fold (5.2 $m^3$/day effluent discharge; median flow Tarawera 2,067,000$m^3$/day), it is likely that viral infection risk past mixing would be minimal."*

The applicant has provided a statement contained within a Beca Memorandum dated 22 September 2017[2] contained within the documentation in response to the further information request and concluded:
*"It is very unlikely that effluent discharged via the effluent disposal field would be able to enter the swale when considering that the swale depth is 0.75m below ground level adjacent to the disposal field. The result being that the effluent would pass approximately 0.85m below the bottom level of the swale.*
*This is a conservative estimate as the centre of the groundwater mound would be unlikely to extend under the swale, therefore the effluent is likely to pass below the bottom of the swale at a greater depth than indicated above providing more confidence that effluent will not enter the swale."*

Andrew Nell (Senior Associate – Civil Engineering, AR & Associates, Contract Engineer to Bay of Plenty Regional Council) reviewed the above information supplied by the applicant and commented (Objective ID A2770046): *"This item has been satisfactorily answered and no further information is required."*

I therefore consider any adverse environmental effects of the proposed discharge of on-site treated wastewater on ground water and surface water will be no more than minor.

# 4 Earthworks

## 4.1 Contaminated Site

The applicant has not applied for resource consent under Rule 35 of the Bay of Plenty Regional Water and Land Plan to disturb or remediate contaminated land due to the determination that the site is not contaminated. This is discussed further below.

A site is considered to be contaminated when hazardous substances are found at significantly higher concentrations than their normal (background) levels. A background level is the level of a substance that occurs naturally within the environment.

This site has been identified as containing contaminants above background levels through a Detailed Site Investigation (DSI) conducted by Beca Limited[3] and this is included in Appendix I of the application document. The contaminants identified were heavy metals (arsenic, cadmium, copper and zinc).

[2] (2017). Beca Memorandum – Nongfu wastewater treatment – response to council questions.
[3] (2017). Beca Limited. *57 Johnson Road, Otakiri – Detailed Site Investigation.*

The applicant has commented (abridged) *"As one sample has concentrations of arsenic above the adopted soil contaminant standards for health (SCSs) a resource consent is required under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil) Regulations 2011 (NESCS). This consent is being sought from the WDC.*

*It is noted that out of 42 soil samples obtained within the site only one sample recorded a concentration above human health criteria and not an order of magnitude above the criteria limit. The DSI states that the scale of contamination is therefore considered to be low.*

*The DSI concludes that the contaminant concentrations do not pose a risk to the physical environment, and therefore, the site is not considered to be contaminated. However, to manage any potential discharges to air and water during earthworks a Contaminated Soils Management Plan (CSMP) will be implemented."*

The DSI and CSMP (contained in Appendix J of the application document) have been reviewed by Emma Joss (Senior Regulatory Project Officer – Contaminated Land and Waste, Bay of Plenty Regional Council). Ms Joss commented (Objective ID A2682480):

*"The Detailed Site Investigation (DSI) and Contaminated Site Management Plan (CSMP) have been prepared by a suitably qualified and experienced practitioner (SQEP) in general accordance with MfE's contaminated land management guidelines No. 1 and No. 5.*

*BOPRC have concerns with the use of the 95%UCL given the arsenic concentration (240 mg/kg) was more than double the guideline value (70 mg/kg). However excluding the 95%UCL, as the DSI demonstrates that the risk to human health either short term or long term is low based on dermal contact concentrations for construction/maintenance workers, the proposed use of the site (commercial/industrial) and the sealing of the majority of the site thus removing the contaminant pathway, BOPRC agrees with the risk categorisation. BOPRC also agrees that the site does not fit under the definition of contaminated land under the RWLP due to the lack of "an immediate or longterm hazard to human health or the environment".*

*Based on the above, BOPRC agrees that Rule 35 consent is not required."*

Nonetheless, Ms Joss has recommended some conditions consent including incorporating the CSMP into any resource consent for the proposed earthworks activity.

I consider that, as long as the works are undertaken as per the proposed methodology, including the proposed management plan, the adverse effects resulting from disturbing the subject site will be no more than minor.

***Contaminant Tracking***

Stormwater, machinery movements and transport of contaminated soil all have the potential to track contaminants off site. Stormwater tracking of contaminants off site via stormwater flows will be avoided by isolating the contaminated areas and ensuring the material is mixed well within localised soils.

Dust tracking off site will be controlled by monitoring site conditions, applying water for dust suppression, or ceasing work if conditions are such that dust cannot be controlled.

The site management plan requires that vehicles that are used to transport the contaminated soils to the approved disposal facility are to be covered to prevent dust and soil tracking on roadways during transit.

I consider that, as long as the remediation earthworks are undertaken as per the proposed methodology and mitigation measures and controls, that tracking of contaminants will be no more than minor.

## 4.2 Erosion and Sedimentation

In order to control erosion and sedimentation during works, the applicant has provided an erosion and sediment control plan in Appendix K of the application documentation for resource consent. This plan

details the use of clean and dirty water diversion channels, earth bunds, a sediment retention pond and silt fencing and section 3 of the CSMP further details management procedures for the site.

The control measures as described in the original application documentation were reviewed by Mr Nell and found to contain *"insufficient information to determine the scale of effects of the proposed activity and whether the proposed measures are appropriate to ensure that the activity's adverse effects will be less than minor."*

Mr Nell outlined various questions and points seeking clarification in his technical review of the application (Objective ID A2691316). These related to the size of the sediment retention pond and contributing earthworks catchment area, printing errors in documents, details regarding the emergency spillway and forebay volume of the sediment retention pond, managing stock piles and erosion mitigation measures.

As mentioned previously in section 2.2 of this report, this information was requested in a further information request to the applicant, and subsequently supplied by the applicant on 19 October 2017 (Objective ID A2724645).

The Bay of Plenty Regional Council was also sent a copy of the resource consent application lodged with Whakatāne District Council (WDC) and asked to provide any relevant comments regarding the application. Peter Blackwood (Principal Environmental Engineer, Bay of Plenty Regional Council) provided the following comments (abridged) in a response to WDC (Objective ID A2713176) stating stormwater mitigation required *"on-site detention to be provided to prevent an increase in runoff from the site in a 72 hour 100 year event. This detention should be to a minimum standard of 80% of pre-development peak discharge. Note: The stormwater mitigation will need to provide for the 1% AEP for the year 2117 climate adjusted storm for the critical duration, being the 72 hour storm."*

Mr Nell further reviewed the information submitted by the applicant and was satisfied the applicant has supplied the full information to address any actual or potential effects of erosion and sedimentation and advised *"no further information is required."*

During winter months the risk of sediment generation and subsequent discharge is higher and requires a greater degree of control. During this period, larger capacity controls are required. The sediment retention pond has been sized appropriately in order to cater for this event for a 72 hour 100 year event. This information is discussed further in section 5.2 of this report.

The control measures as described are in accordance with the Environment Bay of Plenty Guideline No. 2010/01 - "Erosion and Sediment Control Guidelines for Land Disturbing Activities" (ESC Guidelines).

I consider that, as long as the earthworks are undertaken as per the proposed methodology, including proposed design of erosion and sediment controls, any adverse effects resulting from erosion and sedimentation as a result of the proposed earthworks activity will be no more than minor.

## 4.3 **Dust**

During dry period of works dust could be generated from various sources such as cut /fill activities and machinery movements (internal and on and off site).

In order to control dust, a water truck or portable water sprays utilising the water supply from the existing bore(s) onsite are proposed to be used to apply water to dust.

The applicant has outlined the following management procedures in relation to dust control and mitigating any adverse effects of dust in the CSMP:

- *Timing of works including prevalent wind direction;*
- *Dampening any exposed soils during dry and windy conditions through use of a water truck or portable water sprays;*
- *Covering any stockpiles if required;*

- *Reduction of vehicle speeds on site; and*

- *Minimising drip heights from loaders.*

Monitoring is also required in order to manage site conditions, consent conditions associated with any resource consent for authorisation of the proposed earthworks activity will require machinery movement to cease if dust generation is uncontrollable and water to be applied at a rate of no less than 5mm per day per hectare exposed and 10mm/hectare/day of areas subject to high traffic or machinery movement.

I consider that, as long as the earthworks are undertaken as per the proposed methodology, the adverse effects resulting from dust discharge will be no more than minor.

## 4.4 Heritage sites

As discussed in section 1 of this report, there are no known historic or heritage sites within the activity site. However, conditions for any resource consent for the earthworks activity will require that an Accidental Discovery Protocol be in place for all works.

It is considered that as long as there is compliance with conditions of any resource consent there will be no effects from the proposed earthworks activity on heritage sites. This is only one aspect of the consideration of cultural effects.

## 4.5 Associated Bylaw Requirement

Earthworks (excavation) proposed by the applicant encroaches on the 60 metre buffer identified in clause 9.1(b) of the Bay of Plenty Regional Council Floodway and Drainage Bylaw 2008, therefore require approval under the Bylaw.
Approval is also required for the stormwater outlet structure in Hallett Drain under the above Bylaw (clause 3.1(h)).

As part of the further information request to the applicant, the applicant was asked to provide an assessment of the proposed activity against the above Bylaw.
The applicant responded stating *"A meeting was held with Roger Waugh, Programme Leader, Rivers and Drainage on 22 September 2017 to discuss the proposal and an application for an authority under the bylaw was lodged on that date. Roger Waugh has requested further information in regards to a geotechnical assessment which we have agreed to prepare."*

Mr Waugh has advised that the geotechnical assessment in support of the Bylaw application is to be provided by the applicant in January 2018.

The Bylaw approval process is a separate authority to the resource consent process under the Resource Management Act 1991 and the applicant cannot exercise any resource consent to undertake earthworks without the necessary Bylaw approvals.

Despite this, I consider that the effects of undertaking earthworks within 60 metres of a flood protection structure and the potential effect of compromising the structural integrity of the stopbank due to the proposed works are not well understood with the information received to date to determine the effects of the proposed activity are no more than minor. Therefore I consider the Rivers and Drainage department (as asset manager of the stopbank) to be an affected party for the purposes of this application.

# 5 Stormwater Discharge

## 5.1 Water Quality

Stormwater contaminants entering a water body can potentially have effects on the ecology of the receiving environment. The site is currently a water bottling plant and kiwifruit orchard however the applicant proposes to remove all kiwifruit, earthwork the site, and expand the water bottling plant so that this is the sole activity occurring at the site.

The stormwater generated onsite will originate from earthworks in the pre-development stage and from roofs and carparks post-development. Contaminants discharged from the subject site are likely to include sediments, total petroleum hydrocarbons (TPH) and heavy metals such as zinc and copper associated with vehicle movement.

To mitigate any adverse effects on the receiving environment, the applicant has proposed to install stormwater swales and a stormwater detention pond for treatment prior to discharge. The stormwater detention pond is proposed to be a dry pond. The applicant has advised the proposed system will provide water quality treatment primarily by extended detention of the stormwater from the site.

The applicant has based the stormwater management system for the site on the Stormwater Management Guidelines for the Bay of Plenty region (2012/01) and the Bay of Plenty Regional Council Hydrological and Hydraulic Guidelines (2012/02).

A full description of the proposed stormwater system is included in Appendix F of the application documentation and further supplementary information supplied by the applicant on 28 November 2017 (Objective ID A2753742).

The immediate receiving environment is a drain. The Drain Water Quality Classification (Schedule 9 of the Regional Water and Land Plan) sets minimum standards and criteria for any discharge to water in an open drain to prevent further degradation of water quality, particularly in receiving environments. The drain water quality classification as specified in Schedule 9 is *"to set minimum standards and criteria for any discharge to water in an open drain to prevent further degradation of water quality, particularly in receiving environments. The conditions recognise that water quality in drains is already poor, and the somewhat limited opportunity to improve water quality in these watercourses."*

The potential effect of a discharge is graded in the water quality classification standards from pristine to highly modified water courses. Effects on aquatic life from a discharge shall not cause '*any adverse effect'* to '*any more than minor effect*' to *'any significant adverse effect'*. Both drain and regional baseline classifications state that the discharge of contaminants or water to water shall not cause amongst other things *"Any significant adverse effects on aquatic life (refer to ANZECC[4] Guidelines for Fresh and Marine Water Quality, 2000)"* Schedule 9 (Para 7) (abridged) states *"ANZECC 2000 set 'trigger levels' for contaminant levels, but allow for 'guideline levels' to be determined for specific sites based on geological areas. Resource consent applicants may use alternative limits that otherwise comply with the narrative standards in Schedule 9, providing these are scientifically justified for the proposed activity, site characteristics and values."*

The applicant proposes to undertake 12 months of monthly water quality and flow monitoring in the Hallett Drain to establish the baseline water quality prior to any discharge occurring from onsite stormwater and process wastewater (discussed further in section 6 below) to the drain. Following the 12 months of monitoring, the applicant proposes to set discharge limits (submitted to the Regional Council for review and approval) that are appropriate for the receiving waters.

Sediment contaminated stormwater can potentially have effects on the ecology of the immediate and wider receiving environment. The main contaminant discharged from the subject site is suspended sediment which is measured by Total Suspended Solids (TSS).

The approved erosion and sediment control plan is in accordance with the Environment Bay of Plenty Guideline No. 2010/01 - "Erosion and Sediment Control Guidelines for Land Disturbing Activities" (ESC Guidelines), therefore it is expected the discharge from the sediment retention pond will meet the discharge standards for TSS and limits will be included in any conditions of resource consent. The discharge will soak to land within the treatment device, or be piped which will convey the flow to the Hallett Drain.

The Hallett Drain discharges approximately 9.8 kilometres downstream to the Awaiti Canal. A further 2.2 kilometres downstream, the Awaiti Canal meets the Omeheu Canal which eventually discharges a further 4.1 kilometres downstream to the Tarawera River just south of the river mouth.

Mr Scholes has reviewed the information presented by the applicant in the application document including the proposed monitoring regime and proposed consent conditions regarding submission to

[4] Australian and New Zealand Environment Conservation Council (ANZECC), (2000) guidelines

the Regional Council of a report outlining the 12 months of baseline monitoring to inform contaminant limit setting in any conditions of resource consent. Mr Scholes has advised *"such a consent condition may be reasonable in the absence of any baseline drain water quality or ecological information."*

Mr Scholes has also provided some recommendations regarding appropriate monitoring and trigger levels for contaminants which could be included in conditions for any resource consent for the discharge.

Given the proposed treatment and the provision for contaminant limits and monitoring in any consent conditions, I consider potential adverse effects on water quality of the stormwater discharge to be no more than minor.

## 5.2 Water Quantity

As mentioned previously in this report, through consultation with technical staff at the Bay of Plenty Regional Council (specifically Mr Peter Blackwood, Principal Technical Engineer), the applicant was advised to amend their stormwater design to cater for a 72 hour 100 year event to mitigate any potential adverse effects of flooding from the site.

Mr Blackwood advised the applicant in an email dated 15 November 2017 (Objective ID A2761204) that the *"stormwater mitigation will need to provide for:*

a) *The 1% AEP for the year 2117 climate adjusted storm;*

b) *The climate change being based on 8% per degree temperature rise, not 8% as advised in Section 2 of Appendix M;*

c) *The critical duration 72 hour storm.*

The applicant addressed Mr Blackwood's queries in additional information provided to the Regional Council in the form of a Memorandum by Beca on 28 November 2017 (Objective ID A2753742). In summary, the Memorandum concluded: *"Based on the current concept design the volume of storage required is 8,550m$^3$. The volume required will be recalculated in the detailed design stage but the principle as discussed in this memo will apply.*

*The volume will be contained on site by a combination of the currently designed stormwater pond (~3,600m$^3$) and storage methods (~4,950m$^3$).*

*Due to the large storage volume on the site it is expected that the stormwater on the site will drain to ground soakage. However, there will be an emergency overflow connection to Hallett's Drain in case of saturated ground (no soakage occurring). This overflow will be limited to the 100yr-72hr predevelopment flow rate restricted to only allow 0.031m$^3$/s runoff. There will also be an emergency overflow for any events greater than the 100yr-72hr event."*

Mr Blackwood has reviewed the applicant's supplementary information, calculations and assumptions and agrees the appropriate storage, and hence mitigation, has been provided by the applicant to determine any potential adverse effects of flooding resulting from the proposed stormwater discharge will be less than minor (Objective ID A2770064) and has advised that the volumes in the Beca Memorandum dated 27 November *"was assessed at 8,550m$^3$ and will be reassessed when details of the proposal are confirmed prior to construction."*

Andrew Nell (Senior Associate – Civil Engineering, AR & Associates, Contract Engineer to Bay of Plenty Regional Council) undertook a technical review (Objective ID A2691316) of the proposed earthworks and stormwater discharge activity including the stormwater management system. Mr Nell's review highlighted deficiencies in the information provided in the application to make a full assessment of the proposed stormwater discharge therefore, the review resulted in a request for further information to the applicant.

The applicant supplied the information relating to Mr Nell's identified queries and concerns in relation to the proposed stormwater system, erosion effects, discharge flows and calculations on 19 October 2017. This was further reviewed by Mr Nell who commented that *"all items have been addressed"* and *"no further information is required."*

Provided that consent conditions are complied with, I consider that the effects of the proposal on flooding have been avoided and will be less than minor.

## 5.3 Erosion and Scour

The stormwater outlet has been designed to minimise erosion. The applicant proposes to install a pre-cast concrete headwall and rock rip-rap at the outlet point into Hallett's Drain.

The head wall and rip-rap will dissipate outflow energy and slow velocities before discharge and hence minimises erosion and scour. Mr Nell (Contract Engineer to Bay of Plenty Regional Council) has also reviewed the outlet design and considered it to be appropriate for this location.

Conditions of any resource consent for the stormwater discharge will also require the applicant to effectively stabilise any scour or erosion resulting from the discharge or the discharge structure.

I consider that, as long as the structures are built as per the proposed design and there is full compliance with any consent conditions, the adverse effects resulting from erosion and scour will be no more than minor.

# 6 Process Wastewater Discharge

The applicant proposes to discharge waste process water from the water bottling operation to the stormwater pond and has accounted for this additional discharge in their design which has been assessed above in section 5.2 of this report therefore any effects associated with flooding as a result of the process wastewater discharge to the stormwater pond have already been discussed above.

As mentioned previously in this report, the applicant also seeks authorisation to discharge process wastewater generated from the water bottling operation to the stormwater detention pond and ultimately, Hallett's Drain. This includes reject streams of water from the membrane filtration processes and clean in place (CIP) process wastewater.

Section 4.6 and Appendix H of the application documentation contains a description of the proposed discharge and waste streams of water.
The applicant has categorised the two different waste streams of water (membrane reject stream and CIP process and chemicals) and provided descriptions in section 4.6.1 and 4.6.2 of the application document. These are summarised by the applicant:

***Membrane reject stream***

*As part of the water bottling process the water is filtered through membranes. Two water streams are produced through this process, a "reject" stream, which is concentrated bore water and a permeate stream, which is clean bore water. The reject stream from the membrane filtration system is approximately 436m$^3$/day under peak conditions and 239m$^3$ per day on average and it proposed this flow be discharged via the stormwater pond as it is unadulterated groundwater.*

***Clean in Place (CIP) process and chemicals*** *(abridged)*

*The water bottling plant has three process lines and each line requires regular cleaning using the CIP process. The following chemicals will be used for CIP:*

- *Nitric Acid*
- *Hydrochloric Acid (as an alternate to Nitric Acid)*
- *Peracetic Acid*
- *Sodium Hypochlorite*
- *Sodium Bisulphate*
- *Sodium Hydroxide*

*The frequency of use varies on the chemical. Some are used on a weekly and monthly basis and others periodically throughout the year, as required. The weekly CIP process is used to clean the membranes, filters and raw water tank and diluted chemical volume dosed will be approximately 27.5m$^3$. Monthly CIP processes are carried out on the membrane system and filters and chemical volume dosed will be approximately 15m$^3$ (total 42.5m$^3$/day for weekly and monthly). In addition to the regular (weekly and monthly) CIP procedures there are also irregular CIP processed that may be*

*undertaken periodically, as required. Flushing water is also administered after chemical dosing to purge any residual chemicals out of the system."*

Section 6.3 of the application documentation contains an assessment of effects of the proposed discharge on water quality to the receiving environment; being Hallett's Drain.
The applicant has identified the chemicals involved in the CIP wastewater stream discharge have the potential to adversely affect water quality (and potentially aquatic life) in Hallett's Drain if not managed properly.

To mitigate any adverse effects of the discharge on Hallett's Drain, the applicant proposes to use a treatment process of neutralisation, off-site disposal and dilution. The applicant has based the discharge water quality requirements on an assessment of the ANZECC 2000 Guidelines, the National Policy Statement for Freshwater Management and the Bay of Plenty Regional Water and Land Plan.

This is explained further in section 6.3 of the application document but essentially the applicant proposes to capture the nitric acid in a separate tank for collection and disposal offsite at an approved treatment facility along with hydrochloric acid if used in the CIP process.
The applicant states that this will then *"allow the remaining CIP wastewater once combined with the membrane reject stream to be diluted significantly and to be suitable for discharge to the Hallett Drain."*

The applicant has identified this remaining waste stream *"is likely to be an acidic solution with a pH of between 1 and 2."* The applicant proposes to regulate the discharge to a pH of between 6 and 9.

The applicant has also commented on potential phosphorus concentrations within the CIP waste stream, and noted that *"an alum dosing system could be included to remove any residual phosphorus found in the CIP waste water, if required."*

As discussed previously in section 5.1 of this report, the applicant proposes to undertake 12 months of monthly water quality and flow monitoring in Hallett's Drain (receiving water) to establish the baseline water quality. Monitoring of ecology has not been undertaken.

Paul Scholes (Science Team Leader – Water Quality, Bay of Plenty Regional Council) has also technically reviewed the proposed process wastewater discharge component (Objective ID A2677992) of the application and advised *"the applicant considers it unlikely that after 'reasonable mixing' in the Hallett's Drain the proposed discharge of process wastewater will have any significant adverse effects on the ecological values of the drain. It is noted that no ecological assessment of the drain has been made, such as invertebrate or fish monitoring."*

Following the 12 months of monitoring, the applicant proposes to set discharge limits for the process wastewater that are appropriate for the receiving waters to ensure any adverse effects on the stream are less than minor. Limits are to be submitted to the Regional Council for suitability (subject to a set criteria being met) prior to any approval.

Mr Scholes' technical audit also identified some uncertainty in the effects of the chemicals to be used in the CIP process on the water quality of the Hallett's Drain due to the absence of baseline monitoring for the drain and provided the following comments in his review:

*"The applicant has identified that nitrate, chloride and Biochemical Oxygen Demand (BOD) associated with the nitric acid, hydrochloric and per-acetic acid cleaning processes are the key components of consideration for the discharge of the CIP process wastewater to surface water. Nitrogen and phosphorus can promote the growth of algae and macrophytes. Matheson et al[5] suggested a DIN level of greater than 250 mg/m$^3$ and DRP greater than 6 mg/m$^3$ is likely to lead to nuisance algal growth depending also upon light and temperature. It could be likely that both nitrogen and phosphorus are not limiting in the drain waters, hence algal growth for nutrients is not the limiting factor. This is yet to be established with baseline monitoring.*

*The applicant has noted that the phosphorous will be at an elevated level in waste stream (total phosphorus concentrations are expected to be approximately 0.45mg/l prior to any dilution), but because of the low nitrogen in the discharge water there is unlikely to be any additional biological*

[5] *Matheson, F., J. Quinn and C. Hickey (2012): Review of the New Zealand instream plant and nutrient guidelines and development of an extended decision making framework: Phases 1 and 2 final report.*

*growth in the receiving environment after mixing. This is difficult to determine until some monitoring information in the receiving environment is established. It would appear from the projected discharge concentrations that there will be a significant loading of phosphorus and some nitrogen, the dissolved form and in-stream concentrations will determine if there is potential for an adverse effects. It could be that nutrient limitations to growth are already exceeded, in which case there it is unlikely to be an increase in growth. The increased flow due to the discharge could also impact algal accrual rates. There is unlikely to be any toxicity effects due to nitrogen based on the expected discharge figures. Nutrient additions to the drain will increase the cumulative nutrient load to the Tarawera River and as a consequence may have the potential to impact these waterways, and may be a future consideration for nutrient limitation requirements.*

*BOD exerts an oxygen demand on the water body resulting in lower dissolved oxygen (DO) concentrations. Changes in DO can have detrimental effects on some aquatic organisms. Again the expected BOD concentrations are under 2 mg/L and after dilution are unlikely to have a significant effect on dissolved oxygen concentrations in the stream.*

*The nature of the process wastewater is such that it is unlikely to cause any oil or grease films, scums or foams issues as a result of the discharge. There will also be very little suspended material in the process wastewater and it will therefore not result in any conspicuous floatable or suspended materials discharged to the drain. However, this must be considered along with stormwater loading to the stormwater pond.*

*Visual clarity and colour are also not expected to be impacted and could be covered by the consent condition on no change in visual clarity or colour as a result of the discharge."*

Mr Scholes also reviewed the applicant's proffered consent conditions and whilst is in agreement with the relevant conditions regarding this activity and has made some additional recommendations which will be incorporated in to conditions for any resource consent.

In addition to the effects on water quality of the Hallett's Drain, the applicant was also asked by way a further information request to provide an updated assessment of the proposal against the relevant provisions of the Operative Regional Plan for the Tarawera River Catchment (the Plan) in light of the Matatā Wastewater Treatment Plant Environment Court decision (ENV-2014-AKL-109, ENV-2014-AKL-103).

This decision, and the Plan put emphasis on the 'protection, maintenance and enhancement' of water quality within the catchment. Objectives 13.5.2(a) and 15.8.2 are relevant considerations.

Mr Scholes also commented on the Environment Court Decision (Objective ID A2725753):
*"The Matatā Court indicated they thought consideration of if the receiving waters were over-allocated with respect to contaminants was required and hence a need for reduction and enhancement. It is clear there will be a net nutrient increase from this activity, but is yet to be seen if water quality will be 'maintained' in the receiving drain."*

I consider that any adverse environmental effects of the treated wastewater effluent discharge to land and stormwater discharge on water quality have been adequately avoided or mitigated, and have the ability to protect and maintain the water quality within the Tarawera Catchment. However as outlined in the discussion above and the technical review of the proposal by Mr Scholes, there is still uncertainty over whether the process wastewater discharge will achieve the above objectives due to the absence of baseline monitoring of the Hallett's Drain.

The provision of "maintaining" the water quality as a result of the discharge of the process wastewater is yet to be determined and will not be known until the applicant undertakes the baseline monitoring and limits are set within any resource consent conditions.
Whilst the applicant has not proposed to undertake any discharge to the drain until limits are set and agreed upon by Council within conditions of any resource consent, for the purposes of this assessment, the processing authority is still required to undertake an assessment of the effects of the proposal and I consider the effects on water quality of discharging the process wastewater to the Hallett's Drain are not well enough understood to agree with the applicant's determination that the effects of this discharge are less than minor, and therefore in my view could potentially be more than minor.

***Effects of Process Water Discharge on Whakatāne District Council Municipal Supply Bores***

As mentioned previously in this report, the Regional Council received email correspondence from Michael Van Tilburg (Manager Three Waters – Assets and Planning, Whakatāne District Council) on 25 August 2017 (Objective ID A2750547) identifying potential effects of the proposed stormwater (including process wastewater) discharge on Whakatāne District Council's assets. In this case; the nearby Johnson Road bores (bore numbers BN-2510 and BN-2511).

Mr Van Tilburg identified concerns relating to potential flooding effects on the bores and the possibility of contaminants entering the public water supply around the headworks of the bores.

The applicant has undertaken consultation with Whakatāne District Council in regards to their concerns regarding the above identified potential effect however at the time of correspondence had yet to provide WDC with the additional stormwater retention information. At the time of writing this report, the applicant had not provided this information to WDC.

In any case, I consider that the additional stormwater retention proposed by the applicant and discussed in section 5.2 above will mitigate any potential effects of flooding (and therefore contaminants entering) the District Council's bores.

# 7 Cultural effects

The subject site is located directly east of the Tarawera River. Two iwi have statutory acknowledgements on the river which are recognised through their respective Settlement Acts – Ngāti Awa and Ngāti Tūwharetoa. Ngāti Rangitihi also has an Iwi Management Plan lodged with the Regional Council.

Iwi in the Bay of Plenty region have expressed a growing interest in activities involving the take and use of water, discharge activities and land use activities such as those applied for in this resource consent application.

The applicant has described the iwi consultation that they undertook prior to lodging their application in section 6.7 (Cultural Effects) of their Assessment of Environmental Effects, section 7.1.1 (Stakeholder Consultation and Engagement – Iwi and Hapū) and included copies of correspondence in Appendix M of the application documentation for resource consent.

Consultation resulted in a Cultural Impacts Assessment (CIA) being prepared by Te Mana o Ngāti Rangitihi Trust which was included in the application documentation and Ngāti Tūwharetoa (BOP) Settlement Trust which was received by the Bay of Plenty Regional Council on 20 October 2017 (Objective ID A2724669).

The applicant has consulted with the following iwi regarding the proposal:

- Te Rūnanga o Ngāti Awa
- Ngāti Tūwharetoa (BOP) Settlement Trust
- Te Mana o Ngāti Rangitihi Trust; and
- Ngāti Mākino Iwi Authority.

I acknowledge the efforts of the applicant to obtain CIAs from the above parties and this is demonstrated in the extensive communications between the applicant and the various iwi parties.

The CIA prepared by Mr Christopher Clarke (Environmental Officer, Te Mana o Ngāti Rangitihi Trust) concluded Te Mana o Ngāti Rangitihi Trust supported the proposal and included an Accidental Discovery Protocol should any Koiwi or other Taonga be unearthed during the exercise of any resource consent.

The correspondence received by the applicant from Ms Leonie Simpson (CE, Te Rūnanga o Ngāti Awa) and subsequently Ms Beverley Hughes (Manager Policy & Strategy, Te Rūnanga o Ngāti Awa) contained within Appendix M indicated that a CIA and response to the applicant's consultation would be provided.

Advice was sought from Bay of Plenty Regional Council's Māori Policy team as to which iwi/hapū may be potentially affected by the proposal due to the location of the activities within the relevant iwi's rohe (area of interest).

Mr Nathan Capper (Pou Ngaio (Technical/Cultural RMA Specialist, Bay of Plenty Regional Council) advised the above four groups were the appropriate iwi who have an interest in the site and would need to be considered.

The further information request to the applicant asked the applicant to provide an assessment of cultural effects of the proposed activities on Ngāti Awa, Ngāti Mākino and Ngāti Tūwharetoa (at the time of sending the further information request, Ngāti Tūwharetoa (BOP) Settlement Trust's CIA had not yet been received by the Regional Council).

Ngāti Tūwharetoa (BOP) Settlement Trust's CIA identified potential effects of the proposed activities. Whilst the applicant has provided some commentary around potential mitigation of the effects, it is not clear these have been fully resolved to determine the effects on Ngāti Tūwharetoa are less than minor.

Similarly, in the absence of the assessment of any potential effects of the proposal on both Te Rūnanga o Ngāti Awa (on behalf of Ngāti Awa iwi), and Ngāti Mākino Iwi Authority, I do not agree with the applicant's assessment that the cultural effects of the proposal are less than minor.

I therefore consider, for the purposes of the resource consent applications lodged with the Bay of Plenty Regional Council that the above three tangata whenua groups (Te Rūnanga o Ngāti Awa, Ngāti Tūwharetoa (BOP) Settlement and Ngāti Mākino Iwi Authority are affected parties under section 95E of the RMA.

# 8 Other Consultation

In addition to the above iwi consultation outlined in section 7 above, the applicant has consulted with the following parties:

- The landowner; and
- Neighbouring properties

Consultation is discussed in section 7 of the application documentation and a summary of feedback received from neighbour's consultation and a consultation area map included in Appendix N of the application documentation.

As mentioned in Step 6 above in this report, Mr Jim and Mr Don Robertson as landowners of the subject property at 57 Johnson Road, Otakiri have provided their written approval to the proposal.

The applicant has provided a summary of the consultation and the concerns raised by neighbours during this process in section 7.1.4 of the application document.

The majority of concerns raised by neighbours consulted with related to effects which are considered in the resource consent application to the Whakatāne District Council (potential noise, traffic and visual effects).

Other than the effects identified in the resource consent application, and which have already been discussed in the Assessment of Environmental Effects section above of this report (drawdown effects on neighbouring bores and long term sustainability of proposed water take, concerns about aquifer modelling undertaken and effects of flooding due to stormwater and process wastewater discharged and concerns regarding the discharge receiving environment (Hallett's Drain)) some neighbours have raised additional concerns regarding the *"sale of New Zealand's water resources to overseas companies"* being immoral.

The morality or otherwise of an overseas interest obtaining and making use or a resource consent is not an appropriate matter for consideration here , but rather a higher level national consideration for the current government.

Taking the above into account, I do not consider there to be any other affected parties to the resource consent application.

**Will the activity have, or be likely to have, adverse effects on the environment that are more than minor? (s.95A(2)(a))**

As discussed and identified in relevant sections of this report above, there is still some uncertainty on whether the proposal will have, or be likely to have, adverse environmental effects which are minor or less than minor. I therefore consider the uncertainty remains that adverse environmental effects could potentially be more than minor.

## Step 7

**Are there special circumstances which warrant public notification (s95A(4)) or are there any other matters which justify public notification (s95A(1))?** Note that the existence of special circumstances/ matters does not compel public notification – a decision must still be made as to whether those circumstances/matters are such to warrant public notification.

☒ Yes – PUBLICLY NOTIFY

The applicant has undertaken an assessment in section 9 of the application document and listed a number of considerations in which the use of special circumstances provision in the RMA is not warranted.

I have not determined that special circumstances do not apply in this case therefore have not turned my mind to those considerations however, the Regional Council as the processing authority, does have general discretion to notify a resource consent application under s95A(1) RMA as the application was lodged prior to 18 October 2017.

When considering if an application should be notified under section 95A(1) RMA, the consenting authority needs to consider if any additional information which could support any substantive decision on an application could be obtained through the public notification process.

I consider this is warranted in this instance due to:

- The Operative Regional Plan for the Tarawera River Catchment and the Bay of Plenty Regional Water and Land Plan do not give specified objectives, policies, methods in regards to the activity of the use of the water resource for water bottling. The focus in these provisions is mainly on the sustainable and efficient use of water for agricultural and horticultural activities.

- There is a large amount of work presently happening in the space of water management in the Bay of Plenty Region which the Regional Council is responsible for, including implementation of relevant provisions in the National Policy Statement for Freshwater Management and Plan Change 9 (Water Quantity) to the Bay of Plenty Regional Water and Land Plan. Therefore there remains some uncertainty particularly in the appropriateness, and efficient and sustainable use of the water resource for water bottling.

- There is currently a considerable amount of public interest in the use of the water resource for water bottling at a national level.

- Uncertainty of scale of effects of undertaking earthworks activity within 60 metres of a flood protection structure.

- Uncertainty whether the discharge from the proposal can maintain an unknown water quality within the Hallett's Drain being contained within the Tarawera River Catchment.

- The benefit of a full public process and the ability to obtain more information to inform any substantive decision on the application outweighs precluding public participation. If not publicly notified, based on the assessment contained within this report, the application would be at least limited notified therefore a hearing of the application may be likely in any case. In balancing this consideration, I consider the costs to the applicant are outweighed by the benefit obtained by having a full public participation process.

In addition to the above points and as discussed in the Assessment of Environmental Effects section above of this report, there remains uncertainty as to the scale of some of the effects of the proposed activities on the land and water resources in the Bay of Plenty Region.

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## Step 8

## Is Limited Notification required?

Given the determination under section 95A(1) above regarding public notification, I do not consider it necessary to have regard to the subsequent sections of the Resource Management Act 1991.

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## Recommendation

In accordance with the above assessment I recommend that the application(s) be:

☒ Publicly Notified

☐ Subject to Limited Notification

☐ Non-Notified

**Staff member or consultant dealing with application:**

Jo Cranswick
**Consents Officer**

## Decision under delegated authority

☒ I agree with the recommendation that the application should be processed via public notification and I have explained the reasons for my decision overleaf.

☐ I disagree with the recommendation and have decided that the application be processed via public notification/limited notification/non-notification.

This decision is made under delegated authority by:

…… 8/12/17

**Consents Manager**

I agree with the recommendation to exercise Council's general discretion to notify the application under section 95A(1). I expand on the reasons for reaching this decision below.

**General discretion**

I agree with Ms Cranswick that as this resource consent application was lodged on 04 August 2017, the amendments to the Resource Management Act which came into effect on 18 October 2017 do not apply. Therefore, Council has discretion whether to publicly notify the application under section 95A(1). When considering whether to apply that discretion I have considered the following:

- There is uncertainty around the scale of the effects that the proposed activity will have on the environment.

  Firstly, in relation to the effects of the discharge of process wastewater, Council's technical advisor has commented that it, "is yet to be seen if water quality will be maintained in the receiving drain". I agree with Ms Cranswick that effects could be more than minor.

  Secondly, in relation to cultural effects, I agree with Ms Cranswick that it cannot be concluded from the information available that cultural effects will be minor, or less than minor. Cultural effects could be more than minor, but the information to inform that assessment has not been provided.

  Thirdly, there is some uncertainty around the effects of the proposal on the integrity of the stopbank and the potential effects of a stopbank breach. Ms Cranswick has concluded that this results in the identification of Council's Rivers and Drainage department (as asset manager of the stopbank) as an affected party. I consider that there are potentially additional effects that should be considered. I expect that these issues should be able to be resolved between the parties prior a substantive decision on this application being made, but they have not been resolved prior to this notification decision being made.

  I note that section 95A(2)(a) requires that Council must publicly notify the application if the activity will have or is likely to have adverse effects on the environment that are more than minor. From the information provided, I have not reached the conclusion that the activity will (or is likely to) have more than minor effects. However, there is uncertainty about the scale of effects. I consider that publicly notifying the application has the potential to result in additional information in relation to effects being available to the decision maker so that a more informed decision can be made.

- As Ms Cranswick states above, the Regional Plan for the Tarawera River Catchment and the Bay of Plenty Regional Water and Land Plan do not give specified objectives, policies, methods in regards to the activity of the use of the water resource for water bottling. I consider that there may be effects associated with the bottling of water that have not been taken into account in the assessment presented that are relevant to the consideration of this application. Again, I consider that this consideration will likely be better informed if subject to a public process.

- As Ms Cranswick states, there is a considerable amount of community engagement currently underway in relation to water resources within the Bay of Plenty, specifically plan change 9 and the NPS involvement process. In my mind that adds weight to the potential information benefits of ensuring community input into this consent process (while the community is engaged in water management debates).

- There is uncertainty in relation to whether section 95C applies. . Sections 95C(1) and 95C(2)(a) require a consent authority to publicly notify an application if further information has been requested under section 92(1) but the applicant does not provide the information before the deadline concerned. In this case, a comprehensive request for information was made on 7

September. This reports outlines how the majority of that request has been satisfied by the applicant within timeframes agreed, with exception of item 19 (cultural effects). The request was:

> *The information submitted in the application document (Appendix M) does not clearly identify which effects are of concern to tangata whenua and how these might be mitigated. Please provide this information. Bay of Plenty Regional Council staff have advised the location of the proposed activities fall within the following tangata whenua's rohe:*
>
> - *Ngati Awa;*
> - *Ngati Tuwharetoa; and*
> - *Ngati Makino.*

Consideration of effects of concern to tangata whenua and how those might be mitigated under the planning framework of the Bay of Plenty generally requires consultation with tangata whenua. The applicant has attempted to obtain this information from tangata whenua but has not been able to within the timeframes agreed for the response to the request. The applicant considers that the request has been satisfied but I do not agree.

I have discussed the application with Beverley Hughes, Manager Policy & Strategy at Te Rūnanga o Ngāti Awa and understand that Ngāti Awa have cultural concerns in relation to the proposal but I do not have a good understanding of what those cultural effects are or whether they are able to be appropriately avoided, remedied or mitigated. I consider that the information requested will likely be obtained through a notification process, whether that be limited notification or public notification.

There is debate in relation to whether the information requested has been provided. Rather than make a finding on this matter, I consider it sufficient that this forms part of the consideration to exercise the discretion to publicly notify the application.

- Having outlined the factors that contribute to the exercise of Council's discretion to publicly notify, I need to consider the factors that contribute towards not publicly notifying the application. Again, I agree with Ms Cranswick that the application would be required to be limited notified under section 95B RMA and that a hearing would likely be required. Therefore, the potential prejudice to the application of undertaking public notification is the scale of the hearing (and associated cost), which will likely be bigger, and the introduction of appeal rights for submitters. I consider that these factors are not sufficient to outweigh the factors identified above, and the associated potential for a more informed decision to be made on the application.

Having considered the factors above, I have decided to exercise Council's discretion and publicly notify this application. I note that I, as Consents Manager, am delegated that ability in Bay of Plenty Regional Council's Chief Executive Delegations Manual, September 2015.

For completeness, I wish to record my thoughts on special circumstances**.** As outlined by Ms Cranswick, the applicant has put a case forward that special circumstances do not apply. Under the relevant provisions of the RMA (sections 95A(3) and 95A(4)) Council must not publicly notify an application if a rule of national environmental standard precludes public notification, unless special circumstances apply. Because there are no rules of national environmental standards that preclude the public notification of the application, special circumstances do not need to apply for Council to exercise its discretion to publicly notify the application.