traverse ENVIRONMENTAL

aquanet consulting ltd

RUAPEHU DISTRICT COUNCIL

OHURA WATER SUPPLY

RESOURCE CONSENT RENEWAL APPLICATION

13 AUGUST 2021

Table of Contents

List of Figures

List of Tables

Report Information

Report Status	FINAL
Author	Deborah Kissick
Review By	Simon Bendall

PART A

Resource Consent Application

APPLICATION FOR RESOURCE CONSENT

Section 88, Resource Management Act 1991

To Horizons Regional Council, Private Bag 11025, Manawatū Mail Centre, Palmerston North 4442

1. The Ruapehu District Council applies for new resource consents to replace existing Water Take Permit 101866 which provides for the abstraction of surface water from the Mangaparare Stream, Ohura for the purposes of potable water supply for the township of Ohura and for rural water supply.

2. The site at which the proposed activity is to occur is as follows:

   Grid reference 1771597 5698548

   Immediately upstream of the Taranui Street Bridge, Ohura.

3. Attached is an assessment of the proposed activity's effect on the environment that—

   a) includes the information required by clause 6 of Schedule 4 of the Resource Management Act 1991; and

   b) addresses the matters specified in clause 7 of Schedule 4 of the Resource Management Act 1991; and

   c) includes such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.

4. Attached is an assessment of the proposed activity against the matters set out in Part 2 of the Resource Management Act 1991.

5. Attached is an assessment of the proposed activity against any relevant provisions of a document referred to in section 104(1)(b) of the Resource Management Act 1991, including the information required by clause 2(2) of Schedule 4 of that Act.

6. The value of the investment in the plant and equipment that operate under the existing resource consent that is sought to be replaced is in the order of $729,000.

Date: 13 August 2021 Signature:

Stuart Watson
Environmental Manager
Ruapehu District Council

	Traverse Environmental Limited
Address for Service:	PO Box 245
	Taupō 3350
Telephone:	02102651357
Email:	deborah@traverse.co.nz
Contact person:	Deborah Kissick

PART B

Assessment of Environmental Effects

1 Executive Summary

Ruapehu District Council ("RDC") provides reticulated water supply to the town of Ohura ("Ohura Water Supply") under an existing resource consent to take water from two locations on the Mangaparare Stream at Taranui Street and Hihi Street.

Currently, water is abstracted from the Mangaparare Stream under existing Resource Consent 101866, granted by the Horizons Regional Council ("Horizons") on 1 November 2001 at a maximum daily volume of 360 m^3/day and maximum daily abstraction rate of 15 m^3/hour.

RDC is working on a significant upgrade to the WTP and concept design work on this is underway. The intent of this upgrade is to ensure that the Ohura WTP meets the Drinking Water Standard for New Zealand ("DWSNZ") and to increase water storage capacity at the plant.

A July 2021 Water Loss Analysis, completed by Veolia identifies one central area of the Ohura township where around 3-4 m^3/hr of water is being lost. Further work is being undertaken to identify the cause of this water loss and to rectify any leakage.

Water use for Ohura under the One Plan policies 5-12 and 5-18 has been assessed based on low population growth estimates and latest livestock numbers to determine the following:

- Policy 5-12 Efficient/Reasonable Use: 278 m^3/day
- Policy 5-18(d) Essential Use: 160 m^3/day

These calculations compare to a consented limit of 360 m^3/day under the existing consent.

RDC are not currently able to meet the Policy 5-12 and 5-18 calculations, in part due to the existing system and storage capacity, and in part due to uncertainty around actual water use and losses in Ohura.

RDC propose, through this application, a staged reduction in the take of water from the Mangaparare Stream to align with the One Plan policies 5-12 and 5-18. The staged reduction is proposed to be achieved within 5 years, in part through upgrades to, and the potential relocation of, the Ohura WTP and through ongoing water loss investigations and associated remedial works.

There is the potential for the take of water from the Mangaparare Stream to cause more than minor adverse effects until such time as the staged reduction in water take is achieved.

2 Introduction

2.1 Background

Ruapehu District Council ("RDC") provides reticulated water supply to the town of Ohura ("Ohura Water Supply") under an existing resource consent to take water from two locations on the Mangaparare Stream at Taranui Street and Hihi Street.

Water is abstracted from the Mangaparare Stream under existing Resource Consent 101866, granted by the Horizons Regional Council ("Horizons") on 1 November 2001. Table 1 provides a summary of the current requirements of this consent.

Table 1 Summary of Resource Consent 101866

Parameter	Resource Consent 101866
Maximum Daily Volume of Surface Water abstracted from the Mangaparare Stream	360 m^3/day
Maximum Daily Abstraction Rate	15 m^3/hour or 4.2 litres/second
Requirement to audit the supply and use system with a view to reducing the volume of water abstracted	Reduce to 270 m^3/day

Resource Consent 101866 expires on 14 November 2021, requiring an application for resource consent from RDC to enable the continued supply of water to Ohura.

On 20 April 2021, RDC sought leave from Horizons to continue to take water under Resource Consent 101866 under the discretionary provisions of s.124(2) of the RMA on the basis that an application for a new consent for the same activity would be lodged with Horizons on or before 14 August 2021 (i.e. application would be made 3 months before expiry of Resource Consent 101866).

Horizons confirmed, by email on 30 October 2021, that it was prepared to exercise its discretion and allow the take to continue, provided a draft application is lodged with Horizons by 14 July 2021. A draft application was submitted on this date and comments received from Horizons by email on 02 August 2021 and incorporated into this final application.

Table 2 below summarises the full suite of resource consents related to the operation of the water supply to Ohura township. For avoidance of doubt, this application only seeks the renewal of resource consent 101866 for water take.

Table 2 Existing Resource Consents - Ohura Water Treatment Plant

Consent #	Parameter	Expiry
101866	The abstraction of up to 360 m^3 water per day from the Mangaparare Stream at a maximum rate of up to 15 m^3/hr.	14 November 2021
101865	Land use consent for the intake structure in the Mangaparare Stream	14 November 2036
105948	Discharge of supernatant from Ohura WTP into unnamed tributary (known as Kahu Drain) of the Mangaparare Stream	1 July 2025
106131	Discharge of contaminants into land through the base and sides of the treatment pond/lagoon at Ohura WTP	1 July 2025

2.2 Report Structure

This document has been prepared to describe the proposal to replace Resource Consent 101866 and to provide an Assessment of Environmental Effects ("AEE") for the activity as required under section 88 of the Resource Management Act 1991 ("RMA"). Specifically, this document:

Part A: Resource Consent Application

- Sets out an application to replace Resource Consent 102068.

Part B: Assessment of Environmental Effects

- Describes the current water supply system;
- Describes the existing environment;
- Describes the proposal and proposed consent conditions;
- Analyses the proposal in terms of the relevant statutory documents under the RMA;
- Assesses any actual or potential environmental effects associated with the proposal;
- Outlines the consultation undertaken and notification requirements; and
- Provides an overall conclusion and cites references.

Part C: Appendices

3 Ohura Water Supply

3.1 System overview

The Ohura Water Supply intake structure is located on the Mangaparare Stream, near the Hihi Stream bridge. The location of the abstraction point relative to the township of Ohura is shown in Figure 1 below. Figure 2 provides more detail on the abstraction point and water treatment plant.

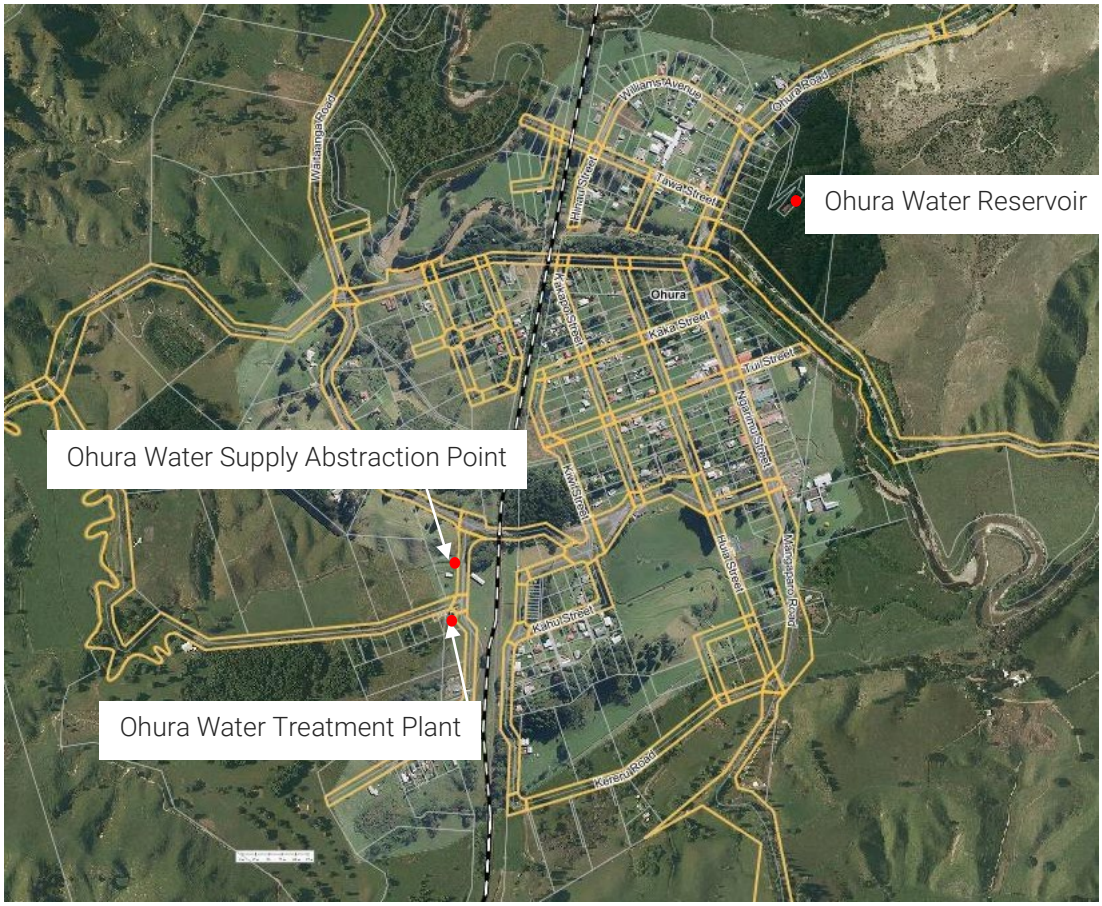

Figure 1 Location of Ohura Township, Water Abstraction Point and Water Treatment Plant

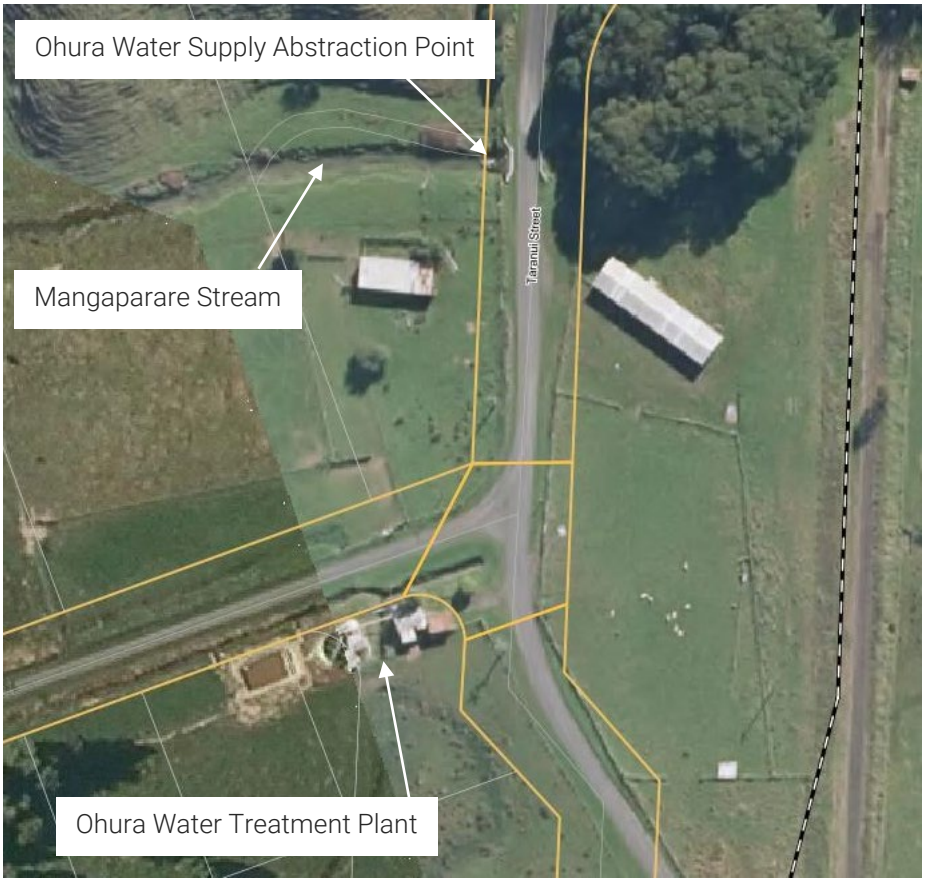

Figure 2 Water Abstraction Point and Water Treatment Plant

Ohura's Water Supply is pumped from a pontoon (Figure 3) in the Mangaparare Stream immediately upstream of a box culvert under Taranui Street. The Taranui Street box culvert is throttled by a weir at its inlet that provides a pond for the pontoon.

Figure 3 Ohura water intake and pontoon in the Mangaparare Stream looking West (October 2020)

The existing Ohura Water Supply consists of the following elements, shown schematically below in Figure 4.

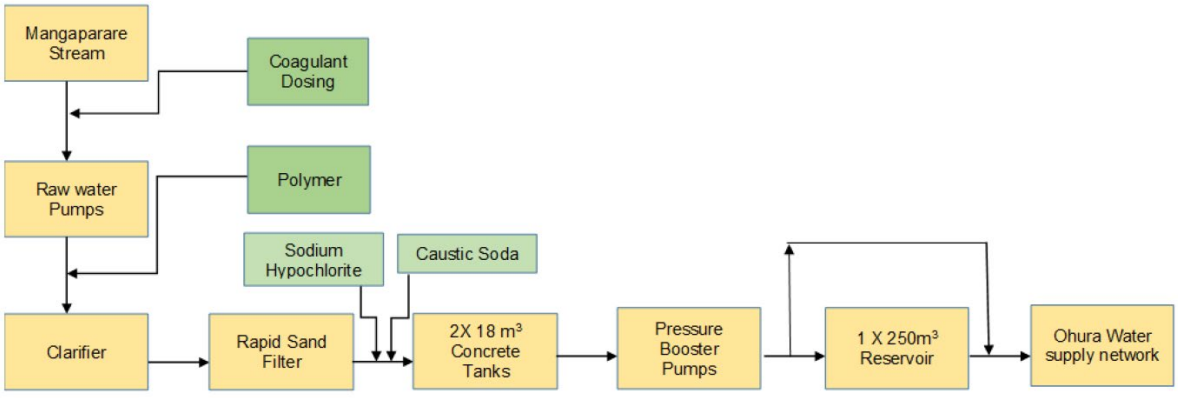

Figure 4 Ohura Water Supply schematic diagram

The Ohura Water Supply was commissioned in 1957. Abstracted water from the Mangaparare Stream is pumped to the WTP and dosed with poly aluminium chloride and polyelectrolyte. The resulting coagulated and flocculated water enters an up-flow floc blanket clarifier from where the settled water is collected in launders and subsequently gravitated through a pressure filter. The treated water is chlorinated with sodium hypochlorite and then dosed with caustic soda for pH correction prior to being stored in one of two clear water storage tanks.

Treated water stored in the clear water storage tanks is then pumped, on a timed pumping cycle, to the Ohura reservoir on the top of a ridge on the eastern side of Ohura-Matiere Road.

The Ohura storage reservoir is a 250 m^3 (nominal) below ground lined reservoir with a corrugated iron gable roof.

The entire Ohura reticulation network is normally gravity fed from the reservoir, however treated water from Ohura WTP can be directly pumped into the Ohura reticulation network by isolating the Ohura reservoir.

3.2 System upgrades and investigations

RDC completed a watermain upgrade on Ngarimu Street, Ohura during the 2018-2019 reporting period.

A major upgrade of the plant chemical storage was completed during the 2018-2019 reporting period which included the following:

- Installation of a re-engineered shipping container adjacent to the existing WTP building to house self-bunded tanks for Caustic Soda, Sodium Hypochlorite and PACL as well as a polyelectrolyte (flocculant) batching tank with mixer.
- Installation of level sensors within the bunded tanks and connection to SCADA to allow remote monitoring of chemical volumes.
- Upgrade of the current chemical dosing pumps for PACl and sodium hypochlorite to remove the need for the current Day Tank system.
- Installation of emergency eyewash and shower and connection to SCADA to allow for alarming in the event the shower is used
- Installation of generator changeover switch to allow the WTP to be operated in the event of prolonged power outages.

In July 2021, Veolia completed a water loss analysis on behalf of RDC (Appendix 7). The purpose of the analysis to target specific areas and understand where high consumption and possibly leakage is occurring. The method of analysis used is detailed in Section 3 of the attached report.

Zone 2, consisting of Ngarimu Road and adjacent streets in central Ohura, had the largest drop in flowrate through the meter with around 3-4 m^3/hour being lost in this part of the water system. Veolia have recommended a more detailed, targeted leak detection program for Zone 2. Veolia also recommend that water meters are installed to monitoring water usage within the different zones in the network on an ongoing basis.

3.3 Future system upgrades and investigations

RDC is currently working on a significant upgrade to the WTP and concept design work on this is underway. The intent of this upgrade is to ensure that the Ohura WTP meets the Drinking Water Standard for New Zealand ("DWSNZ") and to increase water storage capacity at the plant.

The upgrade will significantly improve the reliability of plant. A replacement mesh screen over the water intake to prevent juvenile fish being drawn into the intake is also proposed, and implementation of improved fish passage over the existing weir in the box culvert as recommended in the Aquanet Ecological Report (Appendix 1).

The Ruapehu District Long Term Plan 2021-2031 (LTP) identifies a budget for the plant upgrade of $1.25M to be spent in years 1 and 2 of the LTP.

RDC are currently working with Veolia to better understand the potential leaks in Zone 2 following the water loss analysis report in July 2021 and are in the process of exploring options for installing water meters on the Ohura network to better understand water use of the network.

3.4 Assessment of Actual Use and Compliance

3.4.1 Total Water Abstraction from the Mangaparare Stream

An analysis of the daily abstraction volumes for the period of 2016-2020 is summarised in Table 3 below. The data shows that while the daily take volume is generally within the consented volume limit, there have been a small number of instances in 2016/2017, 2018/2019 and 2019/2020 when the 360 m^3/day volume limit was exceeded (highlighted in red text in Table 3).

Table 3 Summary of Ohura water abstraction volume 2016-2021

	Consent limit	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Maximum daily take (m^3)	360 m^3/day	500	335	393	500	339
Average daily take (m^3)		148	169	169	180	165
Number of exceedances		2	0	1	3	0

An analysis of the daily abstraction flow rate for the period of 2016-2020 is summarised in Table 4 below. The data shows that the average rate of take is near or at the limit of the consent, with numerous occurrences where the maximum daily rate of take was exceeded.

Table 4 Summary of Ohura water abstraction rate of take 2016-2021

	Consent limit	2016/2017	2017/2018	2018/2019	2019/2020	2020/2021
Maximum daily rate of take (m^3/hour)	15 m^3/hour	26	26	45	45	45
Average daily rate of take (m^3/hour)		15	15	15	14	16
Number of exceedances*		81	12	24	30	115

** Exception reporting from Veolia outlines that many of the exceedances in flow rate around the 15-17 m^3/hr maximum flow rate are associated with a spike on plant start up and last for 1 minute only. Veolia have also noted that on occasions where the SCADA loses communications, this results in a spike in the data to 45 which is the maximum for the system.*

Veolia advise that the plant runs for 12-14 hours per day, generally not in one run. Spikes in abstraction flow rates became more frequent throughout the 2020/21 reporting period due to an aging raw water abstraction pump. The spikes in abstraction flow are due to air bubbles in the line which create an airlock and cause the flow rates at start up or mid run to spike, giving the 'non-compliances'. A replacement pump was installed on 3 August 2021 which should see a flattening in abstraction spikes.

3.4.2 Existing Water Use – Town water supply

A survey completed by RDC in 2017, explored activities and land uses in the Ohura Water Supply catchment. The survey attached as Appendix 2 indicates that there is no significant industry in Ohura, and livestock in the catchment was identified as being 530 beef cattle and 550 sheep.

Water use for Ohura under the One Plan policies 5-12 and 5-18 has been assessed based on low population growth estimates and latest livestock numbers to determine the following:

- Policy 5-12 Efficient/Reasonable Use: 278 m^3/day
- Policy 5-18(d) Essential Use: 160 m^3/day

These calculations compare to a consented limit of 360 m^3/day under the existing consent.

RDC are not currently able to meet the Policy 5-12 and 5-18 calculations, in part due to the existing system and storage capacity, and in part due to uncertainty around actual water use and losses in Ohura.

RDC propose, through this application, a staged reduction in the take of water from the Mangaparare Stream to align with the One Plan policies 5-12 and 5-18. The staged reduction is proposed to be achieved

within 5 years, in part through upgrades to, and the potential relocation of, the Ohura WTP and through ongoing water loss investigations and associated remedial works.

3.4.3 Compliance with Other Conditions

A number of conditions of Resource Consent 101866 required actions to be taken by the consent holder. Compliance with these conditions is summarised in Table 5 below.

Table 5 Summary of conditions of Resource Consent 101866 requiring action from RDC and response as implemented by RDC

Condition of Resource Consent 101866		Response
3	The permit holder shall undertake an audit of the Ohura water abstraction, supply and use system with a view to reducing the volume of water abstracted under this Permit to 270 m^3/day. A report of the findings of the audit shall be forwarded to Horizons Team Leader Compliance by October 2003. The report shall include, but not be limited to an assessment of the water needs of Ohura township, an explanation of any measures implemented to reduce the daily volume of water to be abstracted and an assessment of a reasonable daily abstraction volume for Ohura.	An audit of the Ohura water abstraction has not been undertaken as required by this condition, however RDC are in the process of confirming a comprehensive upgrade of the WTP, alongside leak investigation work.
4	The permit holder shall keep daily records of the volumes of water abstracted from the Mangaparare Stream under the authorisation of this Permit. The abstraction record is to be sent to Horizons Team Leader Compliance at the end of each calendar month beginning December 2001 in a suitable electronic format for the duration of this Water Permit	Daily records of the volumes of water abstracted are captured by the SCADA system and provided to Horizons in accordance with the requirements of Condition 4.
5	The permit holder shall ensure that the water intake is operated in a manner to prevent juvenile fish being drawn into or damaged by the intake.	The Ecological Report by Aquanet Consulting (Appendix 1) identifies that the intake screen is too large to prevent fish larvae from being sucked into the water take. As part of the proposed upgrade to the WTP, RDC propose to reduce the mesh screen on the intake structure to be no more than 3mm in diagonal length. The replacement of the mesh will ensure juvenile fish species are not drawn into or damaged by the intake.
6	The permit holder shall ensure that the abstraction is managed in a manner that ensures the wastage of water abstracted from the Mangaparare Stream under this Permit is minimised.	A water use and loss assessment report has been completed and this shows losses are occurring – more work is underway to understand the causes. RDC is also currently undertaken concept design work on a comprehensive plant upgrade for the Ohura WTP which, once commissioned, will also assist with the treatment and storage of water and reduction in water wastage at the plant.

4 Existing Environment

4.1 Mangaparare Stream

The Mangaparare Stream is a small tributary of the Mangaroa Stream. It flows generally west-east and is joined by the smaller Mangatawa Stream approximately 500m downstream of the abstraction point, before entering the Mangaroa just south of Ohura township. The Mangaroa Stream then flows generally south to its confluence with the Ohura River about 5km upstream of the (Ohura) River Rd (SH 43) bridge near Tokirima.

The Hydronet memo (Appendix 5) from 4 December 2020 states "About 40% of the Mangaparare catchment is in the forested Waitaanga Conservation Area. The remaining catchment is steep pastured hill country and a flat valley floor. Some channel realignment is apparent downstream of Hihi Street, directing the stream around the sportsground".

Although the Mangaparare catchment is part of the greater Whanganui River catchment, it is near the northern boundary of the Manawatu-Whanganui region and further west than the Ongarue catchment. "*This area has more in common hydrologically with the southern King Country (Waikato) and northern and inland Taranaki rivers (Figure 6). These rivers are fed largely by north-westerly rain events and drain mudstones that produce runoff with relatively high colour and suspended sediment concentrations but lower than average flow velocities and little in the way of persistent base flows*"[1].

4.1.1 Hydrology

The Hydonet December memo (Appendix 5) identifies that Horizons is currently operating continuous flow recorders on the Ohura River at Nihoniho and Tokirima (River Rd, SH43 bridge) and on the Mangaroa at the Ohura Town Bridge.

The flow recording sites have been regularly gauged while the recorders have been in operation to calibrate the relationship required to derive continuous flow records. Spot gaugings also exist for Tokirima and Ohura Town Bridge and the Waitewhena and Huhatahi tributaries of the Mangaroa; obtained as part of the Whanganui catchment water resource study carried out in the late 1970's and reported by Tonkin and Taylor for Rangitikei-Wanganui Catchment Board in December 1978[2].

[1] Hydronet Memorandum 4 December 2020 "Preliminary hydrology of the Mangaparare Stream including issues of water use and availability with regard to consent to abstract for Ohura's public water supply (PWS)" (Appendix XX).

[2] "Water Resources of the Wanganui River" A report by Tonkin and Taylor for the Rangitikei-Wanganui Catchment Board, December 1978.

Summarised flow statistics for Ohura at Tokirima (site 33313) and Mangaroa at Ohura Town Bridge (site 33341) were compiled by NIWA and published by Horizons in 2007[3]. The Tokirima analysis includes a few years of the recent record and consequently also encompasses a two-decade gap. The Ohura Town Bridge analysis only uses the short record collected in the 1960's. The statistics include flow duration percentiles, mean flow, mean annual flood (MAF), and mean annual low flow (MALF), among others. The mean, range, and quartiles of monthly mean flows are also tabulated. The published statistics for the Mangaroa at Ohura Town Bridge are reproduced in the memo.

A further memo from Hydronet (24 March 2021 (Appendix 6)), following a visit to Ohura, outlines that the observed stream flow in the Mangaparare Stream were "much less than anticipated" and as a result, the possible yield of the Mangaparare Stream was revised with a reduction in flow from the estimate in December 2020.

The table in the revised March 2021 memo estimates the flow for the Mangaparare Stream at the Ohura water abstraction point to have a mean of 177 l/s and Mean Annual Low Flow (MALF) of 12 l/s.

4.1.2 River Values

Table 6 below provides a summary of the surface water values identified for the Upper Ohura (Whai_4b) Sub-zone.

Table 6 Summary of the management values applicable to the Upper Ohura (Whai_4b) Water Management Sub-zone, as per One Plan Schedule B.

Value Group	Management Values	Management Objective
Zone-wide Values	Life-Supporting Capacity (Hill Soft Sedimentary)	The water body and its bed support healthy aquatic life/ecosystems
	Aesthetics	The aesthetic values of the water body and its bed are maintained or enhanced
	Contact Recreation	The water body and its bed are suitable for contact recreation
	Mauri	The mauri of the water body and its bed is maintained or enhanced
	Industrial Abstraction	The water is suitable as a water source for industrial abstraction or use, including for hydroelectricity generation
	Irrigation	The water is suitable as a water source for irrigation

[3] "Statistical analysis of river flow data in the Horizons Region" NIWA Client Report CHC2006-154, prepared for Horizons Regional Council, May 2007.

	Stock water	The water is suitable as a supply of drinking water for livestock
	Existing infrastructure	The integrity of existing infrastructure is not compromised
	Capacity to Assimilate Pollution	The capacity of a water body and its bed to assimilate pollution is not exceeded
	Natural State	The river and its bed are maintained in their natural state
Site/Reach – specific values	Water Supply	The water is suitable, after treatment, as a drinking water source for human consumption

4.2 Ohura Township

4.2.1 Population

Ohura township was originally established as a sawmilling and coal mining town. Ohura was a centre for coal mining in the region with coal mines operating through to around 1965 where, previously, the mines and railway network had been a major part of local industry.

In the 2013 census indicates the usually resident population in Ohura is 123 people, down from 420 recorded in 1996. The land use surrounding Ohura is farming with some tourism activities as a result of the "Forgotten World Highway" and "Whanganui River Journey" tourism and cycling trails.

Located to the north-west of Taumarunui in the King Country, Ohura is located in swamp land which has significant drains cut through the township making it prone to flooding.

The Water Treatment Plant is located on the corner of Hihi and Taranui Streets as shown on Figure 2.

4.2.2 Demand Growth and Infrastructure

Statistics New Zealand groups Ohura and Otangiwai townships together for the purposes of projecting population growth (in accordance with Statistical Area 2 (SA2) from Statistics New Zealand). Low growth is projected for SA2 and as a result, RDC also assume low growth for the Ohura township.

As a result, and according to the Infometrics data gathered for RDC, the usually resident population of Ohura is estimated to grow from 131 in 2020 to 147 in 2030. Total peak population in Ohura is estimated to grow at a low rate from 320 in 2020 to 347 in 2030. These are the figures, together with stock numbers, that have been used to determine reasonable, justifiable and essential water use under Policies 5-12 and 5-18.

For infrastructure purposes, RDC has compiled peak population data which takes usually resident population and adds estimates for holiday homes, commercial accommodation and day visitors to

ensure that an absolute peak population can be catered for on any given day. This is important for water take consenting to ensure that an appropriate level of water is provided based on the maximum number of people likely to need it on any given day. While RDC do not currently have a growth strategy, this peak population methodology is routinely applied by RDC throughout the Ruapehu District. Appendix 3 provides detail of this of Ohura township.

5 Description of the Proposal

5.1 Proposal

Ruapehu District Council seek a replacement consent for Resource Consent 101866 that authorises the following:

- The continued abstraction of surface water from the Mangaparare Stream, Taranui Street, Ohura for the purposes of potable water supply for the township of Ohura and for rural water supply
- For Years 1 – 5 following the commencement of the replacement consent, the maximum rates of abstraction of surface water from the Mangaparare Stream shall not exceed 360 m^3/day and a maximum rate of 4.2 litres/second.
- From Year 6 onward, the maximum rates of abstraction of surface water from the Mangaparare Stream shall not exceed 280 m^3/day and 3.5 litres/second when flows exceed 501 litres/second in the Mangaroa Stream at the Ohura Town Bridge recorder.
- From Year 6 onward, the maximum rates of abstraction of surface water from the Mangaparare Stream shall not exceed 160 m^3/day at a maximum rate of 2.0 litres/second when flows are less than 501 litres/second in the Mangaroa Stream at the Ohura Town Bridge recorder

Table 7 Comparison of Proposal with Existing Consent

Flow conditions in Mangaroa Stream	Parameter	Existing Consent 101866	Proposed Years 1 – 5 under replacement consent	Proposed from Year 6 onwards under replacement consent
More than 501 litres /sec	Max daily volume	360 m^3/day	360 m^3/day	280 m^3/day
	Max rate	4.2 litres/sec	4.2 litres/sec	3.5 litres/sec
Less than 501 litres /sec	Max daily volume	360 m^3/day	360 m^3/day	160 m^3/day
	Max rate	4.2 litres/sec	4.2 litres/sec	2.0 litres/sec

It is noted that Table C.1 in Schedule 1 of the One Plan does not record the Flow Monitoring Site or site location for the Whai_4b sub-zone. Based on the advice from Hydronet, the Mangaroa at Ohura Town Bridge flow monitoring location could be used as the reference point for determining low flow situations. It is understood that other water takes in the Whai_4 Water Management zone are managed (in terms of low flow thresholds) from the Whanganui at Te Maire flow recorder site. RDC wishes to discuss further with Horizons which flow site is the most appropriate flow site for this purpose.

5.1.1 Key factors informing application

In seeking a replacement for Resource Consent 101866, the following key factors have been taken into account:

- The current (known) and future anticipated demands for water use and in town of Ohura and for rural water users serviced by the water take, including initiatives underway to improve this knowledge.
- Current rural water takes are not metered so actual water use is not currently known.
- Actual historic use which has shown that the maximum daily take limit has largely been met, with a maximum of three exceedances in the 2019/2020 monitoring year (see Table 3).
- Actual historic use which has shown that the maximum daily flow rate of 15 m^3/hour has been regularly exceeded (see Table 4).
- Compliance with Condition 3 of Water Permit 101866 which required that an "audit of the Ohura water abstraction, supply and use system with a view to reducing the volume of water abstracted under [Permit 101866] to 270 m^3/day" has not been met.
- Current use exceeds reasonable/efficient use direction in the One Plan which signals the need for a reduction in the volume and rate of water taken.
- In 2017, RDC undertook a telephone survey to better understand water use in the township, as required by Condition 3 of Resource Consent 101866; however no further action was taken to understand why the actual water use for the township was as high as it is recorded and no formal identification of measures to reduce the daily volume of water was undertaken. This is required before the reduction in volume and rate of take of water can be implemented.
- RDC have secured significant funding (~$1,25M) from the government and as a result, have commissioned an upgrade of the Ohura water treatment plant to ensure that the plant meets drinking water standards and provides additional water storage. Concept designs for the plant upgrade are currently being developed.
- In order for reductions in water take to be successful, RDC requires time to build a new plant, increase water storage capacity and investigate/fix water losses in the network.
- The requirements of the One Plan which identifies the water abstraction point as being within the Upper Ohura Water Management Sub-zone (Whai_4b) with a cumulative core allocation limit specified as being 10% of MALF. Horizons records indicate that there is water available within the Whai_4b sub-zone and therefore the current take is considered to be within the cumulative core allocation for the sub-zone. The cumulative core allocation for the Water Management Subzone looks at the cumulative effects of water takes within that subzone.

- Ecological monitoring could not discount possible adverse effects associated with the current take of water. The daily take currently represents 35% of MALF, which presents a risk of localised effects on in-stream habitat. The proposal includes a proposed staged reduction in the take which corresponds to a more ecologically sustainable rate, equivalent to 20-30% of MALF (2.4 to 3.6 l/s).

5.1.2 Term of consent sought

RDC seek a term of 24 years for the new consent, to align with the 2045 catchment expiry date (based on a 2015 base year for the Upper Whanganui Zone), with an expiry date of 1 July 2045.

Under the Resource Management Act, a water permit can be issued for a maximum of 35 years. Long term consents are important to provide certainty for consent holders, particularly in relation to the capital expenditure for upgrades and maintenance, and in RDC's case, for the ongoing supply of water to the township of Ohura as an essential service.

Based on the factors outlines in Section 5.1.1, a 24-year term for the new consent is sought. This will provide the community of Ohura with certainty of ongoing water supply and better supports the investments being proposed in the Ohura WTP upgrade.

Policy 12-5 of the One Plan provides that "resource consent durations for applications required under s13, 14 and 15 of the RMA will generally be set to the next common catchment expiry date listed in Table 12.1". Under the provisions of Policy 12-5 and Table 12.1, the expiry date for the renewed consent would be either 2025, 2035 or 2045 (based on a 2015 base year for the Upper Whanganui Zone). RDC are seeking a consent duration which is consistent with this policy.

It is noted that Ruapehu District Council are in the process of consulting with Ngāti Haua, Maniapoto and Ngā Tangata Tiaki o Whanganui to confirm their views on the consent duration sought in this application, among other matters, and the outcome of those discussions may result in a revised term being sought.

5.1.3 Proposed Consent Conditions

A full set of proposed conditions, while not required to satisfy s.88 of the Resource Management Act, will be developed by the applicant for submission once discussions with Ngāti Haua, Maniapoto and Ngā Tangata Tiaki o Whanganui are sufficiently advanced to inform their development.

These proposed conditions will be largely based on those recently confirmed in the Raetihi Water Supply replacement consents issued to RDC by Horizons on 11 May 2020, and RDC welcomes further discussions with Horizons at the appropriate time.

In the interim, and subject to ongoing discussions with iwi, RDC propose the following conditions to provide for the staged reduction in water take as a fundamental component of the proposed consent renewal:

1. From the commencement of this consent to [*specify date 5 years from commencement*], the total volume of water abstracted from Mangaroa Stream shall not exceed 360 cubic metres per day (360m^3/day) at a maximum rate of 4.2 litres per second (4.2 l/s) and a daily average take rate of 4.2 l/s.

2. From [*specify date 6 years from commencement*], the total volume of water abstracted from Mangaroa Stream shall not exceed 280 cubic metres per day (280m^3/day) at a maximum rate of 3.5 litres per second (3.5 l/s) and a daily average take rate of 3.5L/s when flows exceed 501 l/s in the Mangaroa Stream at the Ohura Town Bridge recorder.

3. From [*specify date 6 years from commencement*], the total volume of water abstracted from Mangaroa Stream shall not exceed 160 m^3/day at a maximum rate of 2.0 litres/second (2.0 l/s) when flows are less than 501 l/s in the Mangaroa Stream at the Ohura Town Bridge recorder

   ADVICE NOTE: Per Day refers to midnight to midnight New Zealand Standard Time.

6 Planning Assessment

This section identifies the activity status of the consent renewal under the Horizons One Plan and sets out the relevant statutory considerations for Horizons to consider when assessing the application to renew Resource Consent 101866. In accordance with the provisions of section 104(1)(b) of the RMA, this section also assesses the planning framework relevant to the consent renewal. An assessment of the proposed renewal against Part II of the RMA is also provided.

6.1 Activity status

Cumulative core allocation for the whole Whai_4 (Middle Whanganui) Water management Zone is 10% of MALF. Similarly, for the Upper Ohura Sub-zone (Whai_4b) core allocation is determined as 10% of MALF[4] due to insufficient reliable flow data being available when the One Plan was notified.

Correspondence from Horizons Regional Council on 16 September 2020 (and reconfirmed on 18 June 2021) indicates that there are "*4 relatively small consented abstractions in the Upper Ohura sub-zone (Whai_4b), including the Ohura municipal water supply and 3 stock wate abstractions totalling 675 m^3/day.*" The advice from Horizons further states "*In order for any further abstraction volume to be consented, a hydrological assessment will be needed to calculate an estimate of the MALF…".*

Horizons have not provided the Cumulative core allocation limit (m^3/day) in Schedule C of the One Plan for either the Middle Whanganui (Whai_4) Water Management Zone or the Upper Ohura (Whai_4b) Sub-zone, instead outlining that the Cumulative core allocation limit in both instances be calculated at "10% of MALF".

Despite MALF for the Whai_4 or Whai_4b water management zones and subzones being unknown, Horizons have confirmed that there have been no changes in the status of the sub-zone. The October 2019 Water Allocation Status map on Horizons website[5] indicates that there is water available within both the Middle Whanganui (Whai_4) Water Management Zone and the Upper Ohura (Whai_4b) Sub-zone (see Figure 5 below).

[4] MALF is defined in the One Plan as "the one-day mean annual low flow calculated as the average of the lowest flow of the river^ for each year (1 July to 30 June) of record".

[5] http://www.horizons.govt.nz/managing-natural-resources/water/surface-water

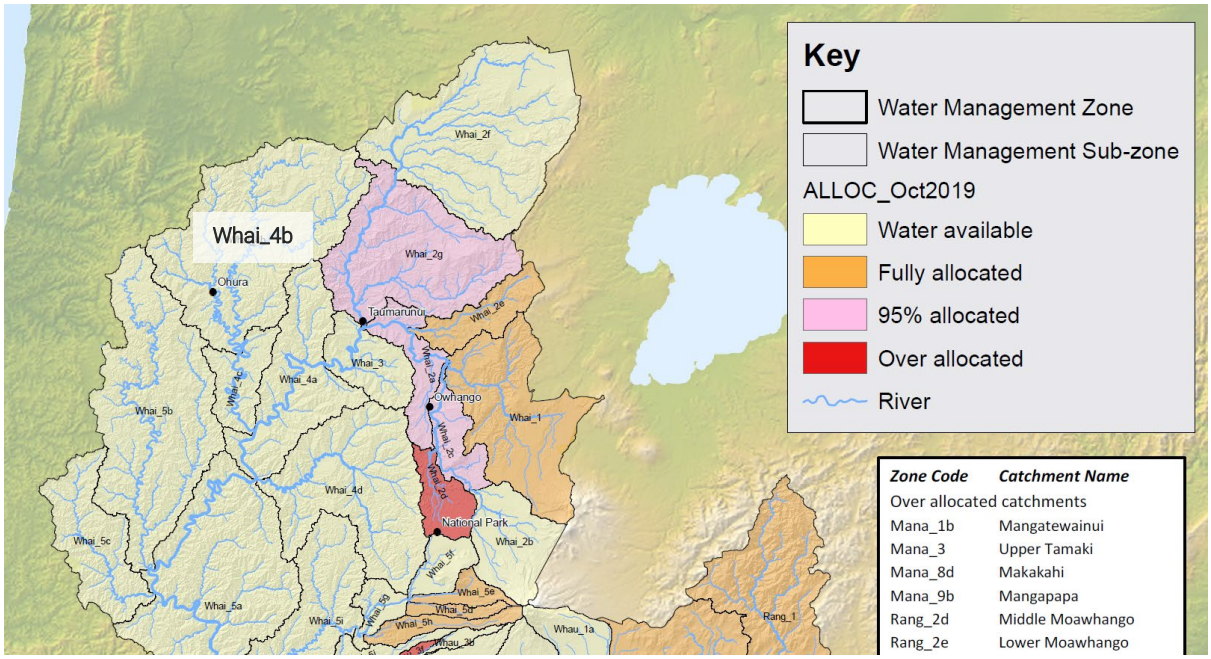

Figure 5 Excerpt of the Water Allocation Status for the Horizons Region showing water available in Water Management Zone Whai_4 and sub-zone Whai_4b.

One Plan Chapter 16: Takes, Use and Diversions of Water and Bore provides the rule framework applicable to the proposed water take renewal. Rule 16-5 sets out the controlled activity requirements for takes and uses of surface water that comply with core allocations where certain conditions are met including that takes cease when minimum flow is reached.

The continued abstraction of water is currently required when the Mangaparare Stream reaches low flow conditions, to ensure the ongoing supply of water as an essential service for people and animals serviced by the Ohura Water Supply. This is due to there being no water storage capability at the current plant. This fact ultimately determines the activity status of the consent renewal.

The One Plan makes provision for essential takes of water below the minimum flow. This is set out in Policy 5-18 and in Rule 16-6, which provides for essential surface water takes at or below the minimum flow that comply with Policy 5-18(d)(i) to be considered as a Discretionary Activity:

Rule 16-6 sets out the discretionary activity requirements for takes and uses of surface water that comply with core allocations where take is at or below the minimum flow as follows

> *Except as regulated by Rule 16-1 or Rule 16-5, the take, use or diversion of surface water^ pursuant to s14(2) RMA at or below the minimum flow by essential takes complying with Policy 5-18(d) (i) existing as at 31 May 2007 provided:*
>
> *(a) The amount of water taken must not exceed*

(i) 250 litres per person per day for domestic needs

(ii) 70 litres per animal per day for drinking water

(iii) 70 litres per animal per day for existing dairy shed washdown

(b) The take must not be from any rare habitat, threatened habitat* or at-risk habitat**

Advice note: the effect of any permitted takes will not be taken into consideration when assessing activities under this rule.

Policy 5-18(d) contains four sub-clauses. Policy 5-18(d)(i) refers to:

> *"takes greater than permitted by this Plan (and therefore subject to resource consent) that are required for reasonable domestic needs, reasonable needs of animals for drinking water, and reasonable dairy washdown water…"*

Public water supply takes are identified as an essential use by Policy 5-18(d)(iv). However, Rule 16-6 only refers to sub-clause 5-18 (d)(i) relating to individual domestic needs, animal drinking water, and dairy shed washdown water. On that basis, Rule 16-6, while applying to existing essential takes, does not provide for public water supplies.

The replacement consent requires for the Ohura Water Supply then, while falling within core allocation, cannot be considered a discretionary activity under Rule 16-6 and must instead be considered in terms of Rule 16-8, a non-complying activity for takes and uses of surface water not complying with core allocations or takes and uses of water taken at or below minimum flow.

On this basis, the renewal of water take for Ohura is a Non-Complying Activity.

7 Assessment of Actual or Potential Environmental Effects

7.1 Effects on River Values

Table 8 provides analysis of the proposal against the River Values, identified in Schedule B, as applying to the Upper Ohura Water Sub-zone (Whai_4b).

Table 8 Assessment of effects of proposal against River Values of the Upper Ohura Water Sub-zone (Whai_4b).

Value Group	Management Values	Management Objective	Commentary
Zone-wide Values	Life-Supporting Capacity (Hill Soft Sedimentary)	The water body and its bed support healthy aquatic life/ecosystems	There is current uncertainty about the effects of the water take below minimum flow on life-supporting capacity of the Mangaparare Stream. As it is result, there is the potential for the take to have adverse effects on the life-supporting capacity of the Mangaparare Stream. RDC are in the process of undertaking targeted leak detection work following the water loss analysis work in July 2021 to identify sources of leakage within the network and repair them to reduce water wastage.
	Aesthetics	The aesthetic values of the water body and its bed are maintained or enhanced	There is current uncertainty about the effects of the water take below minimum flow on aesthetics of the waterbody. As it is result, there is the potential for the take to have adverse effects on the aesthetics of the Mangaparare Stream. RDC are in the process of undertaking targeted leak detection work following the water loss analysis work in July 2021 to identify sources of leakage within the network and repair them to reduce water wastage.
	Contact Recreation	The water body and its bed are suitable for contact recreation	The proposed continued take is within the cumulative core allocation for the sub-zone and as a result, effects on contact recreation values are not anticipated.
	Mauri	The mauri of the water body and its bed is maintained or enhanced	The ongoing water take will provide for human and animal consumption, including for community use i.e. the school swimming pool. There is the potential for the take to have adverse effects on the mauri of the Mangaparare Stream.
	Industrial Abstraction	The water is suitable as a water source for industrial abstraction or use, including for hydroelectricity generation	The value is not applicable to this application due to the abstraction not being industrial in nature.
	Irrigation	The water is suitable as a water source for irrigation	The value is not applicable to this application due to the abstraction not being for irrigation purposes.

	Stock water	The water is suitable as a supply of drinking water for livestock	This value provides for the proposed ongoing municipal water take which includes some provision for stock drinking water.
	Existing infrastructure	The integrity of existing infrastructure is not compromised	This value provides for the proposed ongoing municipal water take.
	Capacity to Assimilate Pollution	The capacity of a water body and its bed to assimilate pollution is not exceeded	The proposed take is within the cumulative core allocation for the sub-zone.
	Natural State	The river and its bed are maintained in their natural state	While Natural State applies elsewhere within the Whai_4b subzone, it does not apply to the section of the Mangaparare Stream where the water abstraction takes place. This is because the relevant section of the Mangaparare Stream is not "flowing within" Public Conservation Land as required by the Natural State Definition.
Site/Reach – specific values	Water Supply	The water is suitable, after treatment, as a drinking water source for human consumption	This value provides for the proposed ongoing municipal water take.

7.2 Effects on surface water

The proposal includes a staged reduction in the volume and rate of water taken for the supply of potable water to the Ohura township.

The proposed first stage of the water take seeks to retain current take conditions at 360 m^3/day and 15 m^3/hr (4.2 l/s) for the first 5 years from the consent being granted. From year 6 onward, the second stage is proposed to apply which seeks a maximum daily volume of 280 m^3/day and a maximum rate of take of 3.5 l/s when flows are above minimum flow at Ohura Town Bridge or Whanganui at Te Maire monitoring site to align with the reasonable use provisions of Policy 5-12. When flows are below minimum flow, it is proposed that the water take will drop to 160 m^3/day to align with the essential use direction of Policy 5-18.

The proposed staged reduction recognises the volume of water currently being taken is over and above what is considered reasonable, efficient and essential under One Plan policy for the population of Ohura township.

It is necessary for the current take of water to continue below minimum flow conditions in the interim 5-year period due to the nature of the take being an essential service that cannot simply be shut off and to allow time for the plant upgrade and storage to be commissed. Health Act requirements dictate that RDC

has a duty to ensure the continued supply of adequate drinking water. However, once the plant upgrade has been completed and additional storage provided, from Year 6 onward, the proposed take will be able to be reduced at times of low flow, offset by stored capacity, to ensure, only the essential use requirements are provided for.

It is noted that the existing consent does not restrict the abstraction of water below minimum flow. However, the continued take of water during low flow conditions is likely to be having adverse effects on stream ecology that are more than minor. The Aquanet report notes however that other factors including lack of stream fencing, the presence of stock and horses in the area and the differences in in-stream habitat between monitoring sites will also be contributing the changes in macroinvertebrate communities downstream of the water take.

As a result of the adverse effects potentially being contributed to by the water abstraction, a reduction in volume and flow is being sought, following a sufficient period of time to allow the upgrades to be completed and fully commissioned. This time will also enable future monitoring to be undertaken to better understand the effects of the current take and enable better management of the water supply in future.

Overall, it is considered that the actual or potential effects on surface water from the proposed renewal of the existing water take for the Ohura township are likely to be more than minor until such time as the staged reduction can be implemented from Year 6 onward.

Water allocation limits in the One Plan have generally been determined on the basis of protecting 70% of habitat available at MALF for low flow dependent species[6]. Detailed ecological or hydrological information are not available for the Mangaparare Stream to use as a base for assessment of the proportion of habitat retained at 70% of MALF for species actually present in the Mangaparare Stream. Based on current information, there is a risk that less than 70% of habitat will be retained and further investigation to confirm this would require a significant amount of additional investigation, with substantial costs which are difficult for RDC to justify given the size and population of Ohura.

The 1-day mean annual low flow for the Mangaparare Stream is estimated, on the basis of limited information available, at 12 l/s. The proposed maximum rate of take, once the reduction is in place from Year 6, corresponds to 29% (take above minimum flow) to 16% (take below minimum flow) of MALF. This means that, even if the full take is exercised, more than 70% of MALF will be retained in the Mangaparare Stream at all times.

[6] http://www.horizons.govt.nz/HRC/media/Media/One%20Plan%20Documents/Instream-Flow-Assessment-Options-For-Horizons-Regional-Council.pdf?ext=.pdf

The effects of the RDC take must also be considered in the context of other water takes from the Mangaparare Stream.

It is considered that the "size" of the proposed reduced take, after Year 6, is consistent with the cumulative core allocation determine for other streams and rivers in the One Plan Schedule C and that the effects of the proposed reduced take on aquatic habitat and aquatic life and related One Plan Schedule B values, including Life-Supporting Capacity may be minor.

7.3 Effects on fish passage

The Aquanet Consulting Ecological Monitoring Report 2021 (Appendix 1) identifies that there two possible fish passage obstacles associated with the existing Ohura Water Supply. One being the weir beneath the culvert, adjacent to the water take. The weir has a valid resource consent, expiring in November 2036 and the reconsenting of the weir is not the subject of this application. The weir allows for the ponding of water upstream where the water intake structure is located and causes a drop in the stream level of 40-50 cm downstream of the intake.

The Ecological Report identifies that the same three fish species were identified upstream and downstream of the water take: upland bully, cran's bully, and longfin eel with freshwater crayfish (Koura) also found at both sites. The report also notes that the number of individuals belonging to each species was considerably higher upstream of the water take. This suggests that there is no fish passage issue due to the water abstraction activity.

The Ecological Report goes on to identify that vertical drops, such as the one that exists with the current weir, are common challenges for fish migration and where these obstacles can't be moved, additional structures can be implemented to restore fish passage. RDC are currently exploring, as part of the plant upgrade works, how fish passage can be improved at the weir.

A second fish passage obstacle identified in the Ecological Report is posed by the mesh over the existing water intake structure. The Ecological Report identifies that the current mesh size is insufficient to prevent juvenile fish species from being "sucked into" the water take "due to the mesh size being too large". The report recommends that a mesh of 3mm in diagonal length be installed to replace the current 12.6mm diagonal length mesh. RDC are currently investigating options for replacement mesh and will install the new mesh as soon as it becomes available.

7.4 Effects on cultural values

RDC have commenced engagement and are continuing to work with Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui.

Consideration of the proposal against the Te Awa Tupua and Ko Tā Maniapoto Mahere Taiao (Environmental Management Plan of Ngāti Maniapoto) is included in Section 8.7.2 below.

7.5 Positive effects

The continued take of water from the Mangaparare Stream provides essential drinking water to the township of Ohura. This essential component of the use is considered to have significant positive effects on the future of the Ohura community.

8 Statutory Considerations

Section 104 of the RMA specifies the matters that a consent authority must have regard to when considering applications for resource consent. This document has been prepared in accordance with the requirements of Section 104, including an assessment of environmental effects (as outlined in the Section 7) and an assessment of the relevant provisions of following documents (provided below):

- National Policy Statement for Freshwater Management 2020;
- National Environmental Standards for Freshwater 2020;
- National Environmental Standard for Sources of Human Drinking Water 2007;
- Horizons One Plan (Operative December 2014); and
- Other relevant matters including:
    - Te Awa Tupua;
    - Ko Tā Maniapoto Mahere Taiao (Maniapoto Environmental Management Plan); and
    - Statutory Acknowledgements

8.1 National Direction

8.1.1 National Policy Statement for Freshwater Management 2020

On 3 September 2020, the National Policy Statement for Freshwater Management 2020 ("NPSFM" 2020) came into force, replacing and revoking the previous National Policy Statement for Freshwater Management (2014, updated 2017) ("NPSFM 2017").

Consenting authorities are required to have regard to the relevant provisions of any operative national policy statement when considering resource consent applications under section 104 of the RMA. While Horizons Regional Council has not yet updated the One Plan to include the necessary provisions as directed by the NPSFM 2020, it is considered appropriate to provide an assessment under these provisions as if they did already form part of the Region's planning framework in relation to the management of freshwater.

Te Mana o te Wai is identified as the fundamental concept of the NPSFM 2020. It is a concept that refers to the "fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. The concept of Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment and the community." Te Mana o te Wai applies to all aspects of freshwater management.

The 6 principles of Te Mana o te Wai inform the NPSFM 2020 and its implementation. These principles are:

a) Mana whakahaere: the power, authority, and obligations of tangata whenua to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with, freshwater
b) Kaitiakitanga: the obligation of tangata whenua to preserve, restore, enhance, and sustainably use freshwater for the benefit of present and future generations
c) Manaakitanga: the process by which tangata whenua show respect, generosity, and care for freshwater and for others
d) Governance: the responsibility of those with authority for making decisions about freshwater to do so in a way that prioritises the health and well-being of freshwater now and into the future
e) Stewardship: the obligation of all New Zealanders to manage freshwater in a way that ensures it sustains present and future generations
f) Care and respect: the responsibility of all New Zealanders to care for freshwater in providing for the health of the nation.

The NPSFM 2020 also specifies a hierarchy of obligations under the concept of Te Mana o te Wai through the objective which seeks to ensure that natural and physical resources are managed in a way that prioritises:

a) first, the health and well-being of water bodies and freshwater ecosystems
b) second, the health needs of people (such as drinking water)
c) third, the ability of people and communities to provide for their social, economic and cultural well-being, now and in the future.

The NPSFM 2020 specifies a single objective and a series of 15 policies that are designed to achieve the objective. The objective of the NPSFM 2020 is to ensure natural and physical resources are managed in a way that achieves the above priorities.

The policies in the NPSFM 2020 that are considered relevant to this application are:

Policy 1: *Freshwater is managed in a way that gives effect to Te Mana o te Wai.*

Policy 2: *Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.*

Policy 3: *Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.*

Policy 7: *The loss of river extent and values is avoided to the extent practicable.*

Policy 9: *The habitats of indigenous freshwater species are protected.*

Policy 10: *The habitat of trout and salmon is protected, insofar as this is consistent with Policy 9.*

Policy 11 *Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided.*

Policy 15: *Communities are enabled to provide for their social, economic, and cultural well-being in a way that is consistent with this National Policy Statement.*

In addition to the objective and policies, Part 3 of the NPSFM 2020 specifies a non-exhaustive list of the things that local authorities must do to give effect to the objective and policies of the NPSFM. These implementation requirements are split into three subparts:

1. How local authorities must implement this NPS
2. The National Objectives Framework
3. Additional requirements on regional councils relating to freshwater management.

Local authorities are required to give effect to the NPSFM 2020 as soon as reasonably practicable. At the current time, there is limited guidance on how the NPSFM 2020 should be implemented and applied, particularly for applications being prepared in the period before regional councils have amended their regional plans to include the requirements of the NPSFM 2020 such is the situation currently with Horizons Regional Council.

Implementation clauses 3.24(1) (Rivers) and 3.26(1) (Fish passage) of the NPSFM 2020 require a regional council to include a policy in its Regional Plan to address a specific requirement. Wording is provided in the NPSFM 2020 or can be amended by the local authority using words to similar effect. Clause 1.7 specifies that the change is required to be undertaken without using a Schedule 1 plan change process specified in the RMA. For the purpose of this assessment, it is considered that the policy wording from within the NPSFM 2020 for these clauses is relevant for the consideration of this application.

There are also implementation clauses in the NPSFM 2020 which require a compulsory change to an RPS or Regional Plan but which need to be undertaken through a public plan change process. The intent of these compulsory changes are also considered to be relevant to this application, despite the changes not having been made to the One Plan yet, as it is merely a matter of time before they are included.

The following provides an assessment of the proposal against the objective, each of the relevant policies in the NPSFM 2020 and the relevant implementation clauses.

8.1.1.1 Objective

The objective of the NPSFM 2020 requires that the management of natural and physical resources in a way that prioritises the health and well-being of waterbodies and freshwater ecosystems is first, followed by the health needs of people and finally the ability of people and communities to provide for their social, economic and culture well-being, now and in the future.

The proposed water take is within the cumulative core allocation for the Whai_4b water management sub-zone. While it is recognised that the current take volume and rate is larger than One Plan anticipates as reasonable, justifiable and essential water takes, the proposed staged reduction in the amount and rate of water to be taken is proposed to align more closely with what is reasonable and justifiable and will ensure that at times of low flow, water is only taken for essential uses. These restrictions set a benchmark for using water in a manner that provides for the health of the waterbody while recognising the essential role of the provision of freshwater for people and communities.

Overall, it is considered that proposal to ensure the staged reduction of the volume and rate of water taken for the Ohura Water Supply and the implementation of restrictions on water use at times of low flow will manage natural freshwater resources in a way that is consistent with the prioritisation required by the objective of the NPSFM 2020.

8.1.1.2 Policy 1: Freshwater is managed in a way that gives effect to Te Mana o te Wai.

The Horizons One Plan does not yet include objectives and policies that implement the requirements of the NPSFM 2020 in relation to giving effect to Te Mana o te Wai. However, the concept of the fundamental importance of water and the relationship of freshwater to all aspects of the wider environment has been central to the development of this application.

The hierarchy of priorities implied through Te Mana o te Wai have been addressed under Objective 1 above. The six principles of Te Mana o te Wai relating to the roles of tangata whenua and other New Zealanders in the management of freshwater inform the implementation of the NPSFM 2020.

Overall, the proposal to ensure the staged reduction of the volume and rate of water taken to supply the Ohura township and the implementation of restrictions on water use at times of low flow will, while allowing time the reduction to be implemented first 5 years of the consent is considered to achieve management of freshwater in a manner that gives effect to the direction in Te Mana o te Wai.

8.1.1.3 Policy 2: Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.

RDC have connected with Ngāti Haua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui in the preparation of this renewal application and continue to engage with these parties.

8.1.1.4 Policy 3: Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.

The Mangaparare Stream is part of the Whanganui River catchment. The Mangaparare is sourced from within the Waitaanga Forest to the west of Ohura township, it enters the Mangatawa Stream for a short stretch south of Ohura before entering the Mangaroa Stream. The Mangaroa flows into the Ohura River and ultimately the Whanganui River at Tokirima.

The taking of water from the Mangaparare Stream has the potential to have broader implications for the Whanganui River catchment however, as the proposed water take is within the cumulative core allocation for the Whai_4b sub-zone, and the proposal includes a reduction in the volume and rate of water to be taken after a 5 year period, including additional restrictions on water use at times of low flow, it is considered that the effects of this water take on the broader Whanganui River catchment are anticipated by the One Plan and will result in adverse effects on aquatic habitats that are no more than minor.

8.1.1.5 Policy 7: The loss of river extent and values is avoided to the extent practicable.

The current volume and rate of take could be adversely affecting the values of the Mangaparare Stream as identified in Section 7. In response to this, RDC propose the staged reduction in the volume and rate of take to align with the reasonable and justifiable use policy of the One Plan more closely, and at times of low flow, to reduce the use of water to essential uses only.

The proposed reduction will ensure that loss of river values, effected by water abstraction, are avoided where practicable, consistent with Policy 7.

8.1.1.6 Policy 9: The habitats of indigenous freshwater species are protected.

The Ecological Report provided by Aquanet Consulting provides an assessment of the fish and macroinvertebrates in the Mangaparare Stream in the vicinity of the water abstraction point.

The report identifies that MCI and SQMCI scores within the stream indicate poor water quality both upstream and downstream of the water take. Immediately upstream of the water intake, the pasture is unfenced in sections (see Figure 3) which allows livestock to drink directly from the stream and which is likely to impact on water quality and the macroinvertebrate community downstream of the water take as observed by Aquanet.

RDC does not own the land where the fencing of the Mangaparare is currently missing however RDC intend to engage with the landowner to discuss repair and replacement of the necessary sections of fence and installation of water troughs for animials as part of the plant upgrade project. This is anticipated to improve water quality in the Mangaparare Stream and provide additional protection for aquatic habitats.

In addition, the Ecological Report identifies that although the water intake appears to not be having an effect on the ability fo fish species to migrate, both the water intake mesh screen and the weir downstream of the water take are identified as potential obstacles to fish passage. As a result, RDC are currently researching options for changing the screen mesh to a finer mesh to meet the dimension recommended in the ecological report. RDC also intend to improve fish passage over the weir are exploring options of to achieve this as part of the plant upgrade.

The proposed staged reduction in the volume and rate of water taken from the Mangapapare Stream is considered to be consistent with the One Plan direction to protect 70% of the habitat available at MALF for low flow dependent species as outlined in Section 0 above.

Overall, it is considered that the Ohura plant upgrades, proposed staged reduction in water take, improvements to fish passage and fencing of waterbodies to limit stock access will provide improvements to current aquatic habitat, which aligns with the direction of Policy 9.

8.1.1.7 Policy 10: The habitat of trout and salmon is protected, insofar as this is consistent with Policy 9.

Trout and salmon were not species identified as being present within the Mangaparare Stream during the investigations completed by Aquanet and recorded in Table 6 of the Ecological Report (Appendix 1).

8.1.1.8 Policy 11 Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided.

The Ohura Water Supply is within the existing cumulative core allocation for the Whai_4b water management sub-zone and the sub-zone currently has additional water available, as indicated on Figure 5. RDC is currently undertaking investigations to better understand water use within Ohura including through the commissioning of a water use and loss assessment. The outcomes of this investigation will assist with identifying any sections of the water network where there is significant leakage requiring attention and in determining water use activities in the township. This will provide valuable information to RDC and inform where water use improvements can be made, improving water use efficiency and ultimately achieving the reduction in the volume and rate of water taken, consistent with Policy 10.

8.1.1.9 Policy 15: Communities are enabled to provide for their social, economic, and cultural well-being in a way that is consistent with this National Policy Statement.

The Ohura Water Supply is an essential service provided by RDC to the people and communities of Ohura. It provides for domestic, commercial, agricultural and social uses (including the school and swimming pool). This use is consistent with Policy 15 in that it provides for the well-being of the Ohura community while being within the cumulative core allocation for the relevant Whai_4b sub-zone.

8.1.1.10 Clause 3.24 Rivers

Clause 3.24(1) requires a regional plan be amended to include a policy which states (or words to similar effect):

> *"The loss of river extent and values is avoided, unless the council is satisfied:*
>
> *(a) that there is a functional need for the activity in that location; and*
>
> *(b) the effects of the activity are managed by applying the effects management hierarchy."*

As identified in Table 6 above, it is possible that the existing take is having adverse effects on some values of the Mangaparare Stream including life-supporting capacity, aesthetics and Mauri.

Functional Need

That there is a functional need for the provision of potable drinking water for the township of Ohura and it is RDC's responsibility to meet this need. The existing water source is in close proximity to the township and as a result, it is deemed to be a functional need in the current location.

Effects management

The NPSFM 2020 defines the effects management hierarchy as:

effects management hierarchy, in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:

> *(a) adverse effects are avoided where practicable; and*
>
> *(b) where adverse effects cannot be avoided, they are minimised where practicable; and*
>
> *(c) where adverse effects cannot be minimised, they are remedied where practicable; and*
>
> *(d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; and*
>
> *(e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; and*
>
> *(f) if aquatic compensation is not appropriate, the activity itself is avoided*

While the One Plan contains policies which seek to manage effects on Surface Water Management Values in Schedule B, there is currently no policy that seeks to directly address the loss of river extent.

In granting an application, a regional council is required to ensure that the application meets the following two criteria (in accordance with 3.24(3):

> (g) *the council is satisfied that the applicant has demonstrated how each step in the effects management hierarchy will be applied to any loss of extent or values of the river (including cumulative effects and loss of potential value), particularly (without limitation) in relation to the values of: ecosystem health, indigenous biodiversity, hydrological functioning, Māori freshwater values, and amenity; and*
>
> (h) *any consent granted is subject to conditions that apply the effects management hierarchy.*

The effects management hierarchy in the NPSFM 2020 uses different terminology for the management of effects from that used in the RMA. Instead of avoid, remedy or mitigate adverse effects, the NPSFM 2020 requires that adverse effects are avoided where practicable and where this cannot be achieved, effects need to be minimised where practicable or remedied. The hierarchy goes further to outline how offsetting and compensation are to be used for more than minor residual adverse effects.

The assessment associated with this application has identified that there is the potential for adverse effects on aquatic ecology and values of the Mangaparare Stream as a result of the existing take. It is therefore proposed to introduce a staged reduction in the volume and rate of water take, to address the potential for adverse effects and remove the requirement to continue to take water at time of low flow.

In order to effect this change, RDC are currently undertaking work on a comprehensive upgrade of the Ohura WTP which will enable greater water storage capacity. This upgrade will take time to commission and implement, which is why the staged reduction is proposed.

It is considered that this staged reduction is consistent with the management of effects under the NPSFM hierarchy.

8.1.1.11 Clause 3.26 Fish Passage

Clause 3.26(1) requires a regional plan be amended to include a policy which states (or words to similar effect):

> *The passage of fish is maintained, or is improved, by instream structures, except where it is desirable to prevent the passage of some fish species in order to protect desired fish species, their life stages, or their habitats.*

In addition, regional councils are required to include policies that:

> (i) *identify the desired fish species, and their relevant life stages, for which instream structures must provide passage; and*

(j) *identify the undesirable fish species whose passage can or should be prevented; and*

(k) *identify rivers and receiving environments where desired fish species have been identified; and*

(l) *identify rivers and receiving environments where fish passage for undesirable fish species is to be impeded in order to manage their adverse effects on fish populations upstream or downstream of any barrier.*

When considering an application relating to an instream structure, the NPSFM 2020 requires regional councils to have regard to the following:

(a) *the extent to which it provides, and will continue to provide for the foreseeable life of the structure, for the fish passage objective in subclause (1)*

(b) *the extent to which it does not cause a greater impediment to fish movements than occurs in adjoining river reaches and receiving environments*

(c) *the extent to which it provides efficient and safe passage for fish, other than undesirable fish species, at all their life stages*

(d) *the extent to which it provides the physical and hydraulic conditions necessary for the passage of fish*

(e) *any proposed monitoring and maintenance plan for ensuring that the structure meets the fish passage objective in subclause (1) for fish now and in the future.*

There are currently no policies in the One Plan that address the matters above. The Aquanet Ecological Report (Appendix 1) identifies two potential obstacles for fish passage including the mesh size on the water intake and the adjacent weir. While the weir is not the subject of this application, RDC are investigating options to improve fish passage over the weir as part of the overall upgrade to the Ohura WTP. With regard to the intake mesh, RDC are currently investigating options for replacement mesh and will install the new mesh as soon as it becomes available.

8.1.2 National Environmental Standard for Sources of Human Drinking Water 2007

The National Environmental Standard for Sources of Human Drinking Water ("NES") is intended to reduce the risk of contaminating drinking water sources. It came into effect on 20 June 2008.

Regulations 6, 7 and 8 of the NES apply to applications for water and discharge permits issued by regional councils. The provisions only apply to activities that may affect the quality of a registered drinking water supply providing 501 people or more with drinking water for 60 or more calendar days in a year.

On that basis the NES is not considered to be relevant to this application however, it is recognised that the plant upgrade currently being designed for the Ohura WTP will ensure that the plant is suitable to consistently meet standards for drinking water.

8.1.3 National Environmental Standard for Freshwater 2020

The provisions of the National Environmental Standard for Freshwater ("NESF") regulates activities that pose risks to the health of freshwater and freshwater ecosystems including farming activities, drainage of wetlands and the passage fish affected by structures.

Regulation 60 of the NESF outlines that the requirements of Subpart 3 – Passage of fish affected by structures does not apply to *"an existing structure that was in the river… [on] 2 September 2020"*. Therefore, the existing culvert beneath Taranui Street and the associated weir are not subject to the requirements of the NESF.

The Aquanet Ecological Report has identified the potential obstacle for fish passage posed by the existing weir, downstream of the water abstraction point. However, the report concludes that fish passage is not a problem in the stretch of the Mangaparare Stream surrounding the water take. RDC are currently investigating options for the improvement of fish passage in any case, as part of the Ohura WTP upgrade.

8.2 Regional Direction - Horizons One Plan

The One Plan is a combined Regional Policy Statement and Regional Plan, which became fully operative on 19 December 2014.

The following outlines an assessment of the application against Part 1 (Regional Policy Statement) and Part II (Regional Plan) of the One Plan, in terms of the relevant objectives and policies.

8.2.1 Part 1 – Regional Policy Statement

The increasing demand for water is identified as one of the "big four" keystone environmental issues that provide the focus of the One Plan.

Chapter 3 outlines regionally significant issues for infrastructure, energy and waste and sets out the objectives, policies and methods that derive from these issues.

Policy 3-1 is particularly relevant to the application; in that it identifies the Ohura Water Supply system as being of regional or national importance:

> *"Policy 3-1: Benefits of infrastructure and other physical resources of regional or national importance*

(a) The Regional Council and Territorial Authorities must recognise the following infrastructure as being physical resources of regional or national importance:

…

(ix) public water supply intakes, treatment plants and distribution systems"

The continued use of the Ohura Water Supply infrastructure must therefore be considered in these terms.

Chapter 5 addresses the management of freshwater and the following section provides an assessment of the relevant objectives and policies of that Chapter.

Objective 5-3 relates to water quantity and allocation and directs how water quantity is to be managed.

This objective is implemented through the following polices relevant to the application.

Policy 5-1 sets out the overall water management framework of the One Plan. It provides for the allocation of all rivers and lakes into Water Management Zones and Water Management Sub-zones. With reference to Schedule A, the water abstraction point for the Ohura Water Supply is identified as being within the Middle Whanganui Water Management Zone (Whai_4) and the Upper Ohura Water Sub-zone (Whai_4b).

Policy 5-1 also requires that rivers and lakes must be managed in a manner which safeguards their life supporting capacity and recognises and provides for the Schedule B Values when decisions are made on avoiding, remedying or mitigating the adverse effects of activities.

The Schedule B Values for the Upper Ohura Water Management Sub-zone are outlined in Table 6 above, together with their respective management objectives.

The following values are not identified as being present in this subzone:

- Sites of Significance - Aquatic;
- Sites of Significance - Riparian;
- Inanga Spawning;
- Amenity;
- Whitebait migration;
- Sites of Significance - Cultural;
- Trout Fishing
- Trout Spawning
- Domestic Food Supply and

- Flood Control and Drainage.

Policy 5-12 requires that water taken by resource users must be reasonable and justifiable for the intended use. The policy also requires that specific measures for ensuring reasonable and justifiable use of water be taken into account when considering consent applications to take water and include specific provision for public water supplies.

An assessment of the application against this policy has been completed by Aquanet Consulting in the report dated 24 June 2021 (Appendix 4) and summarised in Section 3.4.2 above.

RDC acknowledges there is a degree of uncertainty associated with the information held on water use in Ohura given the actual water use is often significantly higher than the amount considered reasonable and justifiable based on the current population and stock being supplied. RDC propose to stage a reduction in the amount of water taken following further investigations in the first 5 years of the renewal of this water take.

RDC also intend to address some of the current uncertainty through further investigations, such as:

- Engaging Veolia to undertake targeted leak detection of the Ohura Water Supply network following completion of the July 2021 Water Loss Analysis (Appendix 7);
- Identifying uncontrolled and un-monitored connections to the raw water line and considering the implementation of water meters to monitor water use.

However, despite this ongoing work a degree of uncertainty will remain, primarily due to the inherent variability of the system. In particular, livestock types and numbers present on farms supplied by the Ohura Water Supply are not a fixed quantity, and will vary during the season and from year to year. The numbers provided by landowners, and used in this assessment are considered to be reflective of average numbers of animals on farm (current at 2017), rather than peak numbers. The One Plan allocation use is a theoretical calculated number from desktop information and has not been tested against public supply actual use. This leaves some information gaps which RDC wish to expand upon.

It must also be noted that Policy 5-12 only accounts for the "end use" type of water usage, and does not account for any operational requirements, which are essential to the management of a potable water supply system, such as line flushing. The frequency of flushing has minimum levels but no maximum and is subject to source water conditions, pipe age, and turnover period within the reticulation lines. These requirements are essential to the management of a public potable supply and are additional to the types of water usages identified in Policy 5-12, and should be taken into account when defining peak water demand and consent limits.

The New Zealand Fire service also have a minimum requirement to undertake exercises which involve the training in use of fire hydrants/stand pipes for firefighting purposes. While RDC encourages these exercises at end of line points to reduce the reticulation flushing, they are not always possible.

The staged reduction of the volume and rate of water abstracted from the Mangaparare Stream will ensure that the take will align with the requirements of Policy 5-12.

Policy 5-13 requires that water must be used efficiently, including through a range of specified methods including water audits and budgets, checking for leakages and water-use efficiency, infrastructure upgrades to minimise water loss, promoting water storage and through the installation of water meters.

The future upgrade of the Ohura Water Supply system described in Section 3.3 and the future proposed investigations to detect leakage following the July 2021 Water Loss Analysis will enable RDC to reduce the amount of water taken over time and achieve compliance with Policy 5-13 as identified in of the Aquanet Report (Appendix 4).

Policy 5-18 sets out the way water takes will be managed when a river is at or below its minimum flows. Non-essential takes and supplementary takes must cease when the river is at or below minimum flows, and only permitted, existing hydroelectricity and essential takes are allowed to continue. Policy 5-18(d) defines what takes are deemed essential and the manner in which they must be managed. Policy 5-18(d)(iv) specifically refers to public water supplies.

Table 1 of the Aquanet Report (Appendix 4) calculates the amount of essential use, based on the information available and is summarised in Section 3.4.2 above. As with Policy 5-12, the existing and short term proposed take exceeds the essential take requirement of the One Plan. However, the proposed staged reduction in volume and rate of take will see water take reduced to only essential uses at times of low flow which aligns with the direction in Policy 5-18(d) while allowing time for the plant upgrade and associated storage capacity for the Ohura WTP to be increased.

8.2.2 Part II – Regional Plan

Part II of the Horizons One Plan is the Regional Plan which specifies the objectives, policies and regional rules on natural and physical resource use.

The following section contains an assessment of the application against Part II of the One Plan, in terms of the relevant objectives and policies. It is intended that this analysis be read alongside the One Plan and as a result, the provisions are not reproduced here unless this is necessary for the analysis.

Chapter 16 of the One Plan sets out the rules framework applicable to water takes. Objective 16-1 regulates the take, use and diversion of water in a manner that recognises and provides for values and management objectives in Schedule B and provides for the relevant RPS objectives and policies relating to surface water. The following is an assessment of the proposal against the relevant policies of Chapter 16.

Policy 16-1 specifies the requirements on decision-making for considering takes and uses of surface water including the avoidance of adverse effects on other activities, enabling non-consumptive use of water and have regard to the relevant objectives and policies of the Regional Policy Statement & Regional Plan.

The continued abstraction of water for the Ohura Water Supply, with a staged reduction in volume and rate of take from the current allocation, is within the cumulative core allocation for the Whai_4b sub-zone and therefore, is not considered to have an effect on other surface water takes. With regard to Policy 16-1(c), Chapter 3 identifies the Ohura Water Supply as regionally or nationally significant.

Policy 16-2 requires the consideration of alternative sources, other than surface water, be considered. Due to the small size of the Ohura township and that the take of water can be managed within core allocation, significant investigation into alternative sources of water supply were not considered warranted.

In terms of Policy 16-8 relating to the monitoring requirement of consent holders, it is noted that all the required telemetry is in place.

8.3 Section 104(2A) of the RMA

Section 104(2A) of the RMA states:

> *"When considering an application affected by section 124, the consent authority must have regard to the value of the investment of the existing consent holder."*

The Depreciated Value of the WTP is $245,000. RDC have invested significantly, around $133,000 during the 2020/2021 financial year on upgrades and maintenance to the Ohura WTP The total value of the plant and infrastructure is estimated to be at least approximately $729,000 (2020 replacement cost) for the headworks, and treatment assets as valued in 2020.

8.4 Section 104D of the RMA

As identified in Section 6.1 above, the proposal is considered a Non-complying Activity under Rule 16-8 of the One Plan.

Section 104D of the RMA contains the relevant matters relating to non-complying activities.

The 'gateway test' set out in Section 104D of the RMA requires Council to be satisfied that either:

a. the adverse effects of the activity on the environment will be minor, or

b. that the proposed activity will not be contrary to the objectives and policies of a proposed plan and/or plan, prior to granting an application for a Non-complying activity.

Section 8.2 of this report considers the relevant objectives and policies of the One Plan and concludes that the proposal will not be inconsistent with the intent of the relevant Objectives and Policies once the staged reduction in water take is implemented from Year 6 onwards.

The proposal as outlined in this application is therefore considered to satisfy the gateway test.

8.5 Section 124 of the RMA

On 20 April 2021, RDC sought leave from Horizons to continue to take water under Resource Consent 101866 under the discretionary provisions of s.124(2) of the RMA on the basis that an application for a new consent for the same activity would be lodged with Horizons on or before 14 August 2021 (i.e. application would be made 3 months before expiry of Resource Consent 101866).

The reasons for which this leave was sought were:

- RDC have initiated, but have not been able to complete, the necessary technical and preparatory work to advance an application to renew the Ohura Water Supply consent in time to lodge an application six months before consent expiry, on 14 May 2021.
- RDC have engaged technical advisors and has begun to collate available data and are confident that a complete application will be lodged with Horizons by 14 August 2021.
- RDC will have initiated engagement with potentially affected parties including iwi/hapū groups by 14 May 2021 but it is not anticipated that this engagement will be completed by this time.
- As an essential public service, it is critical that RDC can continue to operate under the existing consent to supply Ohura residents and other users with water.

By email on 30 October 2021, Horizons confirmed that it was prepared to exercise its discretionary and allow the take to continue, provided a draft application is provided to Horizons by 14 July 2021. This application has been prepared on that basis.

8.6 Statutory Acknowledgements

A Statutory Acknowledgement is a formal acknowledgement from the Crown, through Treaty Settlements, which recognise the cultural, spiritual, historical and traditional association of iwi with a particular area.

While the Ohura Water Supply is within the 'Area of Interest' for Ngāti Maniapoto, Ngāti Haua and Whanganui iwi, there are no relevant statutory acknowledgements that need to be considered as part of this application.

8.7 Other relevant considerations

8.7.1 Te Awa Tupua

Te Awa Tupua (Whanganui River Claims Settlement) Act 2017 ("Te Awa Tupua Act") secures the legal recognition of Te Awa Tupua as "*an indivisible and living whole, comprising the Whanganui River from the mountains to the sea, incorporating all its physical and metaphysical elements."* Te Awa Tupua is declared a legal person, with all the rights, powers, duties and liabilities of a legal person with the rights, powers and duties of Te Awa Tupua being undertaken by Te Pou Tupua[7].

The Mangaparare Stream is part of Te Awa Tupua (as a waterbody within the of the Whanganui River catchment).

Ngā Tangata Tiaki o Whanganui is the mandated iwi organisation for Whanganui Iwi resulting from the Te Awa Tupua settlement.

People exercising or performing functions, power or duties under the Resource Management Act 1991 must recognise and provide for the Te Awa Tupua status and Tupua Te Kawa while decision makers are required to have particular regard to the Te Awa Tupua status and Tupua te Kawa and these requirements must be documented in any decision.

Tupua Te Kawa are a set of intrinsic values which are set out in Section 13 of the Te Awa Tupua Act which "represent the essence of Te Awa Tupua". The values are included below:

Ko Te Kawa Tuatahi

a. *Ko te Awa te mātāpuna o te ora: the River is the source of spiritual and physical sustenance:*

Te Awa Tupua is a spiritual and physical entity that supports and sustains both the life and natural resources within the Whanganui River and the health and well-being of the iwi, hapū, and other communities of the River.

Ko Te Kawa Tuarua

b. *E rere kau mai i te Awa nui mai i te Kahui Maunga ki Tangaroa: the great River flows from the mountains to the sea:*

[7] The "human face" of Te Awa Tupua established under Section 18 of Te Awa Tupua (Whanganui River Claims Settlement) Act

Te Awa Tupua is an indivisible and living whole from the mountains to the sea, incorporating the Whanganui River and all of its physical and metaphysical elements.

Ko Te Kawa Tuatoru

c. *Ko au te Awa, ko te Awa ko au: I am the River and the River is me:*

The iwi and hapū of the Whanganui River have an inalienable connection with, and responsibility to, Te Awa Tupua and its health and well-being.

Ko Te Kawa Tuawhā

d. *Ngā manga iti, ngā manga nui e honohono kau ana, ka tupu hei Awa Tupua: the small and large streams that flow into one another form one River:*

Te Awa Tupua is a singular entity comprised of many elements and communities, working collaboratively for the common purpose of the health and well-being of Te Awa Tupua.

Section 37 outlines that those exercising or performing functions, power or duties under the Resource Management Act 1991 must also have particular regard to Te Heke Ngahuru. While Te Heke Ngahuru is still being prepared, at the time of writing this application, it is intended as an issues/strategy document to identify issues relevant to the health and well-being of Te Awa Tupua and to provide a strategy to deal with those issues.

Section 76 of the Te Awa Tupua Act requires that the carrying out of customary activities by Whanganui Iwi is an integral part of the relationship of Whanganui Iwi with the Whanganui River and that this be recognised and provided for through this application.

RDC are in discussions with Ngā Tangata Tiaki o Whanganui to explore how Te Awa Tupua can be successfully integrated with the supply of potable water to Ohura, including how Tupua Te Kawa can be recognised and provided for. This is necessary discussion and engagement and cannot be determined by RDC on its own. This process is ongoing and will require additional time for both parties to reach an agreed position with respect to this application.

8.7.2 Ko Tā Maniapoto Mahere Taiao

Ko Tā Maniapoto Mahere Taiao[8] is the environmental plan for Ngāti Maniapoto. It provides high level direction and describes issues, objectives, policies and actions to protect, restore and enhance the relationships of Maniapoto with the environment including their economic, social, cultural and spiritual relationships.

[8] https://issuu.com/maniapotomaoritrustboard/docs/maniapoto_-_environmental_managemen

The Vision from the Ko Tā Maniapoto Mahere Taiao is *"Environmental Sustainability – So, therefore, hold fast to the example of this cormorant's unyielding charge , to forever progress onwards and upwards."*

Ko Tā Maniapoto Mahere Taiao directs that the effects of a project, application or proposal on the people of Maniapoto, on Maniapoto values and interest and the other matters covered in the plan are worked through with Maniapoto and the Ko Tā Maniapoto Mahere Taiao plan.

Part 14 of Ko Tā Maniapoto Mahere Taiao sets out objectives, policies and actions to protect and enhance natural freshwater resources within Maniapoto rohe. The introductory statement to this section outlines the deep obligation that Maniapoto feel to restore, maintain and protect all water within their rohe. Five principles are the outlined which Maniapoto apply to all freshwater in their rohe including:

1. Te Mana o te Wai – referring to the quality and integrity of the water that sustained the physical and spiritual wellbeing of Maniapoto and the important of ongoing health and wellbeing of current and future generations.
2. Ngā Wai o Maniapoto – referring to the deep felt obligations of Maniapoto to restore, maintain all waters within the rohe.
3. Te Mana o te Waipā – specifically referring to the Waipā River and its tributaries
4. Te Mana Tuku Iho o Waiwaiā – referring to Waiwaiā, the spiritual kaitiaki of the Waipā River
5. Kaitiakitanga – considered integral to the mana of Maniapoto and requiring:
    a. Restoration of relationship of Maniapoto with wai
    b. Restoration and maintenance of the ability of Ngā Wai o Maniapoto to provide for manaakitanga (respect and care for others)
    c. Recognition and respect for the kawa (rituals), tikanga (procedures) and kaitiakitanga (guardianship) of Maniapoto
    d. Encouragement and empowerment of active involvement of Maniapoto in expressing their kaitiaki responsibilities.

Ko Tā Maniapoto Mahere Taiao then sets out issues associated with freshwater management that are addressed the objectives and policies. Of particular relevance to this application are the following objectives:

- 14.3.3 Water allocation – to allocate water in a manner that restores and protects the health and wellbeing of waterbodies in the Maniapoto rohe. This objective is to be achieved through the policy ensuring that water allocation recognises and provides for Maniapoto values and interests and contribute to the achievement of cultural and environmental outcomes.
- 14.3.4 Integrated catchment management – to provide an integrated and coordinated approach to manage freshwater resources that considers whole of river effects. This objective is achieved through the policy ensuring that activities within catchments are managed and

controlled across administrative boundaries including across hapū or iwi rohe and local authority boundaries.

RDC have engaged with representatives of Maniapoto in the development of this application and engagement is ongoing to ensure that the view and values of Maniapoto are accurately represented, including discussion on how the application can be considered against Ko Tā Maniapoto Mahere Taiao.

As an initial assessment, the proposed renewal of the Ohura Water Supply is identified to be within the cumulative core allocation for the Whai_4b sub-zone which assists with achieving outcomes sought by Ko Tā Maniapoto Mahere Taiao.

The renewal of the existing water take, on the basis of a staged reduction over time in the amount and rate of take is consistent with ensuring the wellbeing of the water body and ensures an efficient use of freshwater resources.

On this basis, it is considered that the proposal is broadly aligned with the outcomes sought by Ko Tā Maniapoto Mahere Taiao, however further discussions with Maniapoto are necessary to complete a full assessment and to ensure that the views of Maniapoto are successfully integrated and reflected in the application.

9 Part II of the RMA – Purpose and Principles

This section presents an analysis of the application to renew Water Permit 101514 in relation the relevant provisions of Part 2 of the RMA. Overall, the application is considered to be entirely consistent with Part 2. The continued abstraction of water from the Mangaparare Stream to provide water for Ohura township provides an essential service for people and communities, while seeking to improve the efficiency of the water network and the use of the water resource through future plant improvements and reporting and action to address existing water use.

Further analysis of the proposal against each section of Part 2 is provided below.

9.1.1 Section 5 – Purpose

The matters to be considered under section 104 are subject to Part 2 of the RMA. The cornerstone of Part 2 is the Purpose of the Act as set out in section 5(1), which is:

> *"To promote the sustainable management of natural and physical resources".*

Section 5(2) of the RMA defines sustainable management as:

> *"Managing the use, development and protection of natural and physical resources in a way or at a rate which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while-*
>
> a. *Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
>
> b. *Safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
>
> c. *Avoiding, remedying or mitigating any adverse effects of activities on the environment."*

The ongoing abstraction of water from the Mangaparare Stream will enable the people and communities of Ohura to continue to provide for their social, and economic well-being and for their health and safety through the provision of potable water for domestic, commercial, and agricultural uses. This is an essential service that is specifically provided for by the One Plan, and which falls under the Health Act which imposes a duty on Territorial Authorities to maintain an adequate supply of drinking water.

Sustainable management enables the use and development of resources while ensuring that the circumstances in section 5(2)(a)-(c) are able to be satisfied.

As previously discussed, the proposed water take is within the cumulative core allocation for the relevant water management sub-zone and the proposed staged reduction in the water take, once the Ohura WTP is upgraded and additional storage is available is consistent with the sustainable management purpose of the RMA.

The overall assessment of a proposal in relation to the purpose of the RMA is informed by the matters in sections 6, 7 and 8 of the RMA, which are discussed below.

9.1.2 Section 6 – Matters of National Importance

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

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

In general, the only matter of national importance considered relevant to this application is section 6(e). Through the ongoing work with Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui, this matter is considered to be appropriately addressed in terms of this consent application.

The proposed continual abstraction of water from the Mangaparare Stream is not considered to be contrary to any of the matters of national importance set out in section 6 of the RMA.

9.1.3 Section 7 – Other Matters

Section 7 of the RMA sets out the matters that particular regard must be had to in managing the use, development and protection of natural and physical resources as follows:

a. kaitiakitanga:

aa. the ethic of stewardship:

b. the efficient use and development of natural and physical resources:

ba. the efficiency of the end use of energy:

c. the maintenance and enhancement of amenity values:

d. intrinsic values of ecosystems:

e. [Repealed]

f. maintenance and enhancement of the quality of the environment:

g. any finite characteristics of natural and physical resources:

h. the protection of the habitat of trout and salmon:

i. the effects of climate change:

j. the benefits to be derived from the use and development of renewable energy.

In terms of Section 7(a) and (aa), RDC continue to engage with Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui to give effect to these matters.

In terms of Section 7(b), (d), (f), (g) and (h), the proposed continuation of the water take makes use of existing infrastructure, to provide an essential service while also recognising the potential for adverse effects from the current take and proposing a staged reduction in Year 6 to reduce both the volume and rate of water taken.

Section 7(ba), (c), (i) and (j) are not considered relevant to the renewal of this consent.

The ongoing abstraction of water from the Mangaparare Stream to supply water to Ohura is not considered to be contrary to any of the matters of other matters out in section 7 of the RMA.

9.1.4 Section 8 – Treaty of Waitangi

Section 8 of the RMA states:

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

The requirement to take into account the principles of the Treaty of Waitangi is an obligation on those exercising functions and powers under the RMA, including in this case, Horizons Regional Council making decisions on the application to renew Resource Consent 101866. RDC are continuing to work with Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui in a meaningful manner so that their environmental principles are taken into account in seeking a renewal for the Ohura Water Supply. Further detail on this process is discussed in Section 10 of this report.

10 Consultation

Meeting with representatives of Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui was held at RDC on April 14, 2021. During this meeting, RDC introduced the need for the preparation of this renewal application and sought feedback from them following this meeting.

A copy of the draft of this application was provided to Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui. Ngā Tangata Tiaki have requested to meet with Ruapehu District Council to discuss the application and a hui is being arranged at the time of writing.

RDC are continuing to work with Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui a to seek alignment and an agreed position on the renewal of consents for the Ohura Water Supply.

11 Conclusion

RDC are seeking to renew its resource consent held for the take of water from the Mangaparare Stream to provide potable water to the Ohura township.

The proposed take is within core allocation for the relevant water management subzone. However, as a municipal water supply that cannot cease during times of low flow conditions, the application is a non-complying activity under the Horizons One Plan.

While there is some uncertainty, the existing abstraction of water for the Ohura township is likely to be having adverse effects on the aquatic ecology of the Mangaparare Stream. RDC seek to address this through the proposed staged reduction in the volume and rate of water taken, and as part of a wider plant upgrade, improving fish passage.

The comprehensive upgrade of the Ohura WTP which is supported by funding from central government, and the investigation into current water use and leakages, will enable the proposed staged reduction to occur within the anticipated 5 year timeframe.

The proposal is considered to be consistent with One Plan policies around reasonable, justifiable and essential uses and will ensure that any adverse effects from the water take are appropriately managed in the long-term. The proposal is considered to satisfy the 'gateway test' for non-complying activities set out in s.104D of the Resource Management Act.

Discussions are ongoing with Ngāti Hāua, Ngāti Maniapoto and Ngā Tangata Tiaki o Whanganui and the outcome of these discussions will inform the final conditions of consent sought by RDC.

PART C

Appendices

Appendix 1

Ohura Water Take: Ecological Monitoring Report 2021

Appendix 2

2017 RDC Water Use Survey of Ohura

Appendix 3

RDC Population Projections for Ohura

Population Projections for Ohura Township

	Ohura Village												
Usually Resident Population		**2018/19**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
	High	130	132	135	137	140	143	145	148	151	154	156	159	162
	Medium	130	132	134	135	137	139	141	143	145	147	149	151	153
	Low	130	131	133	134	136	137	139	141	142	144	145	147	149
Holiday Homes		**2018/19**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
	Medium		104	106	107	108	110	111	112	114	115	116	118	119
CAM (Commercial accommodation)		**2018/19**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
	High		55	55	55	55	55	55	56	56	56	56	56	57
	Medium		48	48	48	48	48	48	48	48	48	48	48	48
	Low		42	42	42	42	42	42	41	41	41	41	41	42
Day Visitors		**2018/19**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
	High		55	55	55	55	55	55	56	56	56	56	56	57
	Medium		48	48	48	48	48	48	48	48	48	48	48	48
	Low		42	42	42	42	42	42	41	41	41	41	41	42
Total		**2018/19**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
	High		347	350	354	358	362	366	372	376	380	384	389	395
	Medium		332	335	338	341	345	348	351	354	358	361	364	368
	Low		320	323	325	328	331	334	336	338	341	344	347	352

Source: Ruapehu District Council.

Appendix 4

Reasonable and Efficient Use Assessment

Appendix 5

Hydronet Memo – December 2020

Appendix 6

Hydronet Memo – March 2021

Appendix 7

Ohura Water Loss Analysis – July 2021