



Otago Regional Council

Section 42A Staff Recommending Report

Water Permit Application RM19.399.01 and RM19.399.02
Hawkdun Pastoral Limited

The recommendation in the staff report represents the opinion of the writers and it is not binding on the Hearing Commissioner. The report is evidence and will be considered along with any other evidence that the Hearing Commissioner will hear.

Kirstyn Lindsay
Consultant Planner

25 November 2020

**OTAGO REGIONAL COUNCIL DEEMED PERMIT REPLACEMENT
SECTION 42A REPORT**

ID Ref: A1413058
Application No(s): RM19.399.01 and RM19.399.02
Prepared For: Hearings Panel
Prepared By: Kirstyn Lindsay, Consultant Planner
Date: 24 November 2020

Subject: Section 42A Recommending Report – Limited-notified Deemed Permit Replacement and diversion permit by Hawkdun Pastoral Limited, Manuherehia catchment

1. Summary of Recommendation

Hawkdun Pastoral Limited (the applicant) has applied for a water permit (RM19.399.01) to replace a deemed permit to take and use water from Mata Creek which is a tributary of the Manuherehia River and a water permit to divert the flow of Mata Creek above the intake point. After assessing the actual and potential effects of the applications, considering submissions, and considering all of the matters in section 104 of the Resource Management Act 1991, I recommend that this application be **granted** for a period of **15 years**, subject to the conditions listed at the end of this report.

Please note that this report contains the recommendations of the Consent Officer and represents the opinion of the writer. It is not a decision on the application.

2. Purpose

This report has been prepared under Section 42A of the Resource Management Act 1991 (RMA) to assist in the hearing of the application for resource consent made by Hawkdun Pastoral Limited. Local authorities may commission a consultant to prepare the Section 42A report and may consider the report at any hearing. The purpose of the report is to assist the Hearing Panel in making a decision on the applications.

The report assesses the application in accordance with Sections 104, 104C and 104B of the Resource Management Act 1991 and makes a recommendation as to whether the applications should be granted, and, if granted, a recommendation on the duration of the consents and appropriate conditions.

This report contains the recommendations of the Consent Officer and is not a decision on the application. The recommendations of the report are not binding on the Hearing Commissioner. The report is evidence and will be considered along with any other evidence that the Hearing Commissioner will hear.

3. Report Author

Kirstyn Lindsay – Consultant Planner, Southern Planning Solutions Limited

I am the sole director and independent consultant planner of Southern Planning Solutions Limited. I hold a Masters in Planning with Distinction from the University of Otago. I have over 17 years' professional experience in district and regional planning. I am an accredited RMA Commissioner with Chairs Endorsement and hold full NZPI membership.

I have been engaged by the Otago Regional Council to report and make a recommendation on the above application. I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014. While this report has not been prepared for the Environment Court, it has been prepared in accordance with the practice note. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

I have been involved with the Hawkdun Pastoral Limited application since it was lodged and received.

4. Summary of the Application

4.1 Overview

Applicant: Hawkdun Pastoral Limited
Applicant's Agent: Peter Dymock, Paterson Pitts Group
Site address or location: Mata Creek, 4.5 kilometres (km) upstream of the St Bathans Loop Road Bridge and 380 metres (m) west of Hawkdun Road.

Legal description and records of title reference of the point of take:
Run 585 held in Record of Title OT338/127, leased by Southern Lake Holdings Limited, and authorised by a Section 417 certificate.

Legal descriptions and records of titles reference for the use:

Legal Description	Record of Title
Sec 7 Blk III St Bathans SD	OT7A/1148
Sec 10 Blk III St Bathans SD	OT7D/920
Sec 8 Blk III St Bathans SD	OT7A/1149
Sec 9 Blk III St Bathans SD	OT16D/327
Sec 12 Blk III St Bathans SD Sec 5 SO 24231	7149

Map references:

- **Point of diversion** NZTM2000 E1350202 N5058729
- **Point of take** NZTM2000 E1350209 N5028771

Consents sought: Replacement of a deemed permit to take and use water and to divert water.

Purpose of consents: Irrigation, domestic and stock water supply.

Deemed permits being replaced: 96208

Notification: The application was approved to be processed on a limited notified basis on 5 February 2020.

Site visit: A site visit prior to the application being lodged was undertaken on 28 November 2019 by Natasha Pritchard (Senior Consents Officer at the time) and Byron Pretorius (Acting Team Leader Compliance). A second site visit was undertaken by the report writer on 18 September 2020.

4.2. Key Issues

I believe that the key issues with this application are:

- Consent duration;
- Rate and volume of take;
- Residual flow; and
- The location of the fish screens.

4.3. Description of the Application

The applicant is seeking to replace Deemed Permit 96208, which expires on 1 October 2021. Deemed Permit 96208 authorises the applicant to take up to 20,000 cubic metres (m³)/hour of water from Mata Creek. The applicant is seeking to replace the deemed permit with a water permit to take and use 56 L/s from Mata Creek.

The property is predominantly used for pasture and cropping with 90 ha of the 6,000 ha site being irrigated. Irrigation occurs via a piped spray irrigation scheme. There is also a piped stock water scheme. Stock numbers for the site comprise an average 4,000 sheep and 300 cattle.

The point of take is not located on the applicant's land and access is secured by a Section 417 Certificate. The water is diverted from the main stem of Mata Creek during the irrigation season via an artificial gravel bar into a diversion channel of approximately 100 m to a culvert intake (see Image 1). The catchment above the diversion exceeds 50 ha. Water which is not taken from the diversion channel re-enters the main stem of Mata Creek.

There is no fish screen fitted to the current culvert intake. Water is controlled manually by restricting the flow into the pipe using vehicle tyres. The applicant advises that the volume of water travelling through the intake is checked weekly and adjusted if required.

The culvert intake delivers the take water to an open distribution water race. The take is metered within the open race, approximately 250 m downstream of the take (see Image 2). The location of the meter is authorised by WEX0011, in accordance with the Water Measuring and Reporting Regulations 2010 (amended 2020). The take water travels from the measuring device via an open race to an equalisation dam (see Image 3).

At the equalisation dam, the water is split into irrigation water and stock and domestic water. The irrigation water is carried within a pipeline to 90 ha of land irrigated via a k-line irrigation system.

Currently, stock water and domestic water is carried through an open race and is diverted either into a piped stock water scheme or taken for domestic water supply to serve the Hawkdun Station Homestead. Excess water for this component of the take discharges into Station Creek. The applicant proposes to replace the open race take for stock and domestic water with a separate pipeline before the water race intake. As such, the by-wash discharge to Station Creek is to be

discontinued. The applicant intends to install the separate stock and domestic water pipeline within five years of the grant of the replacement permit, if consent are to be granted.

A residual flow of approximately “1 head” (28 L/s) is currently maintained by the applicant below the point of diversion and the applicant considers this to be a realistic estimate of a suitable residual flow based on the applicant’s mean annual low flow (7dayMALF) calculation of 27 L/s. The applicant identifies issues in measuring a residual flow based on a L/s rate due to the method of take and nature of the watercourse. The watercourse is a volatile system and the applicant states that any gauging device would be rendered ineffective in a fresh or similar event.

The applicant originally sought a term of 35 years but has revised this to 25 years after pre-hearing conferencing with the submitters.

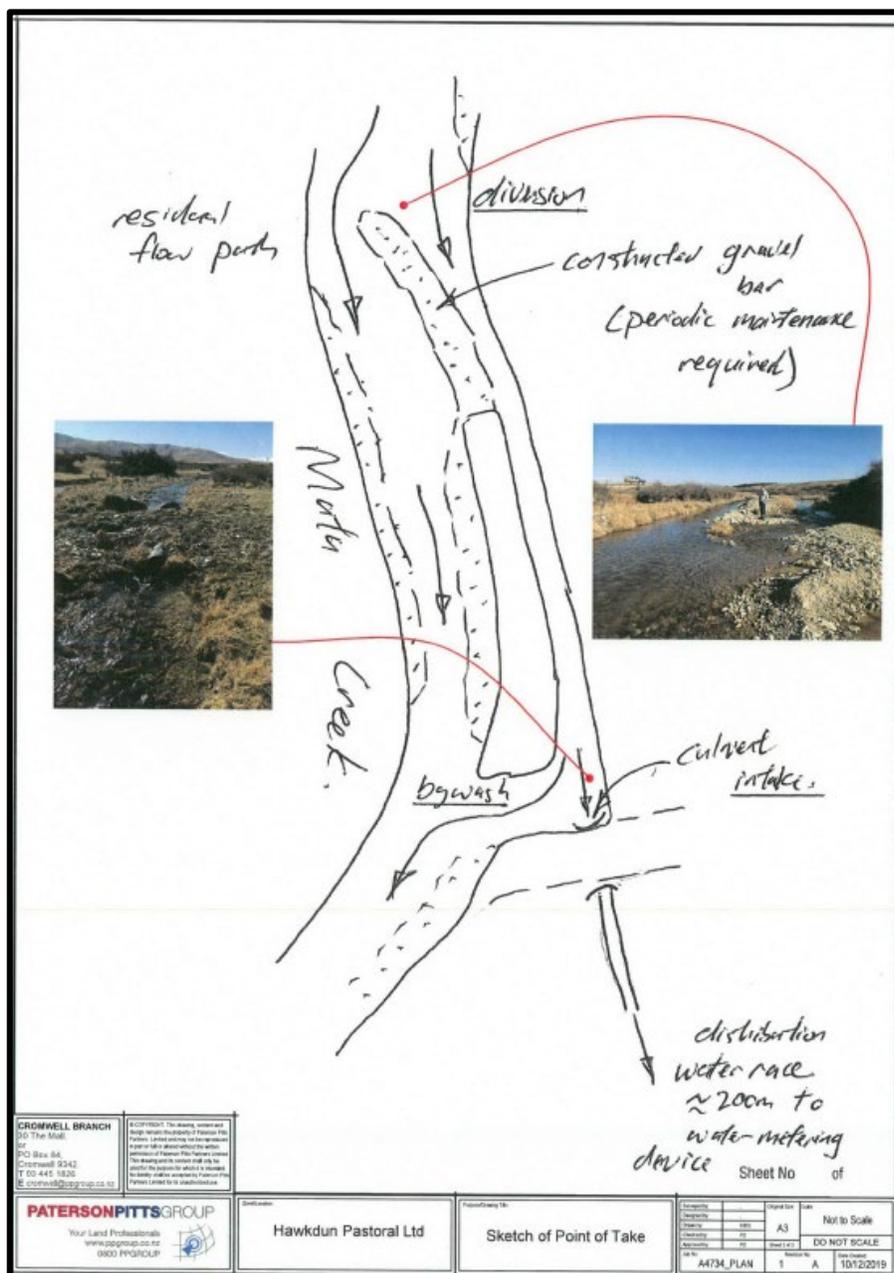


Image 1: Point of take Schematic (source RM19.399 application)

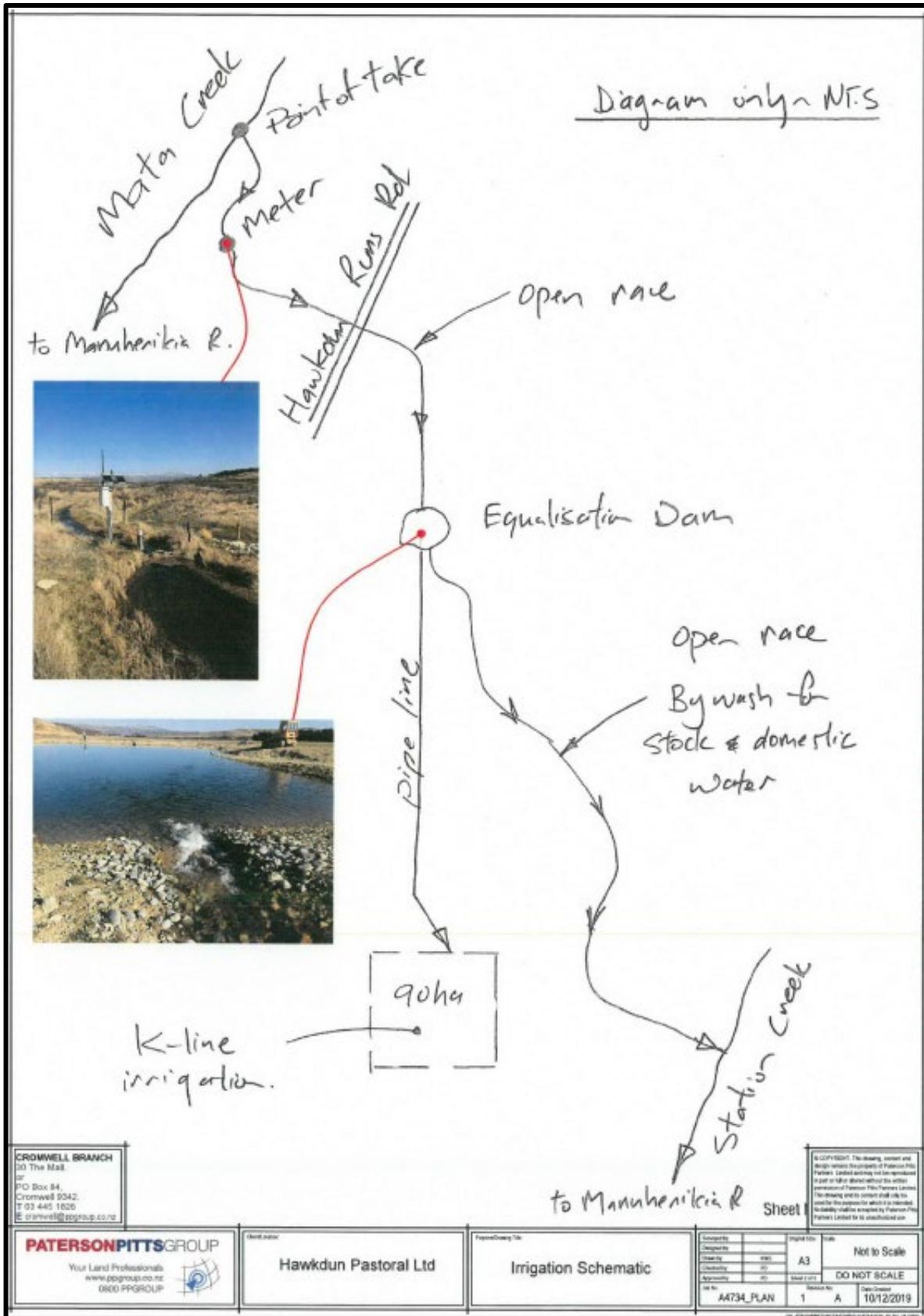


Image 2: Current Irrigation Schematic (source RM19.399 application)

4.4 Rates and Volumes Applied For

Rate of take:	56 L/s
Monthly Volume:	148,800 m ³ /month
Annual volume:	800,460 m ³ /year

4.5 Details of Deemed Permit Being Replaced

The applicant is seeking to replace Deemed Permit 96208 which expires on 1 October 2021. Deemed Permit 96208 authorises the applicant to take up to 200,000 cubic metres (m³)/hour of water from Mata Creek (55.56 L/s).



Image 3: Location of Water Meter as shown in recommending report for WEX0011

This application was lodged with the Council at least six months before the expiry date. The activity applied for is the same as that authorised by the deemed permit. In accordance with Section 124 of the Act, the applicant may continue to operate under Deemed Permit 96208 until a decision on this application is made and all appeals are determined.

Other Activities

Section 14 of the RMA provides for the taking of water for an individual's reasonable domestic needs and the reasonable needs of a person's animals for drinking water, providing the taking or

use does not, or is not likely to, have an adverse effect on the environment. Once the new intake structure is in place, the domestic and stock water take will be separated from the point of take for the irrigation and will be taken before the irrigation take. Once the take is separated out, the domestic and stock water needs are assessed as permitted under Section 14 of the RMA. For the up to five year period prior to this occurring, it is appropriate that the stock and domestic water quantities are assessed and considered as part of the take. This is in accordance with the High Court position on permitted aspects of an activity forming part of the scope of an application and being able to be continued to be authorised by the consent¹.

Section 14 of the RMA states that no person may divert water unless it is expressly allowed by a national environmental standard, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent.

Above the point of take, water is diverted from the main channel of Mata Creek into a diversion channel. Water not taken from the diversion channel re-enters the main channel below the point of take. The definition of diverting water was explored in *Chatham Islands Seafoods Limited v the Wellington Regional Council*². There is no exemption for the diversion of water associated with a water take under the RPW and, as such, resource consent is required pursuant to Rule 12.3.4.1.

Rule 12.3.2.1 provides for the diversion of water as a permitted activity, subject to complying with the conditions set out in Rule 12.3.2.1. (a-i). In this instance, the diversion will not meet clause.(a): *The size of the catchment upstream of the dam, weir or diversion is no more than 50 hectares in area*. Breaches of Rule 12.3.2.1 are assessed as **discretionary activities** pursuant to Rule 12.3.4.1. The applicant applied for the diversion activity on 12 November 2020.

It is noted that the diversion activity was not specifically identified at the time of notification, although the diversion activity was implicit in the application as it formed part of the method of take. The additional activity does not change the scope of what was considered for the notification decision or by the submitters and, therefore, Council determined that it did not need to revisit the notification decision. However, the submitters were advised of the additional application to divert water and were given an opportunity to consider their submission status. At the time of writing this report, DOC and Aukaha confirmed that it did not alter their submission status. F & G did not respond to the advice that a further application had been made. However, F & G were present at the informal pre-hearing meeting where the diversion activity was discussed and in this regard the application to divert water introduces no new information. The activity status is discussed further in Section 6 of this report.

Maintenance of the and intake structure and gravel diversion bar are carried out on an as-required basis under Permitted Activity Rule 13.3.1.1 of the RPW. No change to the scale, dimensions or function of these existing structures is proposed as part of this consent application.

4.6 Application Documents

The application was lodged with Council on 17 December 2019 and the application included the following documentation:

- completed Form 1 and Form 4
- an Assessment of Environmental Effects including plans,

¹ Marlborough District Council v Zindia [2019] NZHC 2765

² Chatham Islands Seafoods Limited v the Wellington Regional Council [2004] EnvC A018/2004

- copy of Deemed Permit 96208,
- WEX approval,
- records of title,
- copy of water permits 2002.503.V1, 2002.504.V1, 2003.917.V1 and RM11.013.02,
- production return from irrigation of 90 ha

The applicant offered a suite of conditions on 24 April 2020, following an informal pre-hearing conference with the submitters and these conditions are now considered to form part of the application (see section 5.3.1 of this report) The applicant also applied for a diversion permit by email on 12 November 2020 (see Appendix 7).

5. Notification and Submissions

5.1 Notification Decision

Council made the decision to process the application on a limited notified basis under Section 95B of the RMA on 4 February 2020 (ID Reference A1320738). The application was notified to:

- Aukaha Limited on behalf of local runanga- Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou;
- Te Runanga o Ngai Tahu (TRONT);
- Department of Conservation (DoC) on behalf of the Director General of Conservation; and
- Otago Fish and Game Council (F and G)

The parties were notified on 5 February 20120 and the close of submission period was 5 March 2020. The reasons for these parties being considered affected are included in the notification recommendation referenced above.

5.2 Submissions Received

Submissions were received from the following:

- Aukaha Limited;
- DoC; and
- F and G.

All submissions were late by one day but a decision to accept the submissions was made under delegated authority pursuant to section 37A(2)(b) of the RMA.

5.3 Summary of Submissions

Table 1: Summary of Submissions

Submitter	Submission Points	Wishes to be heard
Aukaha Limited (on behalf of Kati Huirapa Puketeraki and Te Runanga o Otakou)	Nga Runanga are not confident in the regional planning framework and request a short-term consent to allow a new planning framework to be established before longer term consent is granted.	Withdrew the right to be heard.

	<p>Nga Runanga seek that the consent be declined or if granted then the following conditions imposed:</p> <ul style="list-style-type: none"> • That the term of consent be no longer than 6 years • That at least 50% of the flow in the waterway is left in the waterway • That a fish screen is installed over the intake structures • That the water take is metered and the results recorded. <p>Subsequently advise they were neutral on a residual flow of 28l/s.</p>	
<p>Director-General of Conservation (DGC)</p>	<p>DGC opposed the application in its entirety unless the issues raised below are satisfactorily addressed.</p> <p>DOC considers that a term of 35 years is unjustified and seeks that, if granted, a shorter term be given within the term of ORC's next revised Water Plan</p> <p>DOC notes that the applicant does not provide any information of the fish communities and habitat immediately downstream of the take that may be affected by the water abstraction. DOC considers that the residual flow proposed is excessively low and, in the absence of any further fish survey and hydrology works downstream of the take, proposes either a measured residual flow of 28 L/s (as opposed to the connected visual flow offered by the applicant) or a minimum flow of 90% of MALF (approximately 75 L/s).</p> <p>DOC considers that additional information is required to assess the flow relationship (gaining reach) downstream of the point of take and seeks that a gauging programme be implemented by the applicant to validate the residual flow proposed by the applicant.</p> <p>DOC considers the take should be restricted to the irrigation season only.</p> <p>DOC considers that additional consents to disturb the bed and divert water and proposes a galley intake structure.</p>	<p>Withdrew the right to be heard.</p>

	<p>DOC seeks additional information of the proposed fish screening in order to avoid a s44 fish passage consent by the Director General under the Fish Passage Regulations 1983.</p> <p>DOC seeks a review clause to be imposed on the consent.</p> <p>DOC considers that the application is inconsistent with the relevant objectives and policies of the NPSFM2014, ORPS1998, PORPS2019, RPW for Otago 2012 Otago Conservation Management Strategy (CMS).</p>	
<p>Otago Fish and Game Council</p>	<p>F & G seeks for the consent to be declined or if granted then the following conditions imposed:</p> <ul style="list-style-type: none"> • That the term of consent be no longer than 7 years • That a quantitative residual flow of at least 27 L/s is imposed • That a fish screen is placed as close as practical to the point of take. • That the water take is metered and the results recorded. <p>F&G requests that decision makes consider the values of the wider fishery when considering this application.</p> <p>F&G notes the lack of measured hydrology information and population dynamics in the catchment and as such seeks a precautionary approach to be taken when deciding this application.</p> <p>F&G would work with the other submitters on this application to identify a suitable conservation strategy.</p> <p>F&G asserts that the Otago Water policy framework is not fit for purpose.</p> <p>F&G question the stated economic impacts of a shorter term consent.</p>	<p>Withdrew the right to be heard.</p>

	Fish and Game subsequently amended its submission to oppose the term of consent only.	
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Subsequent to receiving the submissions, the applicant placed the application on hold pursuant to S91A of the RMA to work through the concerns raised in the submission.

5.3.1 Conditions offered post submission period

An informal on-line pre-hearing meeting was held on 17 April 2020 with the applicant, and representatives of F and G and DoC. On 24 April 2020, the applicant made the following changes to the application:

1. *It is proposed that a residual flow condition be set at 28 litres per second, immediately downstream of the point of take.*
2. *It is proposed that the irrigation take be limited to the grass growing season on the irrigation application site which the applicant advises is 1 September through to the 30 April the following year inclusive.*
3. *It is proposed that a fish screen be erected in the open head race as close as practicable to the point of take, but in any case upstream of the existing water measuring device (weir) in the race.*
4. *It is proposed to adopt the fish screening condition of consent as suggested by F & G Game in its submission, modified as required for an installation in an open race.*
5. *A term for the consent of 25 years is now proposed. This is in line with the recently (July 2019) granted RM17.094.01 for a take out of a similar small tributary stream (in that case of the Lindis River)*
6. *The economic justification for this is as follows:*

According to analysis by ICE farm accountants of Alexandra, the top quartile of farming businesses in Otago manage to achieve a return of a maximum of 5% net return on assets per year (the bottom quartile makes a loss each year and the rest barely breakeven). Let us be generous and say Hawkdun Pastoral is an exceptional operator and allow a 10% rate of return on capital. On a capital cost of \$381,117 for the applicant's irrigation system, this gives us a net return of \$38,111 per annum. Discounting this using a NPV / IRR calculation at the current commercial interest rate of 9% results in a 28 year period over which to amortise the initial investment

Following this meeting, all submitters withdrew their right to be heard at the hearing. Specifically, the responses were as follows:

Fish & Game Otago – 28 May 2020

Fish & Game Otago advised that the issues regarding the residual flow and fish screening were resolved and the relief sought in Paragraph 4(b) and 4(c) of its submission was no longer sought. The issue of term remained with Fish & Game Otago seeking a term of no longer than 7 years. Fish & Game Otago withdrew their right to be heard.

Aukaha Limited – 27 October 2020

Aukaha writes this on behalf of Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou (Ngā Rūnanga). Ngā Rūnanga have a neutral stance on the proposed residual flow of a visual assessment of 28 L/s in Mata Creek. Ngā Rūnanga are supportive of a more specific visual flow condition, like the inclusion of ensuring the flow is 28L/s compared to other, less specific visual flow conditions.

Although we understand the difficulties of identifying a practical means of providing a quantitative measurement of the residual flow, we have concerns about the subjectiveness of a condition based on visual flow (for example, does it require a specified depth of flow, or just that the stream bed is wet?) If the condition is to be based on a photographic record of visible connection, we consider it should incorporate the following requirements:

- Specification of what degree of connection is required, particularly in respect to enabling fish passage (for example this could be in relation to a reference photograph)*
- That, as recommended by ORC, the photographic record be taken at times when low flow conditions are likely, rather than on a monthly basis without regard to flow conditions.*

We would like to note that our submission still stands. As per the submission dated 5 March 2020, Ngā Rūnanga would support an amended application or, any consent that would be subject to the following conditions:-

- That the term of consent be no longer than 6 years.*
- That at least 50% of the flow in the waterway is left in the waterway.*
- That a fish screen is installed over the intake structure.*
- That the water take is metered and results recorded*

*While our position has not changed, Ngā Rūnanga would like to inform you that they wish to **withdraw from being heard at a Hearing.***

Department of Conservation

The DG has advised he no longer wishes to be heard on this matter as per the Mike Tubbs letter dated 15th May 2020 to ORC cc'd to the applicant [Attached as Appendix ??], and like Ngai Tahu, our submission still stands.

I suggest the applicant and ORC further discuss the issue of measuring/observation of a residual flow of 28L/s with a view on how this can meet the Newbury tests.

As noted above, the submitters were advised of the additional application to divert water and were given an opportunity to consider their submission status. At the time of writing this report, DOC and Aukaha confirmed that the diversion application did not alter their submission status. F & G did not respond to the advice that a further application had been made.

6. Description of the Environment

6.1 Description of the Site and Receiving Environment

The take is located in Mata Creek, approximately 4.5 km upstream of the St Bathans Loop Road Bridge over Mata Creek and 380 m west of Hawkdun Runs Road. The take is located approximately 2 km east of the township of St Bathans and is in the Central Otago District. The point of take is located on land legally described as Run 585 leased by Southern Lakes Holding Ltd under Record of Title 338/127. Hawkdun Pastoral Ltd holds a Sec 417 certificate over the intake and race within Run 585.

The property is predominantly used for pasture and cropping with 90 ha of the 6,000 ha site being irrigated. Irrigation occurs via a piped spray irrigation scheme and a piped stock water scheme. Image 4 shows the property and Image 5 shows the area of irrigation.

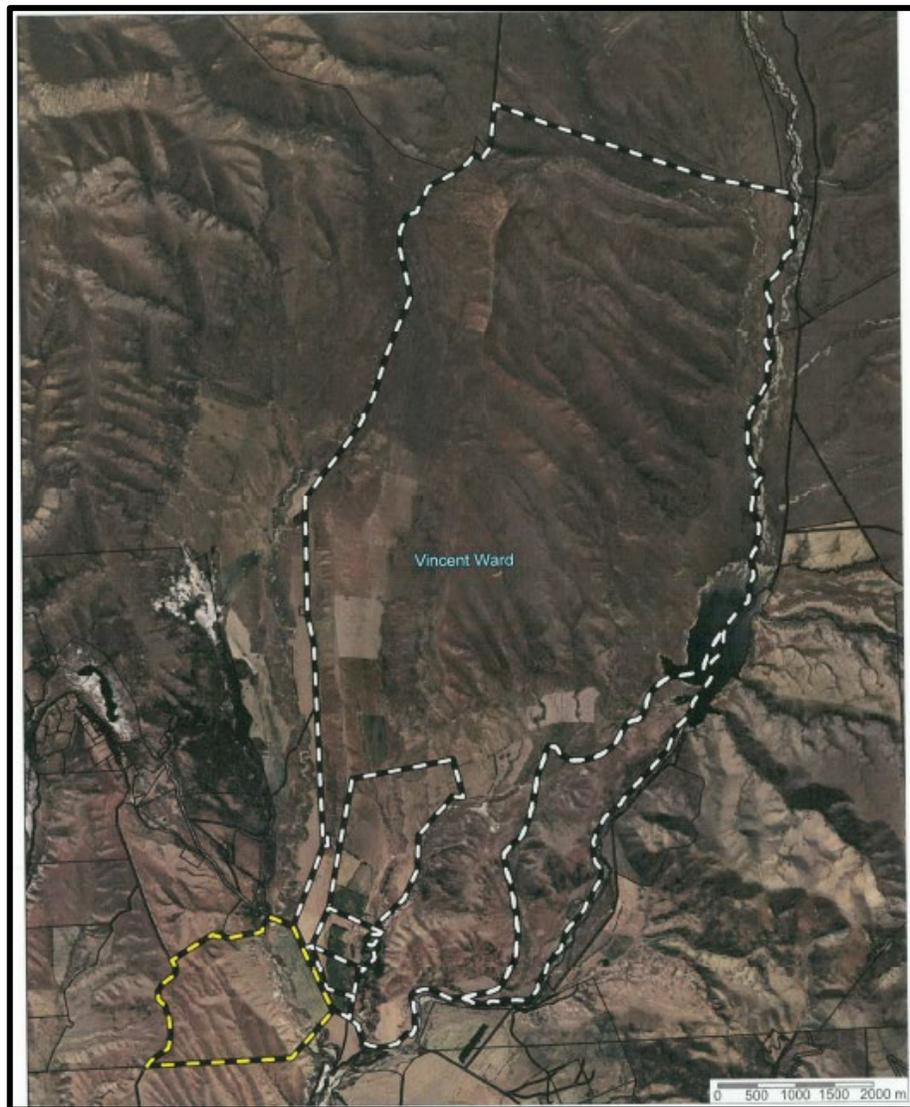


Image 4: Applicant's property marked by yellow and white boundary lines(source RM19.399 application)

Grow Otago indicates that the median annual rainfall at the irrigation site is 551-650 mm while the January/February rainfall is 81-100mm. The median potential evapotranspiration for January/February is 176-180mm. Landcare Research's portal S-MAP identifies the soils as Brown soils; being Oturehua Shallow/Stoney and fine Sandy Loam with low (30-59) Plant Available Water (PAW).

6.2 Description of Surface Water Body

Mata Creek is a tributary of the Manuherekia River and is part of the Manuherekia catchment upstream of Ophir. The Manuherekia River is located in Central Otago and flows north-east to south-west with a catchment area of 3,075 km². The catchment is surrounded by mountainous terrain on all sides, except to the southwest where it joins the Clutha River at Alexandra. The Manuherekia Catchment includes two major depressions, the Manuherekia Valley and the Ida Valley, that are connected by the Poolburn Gorge. The Ida Valley receives lower annual rainfall than the Manuherekia Valley. The Manuherekia River at Ophir site has significantly altered flows due to numerous abstractions upstream and the influence of Falls Dam. The catchment area upstream of this site is 2,036 km², which is two-thirds of the Manuherekia Catchment.

Mata Creek has a catchment of 4,904 ha above the point of take. The upper catchment (approximately 2,255 ha) lies within the southern end of the St Bathans range which varies in altitude from 800 m above sea level (asl) to 1,620 masl. The upper catchment is typical Central Otago tussock high country used for low intensity grazing by sheep and cattle. The lower part of the catchment above the point of take (approximately 655 ha) has an elevation between 600 masl and 800 masl and comprises unirrigated but improved native pasture also used for low intensity pastoral grazing.

Mata Creek is fed by a number of sub-catchments. The main northern branch is joined by the western branch (being Waterfall Creek and Middle Creek) approximately 1 km above the point of take. Muddy Creek joins Mata Creek 4.5 km downstream of the point of take, just below the St Bathans Loop Road Bridge before flowing into the Manuherekia River 2.5 km further downstream.

Mata Creek is characterised by the applicant as perennial. The creek flow is augmented by several natural springs and has been visually assessed by the applicant as a gaining reach between the point of take and the confluence with the Manuherekia River. Flow modelling from the NIWA model Shiny indicates that a significant portion of this flow originates in the northern most branches of the creek, coming from hills near the St Bathans Range.

The application has been assessed by the Councils Resource Science Unit (RSU) who notes that records from the New Zealand Freshwater Fish Database (NZFFD) are sparse but show that upland bully (*Gobiomorphus breviceps*) and brown trout (*Salmo trutta*) are the only fish species recorded nearby. The creek presents as having clear water with gravels, cobbles and boulders present and, given the gravel substrate and perennial flows, it is entirely possible that trout reside in the stream and/or migrate up from the Manuherekia River mainstem to spawn. There is a significant waterfall at the Loop Road bridge which would be an impediment to fish passage. That said, both brown trout and upland bully have been found above this feature indicating that spawning is present above the bridge.

There are no regionally significant wetlands that will be affected, adversely or otherwise, by the proposed water take in Mata Creek.

In addition to the applicant's take, the following water permits are identified for the Mata Creek catchment (being Middle Creek and Waterfall Creek): 2002.503.V1, 2002.504.V1, 2003.917.V1. These expire on 31 December 2023 and provide for the taking of water for community supply, stock water and irrigation for the St Bathans township. RM11.013.02 expires on 1 February 2046 and authorises the take and use of water from Middle Creek and Waterfall Creek for the purpose of pasture irrigation supply. It is the applicant's assertion that RM11.013.02 has not been exercised and is deemed to have lapsed, and, as such, does not form part of the base allocation figures. This assertion is consistent with the assessment by the Councils compliance officer.

6.3 Schedule 1 of the Regional Plan: Water

Mata Creek is not listed in Schedule 1A of the Regional Plan Water for Otago (RPW) but it is a tributary of the Manuhereki River which is listed in Schedule 1A as having the following values:

- Gravel bed composition of importance for resident biota
- Presence of riparian vegetation of significance to aquatic habitats.
- Presence of significant trout spawning areas
- Presence of significant areas for development of juvenile fish
- Absence of aquatic pest plants
- Significant presence of eels and trout
- Presence of a significant range of indigenous invertebrates.

Schedule 1B of the RPW identifies water takes used for public supply purposes (current at the time the RPW was notified in 1998). While the St Bathans Water Supply (2002.503 and 2002.504) is identified as communal water take, these water permits do not relate to Site 15 of Schedule 1B. Both Site 15 and these water permits are located upstream of the applicant's proposed take.

Schedule 1C identifies registered historic places which occur in, on, under or over the beds or margins of lakes and rivers. There are no Schedule 1C values in the RPW listed near the proposed activity.

Schedule 1D of the RPW identifies the spiritual and cultural beliefs, values and uses associated with water bodies of significance to Kai Tahu. While Mata Creek is not specifically identified in Schedule 1D, 'other Manuhereki River tributaries' are recognised for the following values:

- **Kaitiakitanga:** the exercise of guardianship by Kai Tahu, including the ethic of stewardship.
- **Mauri:** life force.
- **Waahi tapu and/or Waiwhakaheke:** sacred places; sites, areas and values of spiritual values of importance to Kai Tahu.
- **Waahi taoka:** treasured resource; values, sites and resources that are valued.
- **Mahika kai:** places where food is procured or produced.
- **Kohanga:** important nursery/spawning areas for native fisheries and/or breeding grounds for birds.
- **Trails:** sites and water bodies which formed part of traditional routes, including tauraka waka (landing place for canoes).
- **Cultural materials:** water bodies that are sources of traditional weaving materials (such as raupo and paru) and rongoa (medicines).

6.4 Schedule 2 of the Regional Plan: Water

The Manuherekia River, of which Mata Creek³ is a tributary, is identified in Schedule 2A.

Table 2: Minimum flow Manuherekia River catchment upstream of Ophir

Catchment	Monitoring Site (with MS number)	Minimum flow (litres per second – instantaneous flow)	Primary Allocation Limits in accord with Policy 6.4.2(a) (litres per second – instantaneous flow)
Manuherekia River catchment upstream of Ophir	Manuherekia River at Ophir (MS 8)	820	3,200 Manuherekia catchment from confluence with Clutha/Mata-Au to headwaters

6.5 Regionally Significant Wetlands

There are no Regionally Significant Wetlands in the vicinity of the activity.

7. Status of the Application s77A and s87A

Resource consent is required under the RPW and proposed Plan Change 7 (Water Permits) of the RPW (PPC7).

Table 3: Planning Rules

Planning Instrument	Rule	Purpose	Activity Status
RPW	Rule 12.1.4.5	Taking and use of surface water as primary allocation including the associated retakes from various storage reservoirs	Restricted Discretionary
RPW	Rule 12.3.4.1(i)	To divert water	Discretionary
PPC7	Rule 10A.3.2.1	Taking and use of surface water as primary allocation which does not meet Rule 10A.3.1.1	Non-Complying

PPC7 was notified by the Council for submissions on 18 March 2020 and the rules have immediate legal effect in accordance with section 86B(3) of the Act, as they relate to water. PPC7 was renotified on 6 July 2020 by the Environmental Protection Agency (“EPA”). PPC7 introduces two new rules relating to water takes which took immediate legal effect upon notification by the Council.

³ The applicant offers a condition of consent which links the ability to take water to the minimum flow for the Manuherekia River.

Under s88A of the RMA an application for a resource consent continues to be processed for the type of activity that applied when an application was made, despite an activity status changing as a result of a proposed plan change being notified. As this application was lodged prior to notification of PPC7, it will retain the activity status that it had under the operative rules in the RPW.

Where an activity requires resource consent under more than one rule, and the effects of the activity are inextricably linked, the general principle from case law is that the different components should be bundled and the most restrictive activity classification applied to the whole proposal.

In this case, there is more than one rule involved, and the effects are linked. As a result, having regard to the most restrictive activity classification, the proposal is considered to be a **discretionary** activity.

8. Section 104 Evaluation

Section 104 of the Act sets out the matters to be considered when assessing an application for a resource consent. These matters are subject to Part 2, the purpose and principles, which are set out in Sections 5 to 8 of the Act.

The remaining matters of Section 104 to be considered when assessing an application for a resource consent are:

- (a) *the actual and potential effects on the environment of allowing the activity;*
- (ab) *any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity;*
- (b) *any relevant provisions of a national environmental standard, other regulations, a national policy statement, the Regional Policy Statement (RPS), the Regional Plan: Water (RPW); and*
- (c) *any other matter the Council considers relevant and reasonably necessary to determine the application.*

8.1 S104(1)(a) – Actual and potential effects on the environment of allowing the activity

Section 104(1)(a) of the RMA requires the council to have regard to any actual and potential effects on the environment of allowing the activity. This includes both the positive and the adverse effects.

8.1.1 Positive effects

The proposal will have the following positive effects:

- Enable the ongoing irrigation of 90 ha of productive farmland as well as providing for stock water and existing domestic supply resulting in economic well-being of the farming operation and flow-on effects from this on the local economy and community;

- Recognise the investment of the applicant in the irrigation infrastructure and land improvements and provides greater certainty for the farming production than is possible with dryland farming; and
- Maintenance of pasture quality over a critical dry period/crops are not affected by moisture stress at critical growing times.

8.1.2 Adverse effects

In considering the adverse effects, the Consent Authority:

- may disregard those effects where the plan permits an activity with that effect; and
- must disregard those effects on a person who has provided written approval.

The assessment and conclusion of the “permitted baseline” for the s95A adverse effects assessment are considered applicable to s104(2), and so are not repeated here. No written approvals of affected parties have been provided with the application and no effect on any party beyond what has been provided for as a permitted activity in a plan has been disregarded.

The following assessment of adverse effects is undertaken for the purposes of s104(1)(a).

8.2 Ecological Effects

I consider that the adverse effects of the water take and diversion activity on the environment relate to:

- Allocation availability
- Minimum flows
- Instream values
- Downstream users and competing demand for water
- Cultural values

8.2.1 Surface Water Allocation Availability

Primary allocation is defined by Policy 6.4.2(b) of the RPW:

“To define the primary allocation limit for each catchment, from which surface water takes and connected groundwater takes may be granted, as the greater of:

(a) That specified in Schedule 2A, but where no limit is specified in Schedule 2A, 50% of the 7-day mean annual low flow; or

(b) The sum of consented maximum instantaneous, or consented 7-day, takes of:

(i) Surface water as at: 19 February 2005 in the Welcome Creek catchment; or 7 July 2000 in the Waianakarua catchment; or 28 February 1998 in any other catchment; and

(ii) Connected groundwater as at 10 April 2010, less any quantity in a consent where:

(1) In a catchment in Schedule 2A, the consent has a minimum flow that was set higher than that required by Schedule 2A.

(2) All of the water taken is immediately returned to the source water body.

- (3) *All of the water being taken had been delivered to the source water body for the purpose of the subsequent take.*
- (4) *The consent has been surrendered or has expired (except for the quantity granted to the existing consent holder in a new consent).*
- (5) *The consent has been cancelled (except where the quantity has been transferred to a new consent under Section 136(5)).*
- (6) *The consent has lapsed.”*

The Manuherekia River at Ophir site has significantly altered flows due to numerous abstractions upstream and the influence of Falls Dam. The catchment area upstream of this site is 2,036 km², which is two-thirds of the Manuherekia Catchment. Schedule 2A of the RPW sets the primary allocation at 3,200L/second for the Manuherekia catchment from confluence with Clutha/Mata-Au to headwaters. The catchment is assessed as fully allocated as the current allocation exceeds the set primary allocation, but because the application was applied for in s124 timeframes then primary allocation is retained.

The applicant states that there are no flow measurements on Mata Creek and no gauging of Mata Creek has been undertaken. The applicant states that Mata Creek is a gaining reach between the point of take and the St Bathans Loop Road Bridge and is augmented by several natural springs. The lack of gauging or other hydrological data is a point of concern raised in the submissions.

Shiny has been used by the applicant to calculate a 7-day MALF of 83 L/s (0.0829 cumecs) very close to the point of take. This MALF calculation is accepted by the Council’s Resource Science Unit. When considering the current water permits authorised to take water from Mata Creek being 2002.503, 2002.504 and 2003.917 and the deemed permit for which this application seeks to replace then, this MALF figure would suggest that Mata Creek is fully-allocated. It is noted that it is the applicant’s assertion that RM11.013.02 is not exercised and is deemed to have lapsed, and, as such, does not form part of the base allocation figures.

To assist in the reduction of primary allocation under Policy 6.4.2(b), only water that has been historically accessed under previous consents can be considered to be granted as primary allocation (except in the case of a registered community drinking water supply where an allowance may be made for growth that is reasonably anticipated).

The Council is able to control the rate, volume, timing or frequency of take, or a combination of these. The Council could grant less water than has been taken under existing consents if it is satisfied on the evidence that the lesser quantity would:

- (a) *reflect only the water actually taken and the pattern of taking established under the existing consent; and/or*
- (b) *minimise conflict between those taking water; and/or*
- (c) *address the underutilisation of water allocated under the existing consent, including any underutilisation arising from;*
 - (i) *inefficient and inappropriate practices; and/or*
 - (ii) *consent holders retaining authorisation for more water than is actually required for the purpose of use.*

The cessation of the by wash discharge to Station Creek will correct the inefficiencies in the water take system overall.

Overall, the proposed take is assessed as primary allocation in accordance with Policy 6.4.2(b).

8.2.2 Minimum Flows

Minimum flows may be set for a river or catchment for the purpose of restricting primary allocation takes of water. A minimum flow provides for the maintenance of aquatic ecosystem and natural character values of water bodies, while providing for the sustainable taking of water for use. Once set in Schedule 2A of the RPW, the minimum flows are imposed on all relevant consents in that catchment. When a minimum flow is breached, the exercise of all consents to take water as primary allocation (with some exceptions), must cease.

Schedule 2A of the RPW identifies that the minimum flow for the Manuherekia River catchment above Ophir, is 820 L/second. However, policy 6.4.(c) states that for the Manuherekia Catchment (upstream of Ophir) the minimum flows will apply after all the consents in the catchment are reviewed. It is noted that the review clause, offered by the applicant which provides for the minimum flow to be imposed.

With regard to any current or future minimum flow requirements, the applicant offers to exercise the water take in accordance with any current or future minimum flow requirements of the mainstem of the Manuherekia River. I note that in its submission DOC suggests a minimum flow of 90% of MALF (approximately 75 L/s) or as an alternative proposes a measured residual flow of 28 L/s. The applicant considers that applying a minimum flow of 90% would frustrate the exercise of the consent during the irrigation season. Tying the operation of the consent to the future Manuherekia River Minimum Flow is supported by the Council's Resource Science Unit and is the recommended approach.

8.2.3 Effects on Instream and Natural Values

With regard to the effects on the instream values of a surface water body, the following has been considered:

- the need for a residual flow at the point of diversion;
- the rate, volume, timing and frequency of water to be taken and used;
- the proposed methods of take;
- the need to prevent fish entering the intake and to locate new points of take to avoid adverse effects on fish spawning sites; and
- any effect on any Regionally Significant Wetland or on any regionally significant wetland value.

The creek presents as having clear water with gravels, cobbles and boulders present. No specific natural or ecosystem values have been identified in the RPW. The applicant notes that the Otago Regional Council's Fish & Flow Portal" shows the presence of upland bully, but there is no information as to flows or water temperature or water quality available in the portal. The most recent survey showed an abundance of upland bully, but no threatened or vulnerable native fish species.

The applicant consulted with Fish and Game prior to lodging the consent and who advised the applicant in emails dated March 2019 that:

- *Young of the year juvenile trout have been found in Mata Creek, implying spawning is occurring in the catchment.*
- *In 2011 there was a waterfall identified in the catchment which might be a barrier to fish passage. It looks like it would be at low flows at least. I believe it is directly below the loop road but do not know what state it is in currently. In 8 years it may have gotten better or worse.*
- *F&G teams electro fished the creek directly upstream of the bridge at around 2011–2013 and found large densities of upland bullies. One of these undertook an MCI assessment in a riffle at the same time and recorded a score of 114.*
- *Ross Dungey electro fished around your point of take recently and found lots of bullies too. When he electro fished higher in the catchment he found brown trout.*

The applicant has also observed that there are juvenile trout present at times in the head race and equalisation dam. With regard to the fish populations within Mata Creek, the applicant notes that the current exercise of all the takes appears to be providing a suitable environment for a healthy population of "Upland Bully" and small trout and this will continue under the proposed regime.

The diversion and taking of water can influence flows of a river thereby altering its natural character as well as adversely affect the amenity and ecosystem values associated with it. With regard to a residual flow, this can be imposed in accordance with Policy 6.4.7 of the RPW to provide for the aquatic ecosystem and natural character of the source water body. In this case, the residual flow is considered necessary to maintain these specific values in Mata Creek.

Mata Creek is characterised by the applicant as perennial. Flow modelling from the NIWA model Shiny indicates that a significant portion of this flow originates in the northern most branches of the creek, coming from hills near the St Bathans Range. Shiny identifies a gain of approximately 21 L/s between the point of take and Loop Road.

The applicant has proposed a visual residual flow of 28 L/s at the point of diversion. The applicant stated that due to the impracticalities and unfavourable conditions of installing a flow gauge at the point of take they do not propose to measure the residual flow.

A percentage of the MALF of a river is one method used to determine a residual flow. The applicant notes the MALF calculation using SHINY of 83 L/s but states that this does not take into account the upstream takes. The applicant recognises that the receiving environment does not include water takes that are granted for a finite term and might not be renewed or renewed on the same conditions (see *Ngāti Rangī Trust v Manawatu-Whanganui Regional Council*). This approach is supported by case law⁴.

However, the applicant also identifies an "effective" MALF at the point of take which is based on 83 L/s minus the 56 L/s authorised by 2002.503, 2002.504 and 2003.917. These consents expire in 2023. This figure equals 27 L/s and is close to the observed residual flow of 28 L/s, which is currently maintained. As noted above, RM11.013.02 is not exercised and is deemed to have lapsed, and, as such, does not form part of the applicant's "effective MALF" calculation.

⁴ *Ngāti Rangī Trust v Manawatu-Whanganui Regional Council* [2016] NZHC 2948 at [65]

The applicant advises that Mata Creek to the Manuherekia River is a gaining reach as calculated by SHINY and there are no water takes between the point of take and the confluence with the Manuherekia River.

As noted above, the applicant has offered a residual flow of 28 L/s which would be visually gauged. A residual flow of 28 L/s is supported by Council's Resource Science Unit, DoC and F and G as protecting the aquatic ecosystem and natural character of the source water body. The proposed residual flow is not opposed by Aukaha. The applicant has explored measuring the residual flow by installing a flow gauge but advises that there are insurmountable difficulties in accurately measuring any residual flow at the point of take as any measuring device will either silt up or blow out at the first fresh.

Council's Freshwater Ecologist, Ciaran Campbell, has assessed the issues surrounding measuring residual flow (see Appendix 2). Mr Campbell notes that:

The applicant has proposed that a residual flow of 28L/s immediately downstream of the point of take will allow provide for values within the creek. I believe the applicant and submitters have agreed to this residual flow condition, in principle, whilst expressing concern about how that residual flow condition is achieved, complied with and measured.

The residual flow condition of 28L/s is difficult to quantify and accurately measure. I have two suggestions for ways at which the applicant can achieve the residual flow condition and the regulator (ORC) can ensure compliance.

The first suggestion is for the applicant to install a flume into Mata Creek immediately downstream of the point of take, with a flow-rated stage gauge on the flume. ORC will be able to measure the flow in the flume to calibrate the stage gauge. Regular photographs, particularly during low-flows and months with high irrigation demands will show the flow through the flume provides a residual equal to 28L/s. The removal of gravels from the flume by the applicant will be required as part of the consent condition.

The second suggestion is: A residual flow further downstream (with limited surface water inflows and outflows) is a way of achieving the residual flow condition. It may not adhere strictly to the condition, but rather aims to achieve the purpose of the residual flow condition and I believe it is tangible, practical and measurable. As such, the method I propose is along the lines of:

A connected continuous residual flow must be maintained at all times downstream of the point of take, reaching as far down as the St Bathans Loop Road Bridge at approximately (NZTM) E1350152 N5024054. This point is upstream but within the vicinity of Mata Creek and Muddy Creek confluence.

Given, the challenges of installing an accurate measuring device, it is recommended that the second condition promoted by Mr Campbell be adopted to ensure that effects on instream values are mitigated at the point of diversion.

With regard to fish population, DoC raised concerns regarding the lack of information regarding fish populations within the water race. The instream values of the water race cannot be considered as water is only present within the water race by virtue of the consent holder operating under valid water permit. That said, with the by-wash discharge from the equalisation dam to cease, the connection to Station Creek will also cease and there is the potential for the

equalisation dam to become a sink and for fish to become trapped within the race system. All three submitters have identified the need for fish screening as close to the point of take as possible to prevent fish becoming stranded in the race or equalisation dam. RSU have also identified the need for fish screening.

The applicant proposed fish screening as part of the application but advised initially that a fish screen could not practicably be installed on the open race intake at the point of take noting the location of the water meter had to be located downstream of the point of take for a similar reason. The applicant initially advised that a fish screen will be installed at the pipe outlet from the downstream equalisation dam.

The applicant subsequently modified the application after consultation with submitters and now offers that a fish screen be erected in the open head race as close as practicable to the point of take but, in any case, upstream of the existing water measuring device (weir) in the race. The applicant also offers to adopt the fish screening condition of consent as suggested by Fish and Game in its submission, modified as required for an installation in an open race.

[X] A fish screen must be designed and installed that meets the following requirements:

- a) Water must only be taken when a fish screen with a mesh size or maximum slot width of 3 mm is operated and maintained across the full width of the water race as close to the intake point as reasonably practical to ensure that fish and fish fry are prevented from passing through the screen;*
- b) As far as possible, the screen area must be designed to ensure the calculated average through-screen velocity does not exceed 0.12 m/s if a self-cleaning mechanism is in place, or 0.06 m/s if no self-cleaning mechanism is in place;*
- c) the sweep velocity parallel to the face of the screen must exceed the design approach velocity; and*
- d) the screening material must have a smooth surface and openings that prevent any damage to fish coming into contact with the screen.*
- e) Prior to installation of any fish screen, a report containing final design plans and illustrating how the screen will meet the required design criteria and an operation and maintenance plan should be provided to the Consent Authority.*

[Y] The fish screen required by condition [X] must be maintained in good working order, to ensure that the screen is performing as designed. Records must be kept of all inspections and maintenance and these should be made available to the Consent Authority, on request.

I note that a fish screen will be installed on the new water pipe system installed to take the domestic and stock water above the point of take.

No effects on any Regionally Significant Wetland, inland wetland or groundwater body has been identified.

Based on the conditions offered by the applicant and the inclusion of the residual flow condition recommended by Mr Campbell, I have assessed the effects of the water take and diversion as acceptable on the instream and natural values.

8.3 Cumulative Effects

In accordance with Section 3 of the Act, the definition of 'effect' includes *any cumulative effect which arises over time or in combination with other effects*. There is no definition for 'cumulative effect' under the Act, other than what is outlined above. The Oxford English dictionary defines 'cumulative' as meaning 'having a result that increases in strength or importance each time more of something is added' and 'including all the amounts that have been added previously'. This case law advises that a cumulative effect is an effect that will occur as opposed to a 'potential effect' (*Dye v Auckland Regional Council* (2001) 7 ELRNZ 209 (CA)).

In respect of this application, I noted that Mata Creek is a tributary of the Manuherekia River where allocation is recognised as a significant issue due to the current consented abstraction significantly exceeding the primary allocation limit in Schedule 2A of the RPW.⁵ The Manuherekia River is in turn a tributary of the Clutha River – Mata Au and part of the Clutha River – Mata Au FMU – Manuherekia Rohe. Subject to the conditions offered by the applicant, the proposed take is not expected to have a cumulative effect on the wider Clutha River Catchment. However, I do have concerns regarding the cumulative effect on the Manuherekia Catchment due to the current level of allocation.

Policy 6.4.5(c) notes that the Schedule 2A minimum flow limits in the Manuherekia catchment area upstream of Ophir will not apply until there is a collective review of the consents in that catchment. The applicant offers to comply with any minimum flow regime imposed on the Manuherekia catchment area and in this regard, the applicant has acknowledged the cumulative effect of this take and sought to mitigate it. I recognise that the new Land and Water Plan, is expected to manage the allocation issues in the catchment, and in this regard, it is important that any new consent issued does not frustrate the transition to any future management of the catchment determined by Land and Water Plan. That said, the applicant offers a review condition to manage the cumulative effects and given the primary allocation status of the take, the reduction in volume of water taken, and the current policy framework, I consider this to be an appropriate approach to manage cumulative effects.

In respect of the cumulative effects on Mata Creek itself, the proposed take is assessed as primary allocation and there are no other consented water users downstream of the applicant's take on Mata Creek. The upstream takes are set to expire in 2023. These takes are shown in Image 6 in the following section of this report. The proposal represents an overall reduction in volume of water taken when compared to that currently allocated. It is assessed that in respect of this take, there are no more than minor cumulative effects in relation to the abstraction of water from a volumetric point of view on Mata Creek itself.

There is a need to take a ki uta ki tai approach to this application. Given that the applicant has offered to operate the consent in accordance with any future minimum flow regime for the Manuherekia River and proposes a reduction in allocation overall, it is assessed that the water take will operate as part of the wider catchment and will be subject to any management regime imposed under the future Land and Water Plan.. With this approach, I have assessed that the cumulative effects of the proposal will be no more than minor.

8.4 Effects on Other Water Users

⁵ Skelton, Peter (2019) *Investigation of Freshwater Management and Allocation Functions at Otago Regional Council – Report to the Minister for the Environment*. Wellington: Ministry for the Environment.

The applicant is the last take on Mata Creek and no downstream users will be adversely affected by the proposal. The takes above the subject take include the St Bathans Water Board Incorporated takes (2002.503, 2002.504 and 2003.917), which is used in part for communal water supply. These takes are from Middle Creek and Waterfall Creek and require a 10 L/s residual flow on Middle Creek and 2 L/s residual flow on Waterfall Creek. The location of the other water permits in the catchment are shown on Image 10 below.

The applicant states that the take held by Southern Lakes Holdings Limited (RM11.013) has not been exercised and is deemed to have lapsed. A water metering audit undertaken by ORC for RM11.013.02 confirms that the permit has not been exercised. Deemed Permit 96208 (the deemed permit the applicant is seeking to replace) currently has priority over Water Permits 2002.503, 2002.504 and RM11.013.02. No permit or other water take has priority over Deemed Permit 96208.

Overall, no conflicts in the taking of water have been identified as the applicant is the last water user on Mata Creek.

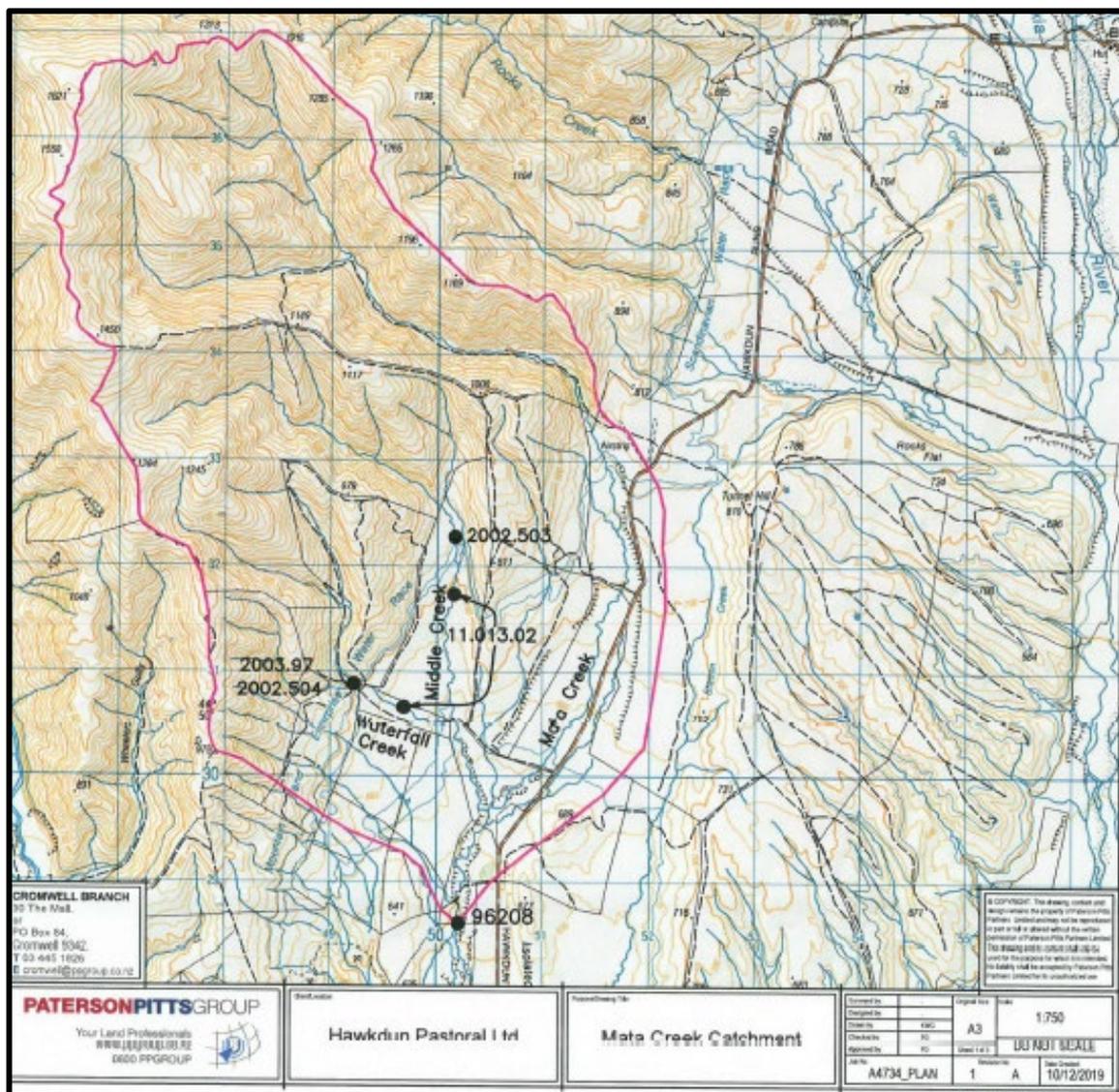


Image 6: Location of other water take in the Mata Creek Catchment (source RM19.399 application)

8.5 Effects on Cultural Values

Kāi Tahu has a cultural, spiritual, historic and traditional relationship with the Clutha/Mata-au Catchments / Te Riu o Mata-au. The Clutha/Mata-au Catchments and its headwaters were the traditional focus of seasonal migrations for many of the hapū and whānau living in the Araiteuru/Coastal Otago. Its vast length, many tributaries and three large roto at its headwaters, fed by the mauka in Kā Tiritiri o Te Moana/Southern Alps, had much to offer Kāi Tahu. The Clutha/Mata-au Catchments was therefore highly valued by all the different hapū and their whānau who used it. The use of these Catchments was a focus of our very distinctive seasonal lifestyle.

The Clutha/Mata-au River was part of ara tawhito, mahika kai trail that led inland. Mahika kai sourced from the Clutha/Mata-au Catchment includes indigenous ika and manu such as:- tuna, kanakana, kōkōpu, moa, inaka and weka. The Clutha/Mata-au River gave access to wide inland ngahere clad plains and to the roto and mauka beyond.

The primary management principle for Ngā Rūnanga is the maintenance and enhancement of the mauri or life-giving essence of a resource. Mauri can be tangibly represented in terms of elements of the physical health of the land, a river, or surrounding biodiversity. The forest, waters, the life supported by them, together with natural phenomena such as the mist, wind and rocks, possess a mauri or life-force. While there are also many intangible qualities associated with the spiritual presence of a resource, elements of physical health which Ngā Rūnanga use to reflect the status of mauri and to identify the enhancements needed include:

- Aesthetic qualities e.g. natural character and indigenous flora and fauna;
- Life supporting capacity and ecosystem robustness;
- Fitness for cultural usage

A resource's mauri is desecrated if it no longer supports the traditional uses and values. A water body or other natural resource can be desecrated by improper resource management activities. These may extinguish the mauri and in turn diminish the association upon which a range of values are based, including mahika kai, for Ngā Rūnanga who hold traditional rights and responsibilities in respect to the resource.

Across the rohe, one of the principle indicators by which Ngā Rūnanga assesses the mauri of a resource is its productivity and the food and other materials sourced from it. Hence Ngā Rūnanga use the nature and extent of mahika kai as an environmental indicator. If the mauri of an entity is desecrated or defiled, the health and well-being of the resource itself, resource users and others depending on the resource are at risk.

As stated in the submission by Aukaha, Ngā Rūnanga are not confident in the current regional planning framework, and therefore request a short-term consent that allows for a new regional planning framework to be established before a longer term consent is applied for by the applicant. Iwi have been involved in the consent process, by being considered an affected party to the application. The cultural values have been identified within their submission. The other matters

sought in the submission in respect of fish screens and monitoring are addressed by way of conditions offered by the applicant. Ngā Rūnanga have also adopted a neutral stance on the residual flow of 28 L/s. As such, the only outstanding matter to address the cultural matters as identified in the submission is the term of consent which is addressed later in this report.

With regard to ki uta ki tai, freshwater, and land use and development, in catchments be managed in an integrated and sustainable way to ensure the health and well-being of water bodies, freshwater ecosystems, and receiving environments. I consider that, in its offer to link the take to the flows in the Manuherekia River, the application recognises the interconnectedness of the whole environment, and the interactions between freshwater, land, water bodies, ecosystems, and receiving environments. Implementation of Plan Change 8 to the RPW and the NES for Freshwater will also manage interrelated effects from the activity. It is also recognised that the Mata Creek is not connected to any known groundwater system and in this regard no water quality effects on ground water are anticipated.

To this end, I consider that the matters raised in the submission relating to cultural matters are largely addressed and the effects on cultural values are considered to be acceptable.

8.6 Water Use Assessment

Water use assessment considers what the applicant has applied for, their historic use and what is considered efficient. The applicant is proposing to take and use the water for a variety of uses including irrigation, stock water, and domestic supply.

8.6.1 Historic Water Assessment

In respect of actual water use, water use was analysed by the ORC's data analyst (see Appendix 8) who found that:

Data for water taken through WM0961 extends from 7 August 2013 through to 18 March 2020 with a total of 43,025 hourly measurements. It was noted as part of the initial review of the data for this application that:

- The data prior to 26 January 2015 and after 22 Feb 2019 were very noisy with many and frequent spikes.
- Data between 1 Feb 2015 and 1 April 2017 are suspect
- Data between 1 April 2017 and 22 Feb 2019 were largely missing.

Overall, this leaves a little over two seasons of useful data available for interpretation, which is likely to result in significant uncertainty in any conclusions made from it.

Before the data was analysed, the following steps were taken:

- Rates less than, or equal to zero were set to NA.
- The maximum average rate of take authorized by the permit this application seeks to replace is 55.6 L/s and water is taken through an open channel. A 10% margin of error was applied to this, and rates in excess of 61.2 L/s were set to NA to reflect that any water taken above this rate was illegal and unconsented.
- Rates between 55.6 L/s and 61.2 L/s were set to 55.6 L/s to reflect that this was the maximum rate of take that could be taken under the deemed permit.
- The resultant data set had 42,230 hourly measurements

A time series showing the pump rate is presented below:

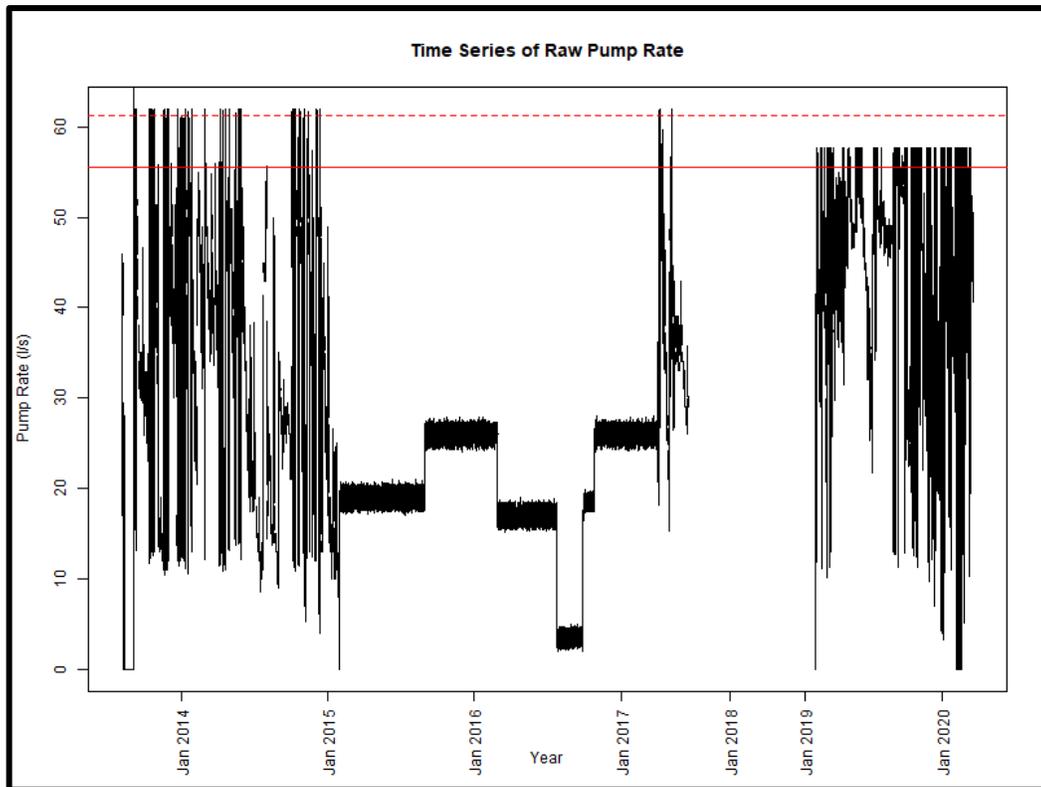


Image 7: Time series showing the pump rate

The solid red line represents the consented maximum rate of 55.6 L/s, and the broken red line represents 55.6 L/s + 10%. The timeline illustrates the unreliable and short nature of the dataset.

The 80th, 90th, and 95th percentiles for the flow rate were calculated, without modelling the distribution, for the raw data set, the filtered data set, and the high rate data set. The results are presented to three significant figures below as Table 4.

Table 4: 80th, 90th, and 95th percentiles for the flow rate

	80th %ile	90th %ile	95th %ile
Raw rate	46.5	52.2	56
Filtered rate	46.4	52	55.5
High use rate	46.4	53	55.6

The maxima for the period 1 July 2012 to 30 June 2017 are presented below:

Table 5: Maxima for the period 1 July 2012 to 30 June 2017

2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
No Data	55.6	55.6	27.9	55.6

It should be noted that the data between 1 Feb 2015 and 1 April 2017 explain the reduced annual maximum for the 2015/2016 irrigation season.

Overall, the water data analysis found that:

- Any seasonal variations are being obfuscated by the combination of missing and low quality data.
- Due to the small amount of available, useful data there may be significant uncertainties in any conclusions based on it.
- The maximum volume taken in any day is 4,800 m³.
- The maximum volume taken in any month is 134,000 m³
- The maximum volume taken in any irrigation year is 965,600 m³
- The applicant has applied for:
 - 56 L/s
 - 4,800 m³/day
 - 148,800 m³/month
 - 800,460 m³/year
- The average maximum rate of take is 48.7 L/s, however, this includes the data missing from the period 1 Feb 2015 and 1 April 2017 which has been identified as suspicious.
- Excluding the data from the period 1 Feb 2015 and 1 April 2017, the average maximum rate of take is 55.6 L/s.
- The lowest rate at which water can be taken and still in the range 55.6 ±10% is 50.5 L/s.
- All 90th and 95th percentiles exceed 50.5 L/s, as does the maximum average rate.
- The rates and volumes applied for can be considered to represent the data available.

While the incomplete data set introduces some uncertainties, I consider that, overall, the rates and volumes applied for align with what has been taken historically and the application is in accordance with Policy 6.4.2A as the applicant does not seek to take more water than has been taken under the existing consent in at least the preceding five years.

8.7 Efficiency of Water Take and Use

Policy 6.4.0A of the RPW requires that the quantity of water granted to take is no more than that required for the purpose of use taking into account the local climate, soil, crop or pasture type and the efficiency of the proposed water transport, storage and application system. The Council commissioned a report by Aqualinc Research Ltd (Aqualinc) entitled "*Water Requirements for Irrigation Throughout the Otago Region*", dated October 2006, to assess water volumes required to efficiently irrigate pasture and crops. This report was updated in July 2017.

Aqualinc developed a water-balance computer model that was used to estimate soil moisture levels over a 42-year period. This model takes into account the local climate, the types of soils, crop types and the irrigation system. The irrigation strategy meets a specific irrigation objective, being that production levels were to be maintained close to maximum for most of the time, and that even in the driest of conditions sufficient water would still be available to sustain plant growth.

The land area of the Otago region was divided into four main zones (Central and Lakes District, Coastal and South Otago, Maniototo and North Otago) based on geographical distribution and

climatic conditions; primarily evapotranspiration and temperature. These four zones are further divided into rainfall sub-zones using mean annual rainfall (MAR), as irrigation demand is primarily dependent on rainfall.

The soil type of an area and the rooting depth of a crop or pasture affect plant available water (PAW). PAW is the amount of water that a soil can store that is available for plants to use. Six soil PAW classes have been specified and soil data for each site can be obtained from the S-Map database (Landcare, 2014), the New Zealand Fundamental Soil Layer (NZFSL) (Landcare 2000) or a site-specific soil investigation.

The applicant proposes to take 56 L/s for irrigation, stock water and domestic water as follows:

Table 6: Proposed Water Use

Table	Proposed Water Use			
	Use	L/S	m3/day	m3/month
Irrigation	55.6	4763.5	147,670	787,500
Domestic & Stock Water	0.4	36.5	1130	12,960
Total	56	4800	148,800	800,460

The timing of the take was raised as a matter of concern in the submissions and the applicant has confirmed that irrigation water will only be taken during September and March in any given year. The remainder of the time, water will only be taken for stock water and domestic water supply.

8.7.1 Irrigation

The applicant has undertaken a calculation of the proposed water use for irrigation of pasture against the recommendations set out in the Aqualinc report. The applicant has confirmed all irrigation is existing and that no new areas of irrigation are proposed under this application. The application identifies the area as being within the Central and Lakes District and uses a MAR of 550 and PAW of 40 to make their assessment. These assumptions are considered acceptable. In making an assessment of efficiency, a 90th percentile for the annual demand calculation is used.

Table 7: Summary of Applied for Water vs Aqualinc Recommendations

	Applied for by Applicant	As recommended by Aqualinc
Total volume per month	147,670 m ³ / month	153,900 m ³ / month
Maximum take rate	55.6 litres / second (continuous 24 hour take rate)	57.29 litres / second (continuous 24 hour take rate)
Irrigation period	15 September to 15 March (6 months)	8 months
Irrigated area	90 hectares	90 hectares

Total volume per season	787,500m ³ / season	706,500 m ³ /season (90 th percentile)
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The proposed volume per month and rate of take is in line with the Aqualinc calculations. The applicant proposes a six-month irrigation season compared to the eight months given by Aqualinc, however, the proposed seasonal take is more than the 90th percentile volume given by Aqualinc. It is recommended that the 90th percentile Aqualinc seasonal volume is imposed as a condition of consent along with the maximum annual requirements for stock water and domestic supply.

8.7.2 Stock Water and Domestic Supply

The applicant farms 4,000 sheep and 300 cattle on the property. ORC guidelines advise that 5 litres/head/day for sheep and 45 litres/head/day for beef cattle is efficient values for stock water. Based on water requirements per head of animal, the table below summarises the daily volume of water that is considered reasonable for consumption by the applicants' stock.

Table 8 : Total stock numbers and water requirements per day

Animal	Total number	Water requirements per head per day (L)	Total water requirements per day (L)
Beef cattle	300	45	13,500
Sheep	4,000	5	20,000
Total	3,400	50	33,500

The applicant also takes 3 m³ of water per day for domestic supply (1 October - 31 March and 1 m³ per day in winter (1 April to September) as a permitted activity pursuant to Rule 12.1.2.1. The applicant notes that the total water take cannot exceed the existing deemed permit allowance.

It is noted that the method to supply domestic and stock water will change as a result of this proposal. Currently, stock and domestic supply is taken from the by-wash race which runs between the equalisation dam and Station Creek, with up to 28 L/s flowing down this race when irrigation is not occurring, including during the winter. As noted previously, the applicant proposes to install a pipeline at the point of take for stock and domestic water, meaning that only irrigation water will be taken to the equalisation dam and the by-wash to Station Creek will cease. The applicant has sought a period of five years to establish the stock and domestic water pipeline. However, given the rate and volume of by-wash to Station Creek, it is recommended that this time frame be shortened to two years.

The installation of the pipe at the point of take is considered to be a more efficient system than the current system which generates a by-wash to Station Creek. Furthermore, the rate and volume of water taken for stock and domestic water is considered to be an efficient use.

Table 9: Total Volumes Recommended

Use	Rate L/s	Daily Volume m³	Monthly Volume m³	Yearly/ Seasonal Volume m³
Irrigation	55.6	4763.5	147,670	706,500
Stock water and Domestic Supply	0.4	36.5	1,131	13,322
Total	56	4800	148,801	719,822

8.8 Efficiency of Water Transport, Storage and Application System

The water is diverted from the main bed of Mata Creek via a gravel bar into a 250m long diversion channel to a culvert intake. The diversion channel then diverts any water not taken at the culvert intake back into Mata Creek. The culvert intake delivers the take water to an open distribution water race. The taken water then travels via an open race to an equalisation dam. This dam is not used for storage as such, rather it is used to ensure there is sufficient pressure head for the piped “k-line” reticulation system. No other storage capacity is within the applicant’s irrigation system. The water will be used on land within the immediate area of the Mata Creek catchment.

At an equalisation dam, the water is split into irrigation water and stock and domestic water. The irrigation water is carried within a pipeline to 90 ha of land irrigated via a k-line irrigation system.

Currently stock water and domestic water is carried through an open race and is diverted into a piped stock water scheme and for domestic water supply to the Hawkdun Station Homestead. Excess water for this component of the take discharges into Station Creek. The applicant proposes to replace the open race, below the equalisation dam, with a piped network, which will be established at the point of take in Mata Creek. As such, the by-wash discharge to Station Creek is to be discontinued.

According to Irrigation New Zealand open channels can cause more trouble in operating an irrigation system than any other conveyance method if not designed and maintained correctly. The water races are unlined which causes losses due to seepage and have evaporation losses (up to 10%) and are therefore not the most efficient form of transport.

The ORC compliance officer has confirmed that the supply infrastructure is in good working order but at the time of inspection raised concerns as to whether the water is efficiently being used for stock water and domestic water purposes as a large portion of this water is discharged to Station Creek directly. Currently, there is a continuous flow along the by-wash race to Station Creek with this flow being as much as 28 L/s during periods where irrigation is not occurring. From this by-wash race, 0.4 L/s of water for domestic and stock water is taken. This is considered to be an inefficient use of water for these purposes and not be in accordance with Policy 6.4.0A.

As noted above, the consent holder has proposed that within five years they will replace this stock water/domestic supply race with a pipe installed at the point of take at Mata Creek. This will ensure the discharge to Station Creek will cease in the future. Given the inefficiencies associated with the Station Creek by-wash, it is recommended that a condition of consent be imposed which requires the applicant to install this stock water/domestic pipe within two years of the consent being granted.

8.9 Alternative Water Sources

The RPW promotes the management of water in a way that enables continued access to suitable water, ensuring communities can provide for their social, cultural and economic wellbeing, now and for the future. It achieves this by requiring consideration of whether the applied for source of

water is the nearest practicable given the proposed location of use including whether the take and use of the water is an efficient use of the water resource, whether there is another practically available and accessible water source, and the wider benefits (economic, social, environmental and cultural) of taking from the water source applied for compared to taking water from other sources (Policy 6.4.0C).

The water is to be taken from Mata Creek which is part of the Manuherekia Catchment. The Manuherekia catchment is fully allocated and no alternative water source is available. The applicant's take is the last water take on Mata Creek before the confluence with the Manuherekia River. Overall, the applicant has identified that the proposed water source is the nearest practicable.

8.10 Water Take and Use Management

Water Management Groups are voluntary. They provide flexibility for two or more consent holders to cooperate in exercising their consents, but without the added formality associated with a water allocation committee. In this instance, there are only two effective water users on Mata Creek.

However, the applicant does offer to operate the consent in accordance with any current or future minimum flow regime for the Manuherekia River catchment. It is recommended that this offer be accepted and a condition of consent is recommended that requires the applicant to operate in accordance with any Council approved rationing regime.

9. Section 104 Evaluation

Section 104 of the Act sets out the matters to be considered when assessing an application for a resource consent. These matters are subject to Part 2, the purpose and principles, which are set out in Sections 5 to 8 of the Act.

The matters of Section 104(1) to be considered when assessing an application for a resource consent are:

- (a) *the actual and potential effects on the environment of allowing the activity;*
- (ab) *any measure proposed or agreed to by the Applicants for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity;*
- (b) *any relevant provisions of a national environmental standard, other regulations, a national policy statement, the pRPS, PORPS, the Regional Plan: Water (RPW) and PPC7; and*
- (c) *any other matter the Council considers relevant and reasonably necessary to determine the application.*

9.1 S104(1)(ab)

The applicant has not proposed or agreed to any measures to offset or compensate for adverse effects that will or may result from allowing the activity.

9.2 S104(1)(b) Relevant Planning Documents

The relevant planning documents in respect of this application are:

- The National Environmental Standard for Sources of Human Drinking Water

- Resource Management (National Environmental Standards for Freshwater) Regulations 2020
- The National Policy Statement for Freshwater Management 2020
- Resource Management (Measurement and Reporting of Water Takes) Regulations 2010
- The Proposed Regional Policy Statement and Partially Operative Regional Policy Statements
- The Regional Plan: Water for Otago
- Proposed Plan Change 7 (Water Permits) (PPC7)

9.3 National Policy Statement Freshwater Management 2020

The National Policy Statement Freshwater Management 2020 (NPS-FM) replaces the National Policy Statement for Freshwater Management 2014 (as amended in 2017). It came into force on 3 September 2020. The NPS-FM 2020 strengthens the concept of Te Mana o te Wai. This 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. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community. Page 38 of 106 The NPS-FM 2020 sets out that Te Mana o te Wai encompasses 6 principles relating to the roles of tangata whenua and other New Zealanders in the management of freshwater, and these principles inform the NPS-FM 2020 and its implementation. The 6 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.

There is a hierarchy of obligations in Te Mana o te Wai that is set out in the single objective of the NPS-FM 2020. The objective is to ensure that natural and physical resources are managed in a way that prioritises: first, the health and well-being of water bodies and freshwater ecosystems, second, the health needs of people (such as drinking water) and third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. When applying Te Mano o te Wai in the context of this objective, when the wai is healthy, so are the people. This is because to Kai Tahu, the condition of water is seen as a reflection of the condition of the people.

The relevant question under the NPSFM is whether the proposed activity will first, prioritise the health and well-being of the particular water body and freshwater ecosystem. In this case, the proposal will maintain the health and well-being of the water bodies (Mata Creek) and associated

freshwater ecosystems by the reduction in current allocation and the provision of residual flows which will ensure that instream and natural values are provided for. The water take provides for the applicant to provide for his economic wellbeing and that of his family and employees and in this regard provides for their ongoing health and wellbeing.

The relevant policies of the NPS-FM 2020 are detailed below and assessed:

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 4: Freshwater is managed as part of New Zealand's integrated response to climate change.

Policy 5: Freshwater is managed through a National Objectives Framework to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.

Policy 6: There is no further loss of extent of natural inland wetlands, their values are protected, and their restoration is promoted.

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

Policy 8: The significant values of outstanding water bodies are protected.

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 12: The national target (as set out in Appendix 3) for water quality improvement is achieved.

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

In respect of Te Mana o te Wai the NPS-FM directs that every regional council must engage with communities and tangata whenua to determine how Te Mana o te Wai applies to water bodies and freshwater ecosystems in the region. I note that this has not yet occurred for the Otago Region.

The NPS-FM requires regional councils to give effect to Te Mana o te Wai, and in doing so regional councils must:

- (a) actively involve tangata whenua in freshwater management (including decision-making processes);
- (b) engage with communities and tangata whenua to identify long-term visions, environmental outcomes, and other elements of the NOF; and
- (c) apply the hierarchy of obligations when developing long-term visions, implementing the NOF and developing objectives, policies, methods, and criteria for any purpose under subpart 3 relating to natural inland wetlands, rivers, fish passage, primary contact sites, and water allocation; and
- (d) enable the application of a diversity of systems of values and knowledge, such as matauranga Maori, to the management of freshwater; and
- (e) adopt an integrated approach, ki uta ki tai, to the management of freshwater.

The NOF process requires regional councils to undertake the following steps:

- (a) identify FMUs in the region,
- (b) identify values for each FMU,
- (c) set environmental outcomes for each value and include them as objectives in regional plans,
- (d) identify attributes for each value and set baseline states for those attributes,
- (e) set target attribute states, environmental flows and levels, and other criteria to support the achievement of environmental outcomes,
- (f) set limits as rules and prepare action plans (as appropriate) to achieve environmental outcomes.

At each step the Council must engage with the community and tangata whenua and apply the hierarchy of obligations in Te Mana o te Wai.

The ORC has identified FMUs in the region and this take is part of the Clutha River/Mata-Au FMU and the Manuherekia Rohe. The Council is in the early stages of identifying the values for this FMU. Council will undertake the remaining steps in the NOF process in upcoming years and plans to notify the Land and Water Plan in accordance with the NPS-FM 2020 in late 2023. This will set the limits that apply to these catchments. The application of these limits to this activity will be considered when this replacement permit is replaced (should consent be granted) or as part of a review of consent conditions, or both.

In respect of Policy 3, ki uta ki tai is a relevant concept and requires that local authorities must: recognise the interconnectedness of the whole environment, from the mountains and lakes, down the rivers to hāpua (lagoons), wahapū (estuaries) and to the sea; and recognise interactions between freshwater, land, water bodies, ground water systems, ecosystems, and receiving environments; and manage freshwater, and land use and development, in catchments in an integrated and sustainable way to avoid, remedy, or mitigate adverse effects, including cumulative effects, on the health and well-being of water bodies, freshwater ecosystems, and receiving environments; and also encourage the co-ordination and sequencing of regional or urban growth.

The effects the takes have on Mata Creek have been considered as have the effects on the Clutha River/Mata-Au catchment. Recommended conditions, if consent were to be granted, require water use to be efficient, which are expected to minimise associated water quality effects in the wider catchment. Implementation of Plan Change 8 to the RPW and the NES for Freshwater will also manage interrelated effects from the activity.

The effects on the Manuherekia Catchment have also been discussed above and the proposed review conditions to manage cumulative effects and reduction in allocated volumes are considered appropriate under the current planning framework. However, it is important that this consent, should it be granted, does not frustrate the transition to any future management of the catchment determined by Land and Water Plan. This matter is discussed further in the reasons for the consent term sought are discussed later in section 10 of this report (Policy 2).

In respect of the other policies, tangata whenua have been involved in the consent process by being considered an affected party and Māori freshwater values have been identified within their submission. Not all of the relief within their submissions has been provided for notably in respect of minimum flows and term. Minimum flows will be established as part of a new Land and Water Plan.

The proposal will not result in the loss of natural inland wetlands nor is there any information to suggest that natural inland wetlands will be adversely affected by the activities (Policy 6). The takes will maintain river values (the residual flows and management of Mata Creek will maintain habitat availability for invertebrates and fish) (Policy 7).

Policy 8 requires that the significant values of outstanding water bodies are protected. In this instance, the reduction in volume taken from Mata Creek as proposed by the applicant will result in a lessening of any adverse effects on the Manuherekia River. As such, the proposal will contribute to the overall protection of the existing significant values of the river until such time as a new policy framework provides for greater protections as determined appropriate. The activities as proposed are not expected to adversely affect the habitats of indigenous freshwater fish species and the habitat of trout will be protected, given the mitigation proposed (residual flow) (Policy 8 and 9). Future overallocation is avoided as the proposal sees a reduction in volume overall and water will be used efficiently in accordance with best practice (Policy 11).

In terms of water allocation, the NPS-FM 2020 directs that every regional council must make or change its regional plan(s) to include criteria for deciding applications to approve transfers of water take permits; and deciding how to improve and maximise the efficient allocation of water (which includes economic, technical, and dynamic efficiency). Further, every regional council must include methods in its regional plan(s) to encourage the efficient use of water. It is recognised that these policies and methods will be developed as part of the Land and Water Plan. These applications have been assessed in accordance with the existing objectives and policies and efficiency of water use has been considered. Recommended conditions, if the consents were to be granted, require ongoing improvement to the efficiency of water distribution and use during the consent term.

Subject to the recommended conditions and consent duration, I am satisfied that the application is prioritising the health and wellbeing of the waterbody over the ability of people and communities to provide for their social, economic, and cultural well-being.

9.4 Resource Management (National Environmental Standards for Freshwater Regulations 2020

With regard to the NESFW, the diversion and water take do not occur within 100m of a natural inland wetland. All land forms within the area of the diversion and point of take are modified pasture land.

Regulation 58 seeks to manage the effects on the passage of fish from the placement, use, alteration, extension, or reconstruction of certain structures in, on, over, or under the bed of any river or connected area. Regulation 60 states that this subpart this does not apply to any structure in, on, over, or under the bed of any river or connected area if the structure was in the river or connected area at the close of 2 September 2020, and includes any later alterations or extensions of that structure. This exemption relates to the culvert intake.

Overall, it is considered that the proposal does not trigger the NESFW.

9.5 Resource Management (Measurement and Reporting of Water Takes) Regulations 2010

Accurate, complete and current water information is a critical building block in establishing a water management system in which water is effectively allocated and efficiently used.

The applicant states that measuring and reporting of the irrigation take will continue in compliance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 but states that the water take for the domestic and stock water falls below the threshold for any water metering at 0.4 L/s. I note that the new domestic and stockwater pipeline intake will be positioned before the water passes the water meter location.

The ORC compliance officer notes that the applicant has monitored their rate and volume of take under WM9061 since August 2013 but notes that data reliability is low between January 2015 to June 2017 and no records were supplied between June 2017 and February 2019. This data reliability has been discussed earlier in this report. The officer also notes that the applicant discharges abstracted water to the stock water races on the farm. An audit was undertaken on 28 November 2019 (ORC Document Reference A1312510) and this audit was graded non-compliant as the location of take was too far from the original deemed permit location. The audit was also graded non-compliant as the consent holder had historically abstracted more than their hourly allocation during the 1 June 2014 to 7 January 2020 period. Furthermore, data records were incomplete during 1 June 2017 to 20 February 2019.

The ORC compliance officer considers that the water records supplied by the consent holder are not reflective of the current use. The applicant currently discharges half of their take to Station Creek directly, although it is noted that this is to cease within two years as recommended, should consent be granted.

The applicant currently measures the water taken via telemetry and this is to continue under this consent. Overall, a condition of consent will require the water take will be recorded and reported on in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010.

The regulations apply to holders of water permits (resource consents) which allow fresh water to be taken at a rate of 5 litres/second or more, specifically:

- Regulation 8 - Permit holder must provide records and evidence to regional council

The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 have been amended by the Resource Management (Measurement and Reporting of Water Takes) Amendment Regulations 2020, which came into effect on 3 September 2020. These regulations introduce a staged timeline requiring holders of consents for more than 20 litres per second to measure their water use every 15 minutes, store their records, and electronically submit their records to the Council every day by 3 September 2022. These regulations are required to be complied with by consent holders regardless of whether they are included in a consent condition. Recommended conditions (if consent were to be granted) bring water use measurement in line with what is required and require them to provide abstraction data records in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and 2020 Amendments.

9.5 National Environmental Standard for Sources of Human Drinking Water

Regulations 7 and 8 of the National Environmental Standard for Sources of Human Drinking Water (NES) need to be considered when assessing water permits that have the potential to affect registered drinking water supplies that provide 501 or more people with drinking water for 60 or more calendar days each year. The Omakau Water Supply Scheme takes water from the Manuherekia River. The proposed take is a considerable distance upstream of the Omakau Water Supply. The take is therefore not expected to have any adverse effects on the drinking water take.

9.6 Regional Policy Statement, Proposed Regional Policy Statement and Partially Operative Regional Policy Statement

The Regional Policy Statement for Otago (RPS) provides an overview of Otago's resource management issues, and ways of achieving integrated management of natural and physical resources. The provisions of Chapter 6 (Water) are relevant to this application. The taking of water is consistent with the policies of the RPS, provided that it is done in a conservative manner that does not adversely affect instream biota, natural character, or other lawful water users. It is noted that the RPW gives full effect to the provisions of the RPS, therefore given the applications are consistent with the provisions of the RPW, it is also consistent with the RPS.

The proposed Regional Policy Statement (pRPS) was notified on 23 May 2015 and a decision was released 1 October 2016. Significant weight can be given to the pRPS as it is substantially through the statutory process. The pRPS was made partially operative on the 14 January 2019 (PORPS), with the exception of all provisions and explanatory material in Chapter 3: Otago has high quality natural resources and ecosystems. The provisions that are the subject of court proceedings and are not made operative are shaded in grey below. Full consideration is given to the operative provisions of the PORPS. Weighted consideration is given to the provisions that have not been made operative in conjunction with the remaining operative provisions of the RPS, outlined above. The relevant provisions of the pRPS/PORPS include:

- *Provide for the economic wellbeing of Otago's people and communities by enabling the resilient and sustainable use and development of natural and physical resources (Policy 1.1.1)*
- *Provide for social and cultural wellbeing and health and safety by recognising and providing for Kāi Tahu values; taking into account the values of other cultures; taking into account the diverse needs of Otago's people and communities; avoiding significant adverse effects of activities on human health; promoting community resilience and the*

need to secure resources for the reasonable needs for human wellbeing; promoting good quality and accessible infrastructure and public services (Policy 1.1.2)

- *Achieve integrated management of Otago's natural and physical resources (Policy 1.2.1)*
- *Taking the principles of Te Tiriti o Waitangi into account including by involving Kāi Tahu in resource management processes implementation, having particular regard to the exercise of kaitiakitaka and taking into account iwi management plans (Policy 2.1.2)*
- *Managing the natural environment to support Kāi Tahu wellbeing (Policy 2.2.1)*
- *Recognise and provide for the protection of sites of cultural significance to Kāi Tahu including the values that contribute to the site being significant (Policy 2.2.2)*
- *Enable Kāi Tahu relationships with wāhi tupuna by recognising that relationships between sites of cultural significance are an important element of wāhi tupuna and recognising and using traditional place names (Policy 2.2.3)*
- *Managing for freshwater values including*
 - *Maintain or enhance ecosystem health in all Otago aquifers, and rivers, lakes, wetlands, and their margins*
 - *Maintain or enhance the range and extent of habitats provided by fresh water, including the habitat of trout and salmon*
 - *Recognise and provide for the migratory patterns of freshwater species, unless detrimental to indigenous biological diversity*
 - *Avoid aquifer compaction and seawater intrusion in aquifers*
 - *Maintain good water quality, including in the coastal marine area, or enhance it where it has been degraded*
 - *Maintain or enhance coastal values*
 - *Maintain or enhance the natural functioning of rivers, lakes, and wetlands, their riparian margins, and aquifers*
 - *Maintain or enhance the quality and reliability of existing drinking and stock water supplies*
 - *Recognise and provide for important recreation values*
 - *Maintain or enhance the amenity and landscape values of rivers, lakes, and wetlands*
 - *Control the adverse effects of pest species, prevent their introduction and reduce their spread*
 - *Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion*
 - *Avoid, remedy, or mitigate adverse effects on existing infrastructure that is reliant on fresh water (Policy 3.1.1)*
- *Ensure the efficient allocation and use of water (Policy 3.1.3)*
- *Manage for water shortage by*
 - *Encouraging collective coordination and rationing of the take and use of water when river flows or aquifer levels are lowering, to avoid breaching any minimum flow or aquifer level restriction*
 - *Encouraging water harvesting and storage, to reduce demand on water bodies during periods of low flows (Policy 3.1.4)*
- *Identify and protect outstanding freshwater bodies (Policy 3.2.13 & 3.2.14)*
- *Identify and protect the significant values of wetlands (Policy 3.2.15 & 3.2.16)*

- *Apply an adaptive management approach, to avoid, remedy or mitigate actual and potential adverse effects that might arise and that can be remedied before they become irreversible (Policy 5.4.2)*
- *Apply a precautionary approach to activities where adverse effects may be uncertain, not able to be determined, or poorly understood but are potentially significant (Policy 4.4.3)*
- *Consider the offsetting of indigenous biological diversity, when:*
 - *Adverse effects of activities cannot be avoided, remedied or mitigated;*
 - *The offset achieves no net loss and preferably a net gain in indigenous biological diversity;*
 - *The offset ensures there is no loss of rare or vulnerable species;*
 - *The offset is undertaken close to the location of development, where this will result in the best ecological outcome;*
 - *The offset is applied so that the ecological values being achieved are the same or similar to those being lost;*
 - *The positive ecological outcomes of the offset last at least as long as the impact of the activity*

The continued use of water will enable the applicant to continue to irrigate their land, resulting in their own economic wellbeing. Cultural and Kai Tahu values have been considered and Aukaha on behalf of Nga Runanga were considered affected in accordance with Section 95E of the Act. Freshwater values have been considered in this report, and the adverse effects of them are considered to be acceptable subject to conditions of consent. Technical advice advises that the residual flow will maintain the natural character and aquatic values of Mata Creek. The volumes sought have been compared with the Aqualinc recommendations and are considered an efficient use of water. Water sought also does not exceed what has historically been taken, the by-wash to Station Creek will cease and the proposed reduction in the seasonal allocation is considered a positive environmental change.

For the above reasons the applications are considered consistent with the provisions of both the RPS and PO-RPS.

9.7 Regional Plan: Water for Otago

9.7.1 Rule Assessment

Taking and use of surface water as primary allocation applied for prior to 28 February 1998 in the following Schedule 2A catchment, shown on the B-series maps:

- (i) *This rule applies to the taking of surface water, as primary allocation, in the above catchment areas, if the taking was the subject of a resource consent or other authority:*
 - (a) *Granted before 28 February 1998; or*
 - (b) *Granted after 28 February 1998, but was applied for prior to 28 February 1998; or*
 - (c) *Granted to replace a resource consent or authority of the kind referred to in paragraph (a) or (b).*
- (ii) *Unless covered by Rule 12.1.1A.1, the taking and use of surface water to which this rule applies is a restricted discretionary activity. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.*

- (iii) *The minimum flows set out in Schedule 2A of this Plan for the above catchments shall affect the exercise of every resource consent or other authority, of the kind referred to in paragraph (i) of this rule, in the Luggate catchment area, Manuherekia catchment area (upstream of Ophir) and Taieri catchment areas Paerau to Waipiata, Waipiata to Tiroiti and Tiroiti to Sutton, upon review of consent conditions.*
- (iv) *The conditions of all such consents will be reviewed by the Otago Regional Council under Sections 128 to 132 of the Act to enable the minimum flows set by Schedule 2A to be met, the volume and rate of take to be measured in accordance with Policy 6.4.16 and the taking to be subject to Rule 12.1.4.9.*
- (v) *The minimum flows set in Schedule 2A for the Luggate catchment area, Manuherekia catchment area (upstream of Ophir) and Taieri catchment areas Paerau to Waipiata, Waipiata to Tiroiti and Tiroiti to Sutton, shall not apply to any consents referred to in clause (i), paragraphs (a) to (c) of this rule until the review of consent conditions set out in clause (iv) of this rule occurs.*

This water take replaces a primary allocation take applied for prior to 28 February 1998 and is located within the Schedule 2A Manuherekia Catchment Upstream of Ophir.

Rule 12.1.4.8 Restricted Discretionary Activity considerations

In considering any resource consent for the taking and use of water in terms of Rules 12.1.4.2 to 12.1.4.7 and 12.2.3.1A, the Otago Regional Council will restrict the exercise of its discretion to the following:

- (i) *The primary and supplementary allocation limits for the catchment; and*
- (ii) *Whether the proposed take is primary or supplementary allocation for the catchment; and*
- (iii) *The rate, volume, timing and frequency of water to be taken and used; and*
- (iv) *The proposed methods of take, delivery and application of the water taken; and*
- (v) *The source of water available to be taken; and*
- (vi) *The location of the use of the water, when it will be taken out of a local catchment; and*
- (vii) *Competing lawful local demand for that water; and*
- (viii) *The minimum flow to be applied to the take of water, if consent is granted; and*
- (ix) *Where the minimum flow is to be measured, if consent is granted; and*
- (x) *The consent being exercised or suspended in accordance with any Council approved rationing regime; and*
- (xi) *Any need for a residual flow at the point of take; and*
- (xii) *Any need to prevent fish entering the intake and to locate new points of take to avoid adverse effects on fish spawning sites; and*
- (xiii) *Any effect on any Regionally Significant Wetland or on any regionally significant wetland value; and*
- (xiv) *Any financial contribution for regionally significant wetland values or Regionally Significant Wetlands that are adversely affected; and*
- (xv) *Any actual or potential effects on any groundwater body; and*

- (xvi) *Any adverse effect on any lawful take of water, if consent is granted, including potential bore interference; and*
- (xvii) *Whether the taking of water under a water permit should be restricted to allow the exercise of another water permit; and*
- (xviii) *Any arrangement for cooperation with other takers or users; and*
- (xix) *Any water storage facility available for the water taken, and its capacity; and*
- (xx) *The duration of the resource consent; and*
- (xxi) *The information, monitoring and metering requirements; and*
- (xxii) *Any bond; and*
- (xxiii) *The review of conditions of the resource consent; and*
- (xxiv) *For resource consents in the Waitaki catchment the matters in (i) to (xxiii) above, as well as matters in Policies 6.6A.1 to 6.6A.6.*

Rule 12.3.2.1 states that: *unless prohibited by Rules 12.3.1.1 to 12.3.1.4, the damming or diversion of water is a permitted activity, providing:*

- (a) *The size of the catchment upstream of the dam, weir or diversion is no more than 50 hectares in area; and*
- (b) *In the case of damming, the water immediately upstream of the dam is no more than 3 metres deep, and the volume of water stored by the dam is no more than 20,000 cubic metres; and*
- (c) *In the case of diversion, the water is conveyed from one part of any lake or river, or its tributary, to another part of the same lake, river or tributary; and*
- (d) *No lawful take of water is adversely affected as a result of the damming or diversion; and*
- (e) *Any damming or diversion within a Regionally Significant Wetland was lawfully established prior to 2 July 2011; and*
- (f) *There is no change to the water level range or hydrological function of any Regionally Significant Wetland; and*
- (g) *There is no damage to fauna, or New Zealand native flora, in or on any Regionally Significant Wetland; and*
- (h) *The damming or diversion does not cause flooding of any other person's property, erosion, land instability, sedimentation or property damage; and*
- (i) *The damming or diversion is not within the Waitaki catchment.*

In this instance, the diversion will not comply with Rule 12.3.2.1(a) due to the catchment area, and is assessed as discretionary activity pursuant to Rule 12.3.4.1(i).

Overall, the application is considered to be a **discretionary** activity.

9.7.2 Objective and Policy Assessment

Relevant policies from the RPW are considered below:

6.4.0A To ensure that the quantity of water granted to take is no more than that required for the purpose of use taking into account:

- (a) How local climate, soil, crop or pasture type and water availability affect the quantity of water required; and*
- (b) The efficiency of the proposed water transport, storage and application system.*

6.4.2A Where an application is received to take water and Policy 6.4.2(b) applies to the catchment, to grant from within primary allocation no more water than has been taken under the existing consent in at least the preceding five years, except in the case of a registered community drinking water supply where an allowance may be made for growth that is reasonably anticipated.

As noted above, the rate of and volume of take is assessed as being efficient when considering the local climate, soils and crop and noting the 90th percentile of the Aqualinc recommendations when calculating the seasonal rate.

Policy 6.4.2A applies in this instance as the take is from the Manuherekia catchment upstream of Ophir and Policy 6.4.2(b) applies to the catchment. The applicant has four years of data on water use and the rates and volumes sought are no greater than that data shows. The application does not seek any more water than has been taken under the existing consent. The rate and volumes applied for are consistent with actual water usage as determined by the ORC Water analyst.

The delivery system is via an open race system which are assessed as efficient and will become even more so when the point of take for the domestic and stock water is relocated to the actual point of take at Mata Creek and the by-wash to Station Creek ceases.

6.4.12 To promote, establish and support appropriate water allocation committees to assist in the management of water rationing and monitoring during periods of water shortage.

6.4.12A To promote, approve and support water management groups to assist the Council in the management of water by the exercise of at least one of the following functions:

- (a) Coordinating the take and use of water authorised by resource consent; or*
- (b) Rationing the take and use of water to comply with relevant regulatory requirements;*
or
- (c) Recording and reporting information to the Council on the exercise of resource consents as required by consent conditions and other regulatory requirements, including matters requiring enforcement.*

6.4.12B To manage water rationing amongst water takes, Council may either

- (a) Support establishment of a water management group; or*
- (b) Establish a water allocation committee.*

Council may also instigate its own water rationing regime or issue a water shortage direction.

6.4.12C Where appropriate, to include in water permits to take water a condition that consent holders comply with any Council approved rationing regime.

6.4.13 To restrict the taking of water in accordance with any Council approved rationing regime.

6.6.0 To promote and support development of shared water infrastructure.

6.4.0B To promote shared use and management of water that:

- (a) *Allows water users the flexibility to work together, with their own supply arrangements; and*
- (b) *Utilises shared water infrastructure which is fit for its purpose.*

Water Management Groups are voluntary. They provide flexibility for two or more consent holders to cooperate in exercising their consents, but without the added formality associated with a water allocation committee. In this instance, there are only two effective water users on Mata Creek.

However, the applicant does offer to operate the consent in accordance with any current or future minimum flow regime for the Manuherekia River catchment. It is recommended that this offer be accepted and a condition of consent is recommended that requires the applicant to operate in accordance with any Council approved rationing regime.

6.4.0C To promote and give preference, as between alternative sources, to the take and use of water from the nearest practicable source.

The RPW promotes the management of water in a way that enables continued access to suitable water, ensuring communities can provide for their social, cultural and economic wellbeing, now and for the future. It achieves this by requiring consideration of whether the applied for source of water is the nearest practicable given the proposed location of use including whether the take and use of the water is an efficient use of the water resource, whether there is another practically available and accessible water source, and the wider benefits (economic, social, environmental and cultural) of taking from the water source applied for compared to taking water from other sources.

Mata Creek is considered to be fully-allocated as is the entire Manuherekia catchment. In this instance, the water is to be used within the Mata Creek catchment and is to be used locally. Mata Creek and Station Creek are the nearest source of water for the irrigation of the applicant's land. The system relies on gravity drainage using established infrastructure and, as such, the scheme has a relatively low carbon/energy footprint compared to other irrigation systems. There is the potential for the stock water and domestic supply to be taken from Station Creek or Mata Creek, however, the installation of the separate intake pipe at Mata Creek enables the use of gravity to deliver this water. Overall, I consider that the water take is most practicable source of water for the proposed irrigation, stock water and domestic supply.

6.4.1 To enable-the taking of surface water, by:

- (a) *Defined allocation quantities; and*
- (b) *Provision for water body levels and flows,*
except when
 - (i) *the taking is from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha/Mata-Au or Kawarau Rivers.*
 - (ii) *All of the surface water or connected groundwater taken is immediately returned to the source water body.*
 - (iii) *Water is being taken which has been delivered to the source water body for the purpose of that subsequent take.*

6.4.2(b)(i)(3)

To define the primary allocation limit for each catchment, from which surface water takes and connected groundwater takes may be granted, as the greater of the sum of consented maximum instantaneous, or consented 7-day, takes of Surface water as at 28 February 1998 in any other catchment

6.4.2AA Where Policy 6.4.2A applies and, under the existing consent, water was usually taken at flows above the minimum flow calculated for the first supplementary allocation block for that catchment, to consider granting the new resource consent to take water as supplementary allocation.

The application to take surface water has primary allocation status. Policy 6.4.2AA does not apply in this instance.

6.4.3 For catchments identified in Schedule 2A, except as provided for by Policy 6.4.8, minimum flows are set for the purpose of restricting primary allocation takes of water.

6.4.5 The minimum flows established by Policies 6.4.3, 6.4.4, 6.4.6, 6.4.9 and 6.4.10 will apply to resource consents for the taking of water, as follows:

- (a) In the case of new takes applied for after 28 February 1998, upon granting of the consent; and*
- (b) In the case of any resource consent to take surface water from within the Taieri above Paerau and between Sutton and Outram, Welcome Creek, Shag, Kakanui, Water of Leith, Lake Hayes, Waitahuna, Trotters, Waianakarua, Pomahaka and Lake Tuakitoto catchment areas as defined in Schedule 2A, upon the operative date of this Plan subject to the review of consent conditions under Sections 128 to 132 of the Resource Management Act; and*
- (c) In the case of any existing resource consent to take surface water from the Manuherekia catchment area (upstream of Ophir) and the Taieri catchment areas Paerau to Waipiata, Wapiata to Tiroiti, Tiroiti to Sutton, as defined in Schedule 2A, upon collective review of consent conditions within those catchments under Sections 128 to 132 of the Resource Management Act; and*
- (d) In the case of any existing resource consent to take surface water within a catchment area not specified in Schedule 2A, upon the establishment of a minimum flow set for the water body by a plan change, subject to the review of consent conditions under Sections 128 to 132 of the Resource Management Act.*

6.4.11 To provide for the suspension of the taking of water at the minimum flows and aquifer restriction levels set under this Plan.

The Manuherekia River catchment upstream of Ophir minimum flow is established by Schedule 2A but currently does not apply to consents within the catchment. The applicant has offered to link the exercise of their water take to any current or future minimum flow for the Manuherekia River which is listed in Schedule 2A of the RPW. As such it is recommended that any consent granted be subject to these minimum flows, in accordance with Policies 6.4.3 and 6.4.5.

6.4.7 The need to maintain a residual flow at the point of take will be considered with respect to any take of water, in order to provide for the aquatic ecosystem and natural character of the source water body.

A residual flow has been considered and recommended, to allow for the protection of the aquatic habitat and natural character of this water body. The applicant has offered a visual residual flow of 28 L/s and this is supported by the Council's RSU.

6.4.16 In granting resource consents to take water, or in any review of the conditions of a resource consent to take water, to require the volume and rate of take to be measured in a manner satisfactory to the Council unless it is impractical or unnecessary to do so.

It is recommended that the taking of water is measured using a water meter, the data downloaded using a datalogger and submitted to Council via telemetry. This is a standard requirement for surface water takes in the region and is recommended as a condition of consent.

6.4.18 Where a resource consent for the taking of water has not been exercised for a continuous period of 2 years or more, disregarding years of seasonal extremes, the Otago Regional Council may cancel the consent.

The recommended water metering condition will allow the Council to monitor the rate and volumes of take, and ensure the water is being used efficiently. Should metering show the consent has been unexercised in accordance with this policy, the consent may be cancelled. A condition to this effect has been recommended.

6.6.2 To promote the storage of water at periods of high water availability through:
(a) The collection and storage of rainwater; and
(b) The use of reservoirs for holding water that has been taken from any lake or river.

No storage is proposed as part of this application.

Overall, the proposal is found to be consistent with the objectives and policies of the RPW subject to recommended conditions of consent.

9.8 Proposed Plan Change 7 (Water Permits)

Plan Change 7 (PPC7) was notified by the Council on the 18 March 2020 and therefore the rules, objectives and policies in the plan change apply to the water permit (although the activity status of the rules does not apply in this instance).

For applications to renew deemed permits expiring in 2021, and any other water permits expiring prior to 31 December 2025, PPC7 establishes a controlled activity consenting framework for short duration consents which comply with the controlled activity conditions. PPC7 also establishes a non-complying consenting framework for consents where a longer duration is proposed or where the application fails to meet one or more of the controlled activity conditions.

In this instance, the consent duration sought is more than 6 years, and therefore the water take does not meet the conditions of Rule 10A.3.1.1 and is assessed as a non-complying activity under Rule 10A.3.2.1. For completeness, it is noted that PPC7, does not apply to the diversion component of this application as this was not specifically provided for by the deemed permit.

The RPW was notified in 28 February 1998 and became operative in 1 January 2004. It is noted here, that the RPW was drafted before the NPS-FM 2014 (amended 2017) was notified and has not been updated to give effect to the NPS-FM. Council notified its Progressive Implementation Programme in December 2018 and has a plan to implement the NPS-FM. Part of this plan, and as directed by the Minister for the Environment, is that a plan change to the Water Plan was notified in March 2020. Issues with the Planning framework have also been raised in Environment

Court cases, including the ‘Lindis’ decision by Judge Jackson (*Lindis Catchment Group Incorporated Vs Otago Regional Council ENV-2016-CHC-61*) on a plan change to the Water Plan specific to the Lindis catchment and a series of consents to take water to replace deemed permits.

The objective, policies and rules in PPC7 establish an interim planning and consenting framework to manage freshwater for the transition from deemed permits to RMA water permits while a long-term sustainable framework is prepared. PPC7 has been notified to implement the recommendations of the Minister for the Environment⁶ following Professor Skelton’s investigation of freshwater management and allocation functions at Otago Regional Council.⁷

Professor Skelton’s report and the Minister’s recommendations both highlighted inadequacies of the current planning framework in giving effect to the higher order documents, in particular the NPS-FM. While the comprehensive overhaul of the ORC planning framework is underway, the Minister considers that there is an urgent need to ensure that an interim framework is in place between now and 31 December 2025. In his recommendation to ORC the Minister stated:

“This is necessary to manage approximately 400-600 future consent applications in over allocated catchments. The possibility of up to 600 consents being granted under the current planning and consenting framework is problematic. I understand that around 70 per cent of ORC’s currently issued water permits are for durations of 25-35 years, with various expiry dates. This includes over 50 permits that expire in 2050 or later, eight of which are 35 year permits issued this year. I am advised that there is a strong expectation from deemed and RMA water permit holders that their new consents will be for similarly long terms, and that the Council is likely to come under strong pressure to meet these expectations. In my view, long terms for these new consents would be unwise, as they would lock in unsustainable water use, inhibiting the council from effectively implementing the outcomes of its intended new RPS and LWRP.”

In response to Professor Skelton highlighting the importance of having robust interim measures in place to provide for short-term consents until the new regional policy statement and land and water regional plan are completed, the Minister formally recommended, under section 24A of the RMA that ORC:

Prepare a plan change by 31 March 2020 that will provide an adequate interim planning and consenting framework to manage freshwater up until the time that new discharge and allocation limits are set, in line with the requirements in the National Policy Statement for Freshwater Management.

The Minister encouraged ORC to consider a narrow plan change that provides for a relatively low cost, and fast issuing of new consents on a short-term basis, as an interim measure until sustainable allocation rules are in place. The Council formally responded to the Minister’s recommendations and advised of an agreed work programme which includes PPC7 to provide

⁶ Letter from David Parker (Minister for the Environment) to Otago Regional Council Councillors regarding the Minister’s investigation of freshwater management and allocation functions at the Otago Regional Council (18 November 2019).

⁷ Peter Skelton “Investigation of freshwater management and allocation functions at Otago Regional Council: (report to the Minister for the Environment, November 2019).

an adequate interim planning and consenting framework to manage freshwater up until the Council's Land and Water Regional Plan becomes operative.

The Minister's recommendations are reflected in Objective 10A.1.1 of PPC7 which provides:

Objective 10A.1.1 Transition toward the long-term sustainable management of surface water resources in the Otago region by establishing an interim planning framework to manage new water permits, and the replacement of deemed permits and water permits to take and use surface water (including groundwater considered as surface water) where those water permits expire prior to 31 December 2025, until the new Land and Water Regional Plan is made operative.

This objective is implemented by the following policies and rules:

Policy 10A.2.1 Irrespective of any other policies in this Plan, avoid granting resource consents that replace deemed permits, or water permits to take and use surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, except where:

- (a) The deemed permit or water permit that is being replaced is a valid permit; and*
- (b) There is no increase in the area under irrigation, if the abstracted water is used for irrigation; and*
- (c) There is no increase in the instantaneous rate of abstraction; and*
- (d) Any existing residual flow, minimum flow or take cessation condition is applied to the new permit; and*
- (e) There is a reduction in the volume of water allocated for abstraction.*

Policy 10A.2.2 Irrespective of any other policies in this Plan concerning consent duration, only grant new resource consents for the take and use of water for a duration of no more than six years.

Policy 10A.2.3 Irrespective of any other policies in this Plan concerning consent duration, only grant new resource consents that replace deemed permits, or resource consents that replace water permits to take and use surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, for a duration of no more than six years, except where Rule 10A.3.2.1 applies and:

- (a) The activity will have no more than minor adverse effects (including no more than minor cumulative effects) on the ecology and the hydrology of the surface water body (and any connected water body) from which the abstraction is to occur; and*
- (b) The resource consent granted will expire before 31 December 2035.*

Rule 10A.3.2.1 Despite any rule or rules in this Plan:
a) Any activity that is the replacement of an activity authorises under a deemed permit; or

*b) The take and use of surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) that is the replacement of a take and use authorised by an existing water permit where that water permit expires prior to 31 December 2025; That does not meet any one or more of the conditions of Rule 10A.3.1.1. is a **non – complying activity**.*

As this application seeks water permits to replace deemed permits and water permits, Policies 10A.2.1 and 10A.2.3 apply. Policy 10A.2.2 is not applicable as it only applies to new permits that are not replacing expiring deemed permits or water permits.

As PPC7 has been notified, regard must be had to its provisions as well as the provisions of the operative RPW. I note that the application was lodged in December 2019, well before the notification of PPC7. While regard must be given to the provisions of PPC7, this does not necessarily mean giving full effect to its context. It is up to the decision-maker as to the weight that should be afforded to each of the matters under section 104(1).

In terms of weight applied to proposed provisions, the following has been gathered from case law as relevant for the decision maker to consider the weight to be applied to proposed provisions:

- The extent that it has progressed through the plan-making process⁸;
- The extent that the proposed measure has been subject to independent testing or decision making⁹;
- Circumstances of injustice¹⁰;
- The extent to which a new measure, or the absence of one, might implement a coherent pattern of objectives and policies in a plan¹¹; and
- Whether there has been a significant change in Council policy and the new provisions are in accordance with Part 2 of the RMA¹².

Based on these matters outlined above, it is considered that while the provisions are in their initial stages of the plan making process, they are particularly directive (use of 'avoid') and are a significant change from the operative provisions of the plan. As these provisions have been proposed in response to the Minister's recommendations as set out above, following an independent investigation undertaken by Professor Skelton with a particular focus on the management of freshwater, it is considered that they may better achieve the purpose and principles of the Act and the NPS-FM than current operative provisions. Otherwise, water permits granted under the current operative planning provisions have the potential to frustrate the new limits imposed in the new regional plan for land and water resources that is scheduled to be notified by December 2023, and made operative by December 2025.

It is recognised that PPC7 is only an interim step to achieving the purpose of the RMA and giving full effect to the NPS-FM, however, the section 32 report for PPC7, identifies that it is a critical

⁸ *Queenstown Central Ltd v Queenstown Lakes District Council* [2013] NZHC 815 at [9].

⁹ *Hanton v Auckland City Council* [1994] NZMRA 289 (PT).

¹⁰ *Keystone Ridge Ltd v Auckland Bity Council* (HC Auckland, AP24/01, 3 April 2001) at [16] and [37]; *Mapara Valley Preservation Society Incorporated v Taupo District Council* EnvC Auckland A083/07, 1 October 2007, at [51].

¹¹ *Keystone Ridge Ltd v Auckland Bity Council* (HC Auckland, AP24/01, 3 April 2001) at [16] and [37]; *Mapara Valley Preservation Society Incorporated v Taupo District Council* EnvC Auckland A083/07, 1 October 2007, at [51].

¹² *Keystone Ridge Ltd v Auckland Bity Council* (HC Auckland, AP24/01, 3 April 2001) at [16].

measure in order to achieve this purpose in a timely manner and ensures the current planning framework is more in accordance with Part 2 of the RMA in the interim period.¹³ For example, PC7 seeks to manage the abstraction of surface water flows by allocating water to water users on an actual use basis with the consented allocation to be reduced where it currently exceeds actual use. In addition, any residual, minimum flow or take cessation conditions on existing permits are to be carried over to new permits and this will contribute to preventing any further degradation of water quality. Furthermore, it is assessed that PPC7 implements a coherent pattern of objectives and policies as it is designed to be a standalone consenting regime for replacement deemed permits and water permits expiring before 31 December 2025.

I recognise that this application was lodged in 2019, prior to notification of PPC7 and, as such, the applicant has not had the benefit of the new controlled activity rule under PPC7 to obtain a relatively low cost, short term consent. The provisions in PPC7 represent a significant shift in Council policy that granting new consents for all expiring deemed permits would inhibit the Council from effectively implementing the outcomes of its intended new regional policy statement and land and water plan. As such, I consider that some weight should be placed on the notified provisions. I have provided an assessment against the provisions below.

The objective in PC7 requires a 'transition' toward long-term sustainable management of surface water. This relates to the management of surface water generally and the issues relating to large quantities of water being allocated to deemed permits or historic water permits (pre-RMA). Transition insinuates a process or period of changing which through the preceding policies and rules is achieved through limiting the duration of consents and, thereby, reducing risk for water to be allocated for a long duration under the current framework. By ensuring the application is consistent with the corresponding policies, ensures the application is consistent with this objective. These policies are considered further below and the duration in Section 10 of this report.

Policy 10A.2.1, provides strong direction to 'avoid' granting consent except where the provisions in (a) – (e) are met. As confirmed in the *King Salmon*¹⁴ case, the word 'avoid' takes its ordinary meaning of 'not allow' or 'prevent the occurrence of'. In respect to this policy, it directs that the Council must avoid granting the consent, unless all of the provisions of (a) – (e) are met. In relation to these matters:

- (a) the water permit that is to be replaced is 'valid';
- (b) there is no increase to the area of irrigation;
- (c) there is no increase to the instantaneous rate of take;
- (d) there was no existing residual or minimum flow on the current water permit (however residual flows have been proposed); and
- (e) there is a reduction in the volume of water allocated of abstraction.

In this instance, the deemed permit is valid, the rate and volume are to be reduced and no residual or minimum flow were imposed by the previous deemed permit. No increase in irrigation area is sought. Therefore, the granting of this application is consistent this policy.

Policy 10A.2.3 applies irrespective of any other policies concerning consent duration. It directs that new resource consents to replace deemed permits only be granted for a duration of no more than 6 years, except where the activity will have no more than minor adverse effects (including no more than minor cumulative effects) on the ecology and the hydrology of the surface water

¹³ Section 32 Evaluation Report for PPC7 dated 18 March 2020, p 18.

¹⁴ *Environmental Defence Society Incorporated v The New Zealand King Salmon Company Limited* [2014] NZSC 38 (King Salmon).

body (and any connected water body) from which the abstraction is to occur. In that case a consent may be granted with an expiry of up to 31 December 2035. This policy is considered further in Section 10 of this report.

The activity would be a non-complying activity under the notified plan in accordance with Rule 10A.3.2.1. However, it retains its activity status of discretionary as it was lodged prior to the notification of PPC7. A non-complying activity status introduces the most onerous test for a consent application being the Section 104D 'gateway' test. This being that the consent authority may only grant consent if the application is not contrary to provisions of all planning documents or causes a no more than minor adverse effect. Given this application was lodged prior to the notification of PPC7 it retains the operative rule and its corresponding activity status and no further consideration to Section 104D is given.

9.9 Section 104(1)(c) - Any other matters

9.9.1 The Kai Tahu ki Otago Natural Resource Management Plan 2005

The Kai Tahu ki Otago Natural Resource Management Plan 2005 (NRMP) is considered to be a relevant other matter for the consideration of this application. This is because the RPW is yet to be amended to take into account this Plan and this Plan expresses the attitudes and values of the four Papatipu Rūnaka: Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga. The following objectives and policies are of most relevance to this application:

- To require that resource consents applications seek only the amount of water actually required for the purpose specified in the application.
- To require that all water takes are metered and reported on, and information be made available upon request to Kai Tahu ki Otago.
- To oppose the granting of water take consents for 35 years.
- To encourage those that extract water for irrigation to use the most efficient method of application.
- To discourage over-watering.

Aukaha Limited on behalf of Kati Huirapa Puketeraki and Te Runanga o Otakou made a submission opposing the water take as applied for. Nga Runanga raise concerns regarding the term of consent and the residual flow to remain in Mata Creek. After assessment, the use of water is considered to be efficient and the water take is to be metered and reported on. As discussed above, the recommended term of consent is less than 35 years. Subject to recommended conditions of consent and a reduced term, the proposal is found to be consistent with the NRMP.

9.9.2 Te Rūnanga o Ngāi Tahu Freshwater Policy Statement 1999

The Ngāi Tahu Freshwater Policy Statement 1999 (NTFP) is considered to be a relevant other matter for the consideration of this application. This is because the RPW is yet to be amended to take into account the NTFP and the NTFP expresses the attitudes and values of Te Rūnanga o Ngāi Tahu.

The following objectives and policies are of most relevance to this application:

6.1 – Wāhi Tapu: To afford total protection to waters that are of particular spiritual significance to Ngai Tahu.

- *Identify sites for immediate protection because of their significance as wāhi tapu.*

The location of the take has not been identified as a site of significance as wāhi tapu.

6.2 – Mauri: To restore, maintain and protect the mauri of freshwater resources.

- *Identify freshwater resources where:*
 - *Mauri is unaffected by modification and human activity so that these waterbodies can be afforded total protection; and*
 - *Mauri is adversely affected, and the activities that cause such affects.*
 - *Accord priority to ensuring the availability of sufficient quantities of water of appropriate water quality to restore, maintain and protect the mauri of a waterbody, in particular priority is to be accorded when developing water allocation regimes.*

The application is for water takes within an area that has been modified by human activity and where water is currently taken from. Aukaha stated that a resource's mauri is desecrated if it no longer supports the traditional uses and values. A water body or other natural resource can be desecrated by improper resource management activities. These may extinguish the mauri and in turn diminish the association upon which a range of values are based, including mahika kai, for Ngā Rūnanga who hold traditional rights and responsibilities in respect to the resource. Residual flows have been proposed for the take, however Aukaha have requested in their submission on behalf of Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou that 50% of the flow of the watercourse is retained within the creek.

6.3 – Mahinga Kai: To maintain vital, healthy mahinga kai populations and habitats capable of sustaining harvesting activity.

- *Protect critical mahinga kai habitats and identified representative areas*
- *Restore and enhance the mahinga kai values of lakes, rivers, streams, wetlands, estuaries and riparian margins.*
- *Ensure that activities in the upper catchment have no adverse effects on mahinga kai resources in the lower catchments*
- *Restore access to freshwater resources for cultural activities, including the harvest of mahinga kai.'*

Aukaha has stated in its submission that the Clutha/Mata-au River was part of ara tawhito, mahika kai trail that led inland. Mahika kai sourced from the Clutha/Mata-au Catchment includes indigenous ika and manu such as: tuna, kanakana, kōkōpu, moa, inaka, weka. Aukaha state that they would support an application that at least 50 % of the natural flow in the water but have advised that they are neutral regarding a residual flow of 28L/s. Aukaha also request water metering and fish screens, both of which are offered by the applicant.

It is considered that, overall, the application is generally consistent with the objectives and policies of the NTFP.

9.9.3 Report by Professor Skelton and Ministers Recommendation

Professor Peter Skelton was engaged by the Hon David Parker, Minister for the Environment (the Minister) to investigate whether the ORC is adequately carrying out its functions under section 30(1) of the RMA in relation to freshwater management and allocation, particularly the implementation of the NPS-FM.

The October 2019 report concluded that the current planning framework in Otago is not fit for purpose to appropriately consider resource consent applications for new water permits before the expiry of deemed permits in October 2021. It also identified the need for an accelerated full review of the Water Plan (to notify a new Land and Water Plan by December 2023) and a full review of the Regional Policy Statement (to notify by November 2020).

To bridge the gap between the expiry of deemed permits in Otago in 2021 and other water permits expiring prior to a full plan review, and when a new Regional Policy Statement and Land and Water Plan for Otago will be operative, the Minister has recommended an interim change to the Water Plan. This has recently been notified as Proposed Plan Change 7 (Water Permits) (PPC7).

PPC7 is considered to address the concerns raised by the Skelton report in the interim and it is considered that the proposal is generally consistent with PPC7 (except for the term of consent which is discussed above). However, the weight placed on these ministerial matters is not determinative of the consent application in regard to granting the consent. This ministerial report has been considered but has not changed the recommendation to grant the consent.

9.10 Section 104(2A) Value of Investment

When considering an application affected by Section 124 of the Act, the Council must have regard to the value of the investment of the existing consent holder. The applicant has provided the following evidence of the value of investment:

The applicant states that the capital cost of the irrigation system was \$381,117 plus GST and the total benefit to Hawkdun Station is \$193,050 plus GST. The applicant notes that while only a relatively small area of land is irrigated, this land is vital to the overall farming operation and is crucial to the economic viability of the property.

The applicant provided supporting documentation from Peter G Young from Farm Advisory Services limited which confirms that the amount of feed grown under irrigation is estimated at 12000kgDM/ha with feed utilisation of approximately 85% (110,200kgDM/ha) The strategic value of the feed is estimated to be between 30-35 cents per kgDM. Without irrigation, the level of kgDM would be expected to drop to 4000kgDM/ha with 80% utilised (3,600kgDM/ha). Therefore, the utilised feed of 6,600 kgDM/ha (10,200kgDM/ha -3,600kgDM/ha) x 32.5 cents /kg dry matter + \$2415/ha x 90ha is \$193.050 total annual benefit.

The economic benefit generated by the applicant was challenged by the submission of F&G who questioned the need for a longer-term consent given the annual return stated. The applicant considered that F&G's analysis was too simplistic and further clarified that a better economic

analysis was to use a Net Percent Value/Internal Rate of return method using discounted future net (after expenses and tax) cash flows.

The applicant noted that according to analysis by ICE farm accountants of Alexandra, the top quartile of farming businesses in Otago manage to achieve a return of a maximum of 5% net return on assets per year. The applicant notes that the bottom quartile make a loss each year and the rest barely break even. By way of example, the applicant devised a scenario whereby they were above the top quartile and had a 10% rate of return on capital. On a capital cost of \$381,117 for the applicant's irrigation system, a net return of \$38,111 per annum is realised. Discounting this at the current commercial interest rate of 9%, the applicant advises this requires a 28-year period over which to amortise the initial investment.

Overall, it is considered that the applicant has demonstrated an adequate level of investment to support a longer term of consent.

10 Section 124B Applications by Existing Holders of Resource Consents

The following criteria must be considered when a person who holds an existing resource consent makes an application within Section 124 timeframes:

- (a) the efficiency of the person's use of the resource; and
- (b) the use of industry good practice by the person; and
- (c) if the person has been served with an enforcement order not later cancelled under section 321, or has been convicted of an offence under section 338,
 - (i) how many enforcement orders were served or convictions entered; and
 - (ii) how serious the enforcement orders or convictions were; and
 - (iii) how recently the enforcement orders were served or the convictions entered.

The irrigation system operated by the applicant has been assessed by the Council's compliance officer and found to be in good working order. Currently the by-wash from the equalisation dam to Station Creek is not considered to be an efficient use of the water resource, however, the applicant is taking steps to address this and the by-wash to Station Creek is to cease once the installation of the domestic and stock water pipeline is completed. No enforcement orders have been issued.

11. Part 2 of the Act

Under Section 104(1) of the RMA, a consent authority must consider resource consent applications "subject to Part 2" of the RMA, specifically, sections 5, 6, 7 and 8.

The Court of Appeal has recently clarified how to approach the assessment of "subject to Part 2" in section 104(1). In *R J Davidson* the Court of Appeal found that (in summary):¹⁵

Decision makers must consider Part 2 when making decisions on resource consent applications, where it is appropriate to do so. The extent to which Part 2 of the RMA should be referred to depends on the nature and content of the planning documents being considered.

¹⁵ *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316.

Where the relevant planning documents have been prepared having regard to Part 2 of the RMA, and with a coherent set of policies designed to achieve clear environmental outcomes, consideration of Part 2 is not ultimately required. In this situation, the policies of these planning documents should be implemented by the consent authority. The consideration of Part 2 "would not add anything to the evaluative exercise" as "genuine consideration and application of relevant plan considerations may leave little room for Part 2 to influence the outcome". However, the consideration of Part 2 is not prevented, but Part 2 cannot be used to subvert a clearly relevant restriction or directive policy in a planning document.

Where it is unclear from the planning documents whether consent should be granted or refused, and the consent authority has to exercise a judgment, Part 2 should be considered.

If it appears that the relevant planning documents have not been prepared in a manner that reflects the provisions of Part 2, the consent authority is required to consider Part 2. However, based on my reading of the relevant plans, it appears to me that they have been prepared under the RMA and contain a coherent set of policies to achieve clear environmental outcomes. This applies to all the relevant plans except PC7 as it has only recently been notified and is yet to be tested. When considering the current planning framework, I consider that reverting to part 2 would add anything to the evaluative exercise I have undertaken under section 104 of the RMA or result in me coming to a different recommendation.

11.1 Section 108 and 108AA of the Act

The attached conditions on RM 19.399.01 are recommended in accordance with Sections 108 and 108AA of the Act. In general, the conditions have been offered by the applicant both as part of the original application or after consultation with submitters. Recommended conditions are appended in the decision document and include:

Conditions relating to rate and volume of take, residual flow, fish screening, water metering and water efficiency monitoring. The applicant offers a review condition which will provide for:

- The consented rate or volume to be adjusted if monitoring or future change in the water use indicate that the consented rate or volume is not able to be fully utilised.
- Determining if the conditions of consent are adequate to deal with any adverse effects on the environment that may arise for the exercise of the consent; and
- Ensuring that the conditions of the consent are consistent with any national Environmental Standard, Regulation and/or any regional plans and allowing the method of data recording and reporting to be altered should the need arise.

A review condition which also provides for the consent to be aligned with any current and future minimum flow or water managing regime for the Manuherehia River catchment is also recommended.

12. Recommendation

12.1 Reason for Recommendation

It is recommended that this consent application is approved for the following reasons:

1. The water take is assessed as primary allocation.
2. Mata Creek is not identified in any of the RPW schedules.
3. The applicant offers to maintain a residual flow of 28 L/s in Mata Creek.
4. The applicant offers to cease the by-wash to Station Creek.
5. The applicant offers to exercise the consent in accordance with any minimum flow or water management regime imposed on the Manuherekia Catchment.
6. The use of water is considered to be an efficient use of water.
7. The applicant offers to install a fish screen as close to the point of take as possible.
8. A term of 15 years will provide some economic security and well as providing for the uncertainty of the current and future planning framework.
9. The effects of the water take and use are assessed as no more than minor.
10. No matters have arisen in the assessment of the application that would indicate the application should have been publicly notified.
11. The proposal is assessed as consistent with all of the relevant planning instruments.

13. Term of Consent (Section 123)

The application seeks a term of 25 years to provide for financial security (revised down from 35 years originally sought). The submitters seek lesser terms of between 6 and 7 years, citing uncertainty around the changes required to the planning framework to meet the NPS-FM and that a longer-term consent may undermine or pre-empt this work.

I recommend a term of 10 years. In reaching this recommendation I have considered the following factors, distilled from case law, which are relevant to the Council's determination of the duration of a resource consent:

- The duration of a resource consent should be decided in a manner which meets the RMA's purpose of sustainable management;
- Whether adverse effects would be likely to increase or vary during the term of the consent;
- Whether there is an expectation that new information regarding mitigation would become available during the term of the consent;
- Whether the impact of the duration could hinder implementation of an integrated management plan (including a new plan);
- That conditions may be imposed requiring adoption of the best practicable option, requiring supply of information relating to the exercise of the consent, and requiring observance of minimum standards of quality in the receiving environment;
- Whether review conditions are able to control adverse effects;
- Whether the relevant plan addresses the question of the duration of a consent;

- The life expectancy of the asset for which consents are sought;
- Whether there was significant capital investment in the activity/asset; and
- Whether a particular period of duration would better achieve administrative efficiency.

Under the operative RPW, Policy 6.4.19 provides direction when setting the duration of a consent:

6.4.19 When setting the duration of a resource consent to take and use water, to consider:

- (a) The duration of the purpose of use;*
- (b) The presence of a catchment minimum flow or aquifer restriction level;*
- (c) Climatic variability and consequent changes in local demand for water;*
- (d) The extent to which the risk of potentially significant, adverse effects arising from the activity may be adequately managed through review conditions;*
- (e) Conditions that allow for adaptive management of the take and use of water;*
- (f) The value of the investment in infrastructure; and*
- (g) Use of industry best practice.*

Policy 6.4.19 of the RPWO addresses consent duration for consents to take and use water. It does not recommend actual durations but instead contains seven criteria for to consider. In this case:

- The proposed purposes of the abstractions are enduring, being irrigation, stock water, and domestic use (criteria (a)).
- The applicant has offered to operate in accordance with any future minimum flows set for the catchment (criteria (b)).
- Climatic variability is certain to occur but no detailed evidence of its relevance has been supplied (criteria (c)).
- I also note that the applicant relies on an incomplete data set to establish the effects of the application Potential adverse effects (such as inadequate residual flows or downstream minimum flow) can be addressed through review conditions. The applicant offers a review condition however, it is noted that a review clause must not frustrate the use of the consent, which is a possibility depending on the outcome of the future plan change. (criteria (d)).
- The applicant has not proposed adaptive management (criteria (e)), although review conditions will allow allocation and residual flow matters to be addressed in the future should the need arise.
- The applicant has invested in the existing irrigation infrastructure and will need to continue to invest (i.e. installation of the new pipeline for domestic and stock water to reduce the by wash to Station Creek) (criteria f)).
- There is use of inefficient practices such as the current method of stock and domestic water delivery but the applicant has proposed the alternative delivery method. (criteria (g)).

Overall, the recommended duration of 10 years recognises the primary allocation status of the water take and will provide some security to the applicant while not frustrating any future management regime and managing the assumptions made within the application. This term is considered to be consistent with Policy 6.4.19.

The Kai Tahu ki Otago Natural Resource Management Plan 2005 oppose consents granted for up to 35 years. Therefore, the recommended term of 10 years is not inconsistent with the iwi management plan.

As noted in Section 8.10, the following policy in relation to the duration of new resource consents that replace deemed permits has been proposed through Plan Change 7:

Policy 10A.2.3 Irrespective of any other policies in this Plan concerning consent duration, only grant new resource consents that replace deemed permits, or resource consents that replace water permits to take and use surface water (including groundwater considered as surface water under policy 6.4.1A (a), (b) and (c) of this Plan) where those water permits expire prior to 31 December 2025, for a duration of no more than six years, except where Rule 10A.3.2.1 applies and:

- (a) The activity will have no more than minor adverse effects (including no more than minor cumulative effects) on the ecology and the hydrology of the surface water body (and any connected water body) from which the abstraction is to occur; and*
- (b) The resource consent granted will expire before 31 December 2035.*

Policy 10A.2.3 of PPC7 directs that new consents to replace deemed permits only be granted for no more than 6 years except where there are no more than minor adverse effects (including cumulative effects) on the ecology and the hydrology of the surface water body (and any connected water body) from which the abstraction is to occur. This is irrespective of any other policies in the Plan concerning consent duration, i.e. Policy 6.4.19. Where the activity will have no more than minor adverse effects on the ecology and hydrology of the surface water body and any connected water body the resource consent can be granted a term up to 31 December 2035.

Considering this direction, granting the consent duration sought by the applicants would be contrary to the provisions of PPC7. My assessment, and advice from RSU are that the adverse effects (including cumulative effects) on aquatic ecology and hydrology are no more than minor, subject to conditions of consent. However, I note that there is only two years of metering data on which to base this assessment on, and given that Mata Creek is a tributary of Manuherekia River, which is identified as significantly over-allocated, I consider that a precautionary approach is required. In this regard, I consider that a duration of 10 years would sit better with Policy 10A.2.3. As discussed in Section 8.10, I consider that some, but not full weight should be given to PC7 due to it recently being notified and not yet tested and the application already being in the system at the time of notification. On that basis, it is appropriate to still give some weight to Policy 6.4.19 of the RPW.

I consider that in this instance, a duration of 10 years is appropriate on the basis that:

- PC7 is just at the start of the process and the weight given to this will increase further through the process;
- The application was in the system before the notification of the plan change and the applicant have not had the benefit of applying for a short-term consent as a controlled activity;
- The advice from the applicant regarding the level of investment and rate of return on that investment is generally accepted and, as such, the term provides some ongoing financial security investment for the applicants while ensuring the consent does not frustrate any future policy direction to address the allocation issues with the Manuherekia catchment;
- The applicant offers to exercise the consent in accordance with any future minimum flow or water management regime imposed on the Manuherekia Catchment. At this time, it is

uncertain what the direction the future policy will take and it is important not to rely on a review condition which may ultimately frustrate the exercise of the consent.

- The applicant proposes to take and use water from a single point of take and is the last take on Mata Creek; and
- There is one user upstream whose consents expire in 2023;
- The applicant's use is considered to be an efficient use of water and the proposed a seasonal volume that is less than the current consented limits, and
- The effects of the proposed takes have been assessed as no more than minor, subject to compliance with recommended conditions of consent. However, this assessment has been undertaken with a limited data set.

Overall, based on my assessment as outlined above, I consider that a duration of 10 years is appropriate. A 10-year duration will provide the applicant with security of access to surface water resources, assists in minimising costs associated with implementing the consent, ensures efficient use of water and safeguards the life-sustaining capacity of the watercourses. I consider that a term of 10 years strikes an appropriate balance between the term sought by the applicant of 25 years and the significant shift in Council policy under PPC7 to have interim measures in place to provide for short term consents until the new regional policy statement and land and water regional plan are completed. Given that the diversion permit and the water take permit are to operate in conjunction with one another, I consider that it is appropriate that the terms for these align, should consent be granted.

14. Lapse Period (Section 125)

The application seeks a lapse period of 5 years.

A lapse period of 2 years is recommended given that this is a replacement consent for a permit that expires in October 2021 and involves the continuation of water take and use authorised by that consent.

Appended: Recommended Conditions of Consent

Appended: Advice from RSU

Appended: Applicant's response to submissions

Appended: Letter from Fish and Game amending Submission

Appended: Letter from DOC withdrawing right to be heard

Appended: Email from Aukaha

Appended: Email application for diversion permit

Appended: Submitter advice regarding diversion application

Appended: Historic Water data analysis

Appendix 1 – Draft Consent conditions

Appendix 2 – Advice from RSU



Document Id: A1330299

File Note

From: Ciaran Campbell

Reviewed by: Pete Ravenscroft

Date: 05 March 2020

Re: Science Unit assessment of Resource Consent No. RM19.399 Hawkdun Pastoral Limited to take surface water from Mata Creek

Activity

The applicant proposes to take water from Mata Creek, within the Manuherekia River catchment and has applied for a maximum rate of take of 56 L/s with a maximum consent term of 35 years.

Proposed water use	Rate (L/s)	Volume (m ³ /day)	Volume (m ³ /month)	Volume (m ³ /year)
Irrigation	55.6	4763.5	147,670	787,500
Domestic & Stock water	0.4	36.5	1130	12,960
Total	56	4800	148,800	800,460

Significant values: Mata Creek

Mata Creek is not listed in Schedule 1A of the Regional Plan: Water for Otago (RPW).

Records from the New Zealand Freshwater Fish Database (NZFFD) are sparse but show that upland bully (*Gobiomorphus breviceps*) and brown trout (*Salmo trutta*) are the only fish species recorded nearby. There are no regionally significant wetlands that will be affected, adversely or otherwise, by the proposed water take in Mata Creek.

Hydrology: Mata Creek

There are currently no existing flow records for Mata Creek, for this assessment we used NIWA's Shiny model to estimate MALF at 83L/s.

Assessment of effects: Mata Creek

Due to the hydrological and ecological values of Mata Creek, we support the proposed 28L/s residual flow, under the rationale that shiny suggests that MALF is 83L/s.

We support the proposed fish screens on all intake pipes and recommend 3mm mesh to prevent the entrapment and unnecessary fatality of larval fish.

We support the applicant proposal to adhere to any future minimum flow in the Manuherekia River mainstem.

We recommend that the applicant propose a final date after which they will discontinue by-wash into Station Creek.

Recommendation: Mata Creek

The effects of this take are considered to be no more than minor providing the water take adheres to a residual flow of 28L/s, all intake pipes are fitted with 3mm mesh fish screens and the applicant adheres to minimum flows set in the Manuherekia River mainstem.



File Note

From: Ciaran Campbell

Date: 11/11/2020

Re: Resource Consent No. RM19.399 Hawkdun Pastoral Limited to take surface water from Mata Creek

Residual flow conditions:

The Otago Regional Council Science unit was asked to assess the residual flow conditions on resource consent application RM19.399.

The applicant has proposed that a residual flow of 28L/s immediately downstream of the point of take will allow provide for values within the creek. I believe the applicant and submitters have agreed to this residual flow condition, in principle, whilst expressing concern about how that residual flow condition is achieved, complied with and measured.

The residual flow condition of 28L/s is difficult to quantify and accurately measure. I have two suggestions for ways at which the applicant can achieve the residual flow condition and the regulator (ORC) can ensure compliance.

The first suggestion is for the applicant to install a flume into Mata Creek immediately downstream of the point of take, with a flow-rated stage gauge on the flume. ORC will be able to measure the flow in the flume to calibrate the stage gauge. Regular photographs, particularly during low-flows and months with high irrigation demands will show the flow through the flume provides a residual equal to 28L/s. The removal of gravels from the flume by the applicant will be required as part of the consent condition.

The second suggestion is: A residual flow further downstream (with limited surface water inflows and outflows) is a way of achieving the residual flow condition. It may not adhere strictly to the condition, but rather aims to achieve *the purpose* of the residual flow condition and I believe it is tangible, practical and measurable. As such, the method I propose is along the lines of:

A connected continuous residual flow must be maintained at all times downstream of the point of take, reaching as far down as the St Bathans Loop Road Bridge at approximately (NZTM) E1350152 N5024054. This point is upstream but within the vicinity of Mata Creek and Muddy Creek confluence.

Appendix 3 – Applicant’s response to submissions

RM 19.399 01 Hawkdun Pastoral Ltd

Initial Response to Submissions

A. General Comments

A1. The Consents Function Review, the Skelton Report, recommendations by Minister Parker and various media statements by ORC functionaries can have no bearing on the decision making for this application, being non-statutory in nature.

A2. No weight whatever can be given to Proposed Plan Change 7 in the decision making on this application. There is extensive case law on this matter to the effect that where a proposed plan change is at an early stage, the provisions of the plan change are largely inchoate. At this stage PC 7 has only just been notified and the process by which it will be considered has not even yet been decided. If it does not proceed by Ministerial call-in, then a decision is at least a year away and it will almost certainly be subject to appeal.

See *Peat v Waitakere CC*, *Stevens v Tasman DC*, *Banks v Nelson CC*, *Stokes v Christchurch CC*, *Burton v Auckland CC*, *Lee v Auckland CC*, *Burnett v Tasman DC*, *Anderson v Invercargill CC*, *Keystone Ridge Ltd v Auckland CC*, *Queenstown Central Ltd v QLDC*.

A3. As an aside, apart from the duration of the consent requested, the application would comply with PC 7 in all respects.

A4. All the submissions to some extent appear to be conflating this application as a platform to further promote their respective stances on freshwater management in Otago in general. To keep things in perspective, this application is for a minor take out of a small side stream (you can step across it and keep your feet dry), which the general public are largely unaware even exists.

A5. As a general comment the submissions of DoC & Fish & Game are somewhat out of proportion with the scale and significance of this application and give insufficient recognition of the practicalities of taking and distributing water via the open race systems prevalent throughout Central Otago, nor of the costs and time frames involved in a lot of what you are asking for in your submissions.

B. Submission of Aukaha

B1. Thank you for your explanation of local iwi’s interest in the Manuherekia Catchment, which the applicant fully acknowledges. Paras 1-4.16 and appendix 1 of your submission are a restatement of matters already provided for in the Kai Tahu ki Otago Natural Resource Management Plan 2005. This plan has been fully considered in para 13.2.8 of the AEE.

B2. See para D6 below for a discussion as to the duration of the consent.

B3. Your submission does not define what “flow” it is that you require 50% of to be left in the waterway. If it is to be the MALF (as I assume that it is what you mean), this will effectively shut down any irrigation whatever, with severe economic consequences for the Applicant – is this really the outcome you envisage?

B4. A fish screen cannot practicably be installed on the open race intake at the point of take . As proposed in the AEE , the fish screen will be installed at the pipe outlet from the downstream equalisation dam.

B5. The take is already metred and recorded as explained in the AEE

C . Submission of the Department of Conservation

C1. See discussion below in para D6 regarding the term

C2. Fisheries Information - The applicant was advised by Natasha Pritchard of the ORC that she had consulted with the ORC's science unit and that they were satisfied that the existing fish surveys would be sufficient . These surveys have all shown that while upland bully are abundant , no galaxias have ever been found in Mata Creek. It is unreasonable of DoC to demand endless additional surveys -there has to be a limit. Consultants that can undertake these surveys are in extremely short supply (there is at least a 6 month waiting list) and the cost is likely to be in the order of \$5-\$6k. This is out of all proportion to the likely effects of the application.

C3 Minimum Flow . If DoC could suggest a practicable way in which a structure could be constructed in the bed of Mata Creek that could measure and pass a minimum flow of 28L/s without daily silting up or being destroyed in every minor fresh in the Creek , that would be appreciated . The author of the submission appears to have no local knowledge of the issues with open race intakes on small side streams (of which there are many 100's throughout Otago) with measurement structures. As pointed out in the AEE , this is precisely the reason why the ORC has granted so many exemptions from measuring such takes at the point of take in the stream – it is simply not possible. Alternatively some practicable wording around a suitable minimum flow of 28 L/s (which the applicant accepts is a suitable minimum flow) that would not involve a measurement structure would be appreciated.

C4. There is no proposal whatsoever to take water out of the irrigation season , apart from the minor domestic and stockwater take. You have completely misunderstood the application in this regard. . In ORC consenting terminology "annual" has always been taken to mean "seasonal". The annual /seasonal amount applied for irrigation is actually less than the annual/seasonal amount considered to be reasonable use , as calculated from the ORC's Aqualinc Report . See para 7 of the AEE. To further clarify this matter the applicant would be happy to accept a condition that irrigation water can only be taken during the months of 15 September to 15 March the following year inclusive. It is noted that the application will result a huge reduction in the total take permitted by the existing deemed permit, and an end to all year round by-washing of the current stock & domestic take

C5. The minimum flow of 75L/s you are suggesting fails to take into account the existing upstream lawful takes (which are both full RMA91 consents). 75L/s exceeds the actual flow available at the point of take and would leave the applicant effectively with no irrigation whatsoever – this is untenable . The country will relying on the agricultural sector to pull it out of a deep Covid-19 pandemic induced

recession , yet DoC are proposing to severely curtail Hawkdun Pastoral Ltd's farming operation . DoC needs to be a bit more realistic and compassionate and recognise that a minimum flow of 28L/s (as is has always been provided under the current exercise of the deemed permit) is providing a suitable flow to protect in-stream values

C6. Flow Records - sec 5.1 of the ORC's application Form 4 gives an applicant the option of advising the ORC that its water records have been sent electronically or are recorded on file by Council which will summarise and assess the applicant's historical water use (this is done by the Council's science unit and the results are included in the sec 42A planners report) . The applicant has chosen to take this option.

C7 The intake is an existing lawfully established structure that is a permitted activity under rule 13.1.1.1 Your proposals for an infiltration gallery intake are totally unrealistic . For these to work , what is needed is a large body of water to provide suitable head to saturate a deep layer of highly permeable gravels . This site has neither . Gravel exposures in the area show a very shallow depth of gravels with a high clay content . Moreover gallery systems require pumping into a fully piped distribution system . In this case there is no power supply anywhere near the intake site and the distribution system is via a gravity open race for the first several km's to the equalisation dam .

C8. Written advice in an information hand-out given by the ORC to applicants is the that the ORC recognises that long-term gauging over various flow conditions is not a realistic option on all of the many minor side creeks in Otago that have deemed permits that will need to be renewed . There is neither the time available , nor the resources. The only viable option is hydraulic modelling programs such as "Shiny". This model confirms that downstream of the point of take to the St Bathns Loop Rd bridge is a gaining reach. The simplest way to verify this is by a site visit which makes it patently visually obvious , without gauging, even to the layperson that there is significantly more flow at the bridge than immediately down stream of the intake.

C9 The applicant will accept whatever fish screening conditions the ORC sees fit to apply to the consent . , the location of which can only practicably at the piped off take from the equalisation dam. The proper course of action would normally be for a submitter concerned about these matters to propose what it thinks would be suitable conditions . It suggested that you propose what you think are suitable screening conditions and the applicant will respond to these.

C10. The application already proposes a review clause along the lines suggested in DoC's submission

D. Submission of Fish & Game

D1. The applicant agrees that adverse effects in minor tributaries of the Manuherekia can be felt in the wider game fishery . However , in this case the current exercise of the take with a 28L/s residual flow appears to be providing a providing a suitable habitat for trout , as evidenced by the fish surveys to date

D2. Historic Water Records & Fish Surveys – see comments in paras C6 & C2 above

D3. A residual flow of 80-90% of the naturalised MALF at the point of take would effectively mean no irrigation whatever is possible . See comments above in para C5 above

D3 "Visual Flow " proposal – see comments in para C3 above

D4. Methods of take & fish screens - see comments in paras C7 & C9 above . There are 100's of such intakes in Central Otago plus 1000's of kilometres of open head races and uncountable km's of distribution races . It would be economically ruinous to replace all these with piped systems – it is simply not going to happen and in many situations (such as this one) intake galleries will not work. You have to be realistic in this regard . I am aware for instance of a number of attempts at intake galleries around L Dunstan that have failed and have had to be replaced with direct surface water intakes.

The proposed fish screening conditions in appendix 1 of your submission are acceptable to the applicant

D5 Inadequacy of the Otago Water Planning Framework - see paras A1 & A2 above. The application can only be assessed against the current applicable planning instruments . In this regard the application retains its primary allocation status and the rules of proposed plan change 7 are not applicable and its objectives and policies have no weight at this stage in the proceedings .

D6 Duration of the consent -the applicant will accept whatever comes out of the upcoming Land & Water Plan for Otago , including any minimum flow for the Manuherekia and any methods for addressing over-allocation. The applicant does not wish to get tangled up in what is sure to be a litigious mire that will drag on for years and simply enrich the legal profession and recognises that, as the holder of a small individual take permit on a minor side stream , Hawkdun Pastoral will have virtually no influence in any such proceedings

Placing a short duration on this consent until all the above is sorted out is simply delaying the inevitable and serves no useful purpose as the applicant will accept whatever it will be .

Because the applicant is volunteering such a condition there is no risk to the ORC of frustration of the consent . I refer you to RM 17.094.01 (Oak Tree Water Company), a similar take out of a small tributary of the Lindis R (Wainui Creek) , in which such a review condition was set , with a duration of 25 years . This consent was issued as recently as July 2019 and provides a blue print for this consent , particularly as to consideration of the duration of the consent . I note also that the residual flow condition in this consent was expressed in words , not as a defined measurable flow.

The most important factor in any consideration of the duration of the consent is that mandated by parliament in sec 104(2A) RMA91 whereby when considering an application for renewal of a consent the consenting authority must have regard to the value of the investment of the existing consent holder . (my underlying)

Your analysis of this is defective in that it only considers the gross return , not the net return on investment and only considers the simplistic "pay back period" method . A more proper economic analysis is to use the Net Present Value (NPV)/ Internal Rate of Return (IRR) method using discounted future net (after expenses and tax) cash flows

According to analysis by ICE farm accountants of Alexandra , the top quartile of farming businesses in Otago manage to achieve a return of a maximum of 5% net return on assets per year (the bottom quartile make a loss each year and the rest barely break even) Let us be generous and say Hawkdun Pastoral is an exceptional operator and allow a 10% rate of return on capital . On a capital cost of \$381,117 for the applicant's irrigation system , this gives us a net return of \$38,111 per annum. Discounting this at the current commercial interest rate of 9% results in a 28 year period over which to amortise the initial investment

Contrary to your submission , there is therefore a very large financial risk to the applicant in a short term consent , plus future investment decisions and the obtaining of finance cannot be made under such a short duration as you have requested. Long term security of water consents is also vital to the valuation of a farming property in Central Otago and the owner's ability to extract equity from the property.

Appendix 4 – Letter from Fish and Game amending Submission



28 May 2020

Otago Regional Council
Private Bag 1954
Dunedin, 9054
ATTN: Kirstyn Lindsay

Amendments to Fish and Game's submission on RM19.399

Dear Kirstyn,

I am writing to advise of amendments the Otago Fish and Game Council (Fish and Game) wishes to make to its submission on the Hawkdun Pastoral Ltd. application.

Following discussions with the Department of Conservation and Fish and Game, the attached amendments have been made to the application. For Fish and Game, this has resolved issues surrounding the quantification of the residual flow and fish screening. Because of this, Fish and Game advises that it no longer seeks the relief sought in paragraph 4(b) and 4(c) of its submission.

This leaves the duration of consent as only relief sought by Fish and Game and this point remains unresolved. Fish and Game seeks a term no longer than 7 years in addition to the amendments made regarding the residual flow and fish screening as the flow regime does not provide adequate protection for the long term, nor does it ensure a full review of the application upon development of a fit-for-purpose planning framework.

Given the reduced scope, Fish and Game advises that it no longer wishes to be heard and therefore seeks to amend paragraph 6 to this effect.

I would be appreciative if you could please pass this letter on to the hearing commissioners as soon as it is appropriate to do so.

Faithfully,

Nigel Paragreen
Environmental Officer
Otago Fish and Game Council

Statutory managers of freshwater sports fish, game birds and their habitat

Otago Fish & Game Council

Cnr Harrow & Hanover Sts, PO Box 76, Dunedin, New Zealand. P: (03) 477 9076 E: otago@fishandgame.org.nz

www.fishandgame.org.nz

Appendix 5 – Letter from DOC withdrawing right to be heard.



Our Ref: DOC-6292069

Date: 15 May 2020

Otago Regional Council
70 Stafford St
Private Bag 1954
DUNEDIN
Attn: Kirstyn Lindsay

HAWKDUN PASTORAL LTD

PROPOSED WATER TAKE CONSENT: RM 19.399: MATA CREEK, ST BATHANS SECTION 100 RMA WITHDRAWAL OF RIGHT TO BE HEARD

Regarding the Director-General's position on his rights to be heard on the above resource consent application. The Department of Conservation has consulted with the applicant's agent, Peter Dymock of Patterson Pitts Consultancy.

I advise we have come to an agreement (based on our video conference dated 17th April) that satisfies most of the concerns raised in the Director-General's submission if the consent conditions and terms proposed by the applicant enclosed in Appendix 1 are imposed. These conditions are as follows- term, residual flow, fish screening, and a reduction in take amount. However, there is still scant information on the instream fishery values effected and no information on the instream values in the water race effected by this consent. It should be noted that within the Manuherikia catchment there are native fish populations of conservation significance. Council will need to assess the instream values matter in their decision-making.

I can advise the Director-General no longer wishes to be heard at the upcoming hearing. I would appreciate if you could please pass on this position onto the hearing panel. Note the Director-General retains his appeal rights. Please be advised that the original of this letter has been sent to Peter Dymock for the applicant's records. If you have any questions regarding this letter, please contact Herb FAMILTON at (027) 290 6025 or hfamilton@doc.govt.nz.

Yours sincerely,

Mike Tubbs
Operations Manager, Central Otago / *Kā Moana Haehae*
Pursuant to a delegation for the Director-General of Conservation¹

¹ Note: A copy of the Instrument of Delegation may be inspected at the Director-General's Office at Conservation House, Whare Kaupapa Atawhai, 18/22 Manners Street, Wellington 6011.

Cc

Patterson Pitts Group
PO Box 84
Cromwell 9342
OTAGO
Attn: Peter Dymock

Enc: Appendix 1

Agenda to discuss proposed conditions:

1. Following on from the "without prejudice" video conference with the submitters held on Friday 17th April 2020, the application is hereby formally amended as follows:
2. It is proposed that a residual flow condition be set at 28 litres per second, immediately downstream of the point of take.
3. It is proposed that the irrigation take be limited to the grass growing season on the irrigation application site which the applicant advises is 1 September through to the 30 April the following year inclusive
4. It is proposed that a fish screen be erected in the open head race as close as practicable to the point of take, in any case up stream of the existing water measuring device (weir) in the race
5. It is proposed to adopt the fish screening condition of consent as suggested by Fish and Game in its submission, modified as required for an installation in an open race
6. A term for the consent of 25 years is now proposed. This is in line with the recently (July 2019) granted RM17.094.01 for a takeout of a similar small tributary stream (in that case of the Lindis River)
7. The economic justification for this is as follows:

According to analysis by ICE farm accountants of Alexandra, the top quartile of farming businesses in Otago manage to achieve a return of a maximum of 5% net return on assets per year (the bottom quartile make a loss each year and the rest barely breakeven) Let us be generous and say Hawkdun Pastoral is an exceptional operator and allow a 10% rate of return on capital. On a capital cost of \$381,117 for the applicant's irrigation system, this gives us a net return of \$38,111 per annum. Discounting this using a NPV / IRR calculation at the current commercial interest rate of 9% results in a 28 year period over which to amortise the initial investment

8. I attach the ORC's science unit's analysis of the applicants water usage. This shows the historic use closely aligns with the take applied for, allowing for some gaps in the record.
9. Following on from the "without prejudice" video conference with the submitters held on Friday 17th April 2020, the application is hereby formally amended as follows :
10. It is proposed that a residual flow condition be set at 28 litres per second, immediately downstream of the point of take.
11. It is proposed that the irrigation take be limited to the grass growing season on the irrigation application site which the applicant advises is 1 September through to the 30 April the following year inclusive
12. It is proposed that a fish screen be erected in the open head race as close as practicable to the point of take, but in any case up stream of the existing water measuring device (weir) in the race

13. It is proposed to adopt the fish screening condition of consent as suggested by Fish and Game in its submission, modified as required for an installation in an open race
14. A term for the consent of 25 years is now proposed. This is in line with the recently (July 2019) granted RM17.094.01 for a take out of a similar small tributary stream (in that case of the Lindis River)
15. The economic justification for this is as follows:

According to analysis by ICE farm accountants of Alexandra, the top quartile of farming businesses in Otago manage to achieve a return of a maximum of 5% net return on assets per year (the bottom quartile make a loss each year and the rest barely break even) Let us be generous and say Hawkdun Pastoral is an exceptional operator and allow a 10% rate of return on capital. On a capital cost of \$381,117 for the applicant's irrigation system, this gives us a net return of \$38,111 per annum. Discounting this using a NPV / IRR calculation at the current commercial interest rate of 9% results in a 28 year period over which to amortise the initial investment

16. I attach the ORC's science unit's analysis of the applicant's water usage. This shows the historic use closely aligns with the take applied for, allowing for some gaps in the record.

Appendix 6 – Email from Aukaha Limited



Tania Richardson

to Peter, hamish.cavanagh@gmail.com, Nigel, Herb, me ▾

Tue, Oct 27, 9:44 AM ☆ ↶ ⋮

Kia ora Peter

Trust this email finds you well for a Tuesday and you had a great long weekend 😊

RE: RM19.399 - Hawkdon Pastoral – Mata Creek

Thanks for keeping Aukaha informed of talks with F&G, DOC and Council regarding this application.

Aukaha writes this on behalf of Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou (Ngā Rūnanga). Ngā Rūnanga have a neutral stance on the proposed residual flow of a visual assessment of 28 L/s in Mata Creek. Ngā Rūnanga are supportive of a more specific visual flow condition, like the inclusion of ensuring the flow is 28L/s compared to other, less specific visual flow conditions.

Although we understand the difficulties of identifying a practical means of providing a quantitative measurement of the residual flow, we have concerns about the subjectiveness of a condition based on visual flow (for example, does it require a specified depth of flow, or just that the stream bed is wet?) If the condition is to be based on a photographic record of visible connection, we consider it should incorporate the following requirements:

- Specification of what degree of connection is required, particularly in respect to enabling fish passage (for example this could be in relation to a reference photograph)
- That, as recommended by ORC, the photographic record be taken at times when low flow conditions are likely, rather than on a monthly basis without regard to flow conditions.

We would like to note that our submission still stands. As per the submission dated 5 March 2020, Ngā Rūnanga would support an amended application or, any consent that would be subject to the following conditions:-

- That the term of consent be no longer than 6 years.
- That at least 50% of the flow in the waterway is left in the waterway.
- That a fish screen is installed over the intake structure.
- That the water take is metered and results recorded

While our position has not changed, Ngā Rūnanga would like to inform you that they wish to **withdraw from being heard at a Hearing**.

Thanks 😊

Appendix 7: Email application for diversion permit

Diversion activity in Mata Creek

Peter Dymock <Peter.Dymock@ppgroup.co.nz>

Thu, Nov 12, 2020 at 2:27 PM

To: Kirstyn Lindsay <kirstyn@planningsouth.nz>, "Natasha Pritchard (natasha.pritchard@orc.govt.nz)" <natasha.pritchard@orc.govt.nz>, Kirstyn Lindsay <Kirstyn.Lindsay@orc.govt.nz>, "hamish.cavanagh@gmail.com" <hamish.cavanagh@gmail.com>

Dear Kirstyn

1. As per your below email , please take this email as an application for a diversion of water into the head race
2. The characteristics of the diversion were fully explained in the original application to take water
3. The applicant confirms that the maintenance of the diversion structure fully complies with the permitted activity criteria of rule 13.3.1.1 (this has previously been advised)

Yours faithfully

Peter Dymock
Senior Planner
M 027 437 7910
T 03 445 1826

Paterson Pitts Limited Partnership, trading as:
PATERSONPITTSGROUP
Surveying • Planning • Engineering
Your Land Professionals

Appendix 8: Submitter advice regarding diversion application



Herb Familton

to me, Tania, Nigel, Kirstyn, Natasha ▾

Thanks Kirstyn

I can advise this diversion consideration does not change the DOC submission. Good on the applicant for picking this up.

Herb



Tue, Nov 17, 11:11 AM (3 days ago)





Tania Richardson

to me, Nigel, Kirstyn, Natasha, Herb ▾

Nov 17, 2020, 4:08 PM (3 days ago)



Kia ora Kirstyn

RE: RM19.399 – diversion permit – Mata Creek

Aukaha writes this email on behalf of Ngā Rūnanga.

Please treat this email as reply on the above proposed diversion which does not change the Aukaha submission on behalf of Ngā Rūnanga.

Thanks 😊

Kā mihi

Tania Richardson

Consents Officer – Mana Taiao Team

Kia pai tō rā

(have a good day)

Telephone: (03) 477 0071

Mobile: 021 333 595

Email: tania@aukaha.co.nz

Website: www.aukaha.co.nz



Appendix 8 – Historic Water Use



Document Id: A1334450

MEMORANDUM

To: Kirstyn Lindsay
From: Sean Leslie
Date: 19/03/2020
Re: RM 19.399 Water Use Analysis

This memorandum is in relation to the surface water usage for application RM19.399 to replace deemed permit 96208 to take up to 200,000 litres per hour of water from Mata Creek for the purpose of pasture irrigation.

All analyses, graphs and calculations were performed using RGui 3.6.3

Surface water take 96208 is a deemed permit authorizing the abstraction of up to 200,000 litres/hour. 200,000 litres per hour equates to a maximum average take rate of 55.6 l/s and is measured through WM0961. No other volumetric limits are specified in the deemed permit.

Data for water taken through WM0961 extends from 7 August 2013 through to 18 March 2020 with a total of 43,025 hourly measurements. It was noted as part of the initial review of the data for this application that:

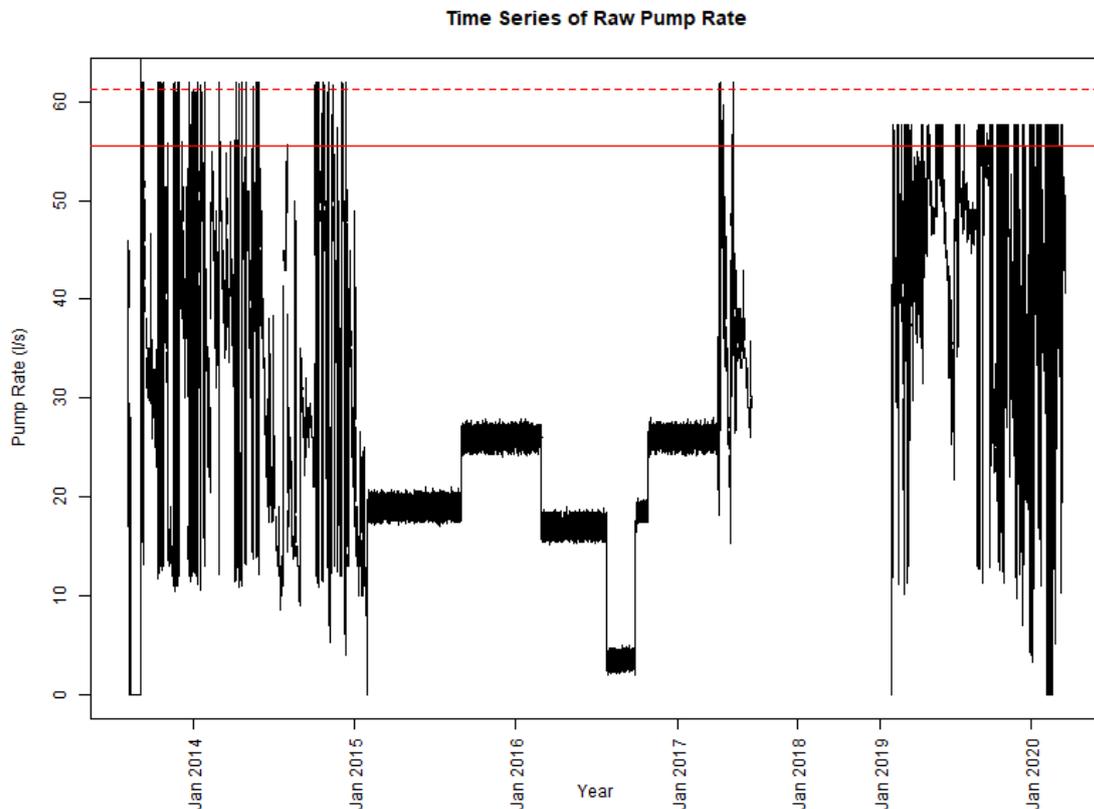
- The data prior to 26 January 2015 and after 22 Feb 2019 were very noisy with many and frequent spikes.
- Data between 1 Feb 2015 and 1 April 2017 are suspect
- Data between 1 April 2017 and 22 Feb 2019 were largely missing.

Over all, this leads a little over two seasons of useful data available for interpretation, which is likely to result in significant uncertainty in any conclusions made from it.

Before the data was analysed, the following steps were taken:

- Rates less than, or equal to zero were set to NA.
- The maximum average rate of take authorized by the permit this application seeks to replace is 55.6 l/s and water is taken through an open channel. A 10% margin of error was applied to this, and rates in excess of 61.2 l/s were set to NA.
- Rates between 55.6 l/s and 61.2 l/s were set to 55.6 l/s.
- The resultant data set had 42,230 hourly measurements

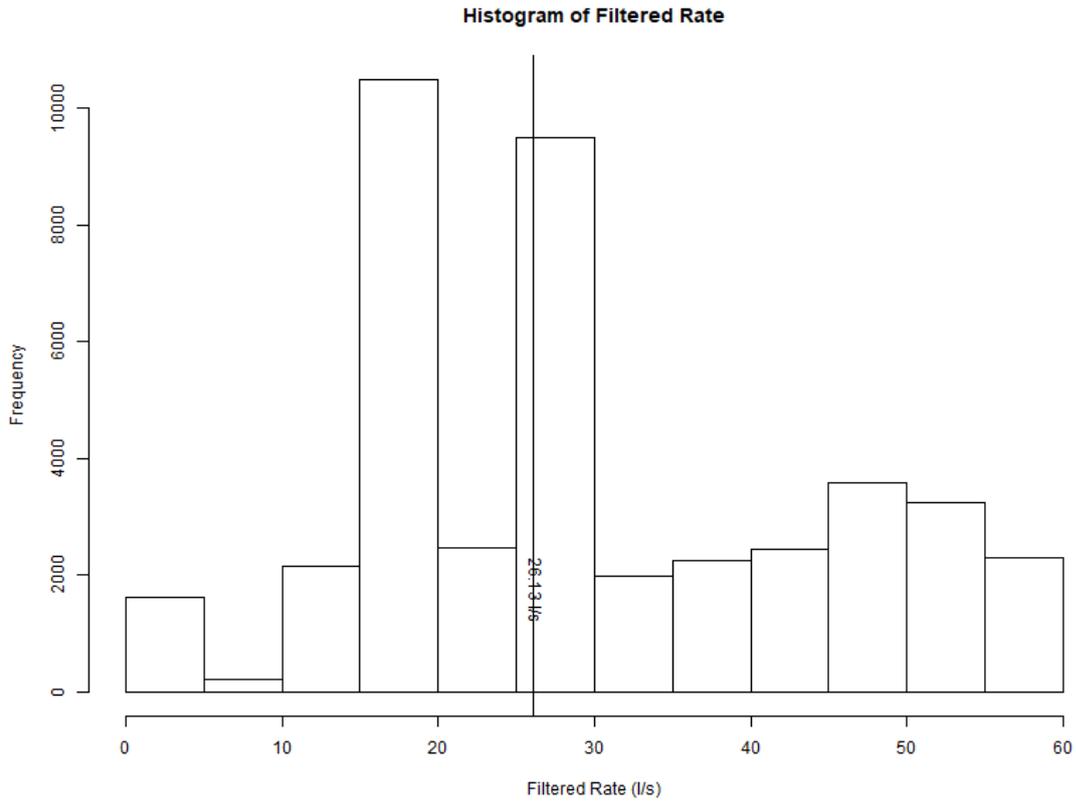
A time series showing the pump rate is presented below:



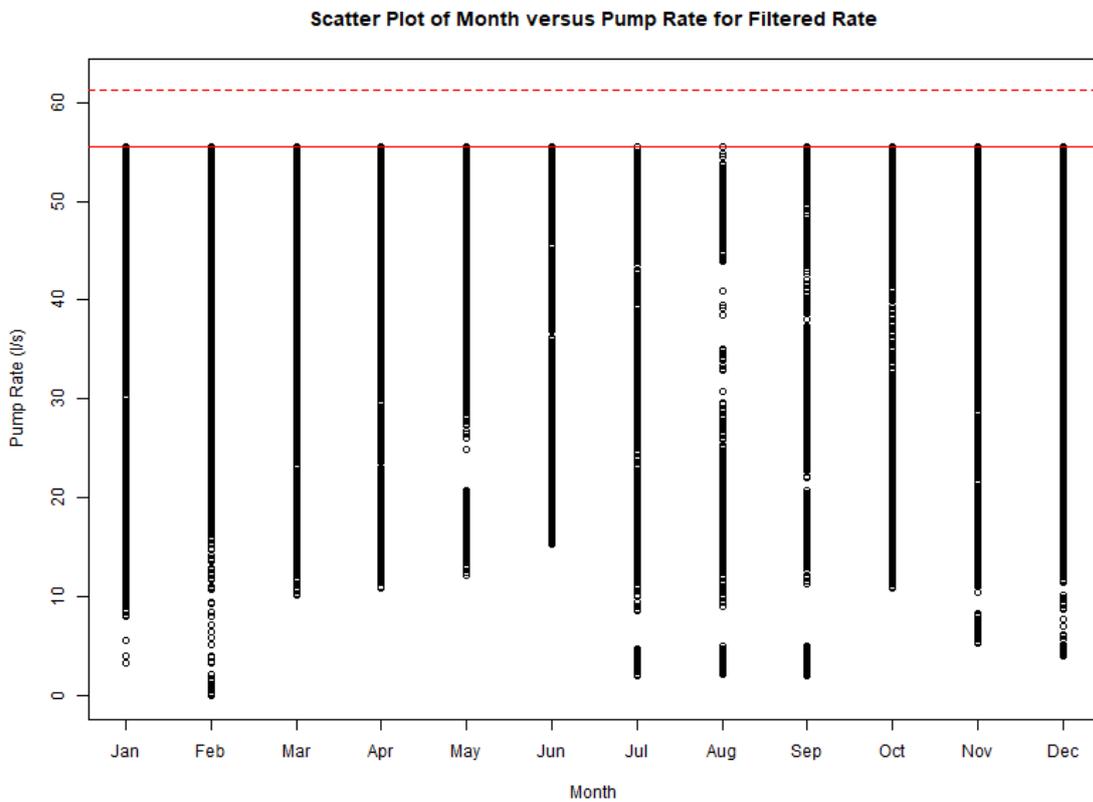
The solid red line represents the consented maximum rate of 55.6 l/s, and the broken red line represents 55.6 l/s + 10%.

The timeline illustrates the unreliable and short nature of the dataset.

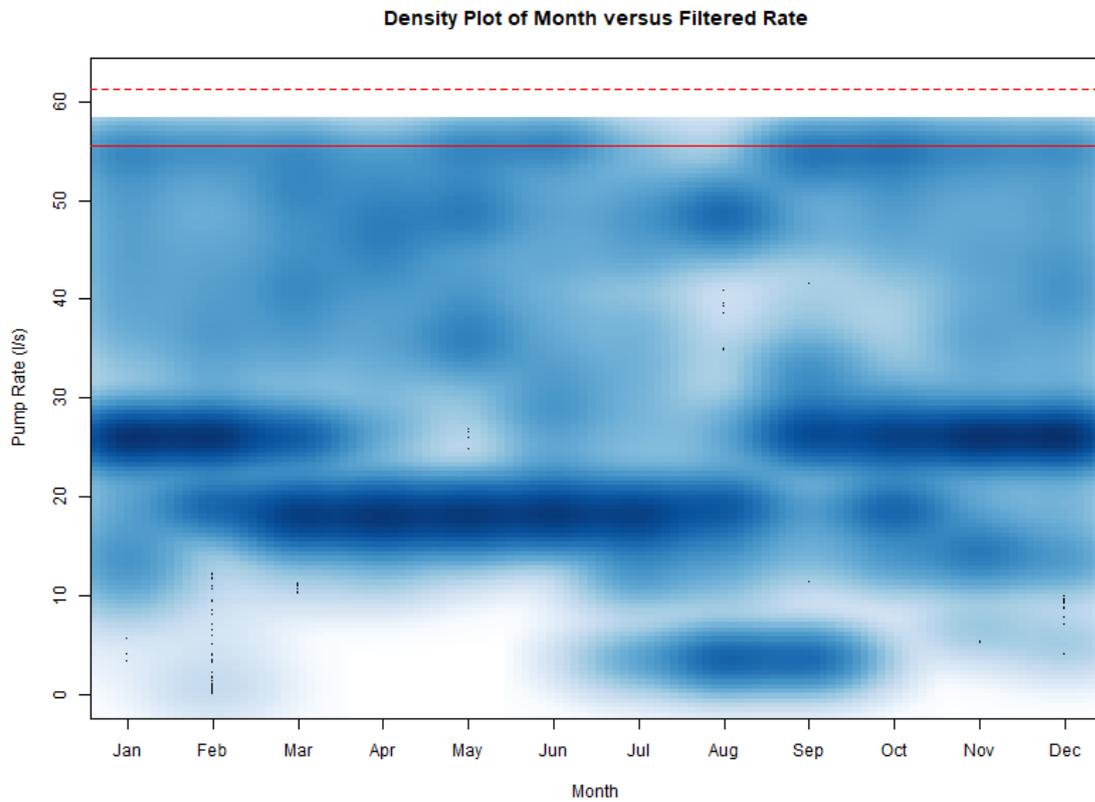
The filtered data set contains 42,230 measurements with an average take of 29.7 l/s, a median rate of take of 26.1 l/s, and a modal (most common) rate of take of 55.6 l/s. The histogram for the filtered rate potentially resembles a largely random distribution with a slight peak between 45 l/s and 55 l/s. There are two large spikes, one between 15 l/s and 20 l/s, and another between 25 l/s and 30 l/s which correspond to the ranges of values observed between 1 Feb 2015 and 1 April 2017.



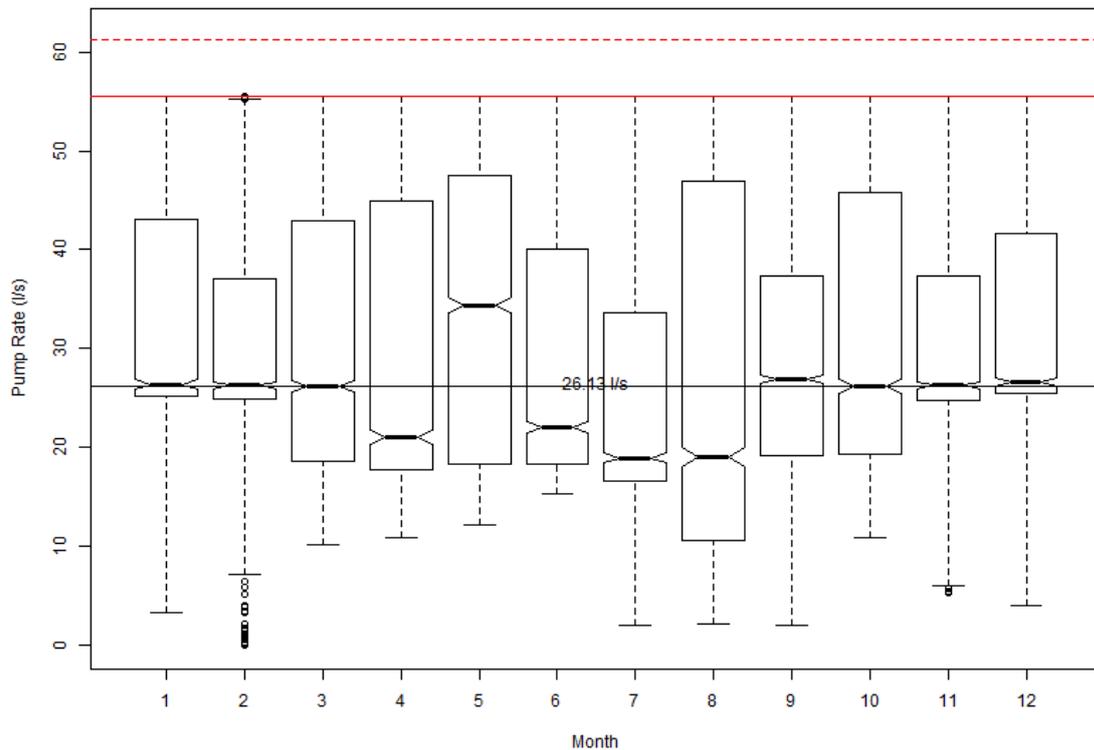
A scatter plot of month versus pump rate does not appear to display any seasonal variation in the maximum rate of take, however, there is some seasonal variation shown in the minimum rate of take.



The density plot of month versus filtered rate does not reveal any useful information, it does, however, underscore the dubious data collected during the period 1-Feb-2015 and 1-April-2017.



The box plot of rate of take by month provides the first real indication of seasonal variability and suggests that taking typically peaks between September and March.



The high use data set was selected by filtering for those months in which the median usage exceeded the median for the filtered data set, 26.1 l/s.

Percentiles are not a percentage of the maximum rate, but rather the rate that is exceeded x% of the time. Percentiles are calculated by ranking the data from lowest to highest and taking the weighted average of the nth highest and the n+1th highest values. The 80th percentile is the pump rate that is exceeded 20% of the time. The 90th percentile is the pumping rate that is exceeded 10% of the time. The 95th Percentile is exceeded 5% of the time. What this means in terms of the analysis is that if the applicant is pumping at the maximum consented rate more than 5% of the time, the 95th percentile will equal the maximum consented rate. If they are pumping at the maximum consented rate more than 10% of the time, the 90th percentile will equal the maximum consented rate. If they are pumping at the maximum consented rate more than 20% of the time, then the 80th percentile will equal the maximum consented rate. In practical terms if the applicant is pumping 24 hours/day and 2160 hours for a 90 day season then:

- The 80th percentile is the rate that is exceeded for 5 hours per day, or 432 hours per season.
- The 90th percentile is the rate that is exceeded for 2.5 hours per day, or 216 hours per season.
- The 95th percentile is the rate that is exceeded for 1.5 hours per day, or 108 hours per season.

What this means is that if a consent holder is consistently using their maximum consented rate for more than 5%, 10%, or 20% of the time they are pumping, it will show up in the table of percentiles.

The 80th, 90th, and 95th percentiles for the flow rate were calculated, without modelling the distribution, for the raw data set, the filtered data set, and the high rate data set. The results are presented to three significant figures below as Table 1.

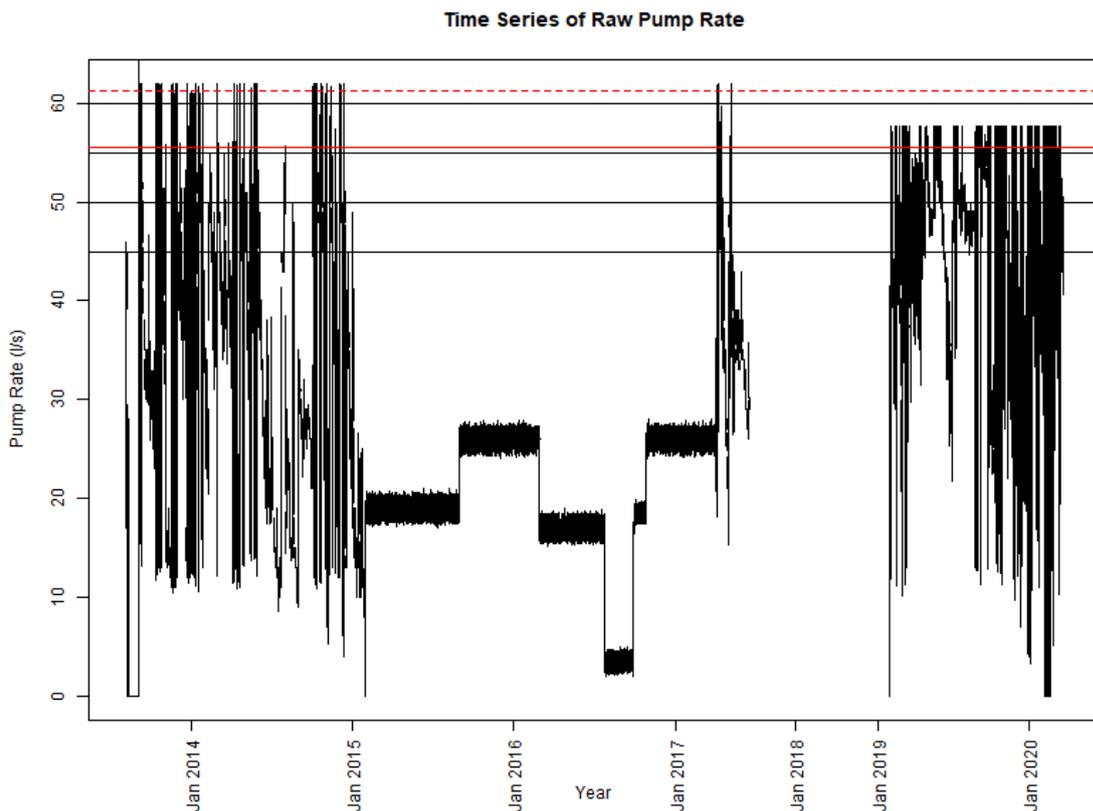
	80th %ile	90th %ile	95th %ile
Raw rate	46.5	52.2	56
Filtered rate	46.4	52	55.5
High use rate	46.4	53	55.6

The maxima for the period 1 July 2012 to 30 June 2017 are presented below:

2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
No Data	55.6	55.6	27.9	55.6

It should be noted that the data between 1 Feb 2015 and 1 April 2017 are expected to explain the reduced annual maximum for the 2015/2016 irrigation season.

A time series with reference lines at 5 l/s intervals between 45 l/s and 60 l/s is presented below:



The frequency with which the various percentiles have historically been exceeded is presented below:

46.4 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	11	14	11	16						
2014	24	10	13	14	25	3	3	5	0	27	13	11
2015	1	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	14	6	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	5	20	26	31	25	18	31	29	19	21	18
2020	24	21	19	#N/A								

46.5 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	11	14	11	16						
2014	24	10	13	14	25	3	3	5	0	27	13	11
2015	1	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	14	6	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	5	20	26	31	25	17	31	29	19	20	18
2020	24	21	19	#N/A								

52 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	7	12	9	9						
2014	16	4	9	10	15	1	1	1	0	19	6	6
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	8	2	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	4	16	17	17	19	8	3	26	17	15	16
2020	20	20	14	#N/A								

52.2 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	7	12	9	8						
2014	16	4	9	10	15	1	1	1	0	19	6	6
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	8	2	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	4	15	16	15	18	8	3	26	17	15	16
2020	20	20	13	#N/A								

53 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	7	10	9	7						
2014	15	2	8	8	15	1	1	1	0	16	6	6
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	8	2	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	3	14	14	15	17	7	2	26	17	14	15
2020	20	19	11	#N/A								

55.5 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	4	9	9	5						
2014	12	0	5	5	11	0	0	1	0	11	4	5
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	8	2	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	3	13	3	11	16	5	1	17	17	13	13
2020	17	18	7	#N/A								

55.6 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	0	0	0	0						
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	0	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	#N/A								

56 l/s	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	0	0	0	0	0						
2014	0	0	0	0	0	0	0	0	0	0	0	0
2015	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A											
2019	#N/A	0	0	0	0	0	0	0	0	0	0	0
2020	0	0	0	#N/A								

A summary of daily volumes, in m³ filtered for a maximum daily take of 4,800 m³ and then rounded to three significant figures is presented below:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min	864	1480	1440	1150	1220	1450	289	287	281	1270	545	400

Mean	2730	2600	2680	2650	2830	2560	2110	2060	2470	2740	2620	2790
Median	2250	2250	2250	2260	3030	1970	1640	1640	2300	2260	2250	2260
80%	3920	3380	3920	3990	4170	3980	3300	4130	3950	4000	3560	3780
90%	4350	3990	4300	4180	4470	4800	4110	4220	4650	4560	4030	4140
95%	4480	4280	4480	4480	4800	4800	4340	4350	4770	4780	4480	4550
Max	4800	4660	4800	4800	4800	4800	4800	4640	4800	4800	4800	4800

A summary of monthly volumes, based on daily volumes that have been filtered for a maximum daily take of 4,800 m³ and then rounded to three significant figures is presented below:

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2013	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	16400	87100	94100	67200	97200
2014	108000	92600	116000	90800	107000	78400	60300	59900	72600	114000	83000	89000
2015	40600	41000	51000	49200	50900	49400	50900	50900	66000	69600	67500	69700
2016	69600	65100	45500	43900	45600	44100	38100	9380	12000	52900	67400	69600
2017	69600	62900	69600	96800	102000	39900	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2018	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
2019	#N/A	22200	106000	116000	133000	134000	113000	131000	122000	94000	107000	108000
2020	122000	93300	75300	#N/A								

In Summary:

- Any seasonal variations are being obfuscated by the combination of missing and low quality data.
- Due to the small amount of available, useful data there may be significant uncertainties in any conclusions based on it.
- The maximum volume taken in any day is 4,800 m³.
- The maximum volume taken in any month is 134,000 m³
- The maximum volume taken in any irrigation year is 965,600 m³
- The applicant has applied for:
 - 56 l/s
 - 4,800 m³/day
 - 148,800 m³/day
 - 800,460 m³/year
- The average maximum rate of take is 48.7 l/s, however, this includes the data missing from the period 1 Feb 2015 and 1 April 2017 which has been identified as suspicious.
- Excluding the data from the period 1 Feb 2015 and 1 April 2017, the average maximum rate of take is 55.6 l/s.
- The lowest rate at which water can be taken and still in the range 55.6 ±10% is 50.5 l/s.
- All 90th and 95th percentiles exceed 50.5 l/s, as does the maximum average rate.
- The rates and volumes applied for can be considered to represent the data available.

Our Reference: A1377802

Consent No. RM19.399.01

WATER PERMIT

Pursuant to Section 104C of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Hawkdun Pastoral Limited

Address: C/- Hamish Cavanagh, 2173 St Bathans Loop Road, RD 1, Oturehua

To take and use surface water from Mata Creek and to retake and use water from races and reservoirs for the purpose of irrigation, domestic and stock water supply

For a term expiring 31 December 2030

Location of Point of Abstraction: Mata Creek, 4.5 kilometres (km) upstream of the St Bathans Loop Road Bridge and 380 metres (m) west of Hawkdun Road.

Legal Description of land at point of abstraction: RUN 585 Block 7 St Bathans SD

Legal Description of lands where water is to be used:

Sec 7 Blk III St Bathans SD
Sec 10 Blk III St Bathans SD
Sec 8 Blk III St Bathans SD
Sec 9 Blk III St Bathans SD
Sec 12 Blk III St Bathans SD Sec 5 SO 24231

Map Reference at point of abstraction: NZTM 2000 E1350209 N5028771

Conditions

Specific

1. The take and use of surface water as primary allocation from Mata Creek at the above location and the retake of primary allocation from races and reservoirs for domestic water, stock water and irrigation of 90 hectares of land on the land legally described as above must be carried out in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Consent Authority as consent number RM 19.399:
 - a) Application form, and assessment of environmental effects prepared by Peter Dymock, Paterson Pitts Group dated 16 December 2019; and
 - b) Email advice from Peter Dymock amending the application on 24 April 2020.

If there are any inconsistencies between the above information and the conditions of this consent, the conditions of this consent will prevail.

2. This consent must not be exercised until Water Permit 96208 has been surrendered or has expired.
3. The rate and quantity of abstraction as primary allocation from Mata Creek from the commencement of this consent for a maximum period of two years must not exceed:
 - i. 56 litres per second for irrigation;
 - ii. 148,801 cubic metres per month; and
 - iii. 719,822 cubic metres in each 12 month period, commencing 1 July of any year and ending 30 June of the following year.
4. The rate and quantity of abstraction as primary allocation from Mata Creek two years after the commencement of this consent must not exceed:
 - i. 55.6 litres per second;
 - ii. 147,670 cubic metres per month; and
 - iii. 706,500 cubic metres in each 12 month period, commencing 1 July of any year and ending 30 June of the following year.
4. A connected continuous residual flow must be maintained at all times downstream of the point of take, reaching as far down as the St Bathans's Loop Road Bridge at approximately (NZTM 2000) E1350152 N5024054 while the abstraction and diversion is occurring.
5. Prior to exercising the consent, the Consent Holder must install a fish screen in a location within the water race as close to intake point as physically practicable to avoid fish ingress and uptake that complies with the following:
 - a) Water must only be taken when a fish screen with a mesh size or maximum slot width of 3 millimetres is operated and maintained across the full width of the water race to ensure that fish and fish fry are prevented from passing through the screen;
 - b) As far as possible, the screen area must be designed to ensure the calculated average through-screen velocity does not exceed 0.12 metres per second if a self-cleaning mechanism is in place, or 0.06 metres per second if no self-cleaning mechanism is in place;
 - c) The sweep velocity parallel to the face of the screen must exceed the design approach velocity; and the screening material must have a smooth surface and openings that prevent any damage to fish coming into contact with the screen;
 - d) Prior to installation of any fish screen, a report containing the location of the fish screen, photographs of the site, rationale for the location selected, final design plans illustrating how the screen will meet the required design criteria (Conditions 7(a)-(c)), must be provided to the Consent Authority. Photographs must be in colour, be no smaller than 200 x 150 millimetres in size and be in JPEG form; and
 - e) The fish screen must be fully functional at all times. If it is damaged and cannot be repaired or replaced immediately, the intake must be shut down.

6. a) An intake pipe for stock and domestic water must be installed within the diversion channel within two years of the date of the commencement of this consent.

b) The by-wash to Station Creek from the equalisation dam must cease within two years of the date of the commencement of this consent.
7. The fish screens, as required by Conditions 5, must be:
 - a) maintained in good working order, to ensure that the screens are performing as designed.
 - b) Records must be kept of all inspections and maintenance and these must be made available to the Consent Authority, on request.

Performance Monitoring

8. The Consent Holder must maintain a:
 - a). Water meter that which will measure the rate and the volume of water taken to within an accuracy of +/- 10% over the meter's nominal flow range at NZTM 2000 E1350185 N5028482, as authorised by WEX011. The water meter must be capable of output to a datalogger.
 - i) A datalogger that time stamps a pulse from the flow meter at least once every 15 minutes and have the capacity to hold at least twelve months data of water taken.
 - ii) A telemetry unit which sends all of the data to the Consent Authority.
 - b) Provide records from the datalogger electronically to the Consent Authority at annual intervals by 31 July each year and at any time upon request. Data must be provided electronically giving the date, time and flow rates in no more than 15-minute increments of water.
 - c) Provide telemetry data once daily to the Consent Authority. The Consent Holder must ensure data compatibility with the Consent Authority's time-series database and conform with Consent Authority's data standards.
 - d) Within 20 working days of the installation of the water meter / datalogger/ telemetry unit, any subsequent replacement of the water meter / datalogger/ telemetry unit and at five yearly intervals thereafter, and at any time when requested by the Council, the Consent Holder must provide written certification to the Consent Authority signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:
 - i. Each device is installed in accordance with the manufacturer's specifications;
 - ii. Data from the recording device can be readily accessed and/or retrieved in accordance with the conditions above; and
 - iii. that the water meter has been verified as accurate.
 - e) The water meter / datalogger / telemetry unit must be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.
 - f) All practicable measures must be taken to ensure that the water meter and recording device(s) are fully functional at all times.
 - g) The Consent Holder must report any malfunction of the water meter / datalogger/ telemetry unit to the Consent Authority within 5 working days of observation of the malfunction. The malfunction must be repaired within [10] working days of observation of the malfunction and the Consent Holder must provide proof of the repair, including photographic evidence, to the Consent Authority within 5 working days of the completion of repairs.

Photographs must be in colour and be no smaller than 200 x 150 millimetres in size and be in [JPEG or specify other acceptable form] form.

Note: the water meter, data logger and telemetry unit should be safely accessible by the Consent Authority and its contractors at all times. The Water Measuring Device Verification Form and Calibration Form are available on the Consent Authority's website.

General

9. A water use efficiency report must be provided to the Consent Authority by 31 July each year for the period commencing 1 July the previous year and ending 30 June the current year. The report must assess the water use over the previous 12 months in respect of the efficient use of water for the purpose(s) consented. This report must include, but not be limited to:
 - a) Area, crop type, number of harvests per year, and timing;
 - b) Annual summary of water usage (month by month, and related to crops in the ground);
 - c) Reasons why use may have varied from the previous year;
 - d) Information demonstrating irrigation equipment that has been used and decision-making regarding efficiency of use (e.g. soil moisture data, irrigation scheduling, meter accuracy checks, computer control of irrigation) and any changes planned for the coming year;
 - e) Any changes or modifications to irrigation (and water conveyance) infrastructure; and
 - f) Water conservation steps taken.
10. The Consent Holder must ensure that at all times:
 - a) There is no leakage from pipes and structures;
 - b) The use of water is confined to targeted areas, as illustrated on the attached plan referenced: H & A Cavanagh Stage 1 ;
 - c) That the volume of water used for irrigation does not exceed that required for the soil to reach field capacity and avoids the use of water onto non-productive land such as impermeable surfaces;
 - d) That irrigation to land must not occur when the moisture content of the soils is at or above field capacity.

Note: Field Capacity is the amount of water that is able to be held in the soil after excess water has run off.

Review

11. The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period of three months either side of the date of granting of this consent each year, or within two months of any enforcement action taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, or on any water management regime (including setting or revising a minimum flow) for the Manuherehia catchment for the purpose of:
 - a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or which becomes evident after the date of commencement of the consent;
 - b) Ensuring the conditions of this consent are consistent with any National Environmental Standards, relevant regional plans, and/or the Otago Regional

Policy Statement;

- c) Reviewing the frequency of monitoring or reporting required under this consent;
- d) Varying the consented quantities and rates of take and monitoring, operating and reporting requirements, and performance requirements to respond to:
 - i. the results of previous monitoring carried out under this consent and/or:
 - 1. water availability, including alternative water sources;
 - 2. actual and potential water use;
 - 3. surface water flow and level regimes;
 - 4. groundwater or surface water quality;
 - 5. efficiency of water use;
 - 6. instream biota, including fish passage and the functioning of aquatic ecosystems; or
 - 7. new requirements for measuring, recording and transmission;

Notes to Consent Holder

1. *Under section 125 of the Resource Management Act 1991, this consent lapses two years after the date of commencement of the consent unless:
 - a) The consent is given effect to; or
 - b) The Consent Authority extends the period after which the consent lapses.*
2. *Section 126 of the Resource Management Act 1991 provides that the Consent Authority may cancel this consent by written notice served on the Consent Holder if the consent has been exercised in the past but has not been exercised during the preceding five years.*
3. *If you require a replacement consent upon the expiry date of this consent, any new application should be lodged at least 6 months prior to the expiry date of this consent. Applying at least 6 months before the expiry date may enable you to continue to exercise this consent under section 124 of the Resource Management Act 1991 until a decision is made on the replacement application (and any appeals are determined).
Primary allocation may be lost if an application is not made at least 6 months prior to expiry and will be lost if an application is not made at least 3 months prior to expiry. A late application will likely result in the application being treated as supplementary allocation, if any such allocation is available.*
4. *The Consent Holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, the Biosecurity Act 1993, the Conservation Act 1987, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004.*
5. *Where information is required to be provided to the Consent Authority in his is be provided in writing to watermetering@orc.govt.nz, and the email heading is to reference RM19.399 and the condition/s the information relates to.*
6. *The Consent Holder will be required to pay the Consent Authority an annual administration and monitoring charge to recover the actual and reasonable costs incurred to ensure ongoing compliance with the conditions attached to this consent, collected in accordance with Section 36 of the Resource Management Act 1991.*

7. *The consent holder must be aware of any rules that relate to the control of farm contaminants in runoff and leaching of nutrients to groundwater in relevant Otago regional plans. For current obligations under the regional plans, refer to the Otago Regional Council website or contact the Council on 0800 474 082.*
8. *It is the responsibility of the consent holder to ensure that the water abstracted under this resource consent is of suitable quality for its intended use. Where water is to be used for human consumption, the consent holder should have the water tested prior to use and should discuss the water testing and treatment requirements with a representative of the Ministry of Health and should consider the following Drinking Water Standards: Drinking Water Standards for New Zealand 2005 (Revised 2018).*
9. *Water may be taken at any time for reasonable domestic or stock water purposes where the taking or use does not, or is not likely to, have an adverse effect on the environment in accordance with Section 14 of the Resource Management Act 1991.*
It is the responsibility of the consent holder to ensure that the water abstracted under this resource consent is of suitable quality for its intended use. Where water is to be used for human consumption, the consent holder should have the water tested prior to use and should discuss the water testing and treatment requirements with a representative of the Ministry of Health and should consider the Drinking Water Standards for New Zealand 2005 (Revised 2018).

Our Reference: A1377802

Consent No. RM19.399.02

WATER PERMIT

Pursuant to Section 104B of the Resource Management Act 1991, the Otago Regional Council grants consent to:

Name: Hawkdun Pastoral Limited

Address: C/- Hamish Cavanagh, 2173 St Bathans Loop Road, RD 1, Oturehua

To divert surface water from Mata Creek into a new channel for the purpose of enabling the operation of a water take (RM19.399.01)

For a term expiring 31 October 2030

Location of consent activity: Mata Creek, 4.5 kilometres (km) upstream of the St Bathans Loop Road Bridge and 380 metres (m) west of Hawkdun Road.

Legal description of consent location: RUN 585 Block 7 St Bathans SD

Map Reference: NZTM 2000 E1350202 N5058729

Conditions

1. The diversion of surface water from Mata Creek at the above location enabling the operation of Water Permit RM19.399.01 on the land legally described as above must be carried out in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Consent Authority as consent number RM 19.399.
 - a) Application form, and assessment of environmental effects prepared by Peter Dymock, Paterson Pitts Group dated 16 December 2019; and
 - b) Email advice from Peter Dymock amending the application on 24 April 2020.
2. This consent must only be exercised in conjunction with RM19.399.01.
3. The diversion must be operated and maintained to ensure that, at all times, it is structurally sound, pose no undue risk to human life, property, or the natural environment.
4. Access for trout through the diversion must be provided by creating and maintaining fish passage.
5. The diversion of water must not cause flooding, erosion, land instability, sedimentation or property damage of any other person's property.

