

**Otago Regional Council**

**Section 42A Staff Recommending Report**

Water Permit Application RM16.093

Criffel Water Limited

And

Water Permit Application RM18.345

Luggate Irrigation Company Limited and Lake McKay Station Limited

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| ***The recommendation in the staff report represents the opinion of the writers and it is not binding on the Hearing Commissioners. The report is evidence and has no greater weight than any other evidence that the Hearing Commissioners will hear and consider.*** |

Stephen Daysh

and

Alexandra King

27 September 2019

**Executi****ve Summary**

Criffel Water Limited has applied for resource consent (RM16.093) for new water permits replacing deemed permits which allow the take and use of water from the Luggate Creek. Luggate Irrigation Company and Lake McKay Station have also applied for new water permits (RM18.345) to replace deemed permits which allow the take and use of water from the Luggate Creek and Alice Burn. The recommendation of the reporting officers is that the applications for consent are granted for a period of ten years subject to the recommended conditions of consent.

**Report writers**

Please note that this report contains the recommendations of the Consent Officers and represents the opinion of the authors. It is not a decision on the applications.

**Alexandra King**

My name is Alexandra King. I am a Consents Officer employed by the Otago Regional Council. I have been employed by the Council as a Consents Officer since 2018.

I hold the qualifications of a Bachelor of Science in Geography and Environmental Management and a Master of Science in Hydrology both from the University of Otago. I am an Associate Member of the NZPI.

I have been involved with the Luggate Lake McKay application since it was lodged and received and the Criffel Water Limited application since mid 2019.

**Stephen Daysh**

My name is Stephen Daysh. I am a Consultant Consents Officer for the Otago Regional Council.

I hold the qualifications of a Bachelor with Honours in Regional Planning Management from Massey University. I am a Partner at Mitchell Daysh.

I am a certified Commissioner Chair under the Ministry for Environment ‘Making Good Decisions’ programme.

 I have been involved with the Luggate Lake McKay and the Criffel Water Limited applications since mid 2019.

**OTAGO REGIONAL COUNCIL DEEMED PERMIT REPLACEMENT**

**SECTION 42A REPORT**

**Application No(s): RM16.093 and RM18.345**

**Prepared For: Hearing Panel**

**Prepared By: Stephen Daysh and Alexandra King**

**Date: 27/09/2019**

**Subject: Section 42A Recommending Report – Non-notified Deemed Permit Replacement**

## 1. Purpose

This report has been prepared under Section 42A of the Resource Management Act 1991 (RMA) to assist in the hearing of the applications for resource consent made by Luggate Irrigation Company and Lake McKay Station and Criffel Water Limited. Section 42A allows local authorities to require the preparation of such a report on an application for resource consent and allows the consent authority to consider the report at any hearing.

The Hearings Commissioners have directed in their Minute 2 dated 17 September 2019 that a combined Section 42A Report be made available.The purpose of the report is to assist the Hearing Panel in making a decision on the applications.

**2. Key issues**

We believe that the key issues with the applications are:

* Consent duration
* Catchment allocation – both primary and supplementary
* Minimum and residual flows
* Fish screens
* Efficient use
* Historic use

**3. Summary of Recommendation**

After assessing the actual and potential effects of the applications and submissions, and considering all of the matters in section 104 of the Resource Management Act 1991 the recommendation of this report is to grant the applications for the water permits subject to the recommended conditions and for the recommended term.

**4. The applications**

This report addresses two separate consent applications for new water permits from parties who currently hold deemed permits for primary allocation[[1]](#footnote-1) in the Luggate Catchment. As the takes are from within the same catchment, have similar effects on the environment, are the only consented takes in the catchment and have the same status under the Regional Plans: Water, they have been addressed collectively in this report.

This report gives background to the Luggate catchment, discusses Council management strategies of the water resource within the catchment, considers the application against statutory requirements and makes recommendations as to the efficient use of water.

The individual applications have been detailed and discussed in the attached Appendices 1-4 and 7-8 along with legal advice at Appendix 5 and recommended consent conditions which are included in Appendix 6. The appendices are:

|  |  |  |
| --- | --- | --- |
| **Appendix Number** | **Applicant(s)** | **Consent Application Number** |
| 1 | Assessment of Criffel Water Limited application  | RM16.063 |
| 2 | Assessment of Luggate Irrigation Company Limited and Lake McKay Station Limited application | RM18.345 |
| 3 | Resource Science report for Criffel Water Limited application | RM16.093 |
| 4 | Resource Science report for Luggate Irrigation Company and Lake McKay Station application | RM18.345 |
| 5 | Wynn Williams Legal opinion dated 26 September 2019 | RM16.093 and RM18.345 |
| 6 | Recommended consent conditions | RM16.093 and RM18.345 |
| 7 | Criffel Water Limited application documents including the final amendment 19th September 2019 | RM16.063 |
| 8 | Luggate Irrigation Company Limited and Lake McKay Station Limited application | RM18.345F |
| 9 | Copy of submissions | RM16.093 and RM18.345 |

Please note that these applications have changed over time. The information contained in this report and the recommendations within it are based on amended applications received from both applicants dated 19th September 2019. The amended applications are included in the information provided in Appendix 7 and Appendix 8 of this report.

## 4.1 Summary of the Application – Criffel

**Applicant:** Criffel Water Limited

**Site address or location:** Luggate Creek, approximately 2 kilometres southeast of the intersection of Smith Road and Mount Barker Road, Luggate

**Legal description(s) take and use:** Crown land

**Map reference (s):** NZTM 2000: E1300130 N5038225

**Consent(s) sought:** Take and use of water

**Purpose of take:** Irrigation, stock water and domestic supply[[2]](#footnote-2)

**Deemed permits:** 94201, 95541, 95541, 95560, 96588, 2001.011.V1, WR7284CR, 97629 and WR412Cr

**Site visit:** A site visit was undertaken on the 29th August 2019. Dean Olsen (Ryder Environmental Scientist), Alexandra King and Stephen Daysh attended.

**Rates and volumes Applied For[[3]](#footnote-3)**

Primary allocation rate of take: 358 L/s

First supplementary block rate of take 170 L/s

Second supplementary block rate of take 80 L/s

Monthly volume: 847,180 m3/month

Annual volume: 7,470,885 m3/year

**Details of Deemed Permits Being Replaced (description of the activity)**

The applicant is seeking to replace Water Permits 94201, 95541, 95560, 96588, 2001.011.V1, WR7284CR, 97629 and WR412Cr which all expire 1 October 2021. Together the above water permits authorise the applicant to take up to 5,580 cubic metres (m3)/day of water from the Luggate Creek, at a maximum rate of 601.8 litres per second (L/s).

This application was lodged with the Council at least six months before the expiry date of the current water permits. In accordance with Section 124 of the Act, the applicant may continue to operate under these Water Permits until a decision on this application is made and all appeals are determined.

**4.2 Summary of the Application – Luggate Irrigation Company Limited and Lake McKay Station Limited**

**Applicant:** Luggate Irrigation Company Limited and Lake McKay Station Limited

**Site address or location:** 2008.519: Approximately 6.9 km west of the intersection of Hopkins Street and Luggate Cromwell Road (State Highway 6)

97803: Approximately 6.9 km west of the intersection of Hopkins Street and Luggate Cromwell Road (State Highway 6)

WR7284: Approximately 1.87 km west of the intersection of Hopkins Street and Luggate Cromwell Road (State Highway 6)

WR7285: Approximately 2.1 km west of the intersection of Hopkins Street and Luggate Cromwell Road (State Highway 6)

WR7286: Approximately 2 km west of the intersection of Hopkins Street and Luggate Cromwell Road (State Highway 6)

WR7298: Approximately 1.89 km west of the intersection of Hopkins Street and Luggate Cromwell Road (State Highway 6)

**Legal description(s) take and use:** 2008.519: Lot 2 DP 342167

97803: Lot 2 DP 342167

WR7284: Part 6 SO 300466

WR7285: Section 1 SO 300466

WR7286: Section 1 SO 300466

WR7298: CL Block XIV Cardrona SD

**Map reference(s):** 2008.519: E1300431 N5032779

97803: E1300431 N5032779

WR7284: E1302952 N5037954

WR7285: E1302752 N5037568

WR7286: E1302729 N5037888

WR7298: E1302958 N5037805

**Consent(s) sought:** Take and use of water

**Purpose of take:** Irrigation, stock water and communal domestic supply

**Deemed permits:** 97803, 2008.519, WR7284, WR7285, WR7286 and WR7298

**Site visit:** A site visit was undertaken on the 9th May 2019. Peter Ravenscroft (Environmental Resource Scientist – Freshwater) and Alexandra King attended the site visit along with representatives from Aukaha, Te Ao Marama, Fish and Game, Department of Conservation and Public Health South. A further site visit was undertaken on 29th September by Dean Olsen (Ryder Environmental Consultancy) and Stephen Daysh (Mitchell Daysh).

**Rates and Volumes Applied For[[4]](#footnote-4)**

Primary allocation rate of take: 180 L/s

First supplementary block rate of take: 80 L/s

Second supplementary block rate of take: 86 L/s

Monthly volume: 931,279 m3/month

Seasonal volume: 4,761,024 m3/season

**Details of Deemed Permits Being Replaced (description of the activity)**

The applicant is seeking to replace 97803, 2008.519, WR7284, WR7285, WR7286 and WR7298 which all expire 1 October 2021. Table 1 and 2 below show the current allocation and locations of point of takes for the deemed permits. The applicant is applying for less than their current paper allocation shown in the tables below.

**Table 1: Deemed permits held by Lake McKay Station**

|  |  |  |
| --- | --- | --- |
| **Water Permit No.** | **Volume of Water Authorised****(l/s)** | **Location of point of take**  |
| 97803**\***Mining privilege | 85 | 4 points of take.* Main stem Alice Burn approx 5km upstream of junction of Alice Burn and North Branch Luggate Creek for 55 l/s
* Two tributaries of Alice Burn - 7 l/s and 21 l/s respectively.
* Tin Hut Creek for 28 l/s approx 3km upstream of junction with Luggate Creek
 |
| 2008.519RMA permit  | 56 | Alice Burn same as intake for 97803. |
| **Total** | **169 l/s** |  |
| 98104RMA permit  | 118 | To discharge up to 118 l/s of water into an unnamed tributary of the Alice Burn for the purpose of retaking the water from the same tributary. |

**\*Only 1 point of take is being replaced for 97803 which is the same point of take as 2008.519**

**\*\* The applicant proposes to surrender 98104 which expires 1 October 2021**

**Table 2: Deemed Permits held by Luggate Irrigation Company Limited**

|  |  |  |
| --- | --- | --- |
| **Water Right No.** | **Volume of Water Authorised**  | **Location of Point of Take** |
| WR7284 | 56(2 heads) | From the north branch of Luggate Creek approx 200m upstream of the junction north branch of Luggate Creek and Alice Burn. |
| WR7285 | 85 (3 heads) | From the south branch approx 400m upstream of the junction of north branch of Luggate Creek and Alice Burn. |
| WR7286 | 56(2 heads) | Alice Burn as above. |
| WR7298  | 56(2 heads) | Alice Burn as above. |
| **Total** | **254 l/s** |  |

This application was lodged with the Council at least six months before the expiry date of the water permits being replaced. In accordance with Section 124 of the Act, the applicant may continue to undertake the activities authorised under Water Permits 97803, 2008.519, WR7284, WR7285, WR7286 and WR7298 until a decision on this application is made and all appeals are determined.

**5. Notification and submissions - Criffel and Luggate**

**5.1 Criffel Application**

Council made the decision to process RM16.003 as limited-notified under Section 95B of the RMA on the 11th January 2019. The following parties were considered affected:

|  |  |  |
| --- | --- | --- |
| **Party** | **Why affected**  | **Why more than minor** |
| Aukaha | Cultural values in the area that may be affected by the activity. This is because the taking of water may affect the mauri of the water and or the recognised cultural values of the water as displayed in Schedule 1A.  | The removal of water from the river as a consumptive take has a more than minor effect on the mauri of the water.  |
| Te Ao Marama | Cultural values in the area that may be affected by the activity. This is because the taking of water may affect the mauri of the water and or the recognised cultural values of the water as displayed in Schedule 1A.  | The removal of water from the river as a consumptive take has a more than minor effect on the mauri of the water.  |

One submissions was received. Aukaha made a submission opposing the application for over allocation, cumulative effects, minimum and residual flows, consent duration and rate of abstraction.

**5.2 Luggate Applications**

Council made the decision to process RM18.345 as limited-notified under Section 95B of the RMA on 30th July 2019 (A1256570). The following parties were considered affected:

|  |  |  |
| --- | --- | --- |
| **Party** | **Why affected**  | **Why more than minor** |
| Aukaha | Cultural values in the area that may be affected by the activity. This is because the taking of water may affect the mauri of the water and or the recognised cultural values of the water as displayed in Schedule 1A.  | The removal of water from the river as a consumptive take has a more than minor effect on the mauri of the water.  |
| Te Ao Marama | Cultural values in the area that may be affected by the activity. This is because the taking of water may affect the mauri of the water and or the recognised cultural values of the water as displayed in Schedule 1A.  | The removal of water from the river as a consumptive take has a more than minor effect on the mauri of the water.  |
| Te Runanga o Ngai Tahu | Statutory Acknowledgement area  | The removal of water from the river as a consumptive take has a more than minor effect on the cultural and spiritual values of the water.  |
| Otago Fish and Game  | Luggate Creek and the Alice Burn have rainbow and brown trout presence and sport fishery values. Fish and Game under the Conservation Act is a body cooperate which has the rights, powers and privileges of a natural person. The primary function of Fish and Game is to manage, maintain and enhance sports fish and game resources in the recreational interest of anglers and hunters. As. | The applicant has not proposed fish screens or any other form of mitigation for fish entering intakes or water races therefore the effects on trout are more than minor.  |
| Department of Conservation | High invertebrate values and Koaro have been recorded within the Luggate Creek, natural character and Schedule 1 values. DOC who represent the Director General of Conservation have a statutory responsibility to manage freshwater fish habitats. Because of the potential effects on the Koaro and the values of the watercourse and the Department’s requirement to preserve freshwater fish habitats, and protect significant habitats of indigenous fauna DoC is considered an affected person. | The applicant has not proposed fish screens or any other form of mitigation for fish or invertebrates entering intakes or water races. Therefore, the effects on the Koaro and other invertebrates are more than minor.  |
| New Zealand Transport Agency | The water race runs underneath State Highway 6 and there is no section 417. This means the applicant does not have the ability to convey water. | The applicant would be unable to convey water without the use of the water race under the State Highway, the effect of the race is NZTA ability for NZTA to undertake maintenance on their land, bridge or state highway.  |

New Zealand Transport Agency gave their unconditional written approval. Three submissions were received:

* The Department of Conservation have made a submission opposing the application in its entirety specifically discussing over allocation, lack of definition of freshwater fish values, fish screening, minimum and residual flow, and consent duration.
* Aukaha have made a submission opposing the application for over allocation, cumulative effects, minimum and residual flows, consent duration and rate of abstraction.
* Fish and Game have made a submission opposing the application it its entirety specifically discussing over allocation, bywash, fish screening, minimum and residual flow, and consent duration.

The following parties were assessed and are not considered to be affected by the application:

* Forest and Bird – there are no regionally significant wetlands in proximity to the takes.
* Public Health South – Although the water is used for residential supply, and there is no registered drinking certificate, the provisions of the potability of the water is not a issue that Council has restricted its discretion to in Rule 12.1.4.8 of the Regional Plan Water. The applicant should talk to the Territorial Authority and Public Health South to ensure water potability issues to the 250 houses are effectively addressed.
* Criffel Water Limited – Upstream user. Whilst the notification decision on the Criffel application has been made and they have priority, a section 104 decision has not been made. The Criffel application has not been granted therefore their proposed take does not form part of the existing environment. The Criffel deemed permits do form part of the existing environment, however, they do not need to adhere to the minimum flow. As the Luggate application is for less than their deemed permit paper allocation the effect on Criffel Water Limited is less than minor. Council has received a letter from their lawyer regarding the status as a potentially affected party, however, for the reasons listed above they are not considered an affected party.

**5.3 Submitter Positions**

**5.3.1 Criffel Application**

Aukaha submitted in opposition of the application. Ngā Papatipu Rūnanga wish to ensure that decision-making in relation to these applications appropriately considers:

* the cumulative effects of water abstraction and use in the Luggate Creek catchment, and the wider Mata-au catchment;
* the interactions between these proposals and catchment-wide water management, including managing for environmental flows; and
* the impacts on Kāi Tahu rights, interests and values, including mahika kai.

**5.3.2 Luggate Irrigation Company and Lake McKay Station Application**

Aukaha, Depatement of Conservation and Otago Fish and Game all submitted in opposition of the application.

Ngā Rūnanga wish to ensure that decision-making in relation to these applications appropriately considers:

* the cumulative effects of water abstraction and use in the Luggate Creek catchment, and the wider Mata-au catchment;
* the interactions between these proposals and catchment-wide water management, including managing for environmental flows; and
* the impacts on Kāi Tahu rights, interests and values, including mahinga kai.
	1. Fish and Game submitted in respect to the whole application, in which it opposes. Fish and Game seeks that the application be declined unless the following conditions are imposed:
1. a 10 year term of consent;
2. the allocation is reduced to a level which will avoid further over-allocation and be split into reasonable supplementary allocation blocks where relevant;
3. allocations are set individually for each of the 4 takes;
4. the following residual flows be imposed:
	* 1. LMS Alice burn: at least 46L/s;
		2. LMS Alice burn tributary: visual flow to confluence with Alice burn main stem;
		3. LIC Alice burn: visual flow to the confluence with the Luggate; and
		4. LIC Luggate: visual flow to the confluence with the Alice burn;
5. all takes are subject to the Luggate minimum flow for winter and summer;
6. the LIC take on the Luggate main stem is screened;
7. a non-lethal bywash structure is installed, with associated screen immediately after the point of bywash, so that spawning fish and juveniles could be returned to the Alice burn or Luggate main stem;
8. bywashing is restricted to that required to operate the fish screens and provide adequate habitat for trout in the race.

The Department of Conservation submitted with the noting the following issues:

* Over allocation
* Lack of definition of fresh water fish values
* Fish screening requirements
* Minimum and residual flows
* Consent duration

The matters raised in the submissions have been assessed in the body of this report and the relevant appendices.

**5.4 Notification Discussion**

Counsel for Aukaha has raised with Council the application of section 104(3)(d) to the Criffel application. This appears to be on the basis that the Luggate application was limited notified to a wider group of submitters than the Criffel application. For completeness this report addresses the application of section 104(3)(d) in these circumstances.

The notification decisions were made at different times by two different Council Officers. In the Criffel Notification decision (RM16.003) a decision was made by the Council Officer that only two parties, Aukaha and Te Ao Marama were affected and these were the only parties notified. In the case of the Luggate application (RM18.345) the Council Officer assessed that four additional partieswere affected parties (Te Runanga o Ngai Tahu, Otago Fish and Game, Department of Conservation and the New Zealand Transport Agency) as set out in the table above.

Section 104(3)d) of the RMA states:

*(3) A consent authority must not,-*

 *[…]*

*(d) grant a resource consent if the application should have been … notified and was not.*

The legal opinion attached as Appendix 5 outlines recent case law considering the scope of section 104(3)(d). This suggests that the section is applicable in situations where an application was limited notified, but certain persons who should have been notified were not notified. If the Council does in fact consider there are additional persons that should have been notified of the application and were not, then section 104(3) will apply and may prevent the application from being granted. This is a matter for the Hearings Panel to consider based on any formal submissions or other information it receives on this matter. For our part as reporting officers we consider the following matters may be relevant to the Commissioner’s consideration of this matter:

* Notification decisions are made by delegated Council Officers based on their judgement of the information provided and it is foreseeable that different officers will make different judgement on affected parties from time to time;
* In this context, neither the Criffel application nor the Luggate Irrigation application currently form part of the existing environment. Both applications are only at the application stage and therefore any adverse effects on the other consent holder must be assessed with reference only to the effect of the proposed activities on the exercise on the existing deemed permits held by the parties (and only up until the expiry of the consents).
* The Council has not received any formal correspondence from other parties regarding this matter (only from Aukaha who were notified on both applications);
* The two applicants have now come together and have proposed an agreed position on their respective primary and secondary allocations for consideration, and this means from a practical perspective that there is now an opportunity to consider the effects of an integrated proposal by the all submitters on the respective applications (See legal advice attached in Appendix 5); and
* Our assessment of effects on both applications, based on the revised applications received on 19 September 2019 is that effects will be no more than minor.

**6.0 The affected environment - Criffel and Luggate**

Both sites are located in the Luggate Creek catchment. Specific information on each site are included in the attached Appendices 1 and 2.

The Luggate Creek Catchment is located in Central Otago. It covers approximately 20 km and has an area of 121 km2. Luggate Creek is relatively short and has one major tributary, the Alice Burn, which merges with Luggate Creek approximately 2 km above the State Highway 6 Bridge. The Luggate catchment drains the northern end of the Criffel and Pisa ranges.

**6.1 Climate**

The average annual rainfall tends to be 651-700mm rising to 801-900mm on the Lake McKay terraces. The median annual air temperature is 10.1-10.5 C with summer median 16.1- 16.5 C. Growing degree days range from 1401 – 2200 (5 C base). In March/April the potential evapotranspiration is 71 – 85mm up to 220mm in November/December.

**6.2 Fish**

Brown trout have been recorded from the mainstem of Luggate Creek to the Alice Burn confluence, including the lower Alice Burn. Electric fishing records from the NZ Freshwater Fish Database (NZFFDB)[[5]](#footnote-5) indicate that juvenile brown trout are abundant in the lower reaches of Luggate Creek (from the vicinity of SH6, downstream).

Kōaro and rainbow trout have been recorded from the mainstem of Luggate Creek from 2 km upstream of the Alice Burn confluence to the Criffel Station intake. Rainbow trout have also been recorded from the lower Alice Burn. Rainbow trout collected from the North Branch of Luggate Creek were of mixed size (62-209 mm), indicating the presence of fry (60-80 mm) and yearlings (100-160 mm), with some larger individuals present (174 mm, 178 mm, 209 mm) indicating that other year-classes may also be present. If these larger individuals are 2+ or even 3+ individuals (in their second or third year of life), this suggests that this resident population may be stunted, and therefore likely to be of little interest to anglers.

The record from a 24 April 2018 survey of the Alice Burn in the vicinity of lower intake found brown trout from 56- 505 mm (NZFFDB record #114093). The presence of a large trout during this survey indicates that this may either be a resident fish, or that it had migrated into the Luggate Creek to spawn. Spawning surveys undertaken by Fish and Game on 5 May 2017 observed spawning brown trout in the Alice Burn, Luggate Creek and irrigation races in the vicinity of where the Lake Mackay Station/Luggate Irrigation Company water takes occur (van Klink 20176)[[6]](#footnote-6). No rainbow trout were observed during this survey, although this may reflect the timing of the survey; brown trout spawn in late April-July, while rainbow trout spawn later (June-August). The abundance of juvenile brown trout in the lower reaches of Luggate Creek and comparative rarity of rainbow trout recorded in the lower reach of the Luggate Creek suggest that Luggate Creek is likely to be contributing to the recruitment of brown trout to the upper Clutha/Mata-Au fishery. However, there is no available evidence to indicate that Luggate Creek makes a substantial contribution to the recruitment of rainbow trout to in the broader upper Clutha/Mata-Au fishery.

No angler effort has been recorded from Luggate Creek in any of the National Angler Surveys to date (Unwin 2016). There are anecdotal reports of longfin eels being present in Luggate Creek. Historically, longfin eels would have been widely distributed in the upper Clutha/Mata-Au, although the abundance and distribution of longfin eels in the upper Clutha/Mata-Au are currently limited by passage for juvenile eels past Roxburgh and Clyde Dams. Any eels currently present are likely to either be large individuals that entered the upper Clutha/Mata-Au catchment prior to the dams, or individuals that have been translocated to areas above the dams.

Kōaro are native to the upper Clutha/Mata-Au catchment, forming land-locked populations in tributaries to Lakes Hāwea and Wanaka. As discussed by Water Ways Consulting[[7]](#footnote-7), NZFFDB records from prior to the formation of Lake Dunstan suggest that low numbers of kōaro juvenile entered Luggate Creek. Since the formation of Lake Dunstan, kōaro have been entering many of the tributaries of the lake and upper Clutha/Mata-Au, including Luggate Creek. The main driver of the kōaro population in Luggate Creek is expected to be predation by trout, as juvenile kōaro entering the Luggate Creek catchment would have to migrate through the lower reaches of Luggate Creek, and the high densities of juvenile trout present.

**6.3 Wetlands**

There are no Regionally Significant Wetlands in near or around the Luggate Catchment.

**6.4 Catchment Values**

Schedule 1A of the Regional Plan: Water for Otago (RPW) outlines the natural and human use values of Otago’s surface water bodies. Clutha/Mata-Au is identified as having the following values:

* Weed free
* Presence of rare invertebrate
* Presence of a rare fish - koaro

Schedule 1B of the RPW identifies water takes used for public supply purposes (current at the time the RPW was notified in 1998), while 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 1B and 1C values in the RPW listed in close proximity to 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. Luggate Creek is not within this Schedule, however the Clutha/Mata-Au is identified as having the following values:

* ***Kaitiakitanga:*** *the exercise of guardianship by Kai Tahu, including the ethic of stewardship.*
* ***Mauri:*** *life force.*
* ***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).*

**7.0 River flows and allocation**

Schedule 2A of the RPW identifies specific minimum flows for primary allocation takes in accordance with Policy 6.4.3, and primary allocation limits in accordance with Policies 6.4.2(a) and 6.4.1A. The Luggate catchment has a minimum flow set within this Schedule as 180 L/s (1 November to 30 April) and 500 L/s (1 May to 20 October) at the State Highway 6 monitoring site.

The primary allocation limit within the plan is 500 L/s for the Luggate catchment from confluence with the Clutha/Mata-Au to its headwaters. However, Policy 6.4.2 defines the primary allocation limit as the greater of Schedule 2A or consented allocated. See Policy 6.4.2 below:

*6.4.2 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:*

*(1) 19 February 2005 in the Welcome Creek catchment; or*

*(2) 7 July 2000 in the Waianakarua catchment; or*

*(3) 28 February 1998 in any other catchment; and…..*

The consented allocation of the Luggate Creek is 1,024 L/s, which is greater than 500 L/s set in the RWP, therefore, the current primary allocation limit under Policy 6.4.2 is 1,024 L/s.

A ‘Management Flow Report for the Luggate Creek catchment’ (ORC 2006)[[8]](#footnote-8) presents an estimate of flow statistics for the Luggate Creek catchment, with a naturalised 7-d MALF[[9]](#footnote-9) of 550 l/s at the SH6 bridge and other low-flow statistics. However, these flow statistics are somewhat out of date being calculated in 2006 and before the NPS-FM. They were calculated based on a series of one-off flow gauging’s in Luggate Creek, as the permanent flow monitoring site was not installed until early 2016. This is not in line with what is now considered to be best practice. NIWA’s NZ River Maps hydrological model[[10]](#footnote-10) provides an estimated 7-d MALF for Luggate Creek at the SH6 bridge of 367 l/s, although this estimate is based on a national model, and it may be subject to substantial error. Using NIWA’s Shiny hydrological model, Luggate Creek at the Criffel intake weir is estimated to have a natural 7-d MALF of 197 l/s and a mean flow of 591 l/s.

The estimated flow statistics for the Luggate Creek (North Branch) and Alice Burn suggest that at the 7-d MALF, approximately 63% of the flow at the confluence comes from the North Branch, while the Alice Burn contributes approximately 37%. This is in line with the relative catchment areas of these two sub-catchments. Leakage and residual flow[[11]](#footnote-11) discharged past the Criffel Water Ltd. intake weir appears to maintain flow continuity throughout the mainstem of Luggate Creek.

**7.1 Historical Water Access**

To assist in the reduction of primary allocation under Policy 6.4.2(b), Policy 6.4.2A allows only water that has been historically accessed under previous consents to 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.*

Criffel’s historic water use has been calculated by Council’s Senior Resource Management Analysist as 559 L/s. However, the applicant notes that water is used to convey water to the furthest away users, which is then bywashed into the Clutha River. According to Irrigation New Zealand up to 10% of the water is estimated to be lost due to the water not being piped. Therefore, water used is likely much less than the 559 L/s.

Luggate Irrigation and Lake McKay Station’s historic water use has also been calculated by Council’s Senior Resource Management Analysist as 287 L/s, which is 95 L/s from the Lake McKay take and 196 L/s from the Luggate Irrigation Limited take. However, the applicant notes that whenever flows are above 150 L/s in the LIC race the water is bywashed back into Luggate Creek, and approximately 8 L/s (10%) of the water is estimated to be lost due to the water not being piped. Therefore, water used is likely much less than the 196 L/s.

**7.2 Efficiency of Water Take and Use**

**7.2.1 Irrigation**

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.

This information is used to calculate the applicant’s water requirement over monthly and seasonal periods. The monthly volume outlined in Aqualinc is the estimated peak monthly usage for any one month in an irrigation season but is not intended to be used for every month over the course of the season i.e. seasonal volume does not equal the monthly volume multiplied by the months in the irrigation season. Commonly, the peak monthly rate is used for one to two months in an irrigation season; however, this is dependent on variables such as rainfall, climate and crop growth.

A seasonal limit on the volume of water has been given to reflect that less water is required during the 'shoulder' of the irrigation season. Aqualinc provides recommended seasonal volumes based on an average year; a one and two year drought (80th percentile); a one in ten year drought (90th percentile); and a maximum situation. For Otago it is considered that a one in ten year drought or 90th percentile is the most appropriate when considering efficient water use.

**7.2.1.1 Aqualinc – Criffel**

For the purpose of calculating water requirements on the applicant’s property, the take is located in the Central and Lakes zone with a MAR of 650 mm/yr and the PAW estimate of the command area shown in the Table below.

**Mean Annual Rainfall and Plant Available Water for current irrigated areas and future irrigated areas**

|  |  |  |
| --- | --- | --- |
| **Area** | **Mean Annual Rainfall (MAR) mm/yr** | **Plant Available Water (PAW) mm** |
| Current irrigation | 650 | 50% 15030% 6020% 120 |
| Future Irrigation | 650 | 50% 15040% 6010% 120 |

Table 1 summarises water volumes and application rates (calculated by the Council based on the total area able to be irrigated) as applied for by the applicant and compares them to water volumes and application rates recommended by Aqualinc.

**Summary of Applied for Water *vs* Aqualinc Recommendations – Criffel**

|  |  |  |
| --- | --- | --- |
| Current irrigation | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 847,190 m3 / month | 769,417 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 619 hectares | 619 hectares |
| **Total volume per season** | 4,570,995 m3 / season | 3,879,273 m3/season |
| Future irrigation | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 532,320 m3 / month | 503,600 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 400 hectares | 400 hectares |
| **Total volume per season** | 2,899,890 m3 / season | 2,530,400 m3/season |

***Total volumes applied for by applicant vs Aqualinc Recommendations***

|  |  |  |
| --- | --- | --- |
| Total | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 1,379,500 m3 / month | 1,273,017 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 1019 hectares | 1019 hectares |
| **Total volume per season** | 7,470,885 m3 / season | 6,409,673 m3/season |

Both the monthly and seasonal volumes of water applied for by the applicant exceed that recommended by Aqualinc. To ensure the efficient use of the water resource it is recommended that a monthly cap of 1,273,017 m3 and a seasonal cap of 6,409,673 m3 is included as a condition of any consent granted.

The applicant has stated that both stock water and domestic supply will be taken under Section 14 of the RMA.

Taking into consideration the uses of water proposed and volumes applied for [and the historical access to water at this site], the following rate of take, monthly and seasonal limits are recommended to be imposed to ensure that the quantity of water granted to take is no more than that required for the purpose of use:

* 358 L/s
* 1,273,017 m3/month
* 6,409,673 m3/year

**7.2.1.2 Aqualinc -Luggate Lake Mckay**

For the purpose of calculating water requirements on the applicant’s property, the take is located in the Central Otago zone with MAR and PAW values shown in the Table below. It is acknowledged that actual use will only be known through the keeping of accurate pumping records.

**Mean Annual Rainfall and Plant Available Water for current irrigated areas and future irrigated areas**

|  |  |  |
| --- | --- | --- |
| **Area** | **Mean Annual Rainfall (MAR) mm/yr** | **Plant Available Water (PAW) mm** |
| Stage 1 | 650 | 30 |
| Stage 2 | 50% 65050% 550 | 50% 3020% 4530% 75 |
| Umbers | 650  | 30 |
| Big River | 550 | 60 |
| Umbers (future irrigation) | 650 | 30 |
| Stage 3 (future irrigation) | 650 | 45 |
| Homeblock (future irrigation) | 550 | 75 |

Table 1 summarises water volumes and application rates (calculated by the Council based on the total area able to be irrigated) as applied for by the applicant and compares them to water volumes and application rates recommended by Aqualinc.

**Summary of Applied for Water *vs* Aqualinc Recommendations**

|  |  |  |
| --- | --- | --- |
| Stage 1 | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 141,950 m3 / month | 141,950 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 85 hectares | 85 hectares |
| **Total volume per season** | 697,850 m3 / season | 615,400 m3/season |
| Stage 2  | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 138,610 m3 / month | 134,210 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 83 hectares | 83 hectares |
| **Total volume per season** | 681,430 m3 / season | 599,882 m3/season |
| Umbers | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 37,620 m3 / month | 141,950 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 22 hectares | 22 hectares |
| **Total volume per season** | 192,500 m3 / season | 615,400 m3/season |
| Big River  | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 184,680 m3 / month | 164,160 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 108 hectares | 108 hectares |
| **Total volume per season** | 1,137,500 m3 / season | 808,920 m3/season |

|  |  |  |
| --- | --- | --- |
| Umbers  | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 146,240 m3 / month | 130,260 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 78 hectares | 78 hectares |
| **Total volume per season** | 682,500 m3 / season | 564,720 m3/season |

|  |  |  |
| --- | --- | --- |
| Stage 3  | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 171,072 m3 / month | 188,100 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 110 hectares | 110 hectares |
| **Total volume per season** | 903,100 m3 / season | 863,500 m3/season |

|  |  |  |
| --- | --- | --- |
| Home Block  | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 132,192 m3 / month | 139,400 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 85 hectares | 85 hectares |
| **Total volume per season** | 697,850 m3 / season | 660,450 m3/season |

**Total volumes applied for by applicant vs Aqualinc Recommendations**

|  |  |  |
| --- | --- | --- |
| Total | **Applied for by Applicant** | **As recommended by Aqualinc** |
| **Total volume per month** | 931,279 m3 / month | 1,040,030 m3 / month |
| **Irrigation period** | 8 months | 8 months |
| **Irrigated area** | 576 hectares | 576 hectares |
| **Total volume per season** | 4,761,024 m3 / season | 4,305,372 m3/season |

As the monthly volume of water applied for by the applicant is less than the monthly volume recommended by Aqualinc, the applied for monthly water take is considered to be efficient given the intended usage. However, the applicant’s total seasonal take exceeds the seasonal limit recommended by Aqualinc for the irrigation of 576 ha. As such, it is recommended that a seasonal cap of 4,728,242 m3 is included as a condition of any consent granted, to ensure the efficient use of water over an irrigation season

The proposed take will supply potable water to 250 households. The Council considers 1,000 L/d during winter and 3,000 L/day during summer to be efficient volumes for each domestic residence. The additional volumes in summer provide for minor curtilage irrigation. Based on this, efficient volumes for this purpose are 500 m3/day, 15,000 m3/month and 180,000 m3/year.

It is also recommended that the applicant be required to pro-actively monitor potential leaks in the scheme’s delivery system and promote the efficient use of water to its clients. The applicant should report on the outcomes of these requirements annually to the Consent Authority.

The water is to be used for the stock water needs of the applicants.Stock unit demand is supplied as per the Ministry of Agriculture’s guidelines, 45 litres/head/day for beef cattle and 5 litres/head/day for sheep. The applicants currently farm a variety of stock including *beef cattle and sheep.* 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.

**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* | *250* | *45* | *11,250* |
| *Sheep* | *7000* | *5* | *35,000* |
| ***Total*** |  |  | ***46,250*** |

Based on these calculations, the applicants’ proposed daily abstraction volume of 46 m3/day is considered to be an efficient use of water.

Taking into consideration the uses of water proposed and volumes applied for [and the historical access to water at this site], the following rate of take, monthly and seasonal limits are recommended to be imposed to ensure that the quantity of water granted to take is no more than that required for the purpose of use:

* 180 L/s
* 927,844 m3/month\*
* 4,502,162 m3/year

*\*This was calculated using the lowest of the applied for and the Aqualinc with the addition of stock and domestic drinking water.*

**7.3 Efficiency of Water Transport, Storage and Application System**

**7.3.1 Criffel Application**

Criffel takes are transported via open race. 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 applicant has holding ponds with little storage.

Criffel Water Company bywashes unused water from the race into the Clutha River to allow enough water to reach the properties furthest away from the take. This is an inefficient use of water from the Luggate Creek.

**7.3.2 Luggate Lake McKay Application**

The Lake McKay take is piped which is an efficient transport of water as there are no losses as long as the pipe is maintained. The applicant states that piping the take has saved around 30 – 40 L/s in losses in the race and this water is now used for irrigation.

The Luggate Irrigation Company is transported via open race. The applicant for LIC has stated they expect a 10% losses in water race. 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 and are therefore not the most efficient form of transport.

Both applicants have holding ponds with little storage. Luggate Irrigation Company uses border dyke, centre pivots and accessory k-line as their application systems. According to Irrigation New Zealand centre pivots and k-line allow irrigators to tailor their water discharge and are therefore efficient application types. Lake McKay Station also uses k-line. The Umbers block which is supplied by Luggate Irrigation Company is irrigated via surface contour border dyke irrigation. Irrigation New Zealand state that boarder dyke and contour flood irrigation is used in older Central Otago schemes, however provides no guidance for efficiency which implies that it is an out of date and inefficient application system. The applicant has stated they are planning on upgrading the application system to a modern more efficient application system.

Currently the Luggate Irrigation Company race bywashes water back into the Luggate Creek approximately 1 km downstream of the measuring point this is an efficient use of water as the water is not required to be taken from the creek. In the amended application the applicant has proposed that any water that is not required for irrigation is left in the creek near the intakes and not bywashed back to the Creek further down the water race. The applicant has proposed that a bywash immediately upstream of the flume will be the main bywash point back to the Creek and the other bywash point further along the water race (approx. 1km downstream of the flume) will be discontinued.

**7.4 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 taken is used locally, there are no alternatives other than the Clutha River but the cost of pumping it up to the paddocks is prohibitive. Therefore, the proposed sources are the nearest practicable source.

**7.5 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. If a water management group is developed, the applicant should give consideration to joining, as they are a useful means of managing takes in a catchment to ensure the minimum flow is not reached.

The applicants within the catchment have come to an agreement and have proposed the following consent conditions:

1. Prior to the exercise of this permit, the consent holder shall enter into a low flow agreement or rationing agreement approved by a water management group operating in the Luggate Catchment.

The purpose of the agreement is to manage abstractions within the catchment to ensure that the minimum flow is met. The agreement shall include (but not be limited to) the following;

* 1. Communications protocol between Luggate Catchment water users for reducing takes to meet minimum flow requirements as in flows drop;
	2. Methodology to be followed by consent holders if the communications protocol cannot be followed;
	3. Methodology for reviewing process in (a) and (b) above in the event that the minimum flow is breached to avoid the same issue arising again.
1. This permit shall be exercised in accordance with the low flow agreement or rationing agreement.
2. The consent holder shall review, and if appropriate, update the agreement prepared in accordance with Condition 11, at any intervals not exceeding 2 years from the date of commencement of this consent. If any amendments are made to the a copy of the updated agreement shall be provided to the ORC following completion of the review.

These conditions will allow the applicants to adhere to the minimum flow.

**8. Status of the Applications**

Resource consent is required for both parties under the Regional Plan: Water (”RPW”). The applications to take and use water as primary allocation from the Luggate Creek (as revised on 19 September 2019) are considered to be a **restricted discretionary** activity, with reference to the following rules.

 ***Restricted Discretionary Activity Rule 12.1.4.4***

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

 *Luggate Catchment,*

*Manuherikia Catchment Upstream of Ophir,*

*Taieri Catchment Paerau to Waipiata,*

*Taieri Catchment Waipiata to Tiroiti, and*

*Taieri Catchment Tiroiti to Sutton:*

*(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, Manuherikia 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, Manuherikia 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.*

***Restricted Discretionary Activity Rule 12.1.4.7***

*Taking and use of surface water as supplementary allocation in any catchment other than a Schedule 2B catchment:*

*(i) This rule applies to the taking of surface water as supplementary allocation for any catchment area, except for any Schedule 2B catchment as set out in clause (ii) below, subject to the minimum flows set in paragraph (iii) below.*

*(ii) This rule does not apply to the taking of any surface water that is in addition to the first supplementary allocation provided for by Schedule 2B, for any catchment area in Rule 12.1.4.3.*

*(iii) The taking of surface water as supplementary allocation for any catchment is subject to a minimum flow which is not less than either:*

*(a) 50% of the natural flow at the point of take, or, if a resource consent so provides, not less than 50% of the natural flow at a point specified in the resource consent; or*

*(b) The natural mean flow at the point of take, or, if a resource consent so provides, not less than the natural mean flow at a point specified in the resource consent,*

*as the Otago Regional Council determines in granting a resource consent.*

*(iv) 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, and is subject to Rule 12.1.4.9. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.*

*(v) Unless covered by Rule 12.1.1A.1, the taking and use of surface water in the Waitaki catchment to which this rule applies is a* ***restricted discretionary*** *activity provided that by itself or in combination with any other take, use, dam, or diversions, the sum of the annual volumes authorised by resource consent, does not exceed the allocation to activities set out in Table 12.1.4.2 and is subject to Rule 12.1.4.9. The matters to which the Otago Regional Council has restricted the exercise of its discretion are set out in Rule 12.1.4.8.*

*(vi) This rule shall affect the exercise of any resource consent which was either:*

*(a) Granted before 28 February 1998; or*

*(b) Granted after 28 February 1998 but was applied for prior to 28 February 1998,*

*for the taking of surface water where a condition on the consent requires the take to be suspended at a minimum flow higher than that which would be set by Schedule 2A.*

*(vii) The conditions of all such resource consents will be reviewed under Sections 128 to 132 of the Act to enable the minimum flows in paragraph (iii)(a) or (iii)(b) of this rule 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, as soon as practicable after the Plan becomes operative.*

***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:*

1. *The primary and supplementary allocation limits for the catchment; and*
2. *Whether the proposed take is primary or supplementary allocation for the catchment; and*
3. *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*

1. *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.*

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

The Criffel weir is authorised by resource consents 2007.656 and 2010.056.

Unless discussed separately in this report all other permitted activities are complied with. It is worth noting that water quality issues have not been discussed due to the narrow range of the matters of discretion under Rule 12.4.8. However, Rule 12.C.1.3 of the RPW will be a relevant consideration for the applicant due to the nature of the activities proposed including irrigation. This Rule has not yet come into force and accordingly has not been addressed in this report.

The Regional Water Plan became operative 1 January 2004. There have been various plan changes since then, but these have not altered the provisions relevant to this application, but all the provisions of the current plan have been operative since 2018.

**9. Statutory Considerations**

**9.1 Section 104 of the Resource Management Act 1991**

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.*

In the context of the report, it is important to note that the Criffel application must be assessed first under section 104 as it has priority over the Luggate application as the first in time application, and as such the “environment” for the purpose of section 104 (1) (a) needs to take this into account. In the assessment of Criffel’s application the effects of the Luggate Irrigation application do not form part of the existing environment for assessment purposes. However, the effect the Criffel application has on the existing Luggate deemed permits may be a relevant consideration. When assessing the Luggate Irrigation application under section 104, the Criffel application may have been granted and if this is the case any such consent will form part of the environment for the decision makers to consider if the decision makers determine that these consents are likely to be implement (See attached Legal opinion Appendix 5).

We note that with the two applicants now working together under joint legal counsel and co-ordinating their proposals under what appears to be an “agreed” allocation split at the primary and secondary allocation levels, this priority position does not appear to be a significant factor between the applicants.

**9.2 Section 104 (1)(a) – actual and potential effects**

The actual and potential effects of each application on the environment are discussed in Appendix 1 and 2 to this report (also relying on the information in Appendix 3 and 4). The main findings of our assessment of effects are set out below:

**9.2.1 Criffel Application**

The primary allocation of the catchment has been reduced to a volume a lot closer to that set in Schedule 2A of the RPW and applies a sinking lid approach consistent with the RPW and NPS-FM. This should address the concerns raised by Aukaha about allocation. The use of supplementary allocation reduces the amount of water taken at low flows therefore, providing an improvement in in-stream habitat availability and will reduce the length of time that the river is held at low flows compared to the existing abstraction. The effects on instream values have been assessed as no more than minor due to mitigation measures proposed by the applicant including a 90 L/s residual flow and a fish screen. The only downstream user is Luggate Irrigation Company.

The residual flow and low flow agreement agreed upon by applicants within the catchment paired with the existing environment excluding the current application by Luggate Irrigation Company has meant the assessment of effects on the downstream user are no more than minor. The means and timing of the take are expected to have a no more than minor effect on instream values. It is worth noting that the applicant has proposed supplementary volumes taken all year round. As the supplementary volumes will ensure instream values effects of year-round taking is no more than minor.

**9.2.2 Luggate Irrigation Application**

The primary allocation of the catchment has been reduced to a volume a lot closer to that set in Schedule 2A of the RPW and applies a sinking lid approach consistent with the RPW and the NPS-FM. This should address the concerns raised by Aukaha, DoC and Fish and Game about allocation. The use of supplementary allocation reduces the amount of water taken at low flows therefore, providing an improvement in in-stream habitat availability and will reduce the length of time that the river is held at low flows compared to the existing abstraction. The effects on instream values have been assessed as no more than minor due to mitigation measures proposed by the applicant including residual flows and a fish screens.

The timing of the take is expected to have a no more than minor effect on instream values, specifically as the applicant has proposed to upgrade the bywash system. It is worth noting that the applicant has proposed supplementary volumes taken all year round. As the supplementary volumes will ensure instream values effects of year-round taking is no more than minor.

**9.3 Section (104) (1) (ab) – Offset or Compensation**

We are not aware of any relevant measure proposed by either applicant under section 104 (1) (ab) relating to the offset or compensation for adverse effects.

**9.4 Section 104 (1)(b) and (c) -** **Relevant Planning Documents**

The relevant planning documents and other relevant and reasonably necessary matters in respect of these applications are:

* The Regional Plan: Water for Otago
* The Operative Regional Policy Statement, Proposed Regional Policy Statement and Partially Operative Regional Policy Statement
* The National Policy Statement for Freshwater Management
* The National Policy Statement for Renewable Electricity Generation
* Resource Management (Measurement and Reporting of Water Takes) Regulations 2010
* The National Environmental Standard for Sources of Human Drinking Water
* The Ngai Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan

Both applications have been assessed against the relevant planning documents below.

10.0 Planning Assessment under Sections 104(1)(b) and (c)

**10.1 Regional Water Plan for Otago**

**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:*

1. *How local climate, soil, crop or pasture type and water availability affect the quantity of water required; and*
2. *The efficiency of the proposed water transport, storage and application system.*

The applicants are proposing to take no more water than required for the purpose of the uses specified in their applications, and the use of the water has been assessed as efficient taking local climate, soil, pasture type and water availability into consideration. Therefore, the proposed takes are consistent with this policy. The reduced takes also mean that the concerns raised by Aukaha, DoC and Fish and Game about primary allocation should be addressed.

*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.*

*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 proposed takes are no more water than has been taken under the relevant existing consents in the previous five year and the applicants have both applied for supplementary allocation. Therefore, the application is consistent with Policy 6.4.2A and 6.4.2AA.

*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:*

1. *Allows water users the flexibility to work together, with their own supply arrangements; and*
2. *Utilises shared water infrastructure which is fit for its purpose.*

The two applicants within the catchment have entered into a low flow agreement or rationing agreement approved by a water management group to operate within the Luggate catchment. This agreement will enable to applicants to communicate in times of low flow and follow a methodology to cut back when necessary. Therefore, the applications are consistent with the above policies.

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

For both applications the water is being taken from the nearest practicable source and used locally, the applicants have both applied for supplementary allocation to utilise when the river is flowing at higher flows. Therefore, the applications are consistent with Policy 6.4.0C.

*6.4.1 To enablethe taking of surface water, by:*

1. *Defined allocation quantities; and*
2. *Provision for water body levels and flows,*

*except when*

* 1. *the taking is from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha/Mata-Au or Kawarau Rivers.*
	2. *All of the surface water or connected groundwater taken is immediately returned to the source water body.*
	3. *Water is being taken which has been delivered to the source water body for the purpose of that subsequent take.*

*6.4.2 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 the consented maximum.*

The applicants within the catchment have come to an agreement of 538 L/s consented maximum primary allocation within the Luggate Catchment which is lower than the current consented maximum of 1,024 L/s. This is more in line with the Schedule 2A primary allocation of 500 L/s, therefore the applications are consistent with this policy. The reduced takes also mean that the concerns raised by Aukaha, DoC and Fish and Game about primary allocation should be addressed.

*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 applications to take surface water have primary allocation status, and are subject to a minimum flow. The applicants have applied for supplementary allocation on top of their primary allocation. Therefore the applications are consistent with this policy. There are still concerns around the minimum flow for the Creek, which has been raised by Submitters, but we cannot change the minimum flow as part of this consent process. Therefore, the concern from Submitters about this point is only partially addressed.

*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:*

* + 1. *In the case of new takes applied for after 28 February 1998, upon granting of the consent; and*
		2. *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*
		3. *In the case of any existing resource consent to take surface water from the Manuherikia 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*
		4. *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 Luggate catchmentis subject to the minimum flow restrictions listed in Schedule 2A of the RPW, and as these applications to take water arelocated within this catchment, it is recommended that any consent granted be subject to these minimum flows, in accordance with Policies 6.4.3 and 6.4.5. Therefore, the applications are consistent with this policy. There are still concerns around the minimum flow for the Creek, which has been raised by Submitters, but we cannot change the minimum flow as part of this consent process. Therefore, the concern from Submitters about this point is only partially addressed.

*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 proposed, considered and recommended, to allow for the protection of the aquatic habitat and natural character of this water body.

*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.*

The applicants have proposed to meter the takes. Data will be made available to Council via telemetry. The applications are therefore consistent with the above policy.

*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.*

Proposed water metering 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. The applications are therefore consistent with the above policy.

*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.*

The recommended term is discussed in section 13 below where the seven points above are discussed.

*6.6.2 To promote the storage of water at periods of high water availability through:*

* 1. *The collection and storage of rainwater; and*
	2. *The use of reservoirs for holding water that has been taken from any lake or river.*

As the applicants have applied to take supplementary allocation, they have also commented that storage will be necessary for them to utilise this resource. Therefore, the application is consistent with this policy.

**10.2 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 14th of January 2019 (PO-RPS), 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)*
* *Enable sustainable use of Māori land (Policy 2.2.4)*
* *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 applicants to continue to irrigate their land, resulting in their own economic wellbeing. Cultural and Kai Tahu values have been considered and Aukaha and TAMI on behalf of the local 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 no more than minor. Maintaining the residual flow and adhearing to the minimum flow will maintain and enhance natural character and aquatic values. 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, and the proposed significant reduction in the primary allocation in the catchment and a move to the use of supplementary allocation volumes 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.

**10.3 National Policy Statement on Renewable Electricity Generation**

The National Policy Statement on Renewable Electricity Generation came into effect on 13 May 2011 and has the objective of recognising the national significance of renewable electricity generation activities by providing for the development, operation, maintenance and upgrading of new and existing renewable electricity generation activities. The most relevant policies to this proposed take are:

* Policy A which relates to recognising the benefits of renewable electricity generation activities including maintaining electricity generation; and
* Policy B which relates to the practical implications of achieving New Zealand’s target for electricity generation from renewable resources and requires decision makers to have regard to even minor reductions in the generation output of existing renewable generation activities.

As the proposed takes will be subject to minimum flow there will be no impact on water availability for renewable generation.

**10.4 National Policy Statement Freshwater Management (NPSFM)**

The National Policy Statement for Fresh Water Management 2014 (“NPS-FM”) provides a National Objectives framework to assist regional councils and(amended 2017) communities to more consistently and transparently plan for freshwater objectives. The NPS-FM also directs how regional councils are to manage freshwater through their planning documents, and in the consideration of resource consent applications.

The Council has decided to progressively implement the policies in the NPS-FM in accordance with Policy E1, as set out in its Progressive Implementation Programme. The Council’s Progressive Implementation Programme provides that the Council will carry out a plan review to the Regional Plan Water to implement the policies in the NPS-FM (including establishing freshwater management units, freshwater objectives, and attributes in accordance with Policy CA), to be notified by December 2025. Individual plan changes are planned to be notified within the next 12 months, with priority being given to the Arrow, Cardrona and Manuherikia catchments.

The objectives and policies in the NPS-FM are relevant when considering an application to replace a deemed permit. Part B of the NPS-FM relates to water quantity. Objective B2 is particularly important in the case of over-allocated catchments as allocation is not currently fully addressed in the RPW. Objective B2 seeks to “avoid any further over-allocation of fresh water and phase out existing over-allocation”.[[12]](#footnote-12) If a particular catchment is considered to be over allocated, and the Council was to grant a new permit for the same volume as authorised under the current deemed permit, the decision would not avoid further over allocation in line with Objective B2. The decision to grant a new permit with the same volume in circumstances were the catchment is currently over allocated would not phase out existing over allocation.

The application proposes to lower the primary allocation from its current 1,024 L/s to 538 L/s through the use of supplementary allocation. The applications are therefore consistent with Objective B2 of the NPS-FM as the proposed take is not causing any further over-allocation to occur and are phasing out existing over-allocation and are phasing out existing overallocation.

Whilst the RWP is not a NPS-FM compliant plan Objective B1 (safeguarding the life supporting capacity, ecosystem processes and indigenous species in sustainably managing the taking of freshwater), Objective B3 (improve and maximise the efficient allocation and use of water) and Objective B4 (protect significant values of wetlands and outstanding freshwater bodies) are still relevant. It is considered that the proposed volumes of water and recommended consent duration mean that the applications are consistent with these Objectives.

Policies in the NPS-FM are also relevant to these applications. In particular Policies B5 and B7. These policies are important as whilst the RWP is not a NPS-FM plan and FMU’s have only just been determined, there is clear direction that decisions must not result in future overallocation. In this case the applications is granted as recommended will not result in any future over allocation and represent reduced primary allocation from what is currently authorised under the deemed permits. Despite there being a numeric threshold in place for Luggate Creek, this has not been set in the context of the NPS-FM these policies require a precautionary approach to be taken in relation to any consents granted.

**10.5 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.

There are no registered drinking water supplies from the Luggate Creek.

**10.6 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 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 applicant currently monitors the water takes and uses both data logger and telemetry. The applicant has proposed that consent conditions to ensure they are consistent with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 are placed on the consent.

**10.7 Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan (s104 (1)(c))**

The Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 - The Cry of the People, Te Tangi a Tauira [only applicable to activities south of the Clutha River/Mata Au] 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 Rūnanga Papatipu o Murihiku – Awarua, Hokonui, Ōraka/Aparima and Waihōpai.

The following objectives and policies are of most relevance to these applications:

* Adopt the precautionary principle when making decisions on water abstraction resource consent applications, with respect to the nature and extent of knowledge and understanding of the resource.
* Support and encourage catchment management plans, based on the principle of *ki uta ki tai*, to manage the cumulative impacts of water abstractions in a given area.
* Require that scientifically sound, understandable, and culturally relevant information is provided with resource consent applications for water abstractions, to allow Ngāi Tahu ki Murihiku to fully and effectively assess cultural effects.
* Recommend, as a condition of consent, that any application for irrigation puts in on-farm rainwater holding facilities, to help with dairy washdown and irrigation.
* Encourage the installation of appropriate measuring devices (e.g. water meters) on all existing and future water abstractions, to accurately measure, report, and monitor volumes of water being abstracted, and enable better management of water resources.
* Advocate for durations not exceeding 25 years on resource consents related to water abstractions.
* Require that Ngāi Tahu are provided with the opportunity to participate through pre hearing meetings or other processes in the development of appropriate consent conditions including monitoring conditions to address our concerns.
* Avoid adverse effects on the base flow of any waterway, and thus on the mauri of that waterway and on mahinga kai or taonga species.
* Ngāi Tahu’s right to development, as per the Treaty of Waitangi, must be recognised and provided for with respect to water allocation from freshwater resources.
* Encourage water users to be proactive and use water wisely. To encourage best practice and efficient use of water, particularly in terms of:
	+ sustainable irrigation design, delivery and management;
	+ making best use of available water before water levels get too low;
	+ reducing the amount of water lost through evaporation by avoiding irrigating on hot windy days.
* Consideration of consent applications for water abstractions should have particular regard to questions of:
	+ how well do we understand the nature and extent of the water resource;
	+ how well can we monitor the amount of water abstracted;
	+ whether land capability (e.g. soil type, vulnerability of underlying groundwater resources) matches the land use enabled by irrigation;
	+ what might happen in the future (e.g. rainfall and recharge of aquifers, climate change).
* Applications for water abstractions may be required to justify the quantities of water requested. Information may need to be provided to Te Ao Mārama Inc. regarding the proposed water use per hectare, estimated water losses, stocking rates, and the level of efficiency for the scheme. This will enable iwi to put the quantity of water sought in context, and ensure that a test of reasonableness can be applied to consents.
* Require catchment based cumulative effects assessments for activities involving the abstraction of water.
* The establishment of environmental flow regimes must recognise and provide for a diversity of values, including the protection of tangata whenua values.
* Ensure that environmental flow allocation and water management regimes for rivers recognise and provide for the relationship between water quality and quantity.
* Avoid compromising fisheries and biodiversity values associated with spring fed creeks and rivers for the purposes of water abstractions.

Both applications have been assessed to be in general accordance with the iwi plan. The applicants as a result of the amended applications are seeking amounts that have been assessed as efficient and have proposed to meter the takes. As well as being consistent with the provision of the iwi plan, this also relates to the concerns raised by all three submitters for the Luggate application and Aukaha for the Criffel application.

The applicants currently use a number of different irrigation methods, some of which are an efficient method by industry best standard. The applicants are both at different stages with their infrastructure and are proposing to upgrade their systems. Te Ao Marama, Aukaha and TRONT were all given the opportunity to be involved in the process. Aukaha has submitted opposing the applications.

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.

The granting of these consentswith the recommended terms and conditions is generally consistent with these requirements. The applicant is seeking an amount that has been assessed as efficient and have proposed to meter the take. The applicants currently use a number of different irrigation methods, some of which are an efficient method by industry best standard, others which are not. However, the applicants propose to upgrade methods to best standard. A term of 35 years has been applied for which is inconsistent with this management plan. Aukaha and TRONT were all given the opportunity to be involved in the process. Aukaha has submitted opposing the application.

**10.8 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):[[13]](#footnote-13)

* 1. 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.
	2. 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.
	3. 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.
	4. 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.

Section 5 of the RMA states its purpose and defines the sustainable management of natural and physical resources. In relation to s5 we note that granting the applications will help the applicant and the community meet their social and economic needs, while the conditions on which the applications are recommended to be granted will sustain the life supporting capacity of the river and its continuously flowing tributaries, and avoid or mitigate the more significant adverse effects of the taking of water from the river.

Section 6 lists eight matters of national importance. Section 6(c), which requires the protection of significant habitats of indigenous fauna. We consider that this applies to the habitat of the Kōaro, which exists as residual populations in some headwater streams. These small fish live their lives in these small streams. The applicants have proposed residual flows to support the habitat of the Luggate Catchment. Section 6(e), which is “the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu and other taonga. Aukaha did submit on the applications which is a reflection of the cultural importance of the waterways.

Section 7 lists matters that decision makers must have particular regard to. The efficient use and development of natural and physical resources. As already discussed the applicants’ proposal which much increase the efficient use of water in the catchment, particularly by eventually closing down the large irrigation raceways which are inefficient, leak water and entrain fish. Additionally, conditions of consent require land presently border-dyked or in flood irrigation to be converted to spray irrigation when using the primary allocation water.

**10.9 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 applicants have been taking water via the deemed permits since the late 1800s or early 1900s
* The Criffel weir and irrigation infrastructure show value of investment.
* Lake McKay Station installed the pipeline and the distribution lines for the Stage 1 area was completed by 2012 and the Stage 2 area was commissioned in 2014 with a total cost of $1.5M.
* Luggate Irrigation Company converted the Big River area of 100 ha into modern pasture and spray irrigation with the installation of 2 centre pivots and accessory K line. The cost of the irrigation on its own was around $1.5M and the conversion.

**10.10 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](http://www.legislation.govt.nz/act/public/1991/0069/latest/link.aspx?id=DLM238559#DLM238559), or has been convicted of an offence under [section 338](http://www.legislation.govt.nz/act/public/1991/0069/latest/link.aspx?id=DLM239038#DLM239038),

(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 above has been considered throughout this report. However, for the avoidance of doubt:

* In regards to (a) and (b) above we consider there are elements of the existing systems that do not represent an efficient use of the resource and are not currently industry good practice. However, both applicants have stated that if the consent is granted and they have surety they will invest in efficient transport and storage. It is recognised that this will be an issue for the applicants with the proposed 10 year consent duration, which has been recommended for the reasons set out in section 13 of this report. Efficiency of water use has also been considered elsewhere in the report.
* Neither Criffel Water Limited, Luggate Irrigation Company nor Lake Mckay Station have been served an enforcement order or convicted, therefore part (c) above is not relevant.

**10.11 Section 104(3)(d)**

The application of section 104(3)(d) to this application has been discussed above at section 5.4.

**11. Section 108 and 108AA of the Act**

Recommended conditions for both applications are included in Appendix 6. These are recommended in accordance with Sections 108 and 108AA of the Act. We are aware that the Applicant will be proposing conditions as part of evidence about a scheme management plan, review conditions for the supplementary allocation and fish screens. At the time of writing this report these conditions had not been reviewed by Council staff. The proposed conditions should also help to address matters raised by the Submitters. For context:

* Review conditions under Sections 128 and 129 of the Act are proposed for the following reasons:
	1. adjusting the consented rate or volume should monitoring or future changes in water use indicate that the consented rate or volume is not able to be fully utilised;
	2. determining whether the conditions of consent are adequate to deal with any adverse effect on the environment that may arise from the exercise of the consent;
	3. ensuring that the conditions of this consent are consistent with any National Environmental Standards, Regulations or regional plans; and
	4. allowing the method of data recording and reporting to be altered should the need arise.
* A condition to require the applicant to undertake maintenance and repair works on its distribution network to ensure it is operating efficiently is recommended.
* Any fish screens should be designed and installed in a way that is consistent with Canterbury good practice guidelines, including:

(a) Water shall 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 intake to ensure that fish and fish fry are prevented from passing through the intake screen; and

(b) As far as possible, the screen area shall 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 shall exceed the design approach velocity.

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 Council for consideration.

* Fish screen 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 Council, on request.

**12. Recommendation**

**12.1 Reason for Recommendation**

It is recommended that the Criffel application is approved. The Criffel application must be assessed first under section 104 as it has priority over the Luggate application. Therefore, in the assessment of Criffel’s application Council will not be considering the effects on the Luggate Irrigation application. However, when assessing the Luggate Irrigation application under section 104, the Criffel application may have been granted and will therefore form part of the environment if the Hearing Panel determines it is likely to be implemented.

 It is recommended that the Criffel application is approved subject to the appended conditions and for the recommended term because:

1. The adverse effects are deemed to be no more than minor as the various proposed provisions such as residual flows and fish screening will avoid, remedy or mitigate adverse effects.
2. The proposed activity is consistent with the objectives and policies of the Regional Plan: Water specifically as the applicant has applied for less than what has been previously taken as primary allocation.
3. The use of the water based on the latest amendment to the applications is efficient and those areas where it is not the applicant has proposed upgrades.
4. The application is consistent with the NPS-FM as the proposed take is not causing any further over-allocation and is reducing any over-allocation as the reduced volumes mean the Luggate Creek allocation will be below the currently consented primary allocation and close to the Schedule 2A limit established in the Water Plan.

In making a decision on the Luggate Irrigation’s resource consent application under section 104 of the RMA, Criffel’s resource consent, if it is granted, would constitute part of the environment the Council would be required to consider if it is determined that it is likely to be implemented. Taking this into account it is recommended that the Luggate Lake McKay application is approved subject to the appended conditions and for the recommended term because:

1. The adverse effects are deemed to be no more than minor as the various proposed provisions such as residual flows and fish screening will avoid, remedy or mitigate adverse effects.
2. The proposed activity is consistent with the objectives and policies of the Regional Plan: Water specifically as the applicant has applied for less than what has been previously taken as primary allocation.
3. The use of the water based on the latest amendment to the applications is efficient and those areas where it is not the applicant has proposed upgrades.
4. The application is consistent with the NPS-FM as the proposed take is not causing any further over-allocation and is reducing any over-allocation as the reduced volumes mean the Luggate Creek allocation will be below the currently consented primary allocation and close to the Schedule 2A limit established in the Water Plan.

**13. Term of Consent (Section 123)**

The Criffel and Luggate Lake McKay applications both seek terms of 35 years. The applicants have sought the 35-year term to ensure long term security of the resource and therefore time to upgrade systems to best practice guidelines. It is only through seeking this length of term that the amended applications are seen as economically viable by the Applicants. We have considered the reasons supplied by the Applicants, but we consider that a duration of 10 years is appropriate in this case and is our recommendation. The Submitters for both applications have also raised concerns about the proposed consent duration, with 35 years not being supported.

In reaching this recommendation we 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.

Further, Policy 6.4.19 of the RPW states that when considering the duration of a resource consent to take and use water the following are considered:

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

Taking the above into account we consider that a 10-year term of consent is appropriate for both applications. The specific reasons for this are:

* The duration of the consent meets the RMA’s purpose of sustainable management. Taking Section 5(2)(a) into consideration a 10-year term provides for future generations and safeguards the life-supporting capacity of the Catchment.
* A 10-year term of consent is consistent with the objectives and policies of the Kāi Tahu ki Otago Natural Resource Management Plan. This plan is clear that consents should not be granted for longer than a single generation. Aukaha have also submitted on both applications and one of their concerns is term.
* Both Department of Conservation and Otago Fish and Game have submitted on application RM18.345.01-02 and opposed any duration longer than 10-years.
* A 10-year term will allow the applicant time to upgrade inefficient transport of water and irrigation type.
* The Fresh Water Management Units are on progress to be notified by 2025, 10 years gives the applicant time to understand the planning framework for reapplying. Consideration was given to only recommending 8 years to take the consents just beyond the 2025 timeframe, but this was not seen as reflecting the investment of the Applicants.
* Although the Luggate catchment has a minimum flow, the RPW is yet to give full effect to the NPS FM, therefore the duration of 10 years would align with the outer limit for giving effect to the NPSFM (2030).
* Granting the consent for 35 years is now is effectively determining the ongoing allocation regime for the entire catchment in advance of any upcoming plan process. This is a process that is far more appropriate to occur through the regional planning process.
* Any conditions proposed are unlikely to be able to anticiapte or control the effects for 35 years.
* A review condition alone, including any clause around ‘using or losing’ water should not be relied upon as a way of granting a long-term permit. There is a high degree of risk with this approach and level of uncertainty for all parties involved.
* It is likely that the allocation regime for the creek will change in the next ten years. This is because the minimum flow as set in 2009 and the allocation of water in this area will be discussed as part of the FMU process.
* It is not administratively efficient to grant the consents for a period of 35 years. This is because it is highly likely they would need to be reviewed to ensure they are in line with any new allocation regime.
* Whilst the uncertainty for the applicants is appreciated, 10 years will take them beyond the future anticipated plan change processes which will give them a clear idea of what long term allocation regime will apply.
* It is likely that new information about mitigation, including around fish screening and how to approach residual flows will change over the next 35 years. Setting the term at 10 years allows for these new mitigation measures to be incorporated in the future.
* At the date of writing this report it is noted that the Applicant was preparing conditions that may reflect a form of adaptive management, which we are yet to see. This is where if water in the supplementary allocation is not used, it is lost. As this water is only being taken in periods of high flow and a share goes to the river first this approach is not seen as a significant reason to justify a 35-year term.
* The applicants have no current specific storage options for their supplementary allocation, therefore a 10-year term will ensure if the supplementary allocation is not utilised it can be re-assessed. A 10-year term is also a reasonable time to allow the applicants to plan, budget , and if necessary consent storage.

Whilst the significant capital invest of the applicants is recognised and their work to reduce the volume of water taken is also recognised, this alone is not a reason to grant a consent for 35 years. For the Criffel application no exact figures of costing have been provided, but the economic investment of the Applicants and their commitment to reduce their water takes have been very carefully considered and have weighed in the recommendation around term.

Overall, we consider that a granting a duration of 10-year 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 Alice Burn and Luggate Creek.



Alexandra King

**Consents Officer**



Stephen Daysh

**Consultant Planner for ORC as Consents Officer**

1. 1 Primary allocation is defined within the Regional Plan Water as quantity of water established under Policy 6.4.2 [↑](#footnote-ref-1)
2. Note that the original application included use for hydro-electric power generation, but this was withdrawn by the applicant on 4th September 2019. [↑](#footnote-ref-2)
3. As formally amended by the applicant on 19 September 2019. [↑](#footnote-ref-3)
4. As formally amended by the applicant on 19 September 2019. [↑](#footnote-ref-4)
5. <https://nzffdms.niwa.co.nz/> [↑](#footnote-ref-5)
6. Van Klink, P. (2017). Luggate Creek Spawning Survey. Council Report, Otago Fish & Game Council Meeting, 15 June 2017. Otago Fish & Game Council, Dunedin. [↑](#footnote-ref-6)
7. Letter from Richard Allibone (Water Ways Consulting) to Mandy Bell (Criffel Water Limited), dated 13 June 2016. [↑](#footnote-ref-7)
8. Otago Regional Council (2006). Management Flows for Aquatic Ecosystems in Luggate Creek. Otago Regional Council,

Dunedin. August 2006. 21 p. [↑](#footnote-ref-8)
9. 7-d Mean annual low flow – the average of the lowest 7-day low flow period for every year of record. [↑](#footnote-ref-9)
10. Booker, D.J., Whitehead, A.L. (2017). NZ River Maps: An interactive online tool for mapping predicted freshwater variables across New Zealand. NIWA, Christchurch. https://shiny.niwa.co.nz/nzrivermaps/ [↑](#footnote-ref-10)
11. Residual flow is defined in the RPW under Policy 6.4.7 [↑](#footnote-ref-11)
12. The NPSFM defines over-allocation as:

*the situation where the resource: a) has been allocated to users beyond a limit; or b) is being used to a point where a freshwater objective is no longer being met. This applies to both water quantity and quality.* [↑](#footnote-ref-12)
13. *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316. [↑](#footnote-ref-13)