1 Resource Consent Application

Otago Regional Council

This application is made under Section 88 of the Resource Management Act 1991.

(For Office Use Only)
Deposit Paid: $

Charges / Deposits

A deposit **must** accompany the application (see page **8** for amounts). The applicant will be invoiced for all costs incurred in processing this application that exceed the deposit.

Council can accept electronic lodgement of applications if sent to consents.applications@orc.govt.nz. Include "consent application" in the subject line.

Please complete the application in pen. For questions marked with an * you will find notes on page 4

1.* Applicant(s) Details

Applicant(s) name(s) in full: _____

BTSGT Ltd

A P McQuilkin, N J McQuilkin, K L Skeggs, S A McQuilkin and G M Todd being Trustees of the A P McQuilkin Family Trust

OR Company Name (in full) _____

OR Names of Trustees (in full) if Applicant is a Trust _____

or Name of Incorporation _____

Postal Address: Tony McQuilkin, 141 Glencoe Road, Arrow Junction
BTSGT Ltd, C/O Grant Coutts, 117 Glencoe Road, Arrow Junction
_____ Post Code _____

Street Address (not a P O box number): _____
_____ Post Code _____

Phone Number: Business _____ Private _____
Mobile _____ Fax _____

Email Address: kit.gordon@barleyinvestment.com; tony@mcquilkin.nz

Please provide a valid and clear email address. Otago Regional Council is moving to a paperless consenting process – therefore any correspondence including decision documents and consent (if granted) will be sent via email, unless you request a paper copy.

If you do not prefer contact by electronic means, please tick ☐

1(a). Key Contact for Applicant Details

If the applicant consists of multiple parties (e.g. multiple consent holders, Trust etc) please outline who the key contact for the consent will be, if granted.

Key contact name(s) in full: Hilary Lennox

Postal Address: 344 Kawarau Gorge Rd, RD2, Cromwell
_____ Post Code _____

Street Address _____

(not a P O box number) _____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile 021 300 554 Fax _____

Email Address hilary.lennox7@gmail.com

Please provide a valid and clear email address. Otago Regional Council is moving to a paperless consenting process – therefore any correspondence including decision documents and consent (if granted) will be sent via email, unless you request a paper copy.

If you do not prefer contact by electronic means, please tick ☐

2.* Consultant/Contact Details (if not applicant)

Name of Consultant/ Contact Person:

_____

Postal Address _____

_____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

Please provide a valid and clear email address. Otago Regional Council is moving to a paperless consenting process – therefore any correspondence including decision documents and consent (if granted) will be sent via email, unless you request a paper copy.

If you do not prefer contact by electronic means, please tick ☐

3. On Site Supervisor/Manager Contact Details (if applicable)

Name of On Site Supervisor/Manager Person:

Postal Address _____

_____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

Please provide a valid and clear email address. Otago Regional Council is moving to a paperless consenting process – therefore any correspondence including decision documents and consent (if granted) will be sent via email, unless you request a paper copy.

If you do not prefer contact by electronic means, please tick ☐

4.* a) Are there any current or expired resource consents relating to this proposal?

☒ Yes ☐ No

If yes, give Consent Number(s) and Description: See attached

_____

_____

b) Do you agree to your current consent automatically being surrendered should a replacement consent be issued.

☐ Yes ☒ No May wish to wait until current consents expire

c) Has there been a previous application for this activity that was returned as incomplete?

☐ Yes ☒ No

If yes, give Consent Number(s) and Description: _____

_____

_____

d) Have you a pre-application lodged with Council for this activity?

☒ Yes ☐ No

If yes, give pre-application Number(s) and Description: _____

Pre-application consultation with Natasha Pritchard on 17 April 2019

_____

_____

e) Have you spoken to a Council staff member about this application prior to lodging this application?

☒ Yes ☐ No If yes, please state name of staff member Natasha Pritchard

5. The applicant is (tick one): ☒ owner ☐ leasee ☐ prospective purchaser **of the land on which the activity occurs.**

6*. Who is the owner of the land on which the activity occurs/is to occur? (only complete if applicant is not the landowner)

Name of landowner: _____

Postal Address _____

_____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

7*. Who is the occupier of the land on which the activity occurs/is to occur? (only complete if the applicant is not the land occupier)

Name of land occupier _____

Postal Address _____

_____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

8*. Who leases the land on which the activity occurs/is to occur? (only complete if land is leased and it is not leased to the applicant)

Name of land leasee _____

Postal Address _____

_____

_____ Post Code _____

Phone Number Business _____ Private _____

Mobile _____ Fax _____

Email Address _____

9. Tick the consents required in relation to this proposal:

Water

- [X] Take Surface Water
- [ ] Take Groundwater
- [ ] Divert
- [ ] Dam

Discharge onto or into:

- [ ] Land
- [ ] Water
- [ ] Air

Land Use:

- [ ] Bore construction
- [ ] Bore alteration
- [ ] Activities in or on beds of lakes or rivers or floodbanks
- [ ] Disturbance of contaminated land

Coastal: [ ] Activities in the coastal marine area (i.e., below mean high water spring tide)?

Where you have indicated the type of consent that is required, you must complete the appropriate Application Form before your application can be processed. Application Forms can be found on the Council's website: www.orc.govt.nz.

10. What is the maximum term of consent you are seeking? 25 years

11.Territorial Local Authority in which activity is situated?

- [ ] Dunedin City Council
- [ ] Clutha District Council
- [ ] Central Otago District Council
- [X] Queenstown Lakes District Council
- [ ] Waitaki District Council

12*. Do you require any other resource consent from any local authority for this activity?

[ ] Yes [X] No

If Yes, please list: _____

Have these consents been applied for/issued? [ ] Yes [ ] No If Yes

If Yes, please give the date applied for or issued: _____

Notes on Application Form Details

1. **Applicant(s) Details**

A resource consent can only be held by a legal organisation or fully named individual(s). A legal organisation includes a limited company, incorporated group or registered trust. If the application is for a trust the full names of all trustees are required. If the application is not for a limited company, incorporated group or trust, then you must use fully named individual(s).

2. **Consultant/Contact Details**

If you are using a consultant/agent for this application put their details here. If you are not, leave question 2 blank.

4 Previous Consent

Do you currently have a resource consent to do the activity that you are applying to renew with this application? If so, please enter the permit number if known and a brief description including the date of issue and the expiry date.

6-8 **Landowner, occupier and leasee**

If you are not the landowner, land occupier or leasee of the land where the activity will be undertaken, you may be required to obtain their unconditional written approval to your application. On pg 6 there is a form that can be used.

12. **Additional Consents**

If you are carrying out earthworks or building work you may need other consents from either the ORC or your Territorial Local Authority.

Declaration

Before signing the declaration below, in order to provide a complete application have you remembered to:

Fully completed this Form 1 and the necessary Application Forms ☐

Attached the required deposit.(or pay on line) (see page 8 for deposit that is payable) ☐
Cheques payable to Otago Regional Council

Please note: your deposit may not cover the entire cost of processing your application. At the end of the application process you will be invoiced for any costs that exceed the deposit. Interim invoices may be sent out for applications, where appropriate.
If the required deposit does not accompany your application, staff will contact you on the phone number provided on this form to request payment, and after 3 working days your application will returned if no payment is made for the required deposit.

I/we hereby certify that to the best of my/our knowledge and belief, the information given in this application is true and correct.

I/we undertake to pay all actual and reasonable application processing costs incurred by the Otago Regional Council.

Name/s HILARY LENNOX
(BLOCK CAPITALS)

Signature/s _____
(or person authorised to sign on behalf of applicant)

Designation CONSULTANT Date 26 April 2019
(e.g., owner, manager, consultant)

Otago Regional Council Postal Address: 70 Stafford St, Private Bag 1954, Dunedin 9054

Consultation

– (consultation is not compulsory, but it can make a process easier and reduce costs).

Under Section 95E of the Resource Management Act 1991 (the Act) the Council will identify affected parties to an application and if the application is to be processed on a non-notified basis the unconditional written approval of affected parties will be required. Consultation with potentially affected parties and interested parties can be commenced prior to lodging the application.

Consultation may be required with the appropriate Tangata Whenua for the area. The address of the local Iwi office is: Aukaha, 258 Stuart Street, P O Box 446, Dunedin, Fax (03)477-0072, Phone (03) 477-0071, email: info@aukaha.co.nz. If you require further advice please contact the Otago Regional Council.

Good consultation practices include:

- Giving people sufficient information to understand your proposal and the likely effects it may have on them
- Allowing sufficient time for them to assess and respond to the information
- Considering and taking into account their responses

Written approval forms are appended to this form on Page 9.

Information Requirements

In order for any consent application to be processed efficiently in the minimum time and at minimum cost, it is critical that as much relevant information as possible is included with the application**. Where an application is significantly incomplete, the Consent Authority may decide not to accept the application for processing.**

Resource Management Act 1991
FOURTH SCHEDULE—ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

(Below are the provisions of the 4th schedule of the Act, which describes what must be in an application for resource consent, as amended in 2015.)

1 Information must be specified in sufficient detail

Any information required by this schedule, including an assessment under clause 2(1)(f) or (g), must be specified in sufficient detail to satisfy the purpose for which it is required.

2 Information required in all applications

(1) An application for a resource consent for an activity (the **activity**) must include the following:

(a) a description of the activity:

(b) a description of the site at which the activity is to occur:

(c) the full name and address of each owner or occupier of the site:

(d) a description of any other activities that are part of the proposal to which the application relates:

(e) a description of any other resource consents required for the proposal to which the application relates:

(f) an assessment of the activity against the matters set out in Part 2:

(g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b). *("document" includes regional & district plans, regulations*, *national policy statements, iwi plans*)

(2) The assessment under subclause (1)(g) must include an assessment of the activity against—

(a) any relevant objectives, policies, or rules in a document; and

(b) any relevant requirements, conditions, or permissions in any rules in a document; and

(c) any other relevant requirements in a document (for example, in a national environmental standard or other regulations).

(3) An application must also include an assessment of the activity's effects on the environment that—

(a) includes the information required by clause 6; and

(b) addresses the matters specified in clause 7; and

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

3 Additional information required in some applications

An application must also include any of the following that apply:

(a) if any permitted activity is part of the proposal to which the application relates, a description of the permitted activity that demonstrates that it complies with the requirements, conditions, and permissions for the permitted activity (so that a resource consent is not required for that activity under section 87A(1)):

(b) if the application is affected by section 124 or 165ZH(1)(c) (which relate to existing resource consents), an assessment of the value of the investment of the existing consent holder (for the purposes of section 104(2A)):"(c) if the activity is to occur in an area within the scope of a planning document prepared by a customary marine title group under section 85 of the Marine and Coastal Area (Takutai Moana) Act 2011, an assessment of the activity against any resource management matters set out in that planning document (for the purposes of section 104(2B)

4 (relates to subdivisions- *not included here as subdivisions not ORC jurisdiction.)*

5 Additional information required in application for reclamation

An application for a resource consent for reclamation must also include information to show the area to be reclaimed, including the following:

(a) the location of the area:

(b) if practicable, the position of all new boundaries:

(c) any part of the area to be set aside as an esplanade reserve or esplanade strip.

Assessment of environmental effects

6 Information required in assessment of environmental effects

(1) An assessment of the activity's effects on the environment must include the following information:

(a) if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity:

(b) an assessment of the actual or potential effect on the environment of the activity:

(c) if the activity includes the use of hazardous substances and installations, an assessment of any risks to the environment that are likely to arise from such use:

(d) if the activity includes the discharge of any contaminant, a description of—

(i) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and

(ii) any possible alternative methods of discharge, including discharge into any other receiving environment:

(e) a description of the mitigation measures (including safeguards and contingency plans where relevant) to be undertaken to help prevent or reduce the actual or potential effect:

(f) identification of the persons affected by the activity, any consultation undertaken, and any response to the views of any person consulted:

(g) if the scale and significance of the activity's effects are such that monitoring is required, a description of how and by whom the effects will be monitored if the activity is approved:

(h) if the activity will, or is likely to, have adverse effects that are more than minor on the exercise of a protected customary right, a description of possible alternative locations or methods for the exercise of the activity (unless written approval for the activity is given by the protected customary rights group).

(2) A requirement to include information in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

(3) To avoid doubt, subclause (1)(f) obliges an applicant to report as to the persons identified as being affected by the proposal, but does not—

(a) oblige the applicant to consult any person; or

(b) create any ground for expecting that the applicant will consult any person.

7 Matters that must be addressed by assessment of environmental effects

(1) An assessment of the activity's effects on the environment must address the following matters:

(a) any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects:

(b) any physical effect on the locality, including any landscape and visual effects:

(c) any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity:

(d) any effect on natural and physical resources having aesthetic, recreational, scientific, historical, spiritual, or cultural value, or other special value, for present or future generations:

(e) any discharge of contaminants into the environment, including any unreasonable emission of noise, and options for the treatment and disposal of contaminants:

(f) any risk to the neighbourhood, the wider community, or the environment through natural hazards or the use of hazardous substances or hazardous installations.

(2) The requirement to address a matter in the assessment of environmental effects is subject to the provisions of any policy statement or plan.

Set out below are details of the amounts payable for those activities to be funded by fees and charges, as authorised by s36(1) of the Resource Management Act 1991.

Resource Consent Application Fees (from 1 July 2018)

Note that the fees shown below are a **deposit** to be paid on lodgement of a consent application and applications for exemptions in respect of water metering devices. This deposit will not usually cover the full cost of processing the application, and further costs are incurred at the rate shown in the scale of charges. GST is included in all fees and charges.

If you wish to make a payment via internet banking, or on line, the details are below. Please note the applicants name and "consent application" should be used as reference when paying the deposit -

For on line payments go to www.orc.govt.nz and go to Home/ Rates/ Way to Pay and follow prompts

Publicly Notified Applications: [3]	**$**
First application	5,000.00
Concurrent applications	225.00

Non Notified Applications and Limited Notified Applications: [3]	**$**
First application (except those below)	1,000.00
Concurrent applications [1]	50.00
Variation to conditions – s127	1,000.00
Administrative variation – s127	500.00
Exemptions from water measuring Regulations	200.00
Bores	500.00
Gravel	500.00

Hearings	Per Note 2 below
Payment for Commissioner request – s100A	Per Note 4 below

Objections	
Payment for Commissioner request – s357AB	Per Note 4 below

Transfers and Certificates Deposits:	**$**
Transfer of permits and consents	100.00
Priority Table	100.00
Section 417 Certificate	200.00
Certificate of Compliance	200.00
Section 125 – Extension of lapse date	100.00
All Other Costs	As per Scale of Charges

Scale of Charges:	**From 1 July 2018 $**
Staff time per hour:	
* Executive staff	235.00
* Senior Technical/Scientist	170.00
* Technical/Scientist	125.00
* Field Staff	100.00
* Administration	85.00
Disbursements	Actual
Additional site notice	Actual
Advertisements	Actual
Vehicle use per kilometre	0.70
Travel and accommodation	Actual
Testing charges	Actual
Consultants	Actual
Commissioners	Actual
Photocopying and printing	Actual
Councillor hearing fees per hour	
*Chairperson	100
*Member	80
*Expenses	Actual

Notes

1. For additional permits in respect of the same site, activity, applicant, time of application, and closely related effect as the first application.

2. The deposit payable shall be 90% of the cost of a hearing as calculated by Council in accordance with information contained in the application file and using the scale of charges. The amount payable will be due at least 10 working days before the commencement of the hearing. If the amount is not paid by the due date, then the Otago Regional Council reserves the right under S36 (7) of the Resource Management Act to stop processing the application. This may include cancellation of the hearing.

Should a hearing be cancelled or postponed due to the non payment of the charge, the applicant will be invoiced for any costs that arise from that cancellation or postponement.

Following completion of the hearing process, any shortfall in the recovery of hearing costs will be invoiced, or any over recovery will be refunded to the applicant.

Under Section 100A of the RMA, one or more submitters may make a request to have a resource consent application heard by one or more hearing commissioners who are not members of Council. In this case the applicant will pay the amount that Council estimates it would cost for the application to be heard had the request not been made, and the submitter(s) who made the request will pay, in equal shares, the cost of the application being heard that exceeds that amount payable by the applicant.

Further, the applicant may request to have a resource consent application heard by one or more hearing commissioners who are not members of Council. In this case, the applicant will pay the full costs.

3. Where actual and reasonable costs are less than the deposit paid, a refund will be given.

4. Where an applicant requests under s100A (for a consent hearing) or under s357AB (for the hearing of an objection) an independent commissioner(s); the applicant will be required to pay any increase in cost of having the commissioner(s).

   Where a submitter(s) requests under s100A an independent commissioner(s) any increase in costs that is in addition to what the applicant would have paid shall be paid by the submitter. If there is more than one submitter who has made such request the costs shall be evenly shared.

Administrative Charges
The following one-off administration charges shall apply to all resource consent applications received:

Publicly Notified and Limited Notified Applications	**$**
First application	100.00
Concurrent applications	50.00

Non-Notified Applications	**$**
First application	50.00
Concurrent applications	25.00

Other	**$**
Certificate of Compliance	25.00
Section 417 Certificate	25.00
Exemptions from water metering regulations	25.00

Review of Consent Conditions
Following the granting of a consent, a subsequent review of consent conditions may be carried out at either request of the consent holder, or, as authorised under Section 128, as a requirement of Council. Costs incurred in undertaking such reviews will be payable by the consent holder at the rates shown in the Scale of Charges above.

Reviews initiated by Council will not be charged to consent holders.

Compliance Monitoring Charges (from 1 July 2017)

1. Performance Monitoring
The following charges will apply to the review of performance monitoring reports for all consent holders, except those listed in section 1.6 below. The charges shown are annual fixed fees per performance monitoring report or plan, and are inclusive of GST.

		From 1 July 2017
1.1 Discharge to Air Consent		***$***
Measurement of contaminants from a Stack report		86.00
Ambient air quality measurement of contaminants report		100.00
Management plans and maintenance records		33.50
Annual Assessment report		66.50
1.2 Discharge to Water, Land and Coast		***$***
• Effluent Systems	Environmental Quality report	46.50
	Installation producer statements	60.00
	Return of flow/discharge records	60.00
• Active Landfills	Environmental Quality report	58.00
	Management Plans	130.00
• Industrial Discharges	Effluent quality report	42.00
	Environmental report	92.50
	Return of flow/discharge records	60.00
Annual Assessment report		50.00
Management Plans – minor environmental effects		130.00
Management Plans – major environmental effects		260.00
Maintenance records		30.00

1.3 Water Takes

Verification reports	60.00
Annual assessment report	50.00
Manual return of data per take	80.00
Datalogger return of data per take sent to the ORC	50.00
Telemetry data per consent	35.00
Administration fee – water regulations	100.00
Low flow monitoring charge*	
- Kakanui at McCones	327.00
- Unnamed Stream at Gemmels	1,431.00

*Charge for monitoring sites established by the ORC specifically to monitor consented activities in relation to river flows.

1.4 Structures

Inspection reports for small dams	130.00
Inspection reports for large dams	260.00
Structure integrity reports	80.00

1.5 Photographs

Provision of photos	60.00

1.6 Set Fees for Specific Consent Holders

Performance monitoring fees will be charges as 75% of actual costs for the following consent holders

Dunedin City Council
Central Otago District Council
Clutha District Council
Queenstown Lakes District Council
Waitaki District Council
Ravensdown
Contact Energy
Trustpower
Pioneer Generation

Additional charges may be incurred for new consents granted during the year.

2. Audit

Audit work will be charged at half of the actual cost incurred, with the actual costs being calculated using the Scale of Charges.

3. Non-Compliance, Incidents and Complaints

Enforcement work on consent conditions, and remedying negative effects from permitted activities – Scale of Charges.

Gravel Inspection and Management

Gravel extraction fee – $0.66 per cubic metre (incl. GST). Where more than 10,000 cubic metres of gravel is extracted within a prior notified continuous two month period, the actual inspection and management costs will be charged, as approved by the Director Corporate Services.

Written Approvals of Persons Likely to be Adversely Affected

I/We (Please print full name/s)_____ _____

of (Address) _____

I /we have read the full application for the proposal by (Applicant)

_____

for a Resource Consent (Number) _____ to _____

_____
and give my/our written approval to the proposed activity/activities.

In signing this written approval I/we understand that:

- The consent authority must decide that I/we am/are no longer an affected person, and disregard adverse effects on me/us
- That /we I may withdraw my/our written approval in writing before the hearing, or if no hearing before a decision is made on the application.

Signature/s_____ Date _____
(or person authorised to sign on behalf of affected party/parties)

Phone _____ Fax _____ Email _____

Please note: If this application is subsequently notified the above approval does not constitute a submission as required under Section 96 of the Resource Management Act 1991.

Written Approvals of Persons Likely to be Adversely Affected

I/We (Please print full name/s)_____ _____

of (Address) _____

I /we have read the full application for the proposal by (Applicant)

_____

for a Resource Consent (Number) _____ to _____

_____
and give my/our written approval to the proposed activity/activities.

In signing this written approval I/we understand that:

- The consent authority must decide that I/we am/are no longer an affected person, and disregard adverse effects on me/us
- That /we I may withdraw my/our written approval in writing before the hearing, or if no hearing before a decision is made on the application.

Signature/s_____ Date _____
(or person authorised to sign on behalf of affected party/parties)

Phone _____ Fax _____ Email _____

Please note: If this application is subsequently notified the above approval does not constitute a submission as required under Section 96 of the Resource Management Act 1991.

RESOURCE CONSENT APPLICATION TO REPLACE VARIOUS DEEMED PERMITS

26 April 2019

This is an application to Otago Regional Council for resource consent to take surface water, which will replace several deemed permits as described below. Form 1 has been completed and Form 4 has been used as the basis for providing the information below, and so we trust that the information provided is adequate in terms of s88 of the RMA.

Part A – General

This application seeks to replace several authorisations as described in Table 1 below. Water taken from the Royal Burn North Branch serves both properties and hence a joint resource consent application is being made. This application does not seek to replace any shares held in the name of Glencoe Station Limited (shaded grey).

Table 1: Deemed Permits to be replaced

Number	Holder	Share
RM14.364.01 – to take water as primary allocation from the Royal Burn North Branch at a maximum rate of 55.6 L/s	G Coutts, R Coutts and S L Anderson being Trustees of the Barley Station (Glencoe) Trust	100%
96285 – to take 50,000 L/hr from the Royal Burn North Branch (13.9 L/s)	Glencoe Station Ltd	20% (10,000 L/hr)
	G Coutts, R Coutts and S L Anderson being Trustees of the Barley Station (Glencoe) Trust	80% (40,000 L/hr)
3073B – to take 48,000,000 L/month from the Royal Burn North Branch at a maximum rate of 400,000 L/hr (111.1 L/s)	A P McQuilkin, N J McQuilkin, R N Wilson and G M Todd being Trustees of the A P McQuilkin Family Trust	100%
97029.V1 – to take 56,000,000 L/month from the Royal Burn North Branch at a maximum rate of 200,000 L/hr (55.6 L/s)	G Coutts, R Coutts and S L Anderson being Trustees of the Barley Station (Glencoe) Trust	79.9%
	P C Little and G Coutts being Trustees of the Barley Station Trust	20.1%
95696 – to take 300,000 L/hr from New Chums Gully (83.3 L/s)	Glencoe Station Ltd	20% (60,000 L/hr)
	BSTGT Ltd being Trustees of the Barley Station (Glencoe) Trust	80% (240,000 L/hr)

It is proposed that all of the above allocation is rolled into *one* water permit with *three* points of take. The permit will be held in the name of BTSGT Ltd and A P McQuilkin, N J McQuilkin, K L Skeggs, S A McQuilkin and G M Todd being Trustees of the A P McQuilkin Family Trust (note the change in trustees). Tony McQuilkin is applying on behalf of the A P McQuilkin Family Trust. Grant Coutts is a Director of BSTGT Ltd and also a named shareholder on the other permits being replaced.

Part B – Description of the Points of Take

General

Figure 1 below shows the points of take from the two creeks, the distribution infrastructure and the location of existing meters (red circles).

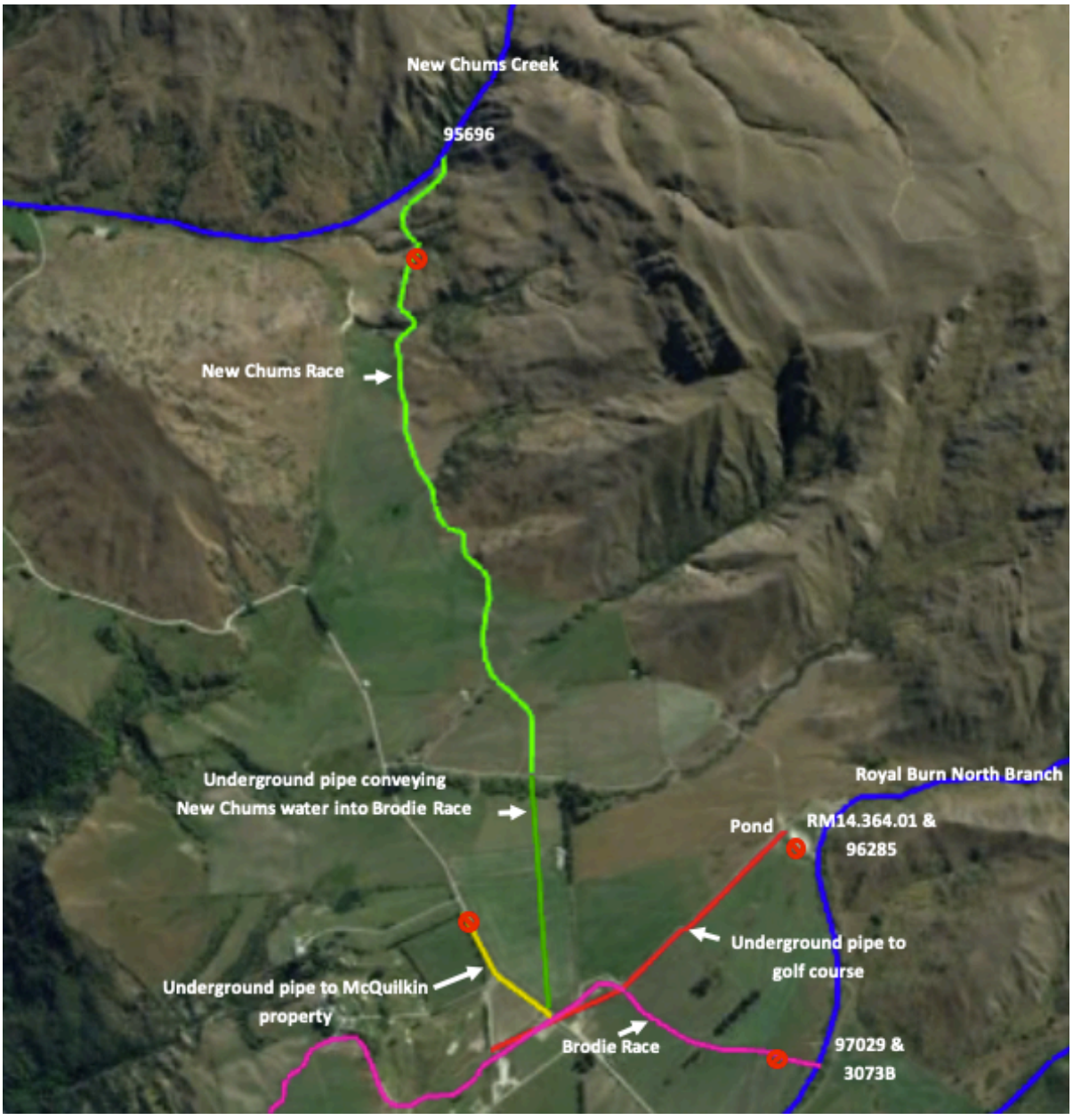

Figure 1: Scheme plan

The properties are situated on the Crown Terrace, a distinct geological feature located above Arrowtown that runs adjacent to the Crown Range. Most of the terrace has a landcover categorised in the New Zealand Landcover Database as high producing exotic grassland, with low producing grassland and tussock on the eastern slopes. This exotic grassland cover is consistent with this area primarily being used for farming and lifestyle properties. Historically, the area was involved in gold mining practice. The terrace sits approximately 600 m above sea level, raising only 100 m back towards the foothills of the Crown Range. The terrace is bordered in the north by Mt Beetham, and towards the south it drops off to the Kawarau River.

The Crown Terrace is subject to characteristically hot dry summers and cold winters, with snow typical. The alpine pass that crosses the terrace and on into the Cardrona Valley is frequently closed in winter due to snow and ice. Median annual rainfall is 700 – 800 mm.

The Crown Terrace is dominated by Pallic Soils, with the upper reaches of the terrace that boarder the foothills of the Crown Range composed of Recent Soils. Because the Crown Terrace is a distinct geological feature, it has a unique lithology. The terrace is composed of Loess and Alluvium, and the surrounding lithology Schist. The terrace is the result of uplift and glacial processes that have produced the characteristics scarps, and flat area that is now used for farming.

Points of Take – Royal Burn North Branch

The main point of take is located in the upper part of the Royal Burn North Branch (referred to hereon in as the "Upper RBNB" take). This is where RM14.364.01 and 96285 are exercised. The intake structure consists of a pipeline sitting in the main channel of the RBNB and this has been fitted with a screen to prevent debris entering the pipeline. A small weir structure allows water to pond around this intake pipe, which then diverts water into a holding chamber sitting on the bank of the creek. A gated outlet allows water to flow from the holding chamber, through underground pipe, into the applicant's 13,000 m^3 storage pond (which sits outside of the bed of the creek). The take is metered at a location between the intake and the pond. From the storage pond, water is conveyed via an underground pipeline for use at various locations throughout the property for irrigation and stock drinking water purposes.

Figure 2: Intake structure at Upper RBNB point of take (RM14.364.01 & 96285)

The other point of take is located further downstream on the RBNB (referred to hereon in as the "Lower RBNB" take). This is where 97029 and 3073B are exercised. At the point of take, there is a small channel that diverts part of the flow down a flume on the true right-hand side of the creek to where the water meter is located. At the time of the site visit early 2018, the creek was completely dry (see pictures below). There is no screening at this point of take.

Figure 3: Intake structure at Lower RBNB point of take (97029 & 3037B)

Water taken at the Lower RBNB point of take is conveyed via the Brodie Race for use at various locations throughout the property for irrigation and stock drinking water purposes. There is also an offtake from the Brodie Race immediately downstream of Glencoe Road where the McQuilkin Family take their water (under Deemed Permit 3073B) and channel it via an underground pipeline to their property. WEX0129 authorises the metering of this take at a location near the entrance of the McQuilkin property.

At both points of take on the RBNB, the creek bed consists of gravelly substrate and riparian margins are vegetated with exotic grasses.

Point of Take – New Chums Creek

Water is taken from within the New Chums Creek gully via an overground pipeline that then turns into an open race once it leaves the gully. Parts of the historic pipeline have recently been replaced with more modern piping. At the point of take there is a small weir structure that allows water to pool around the gated intake pipe (see pictures below). These structures have all been in place for many years and there is no screening at this point of take. This take isn't measured deep in the gully at the point of take, rather it is measured further long the race, outside of the gully, and this is authorised by WEX0184.

The New Chums race is approximately 2 km long and has been maintained in good condition, with no signs of any leakages from the race. The race then goes into a 650 m-long underground pipe that transports any unused water from the New Chums race into the Brodie Race.

Figure 4: Intake structure on New Chums Creek (left) and New Chums Race (right)

At the point of take on New Chums Creek, the creek bed consists of gravelly substrate and riparian margins are vegetated with typical understory species along with exotic grasses and weeds.

Surface Water Hydrology – Royal Burn North Branch

The northern branch of the Royal Burn (RBNB) runs west off the Crown Range and drains into the Arrow River approximately 3 km upstream from the confluence of the Arrow River with the Kawarau River and is therefore a sub catchment of the Arrow. The Ministry for the Environment River Flow database estimates the RBNB to have a **mean annual flow of 33.7 L/s** and a **MALF of 10.7 L/s** upstream of the upper point of take.

The two points of take on the Royal Burn were visited on the 31st January 2018. The RBNB was gauged above the upper point of take (associated with RM14.364.01 and 96285). Flow was estimated at 13 L/s, and therefore the conditions on the day likely reflected low flow conditions based on the estimated MALF for this reach of the stream. During the site visit, < 5 L/s of water was observed downstream of the upper point of take. It is likely water that this was water seeping through the small weir structure at the upper point of take. The lower point of take (associated with 97029 and 3073B) was dry at the time of the site visit, which shows that the water seeping through the weir structure was disappearing to ground before reaching the lower point of take.

Surface Water Hydrology - New Chums Creek

The head waters of New Chums Creek flow west off the Crown Range towards Mt Beetham, flowing from here north west, draining into the Arrow River. The confluence with the Arrow River is

approximately 1 km upstream from Arrowtown. The Ministry for the Environment River Flow database estimates New Chums Creek to have a **mean annual flow of 19.8 L/s** and a **MALF of 4.7 L/s**.

A site visit and stream gauging conduced on the 31st January 2018 estimated flow above the point of take for Deemed Permit 95696 to be 5 L/s. Based on the estimated MALF, it is likely these observations were made during low flow conditions. The land around the point of take is densely vegetated in native bush. Above the point of take there are small rock cascades with some pooling water. During the site visit, a trickle of water was observed downstream of the weir structure. This flow is likely the result of seepage from the very damp surrounding soils.

Figure 5: Photo taken upstream of the New Chums point of take, observed at estimated minimum flow

Part C - Volume and Rates of Take

Historic water use data for the three points of take has been examined (see later in this application) and the following allocation limits are proposed, based on historic use.

Table 2: Current Allocation and Allocation Sought

Location	Permit	Primary allocation currently held by applicants	Primary allocation sought
Upper RBNB	96285	11.1 L/s *Same point of take as RM14.364.01*	15 L/s
	RM14.364.01	55.6 L/s *Same point of take as 96285*	
Lower RBNB	97029.V1	55.6 L/s *Same point of take as 3073B*	100 L/s *Only 20 L/s of will be allocated to McQuilkin going forward*
McQuilkin share	3073B	111.1 L/s *Same point of take as 97029_V1*	
New Chums Creek	95696	66.7 L/s	45 L/s
		TOTAL	**160 L/s**

This will result in the total primary allocation on these permits **reducing** from **319.5 L/s** to **160 L/s**.

Upgrading of the Lower RBNB intake structure may be necessary to ensure that the applicant conforms with the maximum limit sought at this point of take, but any consents that may be required for these works are not being sought as part of this consent application.

Clearly the maximum rate of abstraction sought from each creek exceeds the mean flow for both of these creeks, however, the instantaneous rates of take sought will allow the applicants to harvest higher flows when they are available and store this water in onsite ponds as required. This stored water can be accessed during periods of lower flow to ensure that the irrigation activities can continue whilst reducing pressure on the creeks where possible. There are already ponds on each the subject properties.

An assessment of the volumes of water required for irrigation purposes has been undertaken based on recommendations from Aqualinc, 2017, using a conservative MAR of 750mm/yr and PAWs between 90 and 120 depending on the soil type present.

Table 3: Aqualinc Assessment

	SOILS	AREAS	PAW at 600 mm	Peak daily demand (mm/d)	M3/DAY	Monthly Demand (mm/m)	M3/MONTH	Annual Demand (mm/yr)	M3/YEAR
Barley	PIGBURN	17.5	112	4.35	761.25	135	23,625.00	772	135,100.00
	BARHILL 39	61	101	4.5	2,745.00	140	85,400.00	788	480,680.00
	BARHILL 36	81.5	130	4.2	3,423.00	130	105,950.00	756	616,140.00
	Total	*160*			*6,929*		*214,975*		*1,231,920*
McQ	PIGBURN	13.3	112	4.35	578.55	135	17,955.00	772	102,676.00
	BARGILL 39	1.9	101	4.5	85.50	140	2,660.00	788	14,972.00
	Total	*15.2*			*664*		*20,615*		*117,648*
				TOTAL	**7,593**		**235,590**		**1,349,568**

This has been incorporated into the assessment of total water required (below), which includes an allowance for base flows through the races. If the entire irrigation system relied on a pumped network that transported water directly from the source when it was required, then it would be simple to impose strict monthly and annual limits on the consent based solely on Aqualinc. However, the scheme relies on gravity to transport water, and flows will need to be maintained in the pipes and races at all times to provide domestic and stock drinking water as well and preventing weeds establishing and the races

silting up. This will need to be around 5 L/s in the Upper RBNB pipe, 5 L/s the Brodie Race and 5 L/s the New Chums Race, which equates to the 40,176 m^3/month across the scheme. These base flows have been added to the irrigation demand during the irrigation season to provide an assessment of the total volume of water required for the scheme each year:

Table 4: Irrigation demand calculated for the command area, plus total volumes sought

	Daily (m^3)	**Monthly (m^3/m)**	**Annual (m^3/yr)**
Demand for Irrigation only (Aqualinc)	7,593	235,590	1,349,568
Base Flows (includes domestic and stock water)	1,296	40,176	473,040
Total Volumes Sought	**8,889 (average)**	**275,766**	**1,822,608**

This a significant reduction in the current allocation of 27,603 m^3/day, 606,404 m^3/month and 5,266,200 m^3/yr. The review condition included in the proposed consent conditions below will ensure that if the water allocated to the regime is not being used then the limits on the water permits can be adjusted.

Part - D Water Measuring and Reporting Information

The takes will continue to be monitored in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 (with two WEXs already in place), but the reporting structure will be slightly different. Combining all of the permits into one permit with one set of monthly and annual limits will allow for water to be used where it is required across the command area, but there will need to be separate limits on the instantaneous rates of take at each of the three points of take. This will be monitored using the existing meters at those points of take.

The meter at the McQuilkin property will be used mainly for the benefit of the consent holders to monitor what proportion of the water taken is being used at this property. This is an important point to make, because the meter at the McQuilkin property doesn't monitor how much water is being taken from the creek, rather it simply measures how much of the water taken is being used at this property.

Part E - Historical Water Use Evidence

Water use records for the Upper RBNB take show that the actual rate of take at this location is significantly lower than the maximum allocation limit on the current consents (RM14.364.01 and 96285). The consistency of the consistent data collected can be attributed to the relative modern intake infrastructure and the maximum capacity of the intake pipeline.

The Lower RBNB take is where both 97029.V1 (BSTGT) and 3073B (McQuilkin) are exercised and there is a meter at the point of take. There is a second meter on the offtake to the McQuilkin property to show what they're using, but the volume of water leaving the creek is measured at the meter at the point of take. This is recorded against 97029 only, but in fact it is a measure of what is taken from the creek for both 97029 and 3073B.

Data collected for the New Chums take (95696) has been reasonably consistent, likely due to the size of the pipeline restricting the maximum rate of take.

Part F – Water Use and Management

One property is a lifestyle property owned by the McQuilkin family and around 15.2 ha of this is irrigated. The other property is a productive farm owned by BSTGT Ltd (Grant and Russell Coutts) that contains several dwellings and a private golf course, and around 160 ha of this is irrigated. The property boundaries are shown in Figure 6 below.

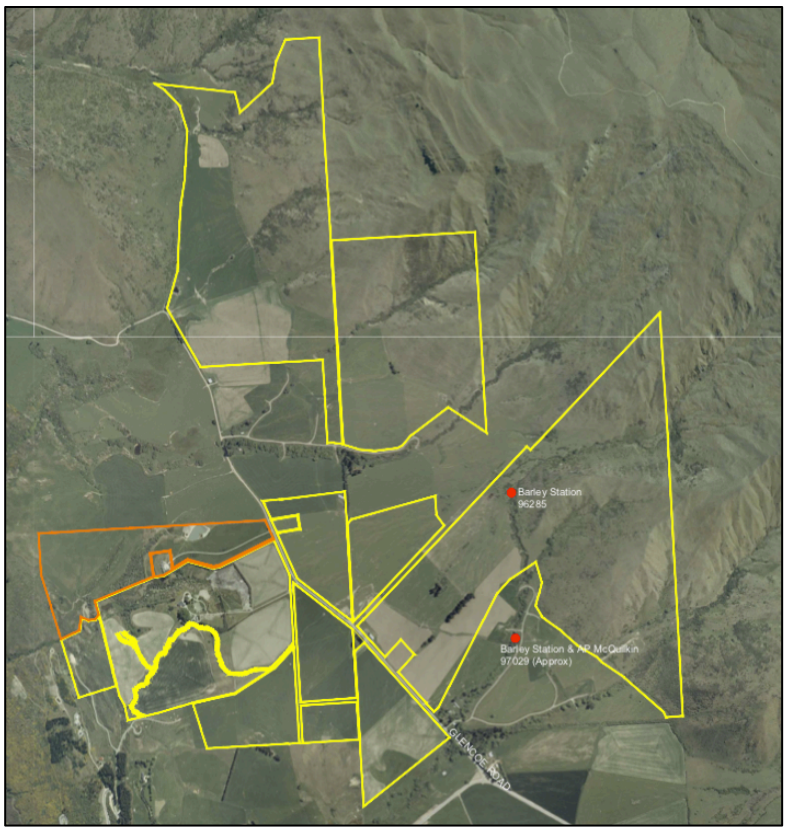

Figure 6: Property boundaries. Orange = McQuilkin, Yellow = BTSGT

Figure 1 above shows the irrigation infrastructure in place across the properties, including the pond on the BSTGT property that is used to store water from the Upper RBNB point of take. The vast majority of this infrastructure traverses the applicants' properties and so any defaults, leaks, breakages or failures are able to be quickly detected and remedied. At the time of writing this application, another pond was being proposed for the BSTGT property to store water from New Chums Creek, but that activity is not part of this consent application.

Part G – Assessment of Environmental Effects

None of the following occur within 500 m of the points of take:

- Food gathering sites
- Natural wetlands
- Waste discharges
- Recreational activities
- Areas of specific aesthetic value
- Areas of aspects of significance to iwi

A search was undertaken of all fish records in the Arrow River catchment using the NZ Freshwater Fish Database to determine whether any fish had ever been found in the RBNB or New Chums Creek. The search revealed that there are no records of any fish or eel ever being found in any of the creeks on the Crown Terrace or in New Chums Creek. These records include results from electric fish surveys undertaken in New Chums Creek and the Royal Burn by Ross Dungey on behalf of ORC in early 2018. Ross Dungey did not find any freshwater crayfish, lobsters or mussels in the Royal Burn either.

The absence of fish is not a surprise given the steep, cliff-type terrain between the Arrow River and the Crown Terrace, and the steep terrain of the upper part of New Chums Gully, which makes it impossible for any fish to move upstream from the Arrow River. This supports a previous conversation with Pete Ravenscroft from ORC (pers. comm.) in which it was noted that there are no fish in these creeks, and that fish weren't likely to ever reach these creeks naturally.

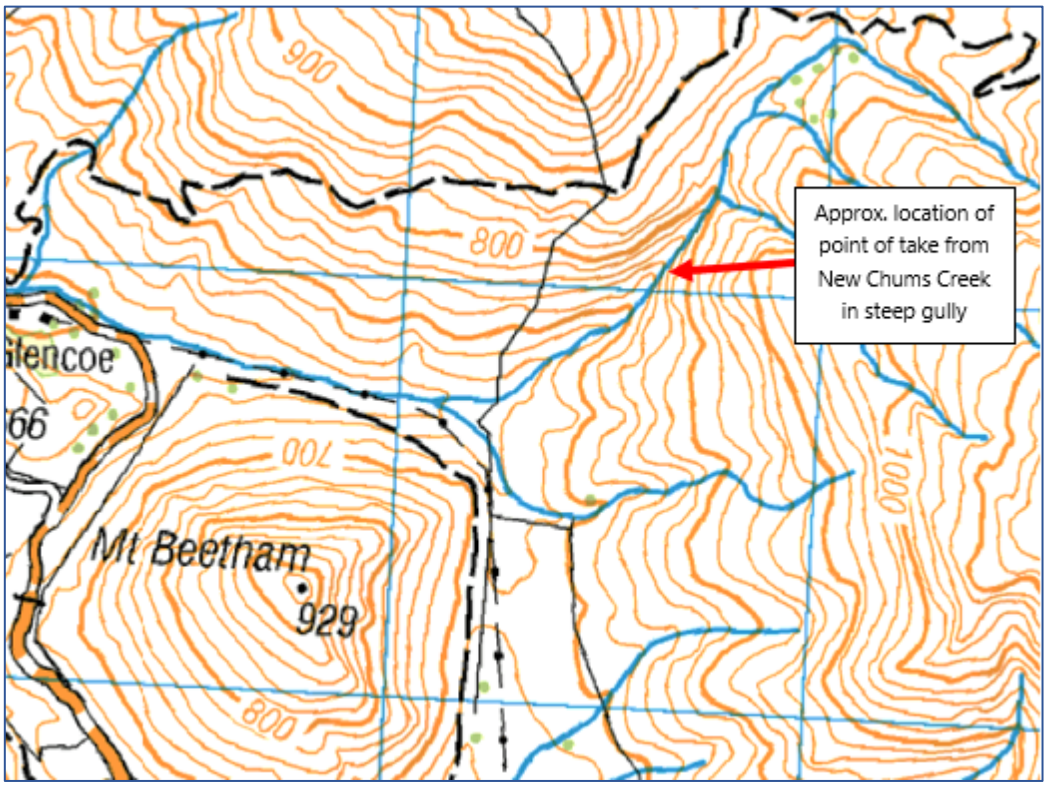

Figure 7: Map showing the steep gradient of New Chums Gully

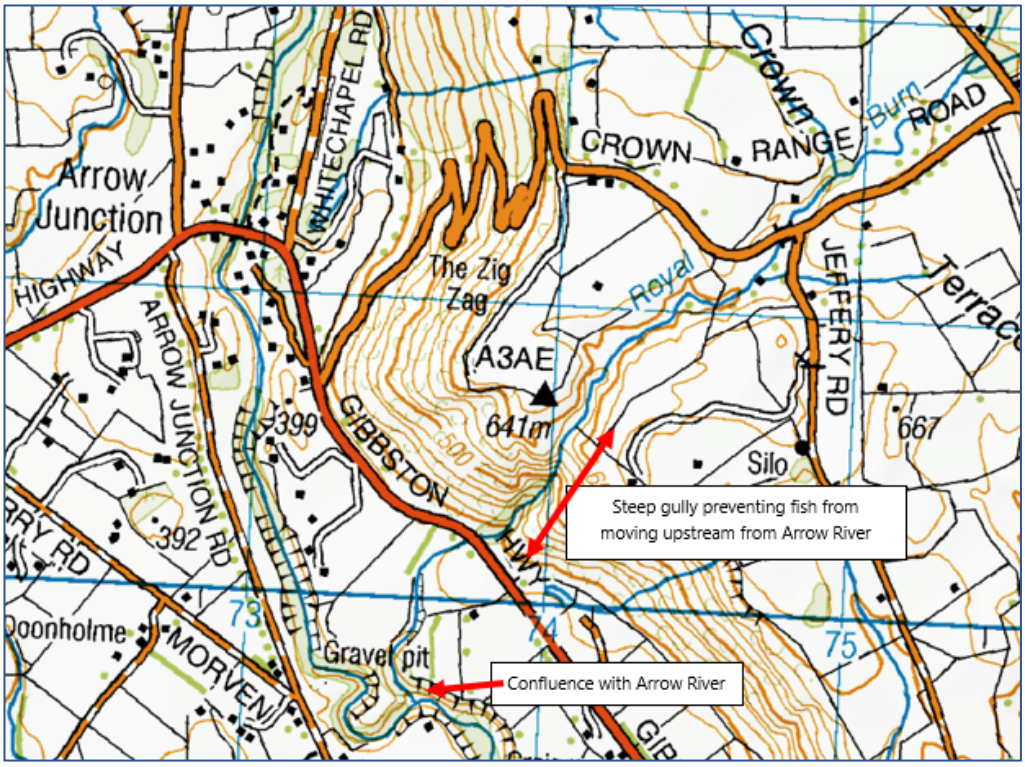

Figure 8: The Royal Burn's descent from the Crown Range prior to the confluence with the Arrow River

In summary, there are no reports of any fish species being present in the RBNB or New Chums Creek, nor is it likely that these watercourses will ever be inhabited by fish. Existing aquatic ecosystem values are limited.

Neither New Chums Creek or the Royal Burn are identified in Schedule 1A of the Otago Regional Water Plan as having natural values, or 1B as having water supply values. No other stream on the Crown Terrace is listed in Schedule 1A or 1B. Neither stream is registered in Schedule 1C or Schedule 1D.

Mitigation measures

A visible residual flow was observed beyond the Upper RBNB point of take in early 2018 and it is proposed that this is required in perpetuity as a consent condition to provide some enhancement to natural character. This condition will be easy to enforce simply by visiting the point of take, and is preferred to a numerical residual flow because the MALF of the creek itself is less than 11 L/s, which is barely measurable. The site of the Lower RBNB point of take was extremely dry during the site visit in early 2018, and the cracked mud indicated that it had been dry for a long time. With a MALF of less than 11L/s, it is questionable whether the Royal Burn would maintain a meaningful, connected flow through the length of the creek down to the Lower RBNB at all times, even if the abstraction activity was not occurring. It is unrealistic and unreasonable for the applicant to be expected to provide a residual flow when there is no water in the creek, and so no residual flow at the Lower RBNB point of take is proposed.

With a MALF of less than 5 L/s, it is questionable whether New Chums Creek would maintain a meaningful, connected flow through the length of the creek at all times even if the abstraction activity was not occurring. The New Chums point of take is in dense bush and there is no public access to this part of the creek, so it could be argued that there is little to be achieved from maintaining a residual flow. However, to provide some enhancement to natural character, a visible residual flow past the point of take at all times is proposed. This will be easy to enforce simply by visiting the point of take, and is

preferred to a numerical residual flow because the MALF of the creek itself is less than 5 L/s, which is barely measurable.

At the time of writing this application, ORC was in the process of preparing for the notification of a plan change that would set a minimum flow for the Arrow River for the maintenance of amenity values, recreational values, aquatic ecosystems, natural character and other values associated with the Arrow River. It is expected that any consents granted subsequent this consent application would be reviewed in accordance with Policy 6.4.5(d) to apply the minimum flow. It is noted that when the Arrow River is below the minimum flow, water may still be taken at the applicants' points of take for domestic and stock drinking water purposes under s14 of the RMA.

The following conditions of consent are proposed to ensure that any potential adverse effects from the proposed activities will be appropriately managed:

- Purpose – to take water as primary allocation from New Chums Creek and the Royal Burn North Branch for the irrigation, domestic and stock drinking water purposes.
- This permit shall not commence until Deemed Permit 3073B, Deemed Permit 95696, Deemed Permit 96285, Deemed Permit 97029.V1 and Water Permit RM14.364.01 have been surrendered or have expired.
- The rate of take at the Upper Royal Burn North Branch point of take at NZTM2000 1275616E 5012955N shall not exceed 15 L/s.
- The rate of take at the Lower Royal Burn North Brach point of take at NZTM2000 1275627E 5012340N shall not exceed 100 L/s.
- The rate of take at the New Chums Creek point of take at NZTM2000 1274624E 5015042E shall not exceed 45 L/s.
- The total volume of water taken under this permit shall not exceed:
    - 275,766 m^3/month; and
    - 1,822,608 m^3/year.
- The water used on the land described as Lot 1 DP 482448 and Lot 2 DP 26283 shall not exceed:
    - 20 L/s
    - 664 m^3/day;
    - 20,615 m^3/month; and
    - 92,796 m^3/year
- ORC's standard water metering condition.
- A visual residual flow shall be maintained past the Upper Royal Burn North Branch point of take and past the New Chums Creek point of take at all times.
- The consent holder shall take all practicable steps to ensure that:
    - There is no leakage from pipes and structures;
    - The use of water is confined to the target areas;
    - There is no runoff of irrigation water in irrigated areas ether on site or off site.
- ORC's standard review condition.
- *Note: When the Arrow River is flowing below the minimum flow as adopted in the Regional Plan: Water, the consent holders may still take water for domestic and stock water needs under section 14 of the Resource Management Act, 1991, or any subsequent equivalent regulatory provisions.*

Fish screens are not being proposed at any of the points of take because there is no reason to believe that there are any fish in the RBNB or New Chums Creek at or near the points of take. Note that no daily maximum has been proposed. Allowing the applicant some flexibility in the way that water is taken by allowing the maximum possible rate on some days and less on other days, as long as the monthly

maximum is not exceeded, will not result in any adverse effects on the environment and will still ensure that water is used efficiently.

Part H – Alternative Water Supplies

The applicants are abstracting water from the nearest possible sources for the purpose of irrigation and stock water supply. The cost of installing a bore or pumping uphill from the Arrow River would be cost prohibitive. Furthermore, the Arrow River supports a much broader range of instream values than the two creeks that are the subject of this application, and so any further abstraction from the Arrow is not preferred.

Part I – Consultation

It is considered that this application will be processed non-notified. Council must decide which persons are affected by the activities pursuant to Section 95E of the RMA.

There are no known authorised surface water takes from the RBNB or New Chums Creek downstream from the applicant's point of take. The nearest known downstream authorised surface water take on the main stem of the Royal Burn is Water Permit 97402, which is located over 4 km downstream. This take is down near SH6 and the Royal Burn traverses a steep descent from the Crown Terrace before it reaches this location. Based on the distance between the proposed activities and this downstream take, and the fact that there is so much uncertainty in terms of effects on the flow regime between the two locations (i.e. losses and gains over this stretch), then any effects of the proposed activities on this take are expected to be immeasurable. All permits on the Royal Burn have equal priority.

There are no records of fish ever having been found in the subject creeks, and any fish in the Arrow River are unable to move up the creeks due to the steep topography. The creeks do not support significant instream values or amenity values, and the activities will not significantly impact on the natural character of the creeks. In fact, the proposed residual flow condition will improve the natural character of these creeks when compared to the current situation. There are no downstream users that may be affected by the activities. It is, therefore, concluded that there will be no significant adverse effects on any other parties resulting from the proposed abstraction of water. No pre-application consultation has been undertaken.

Part J – Statutory Assessment

Schedule 4 of the RMA states that any application for resource consent must an assessment of the activity against relevant provisions of the documents referred to in section 104(1)(b), being:

- a national environmental standard or other regulations;
- a national policy statement;
- a regional policy statement or proposed regional policy statement; and
- a plan or proposed plan.

This assessment follows.

Resource Management Act, 1991

The proposal is consistent with the purpose and principles of the RMA, as outlined in Section 5. There are no matters of national importance under Section 6 of the RMA that will be affected by the proposal. The proposal is also consistent with the requirements of Section 7 of the RMA, with particular regard given to the efficient use of natural resources, the maintenance and enhancement of amenity values, intrinsic values of ecosystems, and the maintenance and enhancement of the quality of the environment. Regarding Section 8, the proposed activity is not inconsistent with the principles of the Treaty of Waitangi. The proposal ensures that adverse effects on the environment are avoided, remedied or mitigated.

National Policy Statement for Freshwater Management, 2014

The following policies, which give effect to the NPS's objectives, are of most relevance to this application for resource consent.

Policy B5 - By every regional council ensuring that no decision will likely result in future over-allocation – including managing fresh water so that the aggregate of all amounts of fresh water in a freshwater management unit that are authorised to be taken, used, dammed or diverted does not over-allocate the water in the freshwater management unit.

Policy B6 - By every regional council setting a defined timeframe and methods in regional plans by which overallocation must be phased out, including by reviewing water permits and consents to help ensure the total amount of water allocated in the freshwater management unit is reduced to the level set to give effect to Policy B1.

Policy B8 - By every regional council considering, when giving effect to this national policy statement, how to enable communities to provide for their economic well-being, including productive economic opportunities, while managing within limits.

The water sought is within the allocation limits defined by Policy 6.4.2 of the RPW and the proposal sees a significant reduction in the current level of allocation in terms of instantaneous, monthly and annual allocation (the application includes conditions halving the current primary allocation). Proposed conditions include provisions for applying minimum flows if a plan change sets one for the Arrow River. The proposal will enable land owners to continue to operate, which will in turn benefit the economic well-being of the community through the provision of productive economic opportunities.

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

As described in Part E of this application, the takes will continue to be metered in accordance with the regulations.

Regional Policy Statement, 1998

The RPW gives full effect to the provisions of the RPS, therefore, if an application is consistent with the RPW then it is consistent with the RPS. As discussed below, this application is consistent with the RPW and, therefore, it is also consistent with the RPS.

Proposed Regional Policy Statement, 2016

The proposed Regional Policy Statement (pRPS) was notified on 23 May 2015 and a decision was released 1 October 2016. The following policies are relevant to this application: 1.1.2, 1.1.3, 2.2.1, 3.1.1 and 3.1.3.

The take and use of surface water as proposed will allow the applicants to continue to irrigate their properties, resulting in economic wellbeing for the landowner and associated staff and other industries. Cultural and Kai Tahu values are considered below and the proposal is consistent with the Kai Tahu ki Otago Natural Resource Management Plan (NRMP) 2005. The subject creeks provide limited habitat for aquatic and riparian fauna given their location and extremely low naturalised summer flows. Likewise, the creeks do not support any recreation activities or significant amenity values. Nonetheless, the proposed residual flow requirement will result in enhanced natural character. The proposed abstractions will not result in adverse impacts on water quality, nor is flooding or erosion anticipated. Overall, any impacts on freshwater values will be less than minor. The volumes of water sought for irrigation purposes are consistent with Aqualinc guidelines. Furthermore, primary allocation will be halved as result of this proposal and the daily, monthly and annual allocation will be reduced by approximately two-thirds. The proposal is, therefore, consistent with the pRPS.

Regional Plan: Water for Otago, 2004

This application seeks to replace existing consents that have primary allocation status. This activity is authorised by Rule 12.1.4.5 of the RPW. Overall, the water abstraction activities associated with this application are *restricted discretionary* activities.

The following policies are relevant to this application: 5.4.1, 5.4.2, 5.4.3, 5.4.4, 5.4.8, 5.4.9, 5.4.12, 6.4.0, 6.4.0A, 6.4.0B, 6.4.0C, 6.4.1, 6.4.2, 6.4.2A, 6.4.7, 6.4.12A, 6.4.16, 6.4.19

New Chums Creek and the Royal Burn do not feature in Schedule 1A of the RPW and the proposal will not exacerbate flooding, erosion, land instability or property damage. There are no other lawful users that may be affected by the proposal. The Kai Tahu ki Otago Natural Resource Management Plan (NRMP) is considered later in this application.

The natural flow characteristics of the subject creeks are discussed earlier in this application. The abstraction of water will undeniably have some influence on the natural flow regime of the creeks, however, there are unlikely to be any adverse effects resulting from this given that the low instream values present. Abstraction of water from the Royal Burn in the height of summer may influence the point at which the creek eventually goes dry, however, no adverse effects are anticipated from this, as discussed earlier in this report.

The current users of the water essentially operate like a water management group, with more than one property being serviced by the scheme. This results in a far greater management of the potential adverse effects of surface water abstraction when compared to each landowner operating a separate take. An assessment of the efficiency of the takes is discussed earlier in this application and the volumes sought are considered to be efficient for the intended use. The scheme allows for extensive sharing of suitable infrastructure and allows the applicants to ensure that water users work together under their own supply arrangements. The proposal seeks to enable the continued taking of water from the nearest practicable source.

The proposal seeks to take water that is within the current primary allocation limits. The rates sought are consistent with what has been taken under the existing consents. Residual flows are considered earlier in this report and recommended accordingly.

The current users of the water essentially operate like a water management group, with more than one property being serviced by the scheme. This results in a far greater management of the potential adverse effects of surface water abstraction when compared to each landowner operating a separate take. The takes will continue to be metered in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010.

A consent term of 25 years is sought for the replacement water permit. Irrigation, stock water and domestic water use activities have been occurring in the area for more than 25 years and are highly likely to continue for at least the next 25 years. No minimum flows currently exist for the subject creeks, although a minimum flow may be proposed for the Arrow River in the near future. The volumes sought are no more than required for the intended purpose, with the demand for water only likely to increase in response to climatic changes. Potential adverse effects will be managed appropriately, but should any unforeseen effects occur as a result of the exercise of the consent, the Council has the ability to review the conditions of the consent as required. The existing users essentially operate as a water user group that manages the abstraction of water for different landowners. The existing scheme supports farming and residential activities that would not be able to exist otherwise.

Overall, the proposal is consistent with the relevant policies of the RPW.

Kai Tahu ki Otago Natural Resource Management Plan (NRMP) 2005

The policies within the Kai Tahu ki Otago NRMP that are particularly relevant to these applications are set-out as follows:

- *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 Tahi 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 amount of water sought has been assessed as being reasonable given the intended purpose. The takes are already metered in accordance with the Regulations and this will continue. A consent term of less than 35 years is sought. Spray irrigation methods are used and these, along with the new monthly and annual limits, will prevent over-watering. The proposal is, therefore, consistent with relevant policies of the NRMP.

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27 November 2020

Sent via email: alexandra.king@orc.govt.nz

Tēnā koe Alex

Amendments to Application RM19.151 since lodgement

As requested, this letter provides a summary of how the above application has been amended since it was lodged. Because the application was lodged on 13 May 2019, regardless of any plan changes that have been notified since, this application will be processed as a ***restricted discretionary*** (s88A of the RMA).

Effects on Ecology

The application has been reviewed by Pete Ravenscroft of ORC's Resource Science Unit (RSU), who concluded:

*The effects of this activity are **no more than minor** providing the following conditions are adhered to.*

- *That all three points of take have to adhere to any future minimum flow on the Arrow River.*
- *Consent No.95696 has to maintain a connected visible flow immediately downstream of the point of take for a distance of no less than 50metres.*
- *Consent No's RM14.364.01 & 96285 has to maintain a connected visible flow immediately downstream of the point of take for a distance of no less than 50metres.*
- *Consent No's 3073B & 97029.V1 has to maintain a connected visible flow immediately downstream of the point of take for a distance of no less than 50metres*

  RSU's file note is attached for your reference. The applicants have amended the application to adopt RSU's recommendations.

Since November 2019, we have been in discussions with the Department of Conservation regarding the proposal. This is summarised below:

- ORC (Ross Dungey) had previously visited the site and was satisfied that there were no native fish present, as was Pete Ravenscroft.
- DOC noted that ORC's surveys had been limited and asked that we either undertake a more thorough survey or assume that native fish may be present.

- We engaged Matt Hickey and Dean Olsen to undertake a more through survey with guidance from Daniel Jack of DOC to ensure that the survey was to DOC's satisfaction.
- The survey confirmed that there are no native fish present in either creek. We have also shown that fish could not travel between the two creeks along the irrigation infrastructure and that there is a significant losing reach of RBNB downstream of the lower point of take.
- Downstream of the North and South Branches confluence, the Royal Burn gains flows from groundwater inputs and appears to flow permanently. It was in this section several age classes of small trout were recorded. Given there is no fish passage from the Arrow up the Crown Terrace to the Royal Burn, it indicates fish have been liberated into the Royal Burn. Currently, it is likely the intermittent reach in the North Branch is acting as a barrier to trout moving into the fish-free perennial reaches above the takes. It is highly unlikely that this trout population is contributing to the wider Arrow fishery, nor are they of any size to be a recreational asset.
- DOC are satisfied with the 50m residual flow proposed by ORC and they are also satisfied that there is no need to install fish screens anywhere. DOC have since provided unconditional written approval.

In conclusion, adverse effects of the ecology of the creeks will be no more than minor. This could be translated into more meaningful language by saying that adverse effects on the ecology of the creeks will be low or even negligible, however, the test in Policy 10A.2.3 of PC7 is "no more than minor".

Effects on Hydrology

The table below shows the current consented rate of abstraction, what was original applied for, and what is now sought.

	Upper RBNB	**Lower RBNB**	**New Chums**
Rate currently consented	69.5 L/s	166.7 L/s	83.3 L/s
Rate originally applied for	15 L/s	100 L/s	45 L/s
Rate now sought	**15 L/s**	**50 L/s**	**24.5**

In other words, the total rate of take sought is only 28% of what is currently allowed. There will also be a reduction in annual allocation from 5,266,200 m^3/yr to **1,822,608 m^3/yr** i.e. the annual volume sought is only 35% of the current consented annual volume.

The reduction in the rate of take sought has been in response to the applicant upgrading the intake infrastructure at the Lower RBNB point of take, and in response to advice from ORC staff about the rates calculated using Method 10A.4.1 of PC7.

Irrigation Area

There is no change to the area under irrigation from what was originally applied for. The images below show that the majority of the irrigated area comprises productive farmland.

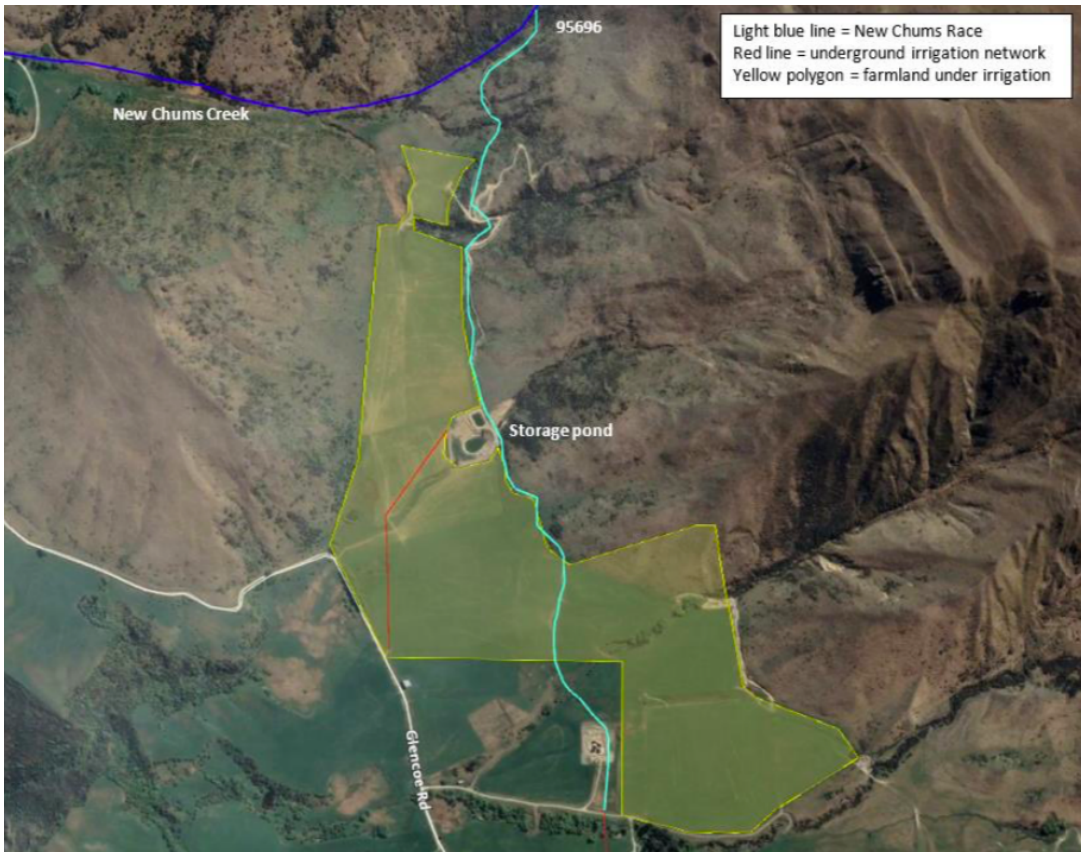

Figure 1: Point of take on New Chums Creek including the race, underground irrigation network, and irrigated areas.

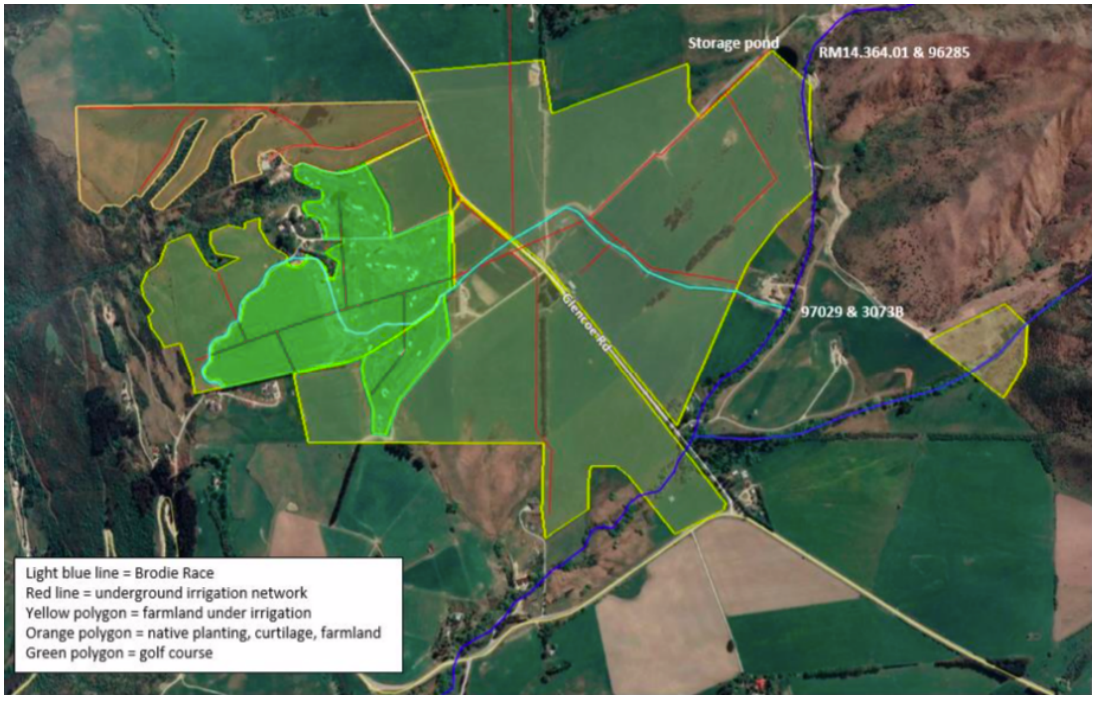

Figure 2: Points of take on the Royal Burn, the Brodie Race, underground irrigation network, and irrigated areas.

Ngā mihi nui

Hilary Lennox
Senior Consultant

3 March 2021

Sent via email to alexandra.king@orc.govt.nz

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Tēnā koe Alex

Amendments to Application RM19.151

Further to our letter dated 27 November 2020, we would like to amend the above application in light of evolving legislation and to address potential adverse effects that were not understood when the application was first lodged.

Annual Volume

The rates of take sought remain unchanged from that detailed in our previous letter. We would, however, propose to reduce the annual volume sought from 1,822,608 m^3/yr to **1,214,683 m^3/yr**. This amendment is being made for the following reasons:

- The volume of water required for irrigating the golf course is less than previously assessed using Aqualinc values for pasture. We have extracted data from the irrigation system and found that the maximum volume used for irrigating the golf course over the past 6 years was 1,949.43 m^3/ha. At the time of writing this letter, 36 ha of paddock is occupied by the golf course, of which 20 ha is irrigated[1]. Based on this, the maximum annual irrigation demand for the golf course should be around 38,989 m^3/yr. If this land had remained in pasture then the average annual irrigation demand would be 274,960 m^3/yr.
- In the original application we allowed for 5 L/s baseflow in each of the races. Upon further consideration, this is not actually required in the Upper RBNB infrastructure. An average of 5 L/s in the New Chums and Brodie races equals 315,360 m^3/yr.

[1] Excludes the rough and bunkers, which are not irrigated.

- The remaining 139.2 ha across the two properties requires an average of 1,074,608 m^3/yr according to Aqualinc.

This brings the total annual irrigation demand to approximately 1,428,957 m^3/yr, which is higher than the volume sought. However, we are mindful of ORC's policies that require no more water to be granted than was taken previously, and so we are applying for a maximum of 1,214,683 m^3/yr. This is the maximum annual volume that has been taken over the past 6 years (2018-19 season).

Low Flow Cut-off Condition

In August 2020 we were made aware of several affected parties downstream that could be adversely affected by the proposed abstraction activities. Due to gaps in our understanding of the hydrological regime of the Royal Burn, we found it difficult to quantify how these parties might be affected and so since late November we have undertaken catchment study work in the form of weekly photographic and video monitoring and confirmed our observations with flow gauging.

Our monitoring work has shown losses to ground between the lower point of take and the swamp in the swamp paddock (see below), but gains of at least 31.9 L/s between the swamp and the Crown Range Road crossing.

From our observations, we are confident that even when the Royal Burn North Branch is dry at Glencoe Road, there will still be water downstream of the applicant's property for permitted users. This is consistent with a comment made in the submission from Jef Desbecker:

> *In the very dry summer months, when the creek runs low or is dry in the vicinity of Glencoe Rd, the creek is naturally fed by swamps and seeps west of Glencoe Rd which bring the Royalburn back to a modest flow.*

However, taking te mana o te wai into account, and to provide certainty that the proposed abstraction activities will not adversely affect downstream users, the following consent condition is proposed:

> *Water must not be abstracted from the Royal Burn North Branch for irrigation purposes when flows in the Royal Burn drop below 5 L/s at NZTM2000 1274996E 5011547N.*

This location has been selected because it is downstream of the observed losing reach and because a notched weir can be more easily placed, monitored and maintained on the fence line.

The LOFTS Certificate of Compliance states that their rate of take is 0.2684 L/s. The proposed low flow condition means that the applicant cannot take water for irrigation purposes when the Royal Burn drops below 5 L/s at the monitoring location. This will ensure that the proposed abstraction activities on the Royal Burn North Branch will not affect the availability of water for the LOFTS or other downstream users, whilst also taking into account to te mana o te wai.

For example, if there was 5 L/s at the LOFTS point of take, this would still leave 4.7 L/s in the creek (although because of the gaining reach we wouldn't expect to see flows this low at the LOFTS point of take very often anyway).

Note that the applicant will still be able to take water for stock drinking water purposes as a permitted activity even if the low flow cut-off has been reached.

Residual Flow for Ecological Purposes

Our letter dated 27 November 2020 discusses potential effects on ecological values. Following advice from ORC's Resource Science Team, we have already amended the application to require a visible residual flow for 50 m past each point of take to ensure that adverse effects on significant instream values are no more than minor. We wish to retain this.

Recent monitoring has shown losses to ground along the Royal Burn North Branch of at least 7.8 L/s (and possibly as great as 13.2 L/s) between lower point of take down and the swamp (see plan attached). Assuming a MALF of 10.7 L/s for the Royal Burn North Branch in the vicinity of the abstraction activities, the section of creek between the lower point of take and the confluence with the south branch is naturally drying, with a MALF that is closer to 0 L/s.

This observation is supported by gauging work that we undertook in 2018 where we observed that the creek had dried up completely along this stretch. Further discussion on the hydrology of the creek and potential effects on ecological values and downstream users will be provided by Matt Hickey in due course.

Because we believe the natural MALF of the creek to be close to 0 L/s along this stretch, we do not believe that anything would be gained from maintaining a residual flow higher than that already proposed.

Consent Conditions

We would like to amend our application to include the attached suite of consent conditions.

I look forward to hearing from you soon regarding a suitable date for the hearing.

Ngā mihi

Hilary Lennox

Ahikā Consulting Limited

Attachments:

- Plan of monitoring locations
- Proposed Consent Conditions

Attachment 1 - Plan of monitoring locations

Attachment 2 - Proposed Consent Conditions

Purpose

To take water as primary allocation from New Chums Creek and the Royal Burn North Branch for the irrigation and stock drinking water purposes.

Consent Term

15 years

Expiry of Other Consents

This permit must not commence until Deemed Permit 3073B, Deemed Permit 95696, Deemed Permit 96285, Deemed Permit 97029.V1 and Water Permit RM14.364.01 have been surrendered or have expired.

Limits

- The rate of take at the Upper Royal Burn North Branch point of take at NZTM2000 1275616E 5012955N must not exceed 15 L/s.
- The rate of take at the Lower Royal Burn North Brach point of take at NZTM2000 1275627E 5012340N must not exceed 50 L/s.
- The rate of take at the New Chums Creek point of take at NZTM2000 1274624E 5015042E must not exceed 24.5 L/s.
- The total volume of water taken under this permit must not exceed 1,214,683 m^3/yr.

Residual Flow Condition

Water must not be abstracted from a point of take when a continuous residual flow extending 50 metres downstream from that point of take cannot be maintained.

Low Flow Cut-off Condition

Water must not be abstracted from the North Branch of the Royal Burn for irrigation purposes when flows in the Royal Burn drop below 5 L/s at NZTM2000 1274996E 5011547N.

Metering

ORC's standard water metering condition.

Other

The consent holder must take all practicable steps to ensure that:

- There is no leakage from pipes and structures;
- The use of water is confined to the target areas;
- There is no runoff of irrigation water in irrigated areas ether on site or off site.

ORC's standard review condition.

Note: When the Arrow River is flowing below the minimum flow as adopted in the Regional Plan: Water, the consent holders may still take water for domestic and stock water needs under section 14 of the Resource Management Act, 1991, or any subsequent equivalent regulatory provisions.

26 February 2021

Water Resource Management Ltd
5 Teignmouth Street
Abbotsford
Dunedin 9018

Attn: Matt Hickey

Re: Royal Burn – Gauging results for work completed 22 February 2021

NIWA Alexandra were engaged to complete flow gauging measurements within the Royal Burn catchment to enable determination of flow losses or gains in this reach, as requested by the client.

This measurement work was completed on 22 February 2021.

A total of 9 locations chosen by the client, were visited by the NIWA Alexandra Field Team. Discharge measurements using a Sontek 'FlowTracker' ADV instrument were completed at each location. The small flow volume in hydraulically difficult, weedy channel locations were raked and modified to obtain the best flow condition possible, prior to each measurement.

The results and photographs are in a table attached to this letter.

Should you have any question relating to this work, please contact me.

Yours faithfully
Neil Blair

Approved for release
Marty Flanagan

Group Manager – South Island Field Teams
Phone: +64-3-348 8987
Marty.flanagan@niwa.co.nz

National Institute of Water & Atmospheric Research Ltd
PO Box 12
Alexandra 9040

NIWA Project: WRM21901

Results table:
Gauged flow results are summarised in the following table (in order of time sampled).

Date	Time (NZST)	Site Number	Site Name	Waypoint	Location NZTM	Stage (mm)	Flow (L/s)
22/02/2021	7:53	100	Royal Burn at SH 6	504	E1295458 N5007801	N/A	25.5
22/02/2021	8:37	200	Royal Burn at Crown Rd Bridge	505	E1274718 N5011356	200	44.3
22/02/2021	9:20	300	Royal Burn at Swamp	506	E1275292 N5011779	N/A	12.4
22/02/2021	9:54	400	Royal Burn North Branch at below Glencoe Rd culvert	507	E1275363 N5011898	N/A	9.0
22/02/2021	10:26	500	Royal Burn South Branch at above Glencoe Rd culvert	508	E1275433 N5011882	N/A	8.8
22/02/2021	11:17	600	Royal Burn at Below Brodie Race	509	E1275636 N5012388	N/A	16.8
22/02/2021	12:20	700	Royal Burn at above Brodie Race	510	E1275639 N5012403	N/A	25.4
22/02/2021	12:16	800	Royal Burn at below top intake	512	E1275632 N5012970	N/A	20.0
22/02/2021	13:13	900	Royal Burn at above top take	511	E1275710 N5013048	N/A	19.2

1. Site Photos:

Figure 1: Site 100 view upstream

Figure 2: Site 100 view downstream

10 Kyle Street, Riccarton, PO Box 8602, Christchurch 8011 | Phone +64 3 348 8987

Figure 3: Site 200 view upstream

Figure 4: View downstream

Figure 4: Site 200 External Staff Gauge

Figure 5: Site 300 view from true right bank

Figure 6: Site 300 view upstream

Figure 7: Site 300 view downstream

Figure 8: Site 400 view downstream

Figure 9: Site 400 view upstream

Figure 10: Site 500 view upstream

Figure 11: Site 500 view downstream

Figure 12: Site 600 view upstream

Figure 13: Site 600 view downstream

Figure 14: Site 700 view downstream

Figure 15: Site 700 view upstream

Figure 16: Site 800 view upstream

Figure 17: Site 800 view downstream

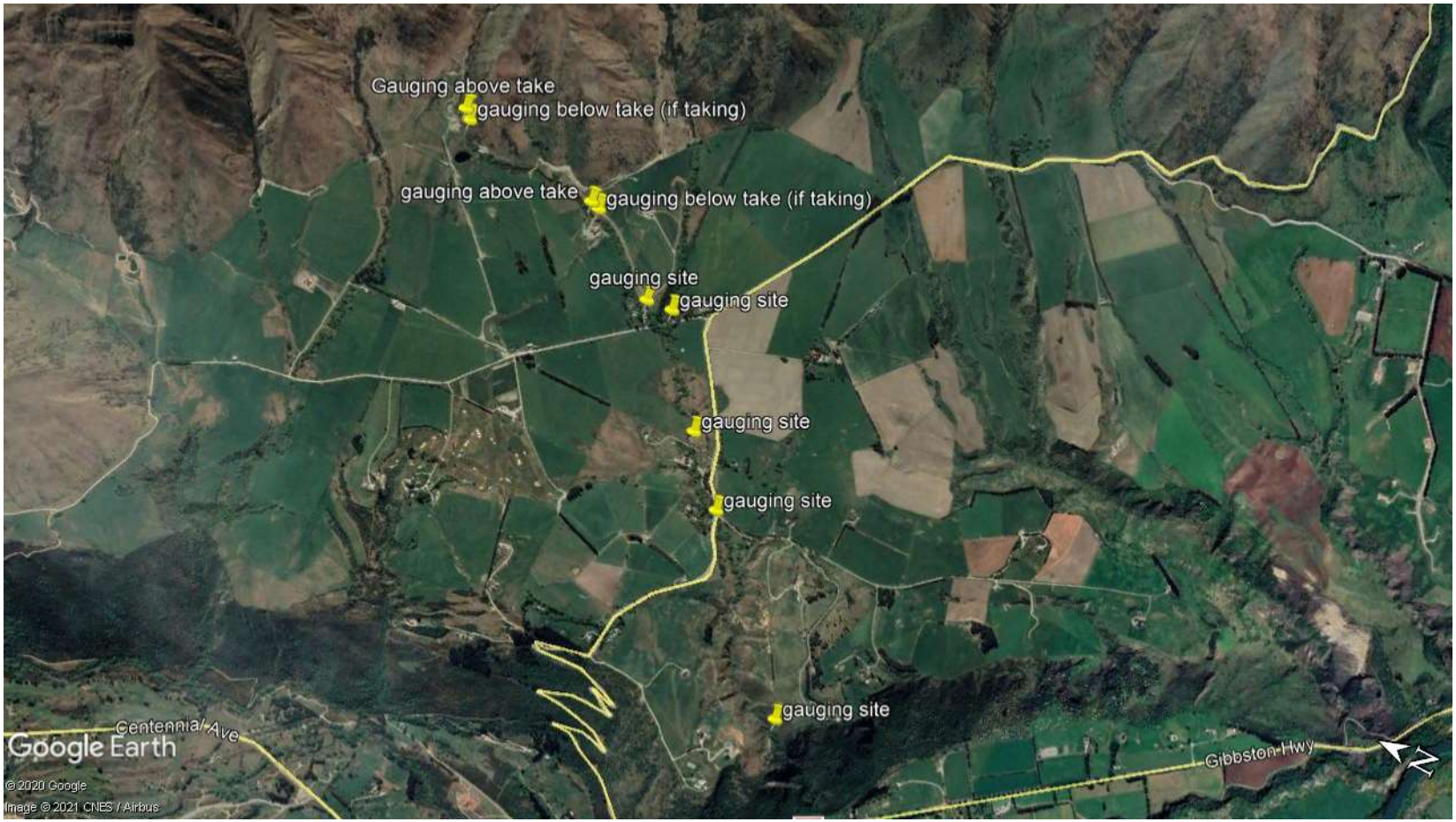
Figure 18: Dam intake

Figure 19: Dam intake from bank

Figure 20: Site 900 view downstream

Figure 21: Site 900 view upstream

2. Site Map:


Gauging above take
gauging below take (if taking)
gauging above take
gauging below take (if taking)
gauging site
gauging site
gauging site
gauging site
gauging site
Centennial Ave
Gibbston Hwy
Google Earth
© 2020 Google
Image © 2021 CNES / Airbus

memo

To: Hilary Lennox, Ahika Consulting Ltd

From: Matt Hickey, Water Resource Management Ltd

Date: 30/01/2019

Re: Fish Survey of the Royal Burn and New Chums Creek

On the 28th of January 2020, WRM Ltd and Ryders Consulting surveyed the Royal Burn and New Chums Creek for fish using Electric Fishing along multiple reaches. Sites selected included both above and below water takes and in reaches that contained habitat suitable for fish. Prior to this survey there had been one site sampled at the head of New Chums Creek and in the upper reaches of the South Branch of the Royal Burn.

New Chums Creek

There is one take from the upper reaches of New Chums Creek, no fish surveys had been conducted in the creek though one site had been surveyed in the race near the intake. Access to the creek is difficult. A significant reach in the middle reaches was surveyed below the take as well as a section immediately above its confluence with the Arrow (Figure 1).

Figure 1. Electric fishing survey sites for New Chums Creek. Red dots = no fish, yellow dots = rainbow trout. The existing take is also shown along with a 2m+ waterfall.

A significant reach of lower gradient stream with good cover and habitat was surveyed below the existing take and no fish were caught or observed. The invertebrate community was dominated by large body specimens such as stoneflies indicating fish (especially salmonids) are not present.

Immediately above its confluence with the Arrow, New Chums Creek was surveyed until several waterfalls were reached, the first was over a metre high while a short distance upstream a second waterfall more than 2 metres high was encountered (Figure 1).

Rainbow trout were not found between the two waterfalls but were common below the most downstream waterfall to the confluence with the Arrow.

On the day of the survey there was only a seepage flow passing the take, while in the middle survey reach flows had gained to be more than 10 l/s. At the confluence with the Arrow, flows were estimated to be in excess of 30 l/s.

Royal Burn

There are two take points from the North Branch of the Royal Burn, no fish surveys had been conducted in North Branch and there is one survey site in the South Branch above any takes. Both the upper reaches of the North and South branches were surveyed as well as below the confluence of the two branches (Figure 2).

Figure 2. Electric fishing survey sites for the Royal Burn. Red dots = no fish, green dots = brown trout. The existing takes are also shown.

Significant reaches of stream with good cover and habitat were surveyed above and below the existing takes in the North Branch of the Royal Burn with no fish caught or observed. The invertebrate community was dominated by large body specimens such as stoneflies indicating fish (especially salmonids) are not present. The same was true for the upper reaches of the South Branch.

Downstream of take 97029 and 3073B the North Branch of the Royal Burn went dry despite two thirds of the flow passing the intake, indicating that the lower section of the Royal Burn North Branch is naturally intermittent (Figure 3 and Figure 4).

Figure 3. Flow split at the bottom take on the North Branch of the Royal Burn. Red arrow indicates the take and the blue arrow is the residual flow.

Downstream of the North and South Branches confluence, the Royal Burn gains flows from groundwater inputs and appears to flow permanently. It was in this section several age classes of small trout were recorded (Figure 4).

Figure 4. Map showing the flow reaches of the Royal Burn (blue line) the dry reach (red line) and the point the North Branch went dry despite the majority of flow passing the intake for 97029 &3078B.

Given there is no fish passage from the Arrow up the Crown Terrace to the Royal Burn it indicates fish have been liberated into the Royal Burn. Currently it is likely the intermittent reach in the North Branch is acting as a barrier to trout moving into the fish-free perennial reaches above the takes.

It is highly unlikely that this trout population is contributing to the wider Arrow fishery, nor are they of any size to be a recreational asset.

Fish Screens

Fish screens are not recommended for any of the takes from either New Chums Creek or the Royal Burn due to the lack of fish.