

Form 1 – Application for Resource Consent

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

The purpose of this Form 1 and the relevant activity form(s) is to provide applications with guidance on information that is required under the Resource Management Act 1991. Please note that these forms are to act as a guide only, and Otago Regional Council reserves the right to request additional information or to reject the application as incomplete under Section 88 of the RMA if the provisions of the fourth schedule of the RMA are not provided (refer to page 6 of this form, which details these requirements).

PLEASE NOTE: You must have Adobe Acrobat Reader installed onto your computer to use this editable version, which you can download for free from the Adobe website. This form cannot be filled in on your internet browser. REMEMBER to save the form to your computer after completing then attach and send via email along with the other relevant application forms/information to consents.applications@orc.govt.nz. The form can also be printed and completed manually.

1(a). Applicant's details:

- The full names or Company name or Trust (including full names of all Trustees) of the consent holder who will be responsible for the consent and any associated costs.
- A resource consent can only be held by a legal organisation or fully named individual(s). A legal organisation includes a registered 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).
- All invoices will be made out to and sent to the applicant.

Full name(s): _____

OR

Registered company: Hawkeswood Mining Limited

OR

Trust (include all Trustees full names) _____

Postal address: as below

Post code: _____

and

Physical address: 399 Whitford Park Road, Whitford

(not a PO Box number) Auckland Post code: 2576

Phone number: Business: _____ Private: _____

Mobile: 027 415 8406

Email address: simon@hawkeswood.co.nz

Please provide a valid and clear email address. Otago Regional Council has adopted 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.

Please tick if you do not prefer contact by electronic means

5. Location of proposed activity:

Address: 1346 - 1536 Teviot Road, Millers Flat

Legal description(s): refer Planning Report / AEE

Map reference(s) (NZTM 2000): E 1318666 N 4938504

Please include location details on separate documentation if there are multiple sites or activities.

Note: Certificate(s) of Title less than three months old for the site to which this application relates are required.

6. Are there any current or expired Resource Consents relating to this proposal:

Yes No

If yes, give consent number(s), description and expiry date(s):

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

Yes No

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

Yes No

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

Yes No

(d) 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: Brad T

7. What is the term of consent you are seeking and reason for this term:

7 years

8. Territorial Local Authority in which activity is situated:

Dunedin City Council Clutha District Council Central Otago District Council

Queenstown Lakes District Council Waitaki District Council

9. Do you require any other resource consent from any local authority for this activity:

Yes No

If yes, please give the date applied for or issued:

10. For the land on which the activity occurs, is the applicant (tick one):

If the applicant does not own the land to which this application relates, unconditional written approval from the land owner/affected party will be required.

- The owner The lease holder The occupier
- Prospective purchaser

If the applicant is not the land owner, who is the owner of the land on which the activity occurs/is to occur:

Name of land owner: refer Planning Report / AEE for landowner details

Phone number: Mobile: _____ Business: _____

Email address: _____

11. Site visit from the Consents Team:

Consents staff are able to meet with you, visit your site and see what you are proposing to do. We find that this is beneficial to everyone involved. The cost of the visit will be included in the total cost of processing your consent. However, we find that applications that have an on-site visit are processed with less congestion and at a similar or lesser overall cost. Please let us know below if you would like us to come and see your site.

I would like a member of the Consents Team to visit my site:

- Yes No

12. Processing Officer:

Due to high workloads or the complex nature of your application, it could be assigned to a consultant processing officer. Having your application assigned to an external officer should not greatly affect the processing costs. However, if you would like your application to be assigned to an internal officer then please advise. This may mean that your application enters a waiting line to be allocated and may not be processed straight away. If this is the case we will ask for a timeframe extension to cover the waiting time. There may be situations where we cannot accommodate this request but will let you know why this is.

I would like my application to only be processed by an internal staff member:

- Yes No

If the groundwater report is to be peer reviewed by an external consultant can we please request a local consultant eg Geosolve or E3.

13. How to pay:

A deposit **must** accompany this application (see **page 9** for amounts and ways to pay). The applicant will be invoiced for all costs incurred in processing this application that exceed the deposit.

If the required deposit does not accompany your application, staff will contact you on the email address provided on this form to request payment, and after 3 working days your application will be returned as incomplete if no payment is made for the required deposit.

When paying online, please use the word '**Consent**' followed by the name of the applicant as a reference.

Method of payment:

Online bank transfer In person Credit card

Date of payment: _____

Amount paid: \$2450

Payment reference: _____

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. We will communicate processing costs to you at key stages through the process. If you would like this, then please let us know and we can see if this is an option for you.

If your application is returned to you, you will still be charged for the cost of processing the application up to the point it was returned or withdrawn. **Therefore, it is recommended that you have your application checked before it is lodged. This is a free service.**

Information regarding costs can be found via the following link:
www.orc.govt.nz/consents/ready-to-apply-for-a-consent/fees-and-charges

Checklist

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

- Fully complete this Form 1, including signed declaration
- Completed the necessary application forms relating to the activity
Application forms can be found on Council's website via the following link:
www.orc.govt.nz/consents/ready-to-apply-for-a-consent
- Payment of the required deposit (see page 8 for fees schedule)
- Written approvals from all potentially affected parties
"Written Approval of an Affected Party" forms are available from Council's website
- An assessment of effects on the environment
- An assessment against the relevant objectives, policies and rules from Regional Council Plans, Regional Policy Statement (including proposed and partially operative versions), and relevant Regulations, National Policy Statements, National Environmental Standards and iwi management plans
- Site and location plans
- Certificate(s) of Title less than three months old for the site to which this application relates
Certificates of Title can be obtained via the Land Information New Zealand website:
www.linz.govt.nz

Declaration

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): Barry MacDonell (Agent).

Signature(s):* MacDonell.
(or person authorised to sign on behalf of applicant)

* **Ensure you use the "fill and sign" function of Adobe Acrobat when signing this form. Either draw your signature or add an image. Council cannot accept typed signatures.**

Designation: consultant - Agent.
(e.g. owner, manager, consultant)

Date: 20 November 2023

Council can accept electronic lodgement of applications if sent to consents.applications@orc.govt.nz.

Alternatively, applications can be posted or delivered to:
Otago Regional Council
Private Bag 1954
70 Stafford Street
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 are in the Clutha River area you may need to talk to Te Ao Marama Inc, Phone (03) 931 1242. 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 available on Council's website.

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.

Resource Management Act 1991

FOURTH SCHEDULE – ASSESSMENT OF EFFECTS ON THE ENVIRONMENT

(Below are the provisions of the fourth 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; and
 - (b) a description of the site at which the activity is to occur; and
 - (c) the full name and address of each owner or occupier of the site; and
 - (d) a description of any other activities that are part of the proposal to which the application relates; and
 - (e) a description of any other resource consents required for the proposal to which the application relates; and
 - (f) an assessment of the activity against the matters set out in Part 2; and
 - (g) an assessment of the activity against any relevant provisions of a document referred to in section 104(1)(b) ("*document*" includes regional and 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:
 - (1) 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))

- (2) 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))
- (3) 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 are not within ORC’s 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:

- (1) the location of the area; and
- (2) if practicable, the position of all new boundaries; and
- (3) 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 2020)

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 online, the details are below. Please note the applicants name and 'consent application' should be used as reference when paying the deposit.

For ways to pay, visit: www.orc.govt.nz/consents/ready-to-apply-for-a-consent

Pre-Application Work

Fees payable for pre-application work carried out before a consent application is lodged with Council will be incurred at the rates shown in the scale of charges.

Publicly Notified Applications: ³

	\$
First application	5,000.00

Non-Notified Applications and Limited Notification Applications: ³

	\$
First application (except those below)	1,750
Multiple Applications ¹	2,300
Variation to Conditions – s127	1,750
Administrative Variation – s127	1,750

Fixed Fees

	\$
Exemptions from water metering regulations	400
Bores	600

Hearings

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

Objections

	Per Note 4 below
Payment for Commissioner request – s357AB	

Transfer of Consent Holder and Certificates Deposits:

	\$
Transfer of permits and consents	200
Priority Table	200
Section 417 Certificate	500
Certificate of Compliance	1,750
All Other Costs As per Scale of Charges	

Scale of Charges:

	\$
Staff time per hour:	
• Management	190
• Team Leader/Principle	170
• Senior Technical	135
• Technical	115
• Field staff	115
• Administration	85

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 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.

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 cost 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.

Review of consent conditions

Following the granting of a consent, a subsequent review of consent conditions may be carried out at either the request of the consent holder, or as authorised under Section 128, as a requirement of Council. Costs incurred in undertaking reviews requested by the consent holder 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

Compliance charges may also be applied to any granted consent(s). These can be found via Council's website at: https://www.orc.govt.nz/media/8679/annual-plan-2020-21_digital.pdf

Resource Consent Application Form 5

To Take and Use Groundwater



Otago
Regional
Council

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

Phone: 0800 474 082
Website: www.orc.govt.nz

IMPORTANT NOTES TO THE APPLICANT

Disclaimer:

If council accepts your application for processing this does not constitute a guarantee that groundwater allocation is available. You should contact the council's Resource Science Unit in regard to water availability **before** you lodge your application. If no allocation is available then the activity will be prohibited and no resource consent will be granted.

Ensure that you complete this application Form 5 **and** Resource Consent Application Form 1 **in full**

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. If all the necessary information is not entered on the form or supplied with the application then Otago Regional Council may **return your application**, request further information or publicly notify your application. This will lead to delays in the processing of your application and may increase processing costs. The Council advises as a precaution, applications for replacement water permits should be lodged at least **6 months** prior to their expiry, to ensure allocation is retained. Please note that an application to replace an existing water permit that has not been lodged and received by the Council at least **3 months** prior to its expiry, may lose its allocation.

This application form, when properly completed, should provide an adequate "Assessment of Effects on the Environment" (AEE) where the adverse effects of a proposal are not significant. However, this can only be determined on application. Guidance for the minimum aquifer test requirements are located at the end of this form.

PART A: GENERAL

A.1 Is this application for (tick which applies):

- a NEW groundwater take; or
 an application to REPLACE a current Water Permit?

Water Permit number:

Expiry date:

If you are applying to transfer the point of a water take or vary a condition of an existing Water Permit, **stop now** and please use Form 16 or Form 22 instead.

A.2 If you are applying to replace an existing Water Permit, do you have evidence of the amount of water historically abstracted under the permit?

- Yes, my records are attached with the application _____ years of records attached
 Yes, the Otago Regional Council has my records. *Note: You will be charged for all time spent retrieving and analysing records held on Council files*

I don't have any records but have other evidence of historical use (e.g. description and photos of existing functioning infrastructure, aerial photographs of irrigated area, electricity records for pump). You must provide evidence of the previous use of the permit including how much water has been used each year over what period.

PART B: DESCRIPTION OF THE POINT OF TAKE

IF THE BORE IS NOT YET CONSTRUCTED, OR IS UNCONSENTED, **STOP** NOW AND APPLY FOR THE LAND USE CONSENT TO CONSTRUCT A BORE OR BORES AND OBTAIN THIS BEFORE YOU APPLY TO TAKE GROUNDWATER. FORM 9A IS AVAILABLE ON THE COUNCIL WEBSITE.

B.1 What are the consent and bore tag numbers for the bore(s) where water is proposed to be taken?

Bore 1: Consent Number:..... Bore tag number.....
 Bore 2: Consent Number:..... Bore tag number.....
 If more than 2, please provide details on a separate sheet

B.2 What are the GPS co-ordinates of the location of the bore(s) from which groundwater is proposed to be taken?

Bore 1: NZTM 2000 E ..1318666..... N ..4938504.....
 Bore 2: NZTM 2000 E N

If more than 2, please provide details on a separate sheet

B.3 Tick the box next to the aquifer that the water is proposed to be taken from. If you are unsure refer to Maps C1-C17 in the Regional Plan: Water for Otago and maps contained in Plan Change 4A (they are available for viewing on www.orc.govt.nz, or at our offices). Information on the location of the 'others' list can be obtained from council's Resource Science Unit.

- | | | |
|---|--|---|
| <input type="checkbox"/> Cardrona Alluvial Ribbon | <input type="checkbox"/> Lindis Alluvial Ribbon | <input type="checkbox"/> Pomahaka Basin |
| <input type="checkbox"/> Cromwell Terrace | <input type="checkbox"/> Lowburn Alluvial Ribbon | <input type="checkbox"/> Shag Alluvium |
| <input type="checkbox"/> Dunstan Flats | <input type="checkbox"/> Lower Taieri | <input type="checkbox"/> Wanaka Basin |
| <input type="checkbox"/> Earnsclough Terrace | <input type="checkbox"/> Lower Waitaki Plains | <input type="checkbox"/> Cardrona Gravels |
| <input type="checkbox"/> Ettrick Basin | <input type="checkbox"/> Maniototo Tertiary | <input type="checkbox"/> Wakatipu Basin |
| <input type="checkbox"/> Hawea Basin | <input type="checkbox"/> Manuherikia Alluvium | <input checked="" type="checkbox"/> Unknown |
| <input type="checkbox"/> Inch Clutha River/Mata-Au Gravel | <input type="checkbox"/> Manuherikia Claybound | Others: |
| <input type="checkbox"/> Kakanui-Kauru Alluvium | <input type="checkbox"/> North Otago Volcanics | <input type="checkbox"/> Bendigo |
| <input type="checkbox"/> Kuriwao Basin | <input type="checkbox"/> Roxburgh Basin | <input type="checkbox"/> Clydevale |
| | <input type="checkbox"/> Papakaio | <input type="checkbox"/> Glenorchy |
| | | <input type="checkbox"/> Strath Taieri |
| | | <input type="checkbox"/> Tarras |
| | | <input type="checkbox"/> Wairuna |

B.4 Do you have a bore log for your bore(s)?

- Yes and it is enclosed with this application, go to **Part C**.
 Yes and it was provided to the Otago Regional Council after the bore was constructed, go to **Part C**
 No, go to B.5

B.5 Please complete the following if no bore log is available.

Date bore drilled:
 Driller:
 Total depth of bore:
 Diameter of bore:
 Static water level:
 If more than one bore, please provide the information on a separate sheet.

PART C: VOLUME AND RATES OF TAKE

C.1 What quantity of water do you propose to take and at what rate will it be taken? Note: 1,000 litres = 1 cubic metre

- (a) maximum rate of take litres per second
- (b) maximum daily volume litres per day; or
Refer attached Groundwater Report cubic metres per day
- (c) maximum weekly volume cubic metres per week
- (d) maximum monthly volume cubic metres per month
- (e) maximum annual volume cubic metres per year

C.2 What is the frequency of your proposed water take?

- | | Average | Maximum |
|---|---------|---------|
| (a) How many hours per day? | | |
| (b) How many days per week? | | |
| (c) How many weeks per month? | | |
| (d) In which months do you expect to take water? (<i>tick those relevant</i>) | | |

	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Average												
Dry year												

C.3 Over what part of the day will you typically take water?

- | | |
|--|--------------------------------------|
| <input type="checkbox"/> During the day | <input type="checkbox"/> 24 hours |
| <input type="checkbox"/> During the night | <input type="checkbox"/> 'on demand' |
| <input type="checkbox"/> Other <i>please specify</i> | |

C.4 Are you intending to harvest water for storage before subsequent use?

- No, go to question C.6.
- Yes: Capacity of water storage reservoir(s) cubic metres

C.5 Is your water storage reservoir 3 metres or more in depth and impounds more than 20,000 cubic metres of water?

- No.
- Yes, a building permit may be required, contact the Duty Resource Management Administration Officer or visit the Council website www.orc.govt.nz.

C.6 Is your proposed take from a Schedule 2C Aquifer (of the Regional Plan: Water)?

Schedule 2C Aquifers:

Kakanui Kauru Alluvium Aquifer, Shag Alluvium Aquifer, Lindis Alluvial Ribbon Aquifer, Cardrona Alluvial Ribbon Aquifer, Lowburn Alluvial Ribbon Aquifer

- Yes: which one
- No, go to question C.9.

C.7 For Schedule 2C Aquifers what is the name of the surface water body connected to your proposed point of take?

e.g. for Kakanui-Kauru Alluvium Aquifer is it the Kakanui River, Kauru River, a tributary of these or another named water course?

.....

C.8. Is your proposed point of take(s) within 100 metres of a connected perennial surface water body?

- No, go directly to Part D
- Yes, go to question C.10

C.9 What is the name of the surface water body within 100 metres of your proposed point of take?

i.e. Lake Dunstan, Waiareka Creek or a tributary of Stoney Creek, etc

Clutha
.....

C.10 Maximum Allocation Volume – Note to applicant

The Regional Plan: Water manages the volumes of water taken from aquifers to prevent long term depletion of base flow to surface water bodies and salt water intrusion of the aquifer. It does this by either assigning a Maximum Allocation Volume for specific aquifers or by considering the maximum annual take and the expected recharge and requiring that a take should not exceed 50 % of the mean annual recharge of the aquifer.

An assessment of the maximum allocation volume for the Aquifer relevant to your take will be undertaken in processing your application and restrictions may be imposed in accordance with Schedule 4B of the Regional Plan: Water

C.11 For Rivers, Streams, modified water courses, springs or drains answer questions (a)-(g), for Lakes, ponds and wetlands go to Question C.13.

(a) What type of water course is identified in C.9 above. *Tick those relevant*

- River
- Stream
- Modified watercourse
- Spring
- Drain

Refer Groundwater Report

(b) Is the water course:

- Perennial (flows all year around)
- Ephemeral (flows only as a result of rainfall)

(c) What is the average channel **width** nearest to your proposed point of take? metres

(d) What is the average channel **depth** nearest to your proposed point of take? metres

(e) What is the estimated average water flow velocity? metres/second

(f) How would you describe the bed of the water course? *Tick those relevant*

Muddy Boulders Gravels and cobbles Sandy Hard rock

(g) Are you able to supply estimated minimum and maximum flow rates for the water course?

No, go to **Part D**

Yes, please complete the following

Minimum: litres per second

Maximum: litres per second

Location of estimate:

adjacent to proposed point of take Other

Source of flow data:

.....

C.11 For Lakes, Ponds and Wetlands, answer points (a)-(f) below.

(a) What type of water body is identified in C.10 above. *Tick those relevant*

Lake Pond Wetland

(b) Has the water body been formed by artificial means?

Yes No

(c) What is the surface area of the lake/pond/wetland?

(d) How deep is the lake/pond/wetland?

(e) Does the lake/pond/wetland have an outlet? i.e. does water flow out of it?

Yes No

(f) What is the main source of water that fills the lake/pond/wetland? *Tick as many boxes as is relevant*

Direct rainfall

Springs Groundwater Runoff from surrounding land

Stream/rivers name:.....

Other consented water takes:
consent numbers:.....

PART D: WATER MEASURING AND REPORTING INFORMATION

The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 apply to water permits where water is taken at more than 5 litres per second. The Regulations require continuous measurement of the water taken and for the daily records to be provided to the Otago Regional Council at the end of the water year. It also requires verification of the device or systems installed.

Note: According to the Regulations the water year is from 1 July through to 30 June in the following year. It is also the Council's policy to require water measuring devices or systems and dataloggers to be fitted on **all** water takes.

D.1 What is the maximum capacity of the pump you propose to install?

Refer Groundwater Report

D.2 Is a water measuring device or system...

Proposed to be installed; or Already installed

D.3 Is a data logger installed, or proposed to be installed, as part of your water measuring device or system?

No Yes

If a data logger is required by a Water Permit, it will need a minimum of 24 months data storage.

D.4 Please indicate on a map or aerial photograph, the following details:

- o The location of the bore(s) from which water is to be taken
- o The location, or proposed location of the water measuring device or system; and
- o The location of pipe work and infrastructure associated with the water take, specifically between the point of take and the measuring device, and include distances.

Installation of a Water Measuring Device or System

The Otago Regional Council has Standard Installation specifications for water measuring devices and systems. The Standard Installation of a water measuring device or system is:

The water meter shall be installed in a straight length of pipe, before any diversion of water occurs. The straight length of pipe shall be part of the pump outlet plumbing, easily accessible, have no fittings and obstructions in it. The water meter shall be installed at least 10 times the diameter of the pipe from the pump and at least 5 times the diameter of the pipe.

D.5 Are you proposing to install your Water Measuring Device in accordance with the Otago Regional Council Standard Installation specifications outlined in the paragraph above?

Yes No

If your answer is NO, you need to fill out and attach to this application form a **Non-Standard Installation Form** for Water Measuring Devices available on our Website or through the Environmental Services Unit of the Otago Regional Council.

D.6 The Regulations require the taking of water to be measured at the point of take unless an Exemption is approved by the Otago Regional Council. Is your water measuring device or system installed at the point of take?

Yes No

If your answer is no, you need to apply for an Exemption by filling out *Application form 24 – Application for Exemption to use a device or system near the location from which water is taken*, which is available on our website www.orc.govt.nz and from our offices.

D.7 The Regulations require the taking of water to be recorded on a daily basis unless an Exemption is approved by the Otago Regional Council. Will you be keeping daily records of your water use?

Yes No

If your answer is no, you need to apply for an Exemption by filling our *Application form 25 – Application for Exemption to record water use on a weekly basis*, which is available on our website www.orc.govt.nz and from our offices.

D.8 For applications to take water for non-consumptive purposes which are at a rate of less than 5 litres per second, please explain why a water measuring device should not be installed.

.....

.....

.....

.....

.....

PART E: WATER USE AND MANAGEMENT

E.1 Will the water take be managed as part of an existing Water Allocation Committee or Water Management Group?

- Yes – Water Allocation Committee
 Yes – Water Management Group
 No

E.2 Please describe the property(s) on which the water is to be used.

(a) Name of owner(s)

(b) Address/location *Refer Planning Report / AEE*

(c) Legal description (as shown on certificate of title attached to this application)
.....

If there is more than one property (legal description) please provide these details on a separate sheet.

E.3 Attach Certificates of Title for all properties where water is to be used. They must be less than 3 months old at the time of lodging the application.

- Yes - my Certificates are attached No - the Council may obtain them at my expense

E.4 Show on a map (no smaller than A4 size) or a coloured aerial photograph the following details:

- The location of the bore(s) or proposed bore(s)
- The location of the water measuring device or system
- The total property area boundary
- The area(s) to be irrigated (if relevant)
- Area of the community supply
- Distances to any discharge activities
- Closest neighbouring bore(s)
- Surface water bodies and wetlands and distances from the point of take(s) to them
- The coastline and the distance to it
- Location of any dairy shed

Efficiency of water use

In this section you are required to only answer the questions relevant to your intended use of water. As a guide the questions are as follows:

- | | |
|---|------------------------------------|
| E.5 Irrigation of land (pasture etc) | E.9 Private community water supply |
| E.6 Irrigation of crops or horticulture | E.10 Public community water supply |
| E.7 Frost fighting | E.11 Stock and/or dairy shed use |
| E.8 Industrial use | E.12 Other |

E.5 Irrigation of land– not crops or horticulture *N/A*
(includes pasture, turf (golf courses), lifestyle blocks and sports fields)

(a) How many hectares of land will be irrigated?

(b) What is the total property area (not just that proposed to be irrigated)?

- (c) What type of irrigation system is or is proposed to be used?
 K-line Centre pivot Travelling irrigator
 Border-dyke/flood irrigation Other
- (d) How many hectares will be irrigated in one day?
- (e) For how many hours per day?
- (f) What is the target (net) application rate?
- (g) How many days are there between irrigating the same block?
- (h) Please describe the soil types of the areas to be irrigated and state the source of this information.

- (i) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

- (j) Is the area to be irrigated:
 Presently irrigated/developed
 Partly irrigated/developed (..... ha complete ha under development)
 Proposed to be irrigated/developed (..... likely completion date)

E.6 Irrigation of crops or horticulture *N/A*

- (a) What is the total area to be irrigated?
- (b) Show the area of land to be irrigated on the map specified in **E.4** and attach to this application.
- (c) What is the total property area (not just that proposed to be irrigated)?
- (d) If glass/plastic houses are used, what area do they cover?
- (e) What type of crops will be irrigated or are proposed to be used?
 Grain/wheat Pip fruit Stone fruit
 Market garden Flowers Nursery

- Viticulture (vines/hectare)
- Nuts
- Other

(k) What type of irrigation system is or is proposed to be used?
 Trickle Sprinkler Other

(f) How many hectares will be irrigated in one day?

(g) For how many hours per day?

(h) What is the target (net) application rate?

(i) How many days will there be between irrigating the same block?

(j) Please describe the soil types of the areas to be irrigated and state the source of this information.

(k) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

(l) Is the area to be irrigated:
 Presently irrigated/developed
 Partly irrigated/developed (..... ha complete ha under development)
 Proposed to be irrigated/developed (..... likely completion date)

E.7 Frost Fighting *N/A*

(a) List the crops, and the area (ha) of each crop, for which frost fighting may be undertaken.

(b) How many hours a day?

(c) How many days per year?

(d) How many days on average do you expect a frost?

(e) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

.....
.....
.....
.....
.....

E.8 Industrial Use *N/A*

(a) What type of industry/process will be using the water?

.....
.....
.....

(b) How will the water be used?

.....
.....
.....

(c) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

.....
.....
.....
.....

E.9 Private Community Water Supply *N/A*

As a guide only the council considers efficient water use for a household is 1,000 litres per day in winter and 3,000 litres per day in Summer (average 2,000 litres per day). This is derived from wastewater volumes in ASNZ 1547:2000.

(a) What type of institution uses the water?

- Households – number of households to be supplied:
- Camping grounds – maximum number of visitors and staff per year:
- Schools - maximum number of students and staff per year:
- Other:

(b) For applications to supply water to households what is the minimum, maximum and average lot size?

..... Square metres (minimum)
..... Square metres (average)
..... Square metres (maximum)

- (c) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

.....

E.10 Private Community Water Supply *N/A*

As a guide only the council considers efficient water use for a household is 1,000 litres per day in winter and 3,000 litres per day in Summer (average 2,000 litres per day). This is derived from wastewater volumes in ASNZ 1547:2000.

- (a) What population will be served by the supply?
 General location of population
 Approximate number of households
- (b) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

.....


E.11 Stock Water and / or Dairy Shed Use *N/A*

The Council considers the following values as efficient use of water for stock.

Sheep	5 litres per day per head
Beef cattle	40 litres per day per head
Dairy cows	70 litres per day per head
Deer	1.5 litres per day per head
Dairy shed use	50 litres per day per head

- (a) What type and how much stock will be supplied with water?
- Sheep number: water required: litres/head/day
- Beef cattle number: water required: litres/head/day
- Dairy cows* number: water required: litres/head/day
- Other number: water required: litres/head/day
- * excluding dairy shed usage
- (b) If you have dairy cows, and require water for your dairy shed, please state the estimated volume required
- Litres/head/day

E.12 Other

- (a)  Please describe the proposed water use:

Refer Planning Report + Groundwater Report

- (b) How have you calculated the amount of water you need? (a separate sheet may be needed and attached to this application form)

PART F: ASSESSMENT OF ENVIRONMENTAL EFFECTS (AEE)

An AEE should be proportional to the scale and significance of the proposed activity. Where your proposed take could have significant effects on the groundwater resource a more detailed environmental assessment is required.

Note: Environment includes ecosystems, people, communities, all natural and physical resources and amenity values, and social and economic, aesthetic and cultural conditions that affect them.

- F.1 An Aquifer test (pumping test) is required to be submitted with your application.** Instructions on the minimum requirements are attached to this application form.

Yes a copy of the results are attached

Refer attached reports

- F.2 Provide details of all known neighbouring bores assessed under Schedule 5B* of the Regional Plan: Water which may be potentially affected by your application or within 1 kilometre of the proposed point of take.**

* within the calculated interference radius based on the aquifer properties from testing and proposed volume

Owner name	Bore number (if known)	Distance (m)	Depth (m)	Use (e.g. domestic irrigation etc)

- F.3 Have you undertaken an assessment of effect on water availability to neighbouring bores in accordance with Schedule 5 of the Regional Plan: Water for Otago?** (available on our website www.orc.govt.nz)

Yes and it is attached to the application No, go to F.6

F.4 If the answer to F.3 was yes, then at what distance may calculated effects on water availability be experienced?

..... metres

F.5 Are there any of the following present within 500 metres* of the proposed point(s) of take:

* or within the calculated interference radius based on the aquifer properties from testing and proposed volume

- (i) Surface water bodies? Yes No
- (ii) Natural wetlands or springs? Yes No

If you have answered 'yes' to any of the above, describe what adverse effects your take may have and the steps you propose to mitigate these effects:

.....

.....

.....

.....

.....

For water takes in Schedule 2C Aquifers or within 100 metres of a surface water resource only

If your groundwater take is not from a Schedule 2C Aquifer or within 100 metres of a surface water resource, go to F.8.

F.6 Will the taking of water have an effect on surface water availability to neighbouring properties?

- Yes No Unknown

F.7 Are there any of the following present within 500 metres of the proposed point of take?

- (i) Obvious signs or known aquatic biota? Yes No
- (ii) Areas where food is obtained from a water body? Yes No
- (iii) Natural wetlands? Yes No
- (iv) Waste discharges? Yes No
- (v) Recreational activities? Yes No
- (vi) Areas of special aesthetic value? Yes No
- (vii) Areas or aspects of significance to iwi? Yes No
- (viii) Other water takes (ground or surface)? Yes No

If you have answered 'yes' to any of the above, describe what adverse effects your take may have and the steps you propose to mitigate- these effects:

Refer attached Planning Report

.....

.....

.....

.....

F.8 Has any water quality analysis been undertaken on groundwater taken from your bores??

- Yes – attach a copy of the results No Unknown

F.9 Are there any waste disposal sites (e.g. septic tanks, offal pits, landfills etc) within 100 metres of your proposed point of take(s) ?

- Yes – show on the site plan required by question E.4 and state distances
 No

F.10 Is your proposed take point(s) (bores) within 1 kilometre of the coastline?

- Yes – show on the site plan required by question E.4 and state distances
 No

F.11 Do you anticipate that your proposed water take will affect the water quality of the groundwater resource? (e.g. contamination from septic tanks or saltwater intrusion)

- Yes No

If you have answered 'yes', describe what adverse effects your take may have and the steps you propose to mitigate these effects:

.....
.....
.....
.....
.....

F.12 Can your maximum abstraction rate (litres per second) be reduced by increasing the length of time over which water is taken?

- Yes

Over what time period would you take water and at what rate?

.....
.....
.....

- No

Why not?

.....
.....
.....

F.13 What are the positive effects of your proposed take and use? This could include any environmental, social and economic benefits that management by a Water Management Group could provide.

.....
Refer Planning Report – employment 15-20 people
.....
.....

F.14 What measures are you proposing to minimise wastage of water and maximise its efficient use?

.....
.....
.....
.....
.....

PART G: ALTERNATIVE WATER SUPPLIES

G.1 Does your property have alternative water sources available? (such as other water bodies, reticulated supplies, groundwater bores, other water permits, irrigation schemes?)

- No
- Yes

If yes, Please detail the sources, quantities, uses and any current Water Permit numbers or any takes authorised by permitted activity rules in the Regional Plan: Water for Otago.

.....
.....
.....

G.2 Have you considered the option of using other sources of water?

- No
- Yes

If yes, Please detail the sources, quantities, uses and any Water Permit numbers

.....
.....
.....

G.3 Explain why you have decided to take water from the proposed groundwater source rather than any alternative source?

.....
.....
.....

PART H: CONSULTATION

H.1 Please describe any consultation undertaken with persons/parties potentially affected by your proposed groundwater take. This should include parties you identified in F.2 and using Schedule 5B of the Regional Plan: Water.

refer Planning Report

.....
.....
.....

Schedule 5B of the Regional Plan: Water for Otago provides a method to identify groundwater takes potentially affected by bore interference. Use this Schedule (found on our website) to assist you in determining who may be affected by your application and thus who to obtain written approval from.

Written approvals are required from parties who are considered by the Otago Regional Council to be affected by your proposed water take. To reduce costs and processing times, it is recommended that written approval is obtained, and submitted with the application, for parties who may be affected.

H.2 Provide any written approvals using the Council's standard Form 1 – Resource Consent Application available on our website.

PART I: CHECK LIST

I.1 In order to submit a complete application, have you remembered to?

- Fully completed this application form and Form 1?
 - For replacement applications, provide evidence of how much water has historically been accessed under that consent (unless held by Council). *refer A.2*
 - Attached a bore log (unless held by Council)? *refer B.4*
 - Attached a Non-Standard installation form if required? *refer D.5*
 - Attached an Exemption Application Form for the point of take? *refer D.6*
 - Attached an Exemption application form for weekly records? *refer D.7*
 - For water management groups, provide evidence that the group meets the requirements of Appendix 2A of the Regional Plan: Water for Otago? *refer E.1*
 - A detailed site map or aerial photograph? *refer E.3*
 - A copy of an Aquifer test (pumping test) results? *refer F.1*
 - A copy of the Regional Plan: Water Schedule 5 Assessment? *Refer F.3*
 - A copy of water quality analysis? *refer F.8*
 - Attached any written approvals? *refer H.2*
 - Paid your deposit or attached a cheque? *refer I.1*
 - Attached Certificate of Title(s) less than 3 months old? *refer E.3*
- Or
- Council to obtain Certificate of Title(s) at your expense

To keep consent processing costs to a minimum it is strongly recommended that the checklist is complete and all items required are attached **before** you lodge your application to the Otago Regional Council.

Otago Regional Council - minimum aquifer test requirements

1.1 Why do I have to do an aquifer test?

Aquifer tests are required by the Otago Regional Council as part of the information requirements for a resource consent application to take and use groundwater. This information sheet outlines the Otago Regional Council's minimum aquifer test requirements to support resource consent applications. Aquifer tests are required for two reasons. First to demonstrate that you can actually take the amount of water you are seeking and second for information on aquifer parameters which are used to assess the potential effects of the proposed take.

1.2 What is an aquifer test?

Aquifer tests consist of pumping a bore at a certain rate and recording drawdown in the pumped bore and nearby observation bores at specific times. There are two main types of pump tests; step-drawdown tests and constant-rate tests.

A **step-drawdown** test occurs when a bore is pumped at successively greater discharge rates for relatively short periods of time. These tests are used to describe bore performance which is a function of the construction of the bore and aquifer characteristics.

A **constant-rate** test occurs when a bore is pumped for a significant length of time at one rate and often includes monitoring of groundwater level recovery once pumping has ceased (a recovery test). These tests are used to provide information on aquifer parameters such as transmissivity, storativity and leakage.

1.3 Doing an aquifer test

The aquifer test must be of sufficient quality to demonstrate to the Council you are able to take the amount of water you are seeking and to provide a reliable assessment of aquifer properties to support an assessment of environmental effects. If the pump test is not of sufficient quality your application may not be accepted.

It is recommended that you discuss your aquifer test with a groundwater scientist and or the Otago Regional Council Resource Science Unit before proceeding.

The aquifer test data should be designed and analysed by a suitably qualified and/or experienced groundwater scientist. It is recommended that they are contacted before undertaking a pump test so that they can advise you on aquifer test design.

If for some reason you are unable to meet the recommended minimum aquifer test requirements, then it is advisable to contact either the Otago Regional Council or your consultant to discuss appropriate alternatives to ensure that your application will be accepted.

1.4 Do I need resource consent?

Under our Regional Water Plan, aquifer tests are a permitted activity the pumping rate does not exceed 2,000,000 litres per day (23.15 litres per second) and they do not exceed three consecutive days duration. If you are planning an aquifer test that does not meet these requirements you will need to obtain resource consent. However, you can apply for a water permit for the aquifer test at the same time you are applying for your bore permits.

1.5 Further information

For more information please contact either a suitably qualified and/or experienced person in hydrogeology or Otago Regional Council.

1.6 References

Aitchison-Earl, P. and Smith, M. 2008. *Aquifer test guidelines (2nd Edition)*. Environment Canterbury Technical Report R08/25, Environment Canterbury, New Zealand.

Kruseman, G. P. and de Ridder, N. A. 1994. *Analysis and evaluation of pumping test data (2nd Edition)*. Publication 47: International Institute for Land Reclamation and Improvement, Wageningen, the Netherlands.

1.7 Acknowledgements

This document is based on the Aquifer Pump Tests Information Sheet from Environment Southland (ES). ORC would like to thank ES for the sharing of information and ideas.

General requirements

- The pumping rate should be kept constant within +/- 5% and measured to within +/- 5% accuracy. It is recommended that a data logging electronic flow meter be used to achieve these requirements.
- After step and constant rate aquifer tests, recovery should be measured to within 10% of the initial static water level.
- After the start of pumping and during recovery, at a minimum, water levels in the pumping and observation wells should be measured at 30 second intervals during the first 5 minutes, 1 minute intervals between 5 and 15 minutes, 5 minute intervals between 15 and 60 minutes and 15 minute intervals thereafter. It is recommended that data logging pressure transducers be used to achieve these requirements.
- Pumped water should be discharged at a location where it won't cause recharge of the aquifer and influence the aquifer test.
- Aquifer pumping tests should be conducted during stable weather conditions. Significant rainfall, barometric pressure changes, high or variable river flows and other factors may influence the results of your test. Be prepared to delay the test if required.

Specific requirements

Takes less than 250 m³/d	2 hour pumping at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumping well.
Takes between 250 to 750 m³/d	<ol style="list-style-type: none"> 1. Static water level to be monitored for at least 24 hours prior to start of test in the pumping and observation wells 2. A step-drawdown aquifer test comprising a minimum of 4, 1 hour pumping steps followed by measurement of recovery. The maximum pumping rate should be equal to the maximum proposed rate. 3. A 24-hour constant-rate aquifer test undertaken at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumping bore and in at least one observation bore within the area of localized drawdown.
Takes greater than 750 m³/d	Confined or leaky aquifers
	<ol style="list-style-type: none"> 1. Static water level to be monitored for at least 24 hours prior to start of test. 2. A step-drawdown aquifer test comprising a minimum of 4, 1 hour pumping steps followed by measurement of recovery. Maximum pumping rate should be equal to the maximum proposed rate. 3. A 72-hour constant-rate aquifer test undertaken at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumped bore and at least two observation bores in the source aquifer and one observation well in the overlying aquifer within the area of localized drawdown.
	Unconfined aquifers
	<ol style="list-style-type: none"> 1. Static water level to be monitored for at least 24 hours prior to start of test. 2. A step-drawdown aquifer test comprising a minimum of 4, 1 hour pumping steps followed by measurement of recovery. Maximum pumping rate should be equal to the maximum proposed rate. 3. A 48-hour constant-rate aquifer test undertaken at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumped bore and at least two observation bores within the area of localized drawdown.

Information requirements to be included with the aquifer test results

The following information should be provided with the aquifer test results:

- A map of the site with key features including the pumping and observation bores, surface water features and pumped water discharge location identified
- Coordinates for pumping and observation bores used in the aquifer test
- Surveyed elevations for pumping and observation bores used in the aquifer test and for nearby surface water level
- Bore logs and construction information, including depth and diameter for the pumping and observation bores
- Information on the location of pumped discharge, the method used to measure discharge and the discharge monitoring records in electronic format (Excel).
- Records of measured groundwater levels in the pumping and observation bores in electronic format (Excel)
- Records of measured or observed of rainfall, barometric pressure and river flows
- Analysis of aquifer test results to provide estimates of relevant aquifer parameters to support the effects assessment. This should include details of any data corrections used, analysis methods, plotted data, calculations used and discussion of data and analysis reliability

6

Application To Discharge Contaminants to Land



(For Office Use Only)

Consent No.: _____

Show the location of the discharge and adjoining properties on your map on Form 1.

Part A: General

1. What is the source of the contaminant (e.g., sewage, treatment, industry, water treatment, rural activity, solid waste, etc)?
alluvial gold mining - groundwater and wash water from gold plant
2. Describe the contaminant, including, where appropriate, the physical and chemical content and their toxicity to the receiving environment.
suspended sediment
3. Is the contaminant treated in any way before being discharged? Yes No
If yes, describe treatment sediment retention pond and infiltration pond
3. What is the location of the discharge, including map reference in NZTM 2000?
NZTM 2000: E 1318666 N 4938504
5. For liquid contaminants, what method of discharge will be used (e.g., spray irrigation, soakage, etc)

6. Describe the soils, topography and vegetation cover of the land onto which the discharge will be made:
pasture overlying gravel
7. What is the total area of land onto which the discharge is to be made? 0.1 hectares
What is the area of land over which the discharge is made each day? 0.1 hectares

Part B: Assessment of Effects on the Environment

1. Comment on the possible effects the discharge may have on the drainage capacity, fertility, ground or surface water of or near the site:

refer Planning Report + Groundwater Report

- | | Yes | No | Not Known |
|--|-------------------------------------|--------------------------|--------------------------|
| 2. Within the vicinity of the discharge are there any: | | | |
| (a) Waterbodies, groundwater or groundwater bore(s)? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (b) Water abstractions? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (c) Obvious signs of fish, eels, insect life, aquatic plants, etc? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (d) Wetlands (e.g., swamp areas)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (e) Recreational activities carried out (eg., swimming, fishing, canoeing)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (f) Areas of particular aesthetic or scientific value (eg., scenic waterfall, rapids, archaeological sites)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| (g) Areas or aspects of significance to Iwi? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

If you have answered "Yes" to any of the above, describe what effects your operation may have and the steps you propose to take to mitigate these.

refer Planning Report + Groundwater Report

(Continue on a separate page if necessary)

3. What alternative methods of disposal or discharge locations have you considered?

discharge to land is preferred over discharge to water

4. Why did you choose the proposed method of disposal and location point?

to minimise environmental effects

Part B: Assessment of Effects on the Environment (Contd.)

5. How will the equipment controlling the discharge be operated and maintained to prevent equipment failure, and what measures will be implemented to ensure that the effects of any malfunction are remedied?

refer Planning Report + Groundwater Report

6. What, if any, monitoring do you propose to carry out to ensure that the discharges does not have any adverse effect?

refer Planning Report + Groundwater Report

Schedule 8B Discharge Permit To Discharge Contaminants to Air From Quarry or Mining Processes



This form is to be used for applications seeking to discharge contaminants to air from quarry or mining activities within the Otago Region.

(For Office Use Only)

Consent No.: _____

Job No: _____

PLEASE READ BEFORE COMPLETING THE APPLICATION FORM

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. **If all the necessary information is not supplied with the application then Otago Regional Council may, under section 88 of the Resource Management Act 1991 (the Act) return your application, request further information or decline your application. This will lead to delays in the processing of your application and may increase processing costs.**

Form 1 and Schedule 8B, when properly completed, may provide an adequate "Assessment of Effects on the Environment" (AEE) where the adverse effects of a proposal are not significant. However, this can only be determined on application. The required detail for an AEE should reflect the scale and significance of the potential adverse effects the activity may have on the environment. If the size of your proposed activity or scale of its potential effects is significant, a report by a professional advisor in support of your application may be required. An AEE is required by the Act so that you and others can understand what happens to the environment when you discharge contaminants to air. When considering applications to discharge contaminants to air, the effects of the discharge on the receiving environment and iwi values must be assessed.

Details of information required in an AEE is included in the Fourth Schedule of the Act appended to Form 1: Resource Consent Application.

PART A: Description of the Proposed Activity

A.1 (a) Please provide an accurate site plan showing:

- i. a description of the type of land use surrounding the site (eg. north, residential – closest dwelling 500m; south, industrial, etc);
- ii. property boundaries and neighbouring properties;
- iii. Identify the closest residential property to the site
- iv. nearby buildings
- v. road access
- vi. the rock extraction, processing, storage and dispatch areas;
- vii. specific location of discharge point(s); and
- viii. scale and north arrow.

(b) Provide mid-point GPS location for the activity in NZTM 2000 (New Zealand Transverse Mercator)

NZTM 2000: E 1318666 N 4938504

A.2 What type of material do you propose to quarry / mine?

alluvial gold from gravels

A.3 Please detail the chemical components of the quarried or mined matter (if known).

No chemicals

A.5 Please identify and describe in full the quarry / mining processes undertaken on site.

(a) Extraction / Excavation

Pages 2 - 8 Refer

i. Describe the method of extraction / excavation that you use

Attached

Planning Report/AEE

ii. Please describe the machinery used in the extraction and / or excavation process

iii. Describe anything else relevant to your extraction / excavation process

iv. How much material is extracted / excavated per year?

(b) Transportation

i. How is the material transported for screening, crushing, storage and / or dispatch?

ii. How far is the material transported for screening, crushing, storage and / or dispatch?

iii. What type of matter / substance forms the basis of the roads used for this transportation?

iv. What dust prevention measures do you currently implement to ensure that dust from the roads and / or transportation is minimised?

(c) Crushing, screening, washing

i. Please describe each method used to crush, screen and wash the quarried or mined material and detail the machinery involved and its purpose

ii. What is the size reduction and screening capacity (tonnes/hour)

A.10 Section 105 of the Resource Management Act 1991 requires consideration of alternatives to the discharge and the reasons for proceeding with your proposed choice.

(a) What alternative methods of disposal or discharge to air from your quarry / mine have you considered?

(b) Justify why you have made the choice to proceed with the proposed activity described in this application.

PART B: Assessment of Environmental Effects

B.1 In the vicinity of the discharge are there any:

	Yes	No
(a) Residential developments?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(b) Production land (e.g., crops, dairy farming)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(c) Recreational Areas (e.g. sports grounds, parks)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(d) Sources of other similar discharges to air?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
(e) Areas of particular aesthetic or scientific value?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(f) Areas or aspects of significance to Iwi?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
(g) Commercial activities and/or schools?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

B.2 List and describe all possible effects the discharge from your quarry / mining operation may have on:

(a) The receiving air quality

(j) Any appropriate additional information (e.g. photographs)



Resource Consent Application Form 9A



Land Use Consent

- To construct or alter a bore
- To drill over an aquifer

IMPORTANT NOTES TO THE APPLICANT

You must complete this form **and** Resource Consent Application Form 1 in full.

It is crucial that you provide as much relevant information as possible with your application and in an understandable way. This will help ORC staff process it efficiently, and at the minimum cost.

If all the necessary information is not entered on the form or supplied with the application then Otago Regional Council may return your application, request further information or publicly notify your application. This will lead to delays in the processing of your application and may increase processing costs.

This application form, when properly completed, should provide an adequate "Assessment of Effects on the Environment" (AEE) where the adverse effects of a proposal are not significant. However, this can only be determined on application.

For bores: Depending on the location, quantity and intended use of the groundwater to be taken from the bore, you may require a separate Water Permit to take and use water from the Otago Regional Council. **If you need a water permit please refer to the aquifer testing requirements attached to this form.** When siting your bore you should consider the location in terms of compliance with the rules permitting abstraction in the *Regional Plan: Water for Otago*. You should also consider any effects on water levels in neighbouring bores, allocation availability within the aquifer, and potential stream depletion effects. Such effects may influence the likelihood of obtaining a resource consent to take groundwater at the volume you request.

Disclaimer: It is the applicant's responsibility to ensure that:

- the bore is suitable for the purpose required;
- the bore will penetrate water-bearing material;
- the consent holder will have physical access to any water in the bore;
- the consent holder will be legally able to take water; and
- any future taking of water will not have adverse effects on other users or the environment.

GENERAL

1. Which of the following activities are you seeking to undertake? (please tick)

- Construct a new bore
- Alter an existing bore
- Drilling over an aquifer identified in the C-series maps, other than for the purpose of creating a bore
- Constructing a piezometer / monitoring well
- Drilling for a geological, geotechnical or groundwater investigation

2. Legal Description of the site where the drilling will occur. Please also attach a Certificate of Title less than 3 months old.

Refer Planning Report / AEE

3. Owner of the site where the drilling will occur (if different from applicant on Form 1)

Full name(s) of owner(s) Refer Planning Report / AEE

Address _____

Phone number _____

Email address _____

4. Name and address of driller of person undertaking the works

Full name(s) _____

Company (if applicable) Hawkeswood Mining Ltd

Phone number _____

Email address _____

5. How many drill holes are proposed? 1 x mine pit which will move

6. Please provide an accurate GPS location in NZTM2000 (New Zealand Transverse Mercator) format for each drill hole. Note: this should be two seven digit numbers e.g. E1415593 N4923363 and can be obtained from your driller or using a GPS.

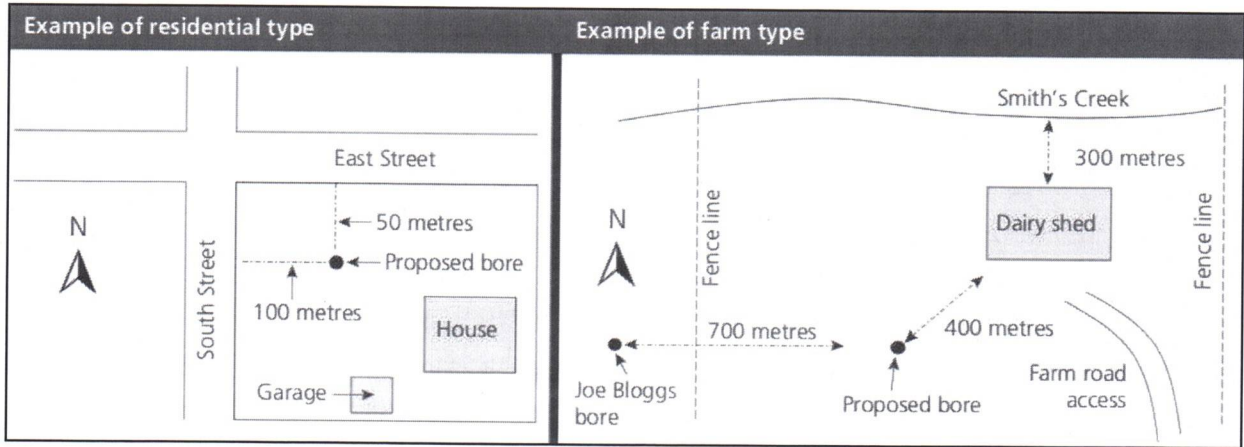
E 1318666 N 4938504

E _____ N _____

E _____ N _____

E _____ N _____

7. Please attach a site plan. This must show the location of the proposed drill sites in relation to nearby houses, driveways, streets, intersections, springs, waterways, and property boundaries. If possible, please also show bores, septic tanks, and waste disposal sites. Two examples of acceptable drawings are shown below.



8. Please provide drill hole details. If more than four drill holes are proposed, provide the following details on a separate sheet.

N/A

Hole 1		Hole 2	
Hole Diameter (mm):		Hole Diameter (mm):	
Estimated Hole Depth (m):		Estimated Hole Depth (m):	
Estimated Casing Depth (m):		Estimated Casing Depth (m):	
Casing Material (if PVC, state grade):		Casing Material (if PVC, state grade):	
Aquifer:		Aquifer:	
Method of Drilling:		Method of Drilling:	
Method of Construction:		Method of Construction:	
Backfill material:		Backfill material:	

Hole 3		Hole 4	
Hole Diameter (mm):		Hole Diameter (mm):	
Estimated Hole Depth (m):		Estimated Hole Depth (m):	
Estimated Casing Depth (m):		Estimated Casing Depth (m):	
Casing Material (if PVC, state grade):		Casing Material (if PVC, state grade):	
Aquifer:		Aquifer:	
Method of Drilling:		Method of Drilling:	
Method of Construction:		Method of Construction:	
Backfill material:		Backfill material:	

BORES ONLY

9. What is the bore to be used for? (please tick)

- Domestic. Number of houses: _____
- Stock drinking water
- Irrigation
- Industrial / Commercial
- Exploratory
- Other. Please specify: mining

10. What quantity of water do you propose to take and at what rate?

Maximum rate of take _____ litres per second } refer Planning Report
 Maximum daily volume _____ cubic metres per day } and Groundwater Report

DRILLING OVER AN AQUIFER

11. Which aquifer do you propose to drill over? If you are unsure refer to Maps C1-C17 in the Regional Plan: Water for Otago and maps contained in Plan Change 4A (they are available for viewing on www.orc.govt.nz, or at our offices). Information on the location of the 'others' list can be obtained from Council's Resource Science Unit.

- | | | | |
|-------------------------------------|-----------------------------|--------------------------|-----------------------------|
| <input type="checkbox"/> | Cardona Alluvial Ribbon | <input type="checkbox"/> | North Otago Volcanics |
| <input type="checkbox"/> | Cromwell Terrace | <input type="checkbox"/> | Roxburgh Basin |
| <input type="checkbox"/> | Dunstan Flats | <input type="checkbox"/> | Papakao |
| <input type="checkbox"/> | Earnsclough Terrace | <input type="checkbox"/> | Pomahaka Basin |
| <input type="checkbox"/> | Ettrick Basin | <input type="checkbox"/> | Shag Alluvium |
| <input checked="" type="checkbox"/> | Hawea Basin | <input type="checkbox"/> | Wanaka Basin Cardona Gravel |
| <input type="checkbox"/> | Inch Clutha River / Mata Au | <input type="checkbox"/> | Wakatipu Basin |
| <input type="checkbox"/> | Kakanui-Kauru Alluvium | <input type="checkbox"/> | Unknown |
| <input type="checkbox"/> | Kuriwao Basin | Others: | |
| <input type="checkbox"/> | Lindis Alluvial Ribbon | <input type="checkbox"/> | Bendigo |
| <input type="checkbox"/> | Lowburn Alluvial Ribbon | <input type="checkbox"/> | Clydevale |
| <input type="checkbox"/> | Lower Taieri | <input type="checkbox"/> | Glenorchy |
| <input type="checkbox"/> | Lower Waitaki Plains | <input type="checkbox"/> | Strath Taieri |
| <input type="checkbox"/> | Maniototo Tertiary | <input type="checkbox"/> | Tarras |
| <input type="checkbox"/> | Manuherikia Alluvium | <input type="checkbox"/> | Wairuna |
| <input type="checkbox"/> | Manuherikia Claybound | | |

ASSESSMENT OF ENVIRONMENTAL EFFECTS

12. Please tick appropriate boxes:

YES NO

- Is the proposed drilling within 50 metres of a known contaminated site?
- Is the proposed drilling within 100 metres of any existing bores on neighbouring properties?
- Is the proposed drilling within 50 metres of any existing septic tank / outfall or long drop toilet?
- Are there are inland natural wetlands within 100 metres of the proposed drilling
- Are there any surface water bodies within 100 metres of the proposed drilling? *Clutha*
- Is the proposed drilling over either the Papakaio or Lower Taieri Aquifer?
- Is the proposed drilling located in a historical place, recorded archaeological site, or in an area of cultural or spiritual significance to Tangata Whenua?

Details of any neighbouring bores:

Owner's Name	Bore number	Distance (m)	Depth of bore (m)
<i>Refer Groundwater Report</i>			

Details of any nearby septic tank / outfall or long drop toilets:

Owner's Name	Distance (m)
<i>N/A</i>	

Details of any nearby inland natural wetlands or surface water bodies:

Inland Natural Wetland or Surface Water Body	Distance (m)
<i>N/A</i>	

Distance to the coast if less than 50 metres: _____

13. What is the minimum distance from the drill site(s) to the property boundaries?

We advise that you consult with your neighbour if the drill site(s) are near your property boundary.

STATUTORY ASSESSMENT

14. The following policies from the Regional Plan: Water for Otago may be relevant to your application.

- *Policy 9.4.14 To require appropriate siting, construction and operation of new groundwater bores, to prevent:*
 - a) *Contaminants from entering an aquifer; and*
 - b) *The contamination of groundwater in any aquifer from the groundwater in another aquifer; and to promote such management for existing bores.*
- *Policy 6.4.10C To require appropriate siting, construction and operation of new groundwater bores, to maintain artesian pressure in confined conditions and to promote such management for existing bores.*
- *Policy 6.4.10D To require that new bores in the Papakaio and Lower Taieri Aquifers are constructed of materials suitable to resist corrosion and in a manner that enables their complete shutdown.*
- *Policy 6.4.10E Unless provision has been made to permanently decommission and seal the bore, to require the structural condition and control mechanisms of all existing bores in the Papakaio and Lower Taieri Aquifers to be certified as being secure against uncontrolled artesian discharge at no more than 5 year intervals.*

In situations where more than one hole is drilled, this policy also applies:

- *Policy 9.4.17 To require new drill holes to be appropriately sealed to prevent contaminants entering any aquifer.*

Is your proposed activity consistent with Policies 9.4.14, 6.4.10C, 6.4.10D, 6.4.10E and where relevant 9.4.17?

Yes No

If No, please explain.

please refer to Planning Report + Groundwater Report

AFFECTED PARTIES AND WRITTEN APPROVALS

If you are not the owner of the land upon which the drilling is proposed, written approval is required from all parties who own the land as shown on the Certificate of Title. This is to demonstrate that agreement has or is being attained where the activity is located on property that you do not own.

Supply written approvals at the time of lodging your application to reduce delays in consent processing and to keep costs to a minimum. You can use the written approval form available on the ORC website.

CHECKLIST

In order to submit a complete application, have you remembered to?

- Fully completed this application form and Form 1?
- Attached maps and drawings as appropriate?
- Attached a Certificate of Title less than 3 months old?
- Attached any written approvals?
- Paid your deposit or attached a cheque?

To keep consent processing costs to a minimum it is strongly recommended that the checklist is complete, and all items required are attached **before** you lodge your application to the Otago Regional Council.

OTAGO REGIONAL COUNCIL MINIMUM AQUIFER TEST REQUIREMENTS

1. Why do I have to do an aquifer test?

Aquifer tests are required by the Otago Regional Council as part of the information requirements for a resource consent application to take and use groundwater. This information sheet outlines the Otago Regional Council's minimum aquifer test requirements to support resource consent applications. Aquifer tests are required for two reasons. First to demonstrate that you can actually take the amount of water you are seeking and second for information on aquifer parameters which are used to assess the potential effects of the proposed take.

2. What is an aquifer test?

Aquifer tests consist of pumping a bore at a certain rate and recording drawdown in the pumped bore and nearby observations bores at specific times. There are two main types of pump tests; step-drawdown tests and constant-rate tests.

- A step-drawdown test occurs when a bore is pumped at successively greater discharge rates for relatively short periods of time. These tests are used to describe bore performance which is a function of the construction of the bore and aquifer characteristics.
- A constant-rate test occurs when a bore is pumped for a significant length of time at one rate and often includes monitoring of groundwater level recovery once pumping has ceased (a recovery test). These tests are used to provide information on aquifer parameters such as transmissivity, storativity and leakage.

3. Doing an aquifer test

The aquifer test must be of sufficient quality to demonstrate to the Council you are able to take the amount of water you are seeking and to provide a reliable assessment of aquifer properties to support an assessment of environmental effects. If the pump test is not of sufficient quality your application may not be accepted.

It is recommended that you discuss your aquifer test with a groundwater scientist and or the Otago Regional Council Resource Science Unit before proceeding.

The aquifer test data should be designed and analysed by a suitably qualified and/or experienced groundwater scientist. It is recommended that they are contacted before undertaking a pump test so that they can advise you on aquifer test design.

If for some reason you are unable to meet the recommended minimum aquifer test requirements, then it is advisable to contact either the Otago Regional Council or your consultant to discuss appropriate alternatives to ensure that your application will be accepted.

4. Do I need resource consent?

Under our Regional Water Plan, aquifer tests are a permitted activity the pumping rate does not exceed 2,000,000 litres per day (23.15 litres per second) and they do not exceed three consecutive days duration. If you are planning an aquifer test that does not meet these requirements you will need to obtain resource consent. However, you can apply for a water permit for the aquifer test at the same time you are applying for your bore permits.

5. Further information

For more information please contact either a suitably qualified and/or experienced person in hydrogeology or Otago Regional Council.

6. General Requirements

- The pumping rate should be kept constant within +/- 5% and measured to within +/- 5% accuracy. It is recommended that a data logging electronic flow meter be used to achieve these requirements.
- After step and constant rate aquifer tests, recovery should be measured to within 10% of the initial static water level.
- After the start of pumping and during recovery, at a minimum, water levels in the pumping and observation wells should be measured at 30 second intervals during the first 5 minutes, 1 minute intervals between 5 and 15 minutes, 5 minute intervals between 15 and 60 minutes and 15 minute intervals thereafter. It is recommended that data logging pressure transducers be used to achieve these requirements.
- Pumped water should be discharged at a location where it won't cause recharge of the aquifer and influence the aquifer test.
- Aquifer pumping tests should be conducted during stable weather conditions. Significant rainfall, barometric pressure changes, high or variable river flows and other factors may influence the results of your test. Be prepared to delay the test if required.

7. Specific Requirements

Takes less than 250 m3/d	2 hour pumping at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumping well.
Takes between 250 to 750 m3/d	<ol style="list-style-type: none"> 1. Static water level to be monitored for at least 24 hours prior to start of test in the pumping and observation wells 2. A step-drawdown aquifer test comprising a minimum of 4, 1 hour pumping steps followed by measurement of recovery. The maximum pumping rate should be equal to the maximum proposed rate. 3. A 24-hour constant-rate aquifer test undertaken at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumping bore and in at least one observation bore within the area of localized drawdown.
Takes greater than 750 m3/d	<p>Confined or leaky aquifers</p> <ol style="list-style-type: none"> 1. Static water level to be monitored for at least 24 hours prior to start of test. 2. A step-drawdown aquifer test comprising a minimum of 4, 1 hour pumping steps followed by measurement of recovery. Maximum pumping rate should be equal to the maximum proposed rate. 3. A 72-hour constant-rate aquifer test undertaken at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumped bore and at least two observation bores in the source aquifer and one observation well in the overlying aquifer within the area of localized drawdown. <p>Unconfined aquifers</p> <ol style="list-style-type: none"> 1. Static water level to be monitored for at least 24 hours prior to start of test. 2. A step-drawdown aquifer test comprising a minimum of 4, 1 hour pumping steps followed by measurement of recovery. Maximum pumping rate should be equal to the maximum proposed rate. 3. A 48-hour constant-rate aquifer test undertaken at the maximum proposed rate. Water level monitoring should include drawdown and recovery in the pumped bore and at least two observation bores within the area of localized drawdown.

8. Information to be included with the aquifer test results

The following information should be provided with the aquifer test results:

- A map of the site with key features including the pumping and observation bores, surface water features and pumped water discharge location identified.
- Coordinates for pumping and observation bores used in the aquifer test.
- Surveyed elevations for pumping and observation bores used in the aquifer test and for nearby surface water level.
- Bore logs and construction information, including depth and diameter for the pumping and observation bores.
- Information on the location of pumped discharge, the method used to measure discharge and the discharge monitoring records in electronic format (Excel).
- Records of measured groundwater levels in the pumping and observation bores in electronic format (Excel).
- Records of measured or observed of rainfall, barometric pressure and river flows.
- Analysis of aquifer test results to provide estimates of relevant aquifer parameters to support the effects assessment.

This should include details of any data corrections used, analysis methods, plotted data, calculations used and discussion of data and analysis reliability

9. References

Aitchison-Earl, P. and Smith, M. 2008. Aquifer test guidelines (2nd Edition). Environment Canterbury Technical Report R08/25, Environment Canterbury, New Zealand.

Kruseman, G. P. and de Ridder, N. A. 1994. Analysis and evaluation of pumping test data (2nd Edition). Publication 47: International Institute for Land Reclamation and Improvement, Wageningen, the Netherlands.

10. Acknowledgements

This document is based on the Aquifer Pump Tests Information Sheet from Environment Southland (ES). ORC would like to thank ES for the sharing of information and ideas.