

**Submission Form 16 to the Otago Regional Council on consent applications**

This is a Submission on (a) limited notified/publicly notified resource consent application/s pursuant to the Resource Management Act 1991.

**Submitter Details:**

(please print clearly)

Full Name/s:

IRRIGATION AND MAINTENANCE

Postal Address:

[REDACTED]

Post Code:

Phone number:

Business:

[REDACTED]

Private:

Mobile:

Email address:

[REDACTED]

I/we wish to ~~SUPPORT~~ OPPOSE submit a ~~NEUTRAL~~ submission on (circle one) the application of:

Applicant's Name: Cromwell Certified Concrete Limited

And/or Organisation:

Application Number: RM20.360.01 - 04

Location: Cromwell, approximately 400 metres south southeast of the intersection of Luggate-Cromwell Road (State Highway 6) and Mt Pisa Road

Purpose: Various consents relating to gravel washing

The specific parts of the application/s that my submission relates to are: (Give details)

ALL

My/Our submission is (include: whether you support or oppose the application or specific parts of it, whether you are neutral regarding the application or specific parts of it and the reasons for your views).

SEE ATTACHED 11 PAGES

I/We seek the following decision from the consent authority (give precise details, including the general nature of any conditions sought)

REJECT THE APPLICATIONS

I/we:

- Wish to be heard in support of our/my submission
- Not wish to be heard in support of our/my submission

If others make a similar submission, I/we will consider presenting a joint case with them at a hearing.

- Yes
- No

I, am/am not (choose one) a trade competitor\* of the applicant (for the purposes of Section 308B of the Resource Management Act 1991).

\*If trade competitor chosen, please complete the next statement, otherwise leave blank.

I, am/am not (choose one) directly affected by an effect as a result of the proposed activity in the application that:

- a) adversely affects the environment; and
- b) does not relate to trade competition or the effects of trade competition.

I, do/do not (choose one) wish to be involved in any pre-hearing meeting that may be held for this application.

I, do/do not request\* that the local authority delegates its functions, powers, and duties to hear and decide the application to 1 or more hearings commissioners who are not members of the local authority.

I, have/have not served a copy of my submission on the applicant.

M. D. / K. S. delegated authority 12/6/21  
Signature/s of submitter/s (Date)  
(or person authorised to sign on behalf of submitter/s)

## **Submission by Irrigation & Maintenance Ltd**

### **Attachment to RM20.360.01-.04**

I&M Ltd is a private company owned by 23 landholders from Mt Pisa Estate. The landholders rely on the company for the supply of drinking water and high quality processing water for an organically registered winery.

I & M Ltd hold the consents and own two bore structures to take Water from the Pisa Aquifer. The potable bore is 150 metres from where the Quarry is at present discharging contaminated wash water into the Pisa Aquifer and, in the application, to increase discharge into the Pisa aquifer.

I & M Ltd have read the application and submissions for the consents. We believe on reasonable grounds that the application contains false statements which have corrupted due process of the application.

The false statement is that a discharge to water is not needed for the application \*1 . As a result of this false statement , discharge to water, although clearly described in the application has not been fully considered in the EER and has not been considered at all in the independent review of the EER. Discharge to water has not been considered in the Councils Recommending Report. The Council has thus been incorrectly advised regarding the application as described in the documents.

It is our opinion that any reasonable council would have come to the conclusion that these consents needed to be Publicly Notified had that council been correctly informed during the consent evaluation process . Their own recommending technical staff would have advised the Council very differently had the false statement not have been made by the applicant.

**Under these past events we see that both the Otago Regional Council and the Central Otago District Council have no option but to decline the applications immediately.**

We believe that the future Quarry operations as described needs the following additional consents.

1. To remove the protective mantle\*2 of the Pisa Aquifer \*3 , and then discharge water contaminated with insoluble matter directly\*4 into the Pisa Aquifer
2. To remove the protective mantle of the Pisa Aquifer and then discharge contaminated water with accumulated soluble salts\*5 directly into the Pisa Aquifer
3. To remove the protective mantle of the Pisa Aquifer and discharge leachate from contaminated and uncontaminated solid fill \*6 into the Pisa Aquifer. The fill originating from the O.R.C. and Q.L.D.C. areas.
4. To remove the protective mantle of the Pisa Aquifer and mine the Aquifer \*7 for gravels using heavy machinery to a depth of 3m (shown on \*4 to be much greater depth)

5. To form a 8Ha pond as a result of mining and thus change the natural course of the Aquifer.\*8
6. To form a 8Ha pond and thus change the level of the aquifer \*9 in both dynamic and static conditions.

Upon reasonable grounds\*8 we believe that the present operator of the quarry/consent holder does not have consents for their activities. In particular

1. To remove the protective mantle\*2 of the Pisa Aquifer \*3 , and then discharge water contaminated with insoluble matter directly\*4 into the Pisa Aquifer\*9
2. To remove the protective mantle of the Pisa Aquifer and then discharge contaminated water with accumulated soluble salts directly into the Pisa Aquifer
3. To remove the protective mantle of the Pisa Aquifer and discharge leachate from contaminated and uncontaminated solid fill \*6 into the Pisa Aquifer. The fill originating from the O.R.C. and Q.L.D.C. areas.

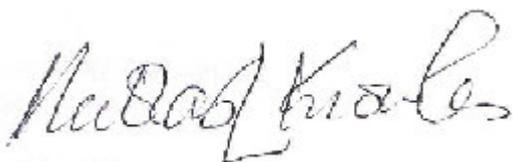
We wish to discuss the present quarry operations with both councils and ask for a meeting with the intention of resolving the problems in order that only consented mining operations take place with environmental monitoring and safeguards.

Should a hearing take place then we wish to attend and be heard. While not expanded in this present submission we will make a submission relating to failure of the EER and submission reports in recognising:-

- a. Actual windspeeds for the quarry site.
- b. The effect of cyclonic wind emulating from Mt Pisa
- c. The particular spectrum of particle sizes in local dust (glacial quartz flour)
- d. The health risks associated to wind borne quartz particulate.
- e. The Engineering requirement for excavations requirements as published by the QLDC
- f. The effects of quartz particulate on pollination.
- g. Future risks to Aquifer contamination from forming an open body of water.
- h. Light spillage from the quarry site (present and future)
- i. Human waste contamination risks to the Aquifer both present and future
- j. Existing pollution of the Aquifer by the applicant

We support the following submissions.

1. Amisfield Orchard Ltd –



Name.....N.L.Knowles..... Signature.....

Standing..... Delegated Authority 10/6/21

**Notations.**

\*1. An excerpt from the submission is below showing the applicant’s statement that discharge to water is not required.

3. *Consents required in relation to this proposal*

**Discharge onto or into:**

Land

Water

Air

**From the consent application a discharge to water is stated :-**

2.2.14 Discharge contaminants (sediment) to land

The applicant proposes to discharge contaminants to land in association with washing/ screening aggregate and dust suppression (currently authorised under Resource Consent RM16.108.01). Water that is not lost directly to ground or via evapotranspiration is collected in a soakage pond where fine sediments settle out prior to the water discharging back into the underlying aquifer

**From Form6 of the Application**

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

Soakage ponds are an effective method of removing sediment from water prior to it discharging to groundwater. The soakage pond is located away from part of the quarry where gravel is extracted and close to plant where it is processed.

\*2. A protective mantle is recognised by the Regional water plan. Excerpt below. In the case of the Pisa Aquifer the mantle is the impermeable layers of glacial flour which is the silt and in the dry, dust formed in the outwash gravels. The mantle makes the Aquifer in the contained condition. A contamination spill at ground level is cut off from the Aquifer and will maybe contaminate surface streams and Lake Dunstan but not the Aquifer. Recharge of the Aquifer is not from rain on the terraces but from the slopes of Mt Pisa and enters the aquifer through the rock/gravel boundary and through seismic disruptions in the schist strata. The only risk to the aquifer is from mining through the mantle as has been the practice of the Amisfield and Parkburn Quarries.

#### 9.2 Issues

9.2.3 Groundwater resources can become contaminated as a result of:

- (a) Point source discharge of effluent onto or into land;
- (b) Land use activities which result in non-point source discharge of effluent, nutrients or other contaminants;
- (c) The accidental spill of a hazardous substance, when they occur in groundwater recharge areas, and
- (d) Excavation of any protective soil mantle or impervious strata overlying an aquifer.

#### Explanation

\*3. The definition of a waterbody is stated in the Regional Water Plan and includes an Aquifer. Similarly, the existing stilling pond is a water body and subject to the water plan. The future pond formed by mining 3m into the aquifer is also a water body.

**Water body\*** Means fresh water or geothermal water in a river, lake, stream, pond, wetland, or aquifer, or any part thereof, that is not located within the coastal marine area.

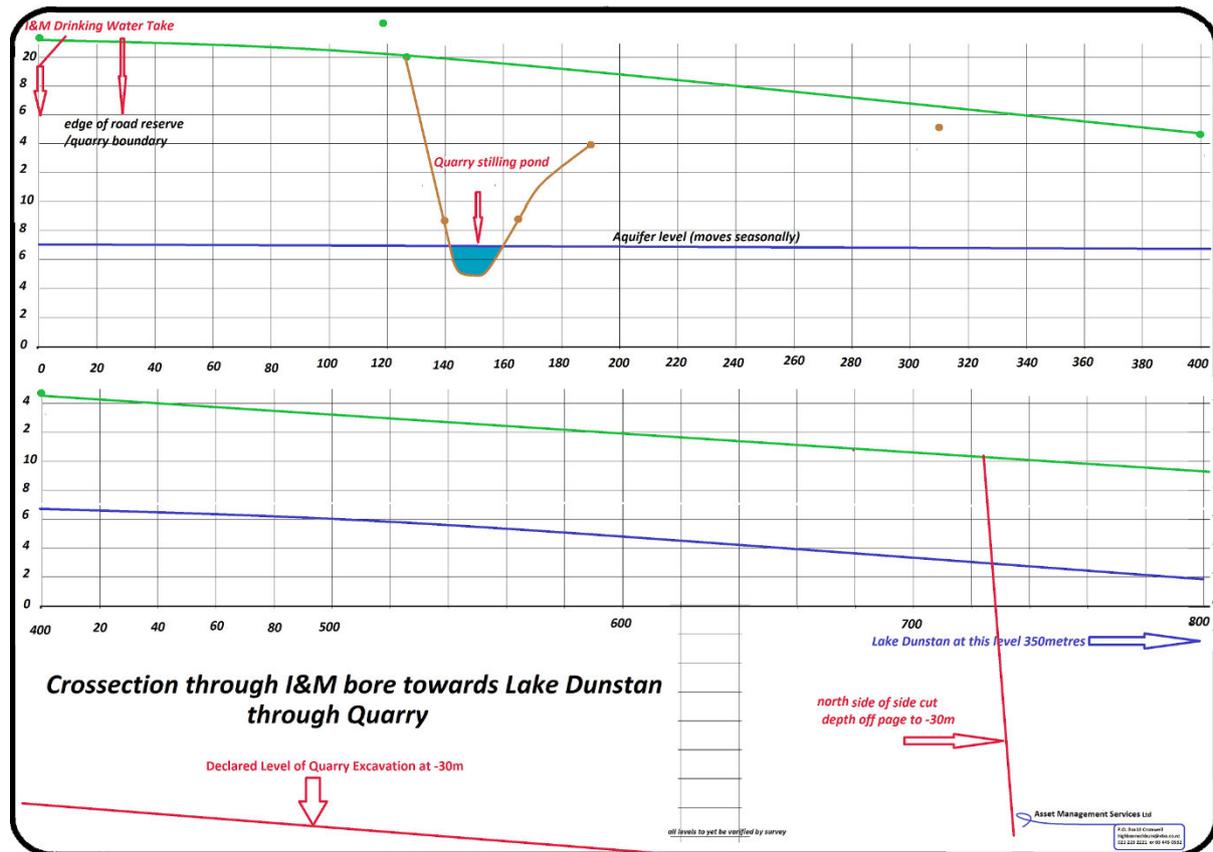
**Water\***

- (a) Means water in all its physical forms whether flowing or not and whether over or under the ground:
- (b) Includes fresh water, coastal water, and geothermal water:
- (c) Does not include water in any form while in any pipe, tank, or cistern.

\*4 In order to demonstrate that the discharge is either directly into the Aquifer which is a waterbody (or if argued, into a pond which is a waterbody and now part of the aquifer or

alternately a pond which discharges directly into a aquifer) a drawing is attached. The drawing is a crosssection through our bore and the quarry. The information is taken from the consent application documents, ORC bore data and Google Earth. It is to be remembered that the static top level of the aquifer varies to the seasonal level as more water is taken in the irrigation season. The dynamic condition also includes the cone of influence caused by the quarry discharging water from one location, the bore and discharging into another.

The position of the stilling pond and the aquifer levels are to be noted.



Also to be noted at chainage 720m is the cut depth in red which has been stated at ground level -30m.

So as there no doubt below is an extract from the IEE

The applicant proposes to discharge contaminants to land in association with washing/ screening aggregate and dust suppression (currently authorised under Resource Consent RM16.108.01). Water that is not lost directly to ground or via evapotranspiration is collected in a soakage pond where fine sediments settle out prior to the water discharging back into the underlying aquifer. Given the increased volume of water to be abstracted, the applicant proposes to discharge the same volume of water (detailed above in Section 2.3.13)

\*5 Since the deposition of the Upper Clutha outwash gravels, the gravels have been decomposing with salts naturally discharged. Because of the unique low rainfall/ high evaporation in the basin, these salts are not washed through the gravels. They accumulate in partially or fully formed salt pans(layers) over many thousands of years. These pans lie dormant until excavated. During the washing process of the gravels, all salts will go back into solution and thus into the aquifer. The aquifer may thus be charged with many thousands of years of salt accumulation over a very sort period of time. Twenty years is a short period of time. A recent (may 21 photo of a salt layer is shown below.



\*6 The Quarry receives contaminated solid fill and solid fill as part of its commercial operations. The material is dumped into the quarry site. We have reasonable evidence to believe that there is no Resource Consent in place for discharging contaminants/leaching to water and as a result there has been no assessment of the Environmental Impact.

\*7The depth of the quarry below ground level is stated in the IEE as:-

*The gravel is extracted by traditional truck and shovel techniques (see Figure 3-1). Trucks transport the unprocessed gravel from the active face to the mobile crushing plant, which is located close to the working area of the quarry on the pit floor and well away from the quarry boundaries. The crushed gravel is transported to the fixed screening and washing plant by truck, which is located towards the northwestern end of the quarry as shown in Figure 2-3. At present, the quarry is consented to quarry to a maximum depth of 15 m below ground level. CCC is applying to quarry to the maximum depth of the gravel resource, which is estimated to extend 30 m below ground level. No blasting occurs on site*

\*8 Effects of making the top level of the aquifer an open 8Ha pond.

- a. The open surface offers no barrier for present contamination from fuel or hydraulic oil spills from the machinery used. Burst hoses are not uncommon on machinery. Oil leaks also have direct contamination.
- b. Because the open surface of the aquifer is below adjacent ground , the lowered water table attracts cross boundary contamination and shortcuts human waste septic tank discharge directly into the aquifer.
- c. The open surface area of the 18Ha aquifer is in itself a very large loss of water through evaporation, depleting the aquifer.
- d. The open area of the aquifer interferes with the gradient of the aquifer , reducing the top level and reducing the availability to bores and the effective available water depths at the bores.
- e. On completion of mining a disused quarry will attract further fly dumping or contamination from future owners.

\*9 The resource consent obtained in 1998 is in part copied below. The applicant stated that wash water was to be discharged into the Amisfield Creek. We can find no variation to this which allows discharge into the Pisa Aquifer.

## 023237 Decision

Mr Phillips noted that a 2,000 cubic metre sedimentation seepage pond (which will be used to filter any water from the washing process) will be constructed in the creek bed. The water will seep back into the river bed and no discoloured water will be allowed to escape. All plant is to be repainted in bronze green and any container on site will be painted in brown, dark green or grey, and power and telephone lines will be laid underground

The 2016 consent (ORC) to take water is reprinted in part below. Highlighted below are conditions that are not being adhered to. The practices used in the quarry do not adhere to the application statement and conditions of consent .

Our Reference: A919731

Consent No. RM16.108.01

### **WATER PERMIT**

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

Name: Cromwell Certified Concrete Limited

Address: Wright Stephenson House, 585 Great South Road, Penrose, Auckland

To take and use ground water

for the purpose of gravel washing and dust suppression General

7. The consent holder shall take all practicable steps to ensure that:

- (a) there is no leakage from pipes and structures;
- (b) there is no run off of irrigation water either on site or off site.
- (c) a back flow preventer device is fitted to prevent any contaminants from being drawn into the source of the water.

The discharge to water is seen in the soakage ponds. The photo is taken from the Council recommending Report. The main pond is the Aquifer or close to the Aquifer and the photo demonstrates the contamination. The recommending report fails to identify that the settling ponds are a waterbody sitting at the Aquifer level and that the detection limit of 3kg/m<sup>3</sup> has not been reached when the photograph shows silt banks.

*The applicant wishes to replace RM16.108.02 due to an increase in the discharge of water. The contaminants in the discharge will be naturally occurring silts and sands from the washing of the gravel, and the majority of the sediment will be removed from the water column by settling in the pond and then by the filtering process as the water moves through the gravels*

*limits have been imposed for total suspended solids on the previous consent, however the latest monitoring results dated November 2020 shows the detection limits of less than 3 g/m<sup>3</sup> have not been exceeded. Likewise, previous monitoring results have also not exceeded the detection limit. This indicates that the soakage ponds are performing as expected. The increased discharge is not expected to affect the capacity and performance of the soakage ponds. Contamination of groundwater from the discharge is expected to be no more than minor, provided that the applicant continues to maintain the soakage ponds and prevent overland flow to any surface water body.*



\*10 This practice is part of the present application with part of the submission reprinted below

#### 2.2.14 Discharge contaminants (sediment) to land

The applicant proposes to discharge contaminants to land in association with washing/ screening aggregate and dust suppression (currently authorised under Resource Consent RM16.108.01). Water that is not lost directly to ground or via evapotranspiration is collected in a soakage pond where fine sediments settle out prior to the water discharging back into the underlying aquifer