

**Memorandum from Irrigation & Maintenance Ltd (designated as an affected party) 16/2/22**

RM20.360.04: Bore Consent

RC200343: Land Use Consent

RM20.360.02: Discharge Consent

RM20.360.01: Water Take

RM20.360.03: Air Discharge Permit

We make the following observations in addition to our original submission and ask that the applicant and Commissioner consider these .

There has been a mass of reports, recommendations and submissions culminating in the sets of proposed consents received on the 8<sup>th</sup> February.

This submitter does not have the resources to consider all the affects of the Consents because of lack of resources but does focus on the affects to the Pisa Aquifer.

We take a step back and précis the recent history of the mining (Quarry) operations.

The applicant has a suite of current Resource Consents for bore, excavations and contaminated water discharge to land. It is an inconvenient truth that the mining operations in recent years have become deeper to the extent that during the present Consent period, the operations have broken through and removed the present natural protective mantle of the Pisa Aquifer and contaminated the Aquifer now .The contamination now has direct contact with the Aquifer both theoretically , visual and practically.

The present proposed application for consents does not recognise Discharges as discharges to water (as described in the Regional Water Plan) but replicates the discharge to land status of the existing consents .While the present application agree on some of the effects, they do not take ownership of the effects, propose practical mitigation or effective baseline monitoring.

By applying for Discharge to Land, the applicant disenfranchises the affected community relying on the aquifer for irrigation and Potable water and restricts the affected parties to those whose volume of take may be affected by the Bore application. The application agrees that there is now a risk and states:- *2. Shallow groundwater in this area is vulnerable to contamination from microorganisms and given the agricultural land use in the catchment it is expected that groundwater samples from bore G41/0111 will not always comply with the microbiological drinking water standards.*

The application fails to acknowledge that the Pisa Aquifer is a sealed aquifer ( Otago Regional Council reports) and that the Quarry operations have excavated the mantle resulting in the mantle reduced from 15m of natural cover

, causing the risk of microbiological and chemical contamination. The groundwater is now exposed to microorganisms and agricultural chemicals because the quarry excavation have altered the natural status.

The application sets the baseline for monitoring at the contaminated present level as opposed to the discharge to land lower level of contamination.

We also comment that the monitoring regime description is verbosely attractive but in practical terms is not productive or effective. The timeframe of the monitoring from contamination to action is many months. Previous testing suggests that there is a natural 2 to 4 weeks period between contamination at the site and contamination at our bore. Sampling is proposed quarterly , a further four weeks reporting before mitigation at the quarry. Further more there is no penalty if the applicant fails to mitigate.

The mitigation proposed- removing silt from the pond indicates to us that the applicant does not have an understanding of the Aquifer. Removing silt build up will cause greater contamination by both increasing turbidity and increasing the pond base permeability. A simple example of this is that open water races leak until the natural silt seals the bottom and sides. The same is with these stilling ponds. Removing the silt will simply increase that contamination rate flowing into the aquifer.

The correlation to this may well be that the present management of the ponds is promoting the silt flushes into our bore. Cleaning the ponds of silt deposits allows a fast flush of fine contamination into the aquifer.

We have proposed to the applicant that the harmful aquifer effects of the proposed consents can practically be mitigated by changing the discharge position to 300m South and discharging at original/present ground level. The proposed application does not incorporate that solution and provides no alternative mitigation for either the contamination of our potable bore, silting of our potable bore or re-silting of our irrigation bore at Mt Pisa Rd. This irrigation bore has a take twelve times the flow of our potable bore and has already suffered extensive damage resulting in costly rehabilitation. The harmful effects to our irrigation bore are not considered by this application because it is designated as a Discharge to Ground . Again our contention is that it should be designated a discharge to Water.

Our memorandum to the Applicant and the Commissioner is that the proposed consents do not address the effects of the discharge, offer mitigation or effective monitoring.



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**Delegated authority from**

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