

Memo

To: Cheryl Low, Environmental Manager, Matakanui Gold Ltd
 From: Jens Rekker, Principal Hydrogeologist, Kōmanawa Solutions
 CC: Matt Dumont, Senior Computational Hydrologist, Kōmanawa Solutions
 Date: 11 September 2026
 Subject: BOGP FTAA Application Processing - RFI-11; Responses to RFI Responses by Other Parties

1 Introduction

Kōmanawa Solutions has been asked for responses to responses received from parties to the Bendigo – Ophir Gold (BOGP) Fast-Track Approvals Act (FTAA) arising from the Panel’s Request for Further Information number 11 (RFI-11).

Kōmanawa Solutions prepared two sets of responses to RFI-11:

- Updated Groundwater Modelling for Bendigo Ophir Gold Deposit, 14/08/2026, Prepared by Kōmanawa Solutions Ltd, Matt Dumont, Zeb Etheridge, and Connor Cleary.
- Report on Compliant Aquifer Test at BOGP Water Supply Bore Field, 17/08/2026, Prepared by Kōmanawa Solutions Ltd, Jens Rekker

This memorandum concentrates on the latter response; i.e., the compliant aquifer test requested by the panel in RFI Question 6. As background to the driving factors for a compliant aquifer test being requested by the panel, the application was for the taking of 110 litres per second (9,504 cubic metres per day) of groundwater from two bores installed in the southeastern quadrant of the Bendigo Aquifer for mine water supply and creek augmentation. A set of aquifer test pumping tests were run on the test production bore in July 2024, but Otago Regional Council (ORC) advised that these did not comply with the ORC guideline requiring that the constant rate test was run at 100% or more of the daily pumping rate sought in the groundwater take consent application for a minimum of 72 hours. This was the main reason for the 2024 test reports not complying with those guidelines.

As part of its response to RFI-11 and MGL’s decision to pause the FTAA application process for collection of further environmental information, MGL commissioned an aquifer test. This entailed engaging SouthDrill drilling contractor and Kōmanawa, plus applying for resource consent to take groundwater temporarily and install two further observation bores to allow a July 2026 constant rate test. The resource consents were granted in early July, observation bores installed and temporary submersible pump installed in mid-July 2026. Flow testing of this test production bore raised the issue that the single production bore would not sustain multi-day pumping at 110 L/s for more than 3 days at a constant rate without risk of the pump sucking air and pumping rate fluctuating (noting that the application sought to use two production bores to achieve 110 L/s). As a work-around, MGL directed SouthDrill to equip the nearby 6-inch diameter observation bore with a 5-inch diameter, 3-phase electrical submersible pump unit to augment test pumping capacity. This allowed the test production bore (400 mm diameter) and co-opted former observation bore (150 mm diameter) to be pumped in tandem at 78.9 L/s and 18.4 L/s, respectively. The combined six-day aquifer test mean pumping rate in late July 2026 was thus 97.1 L/s, which achieved a stable flow averaging 8,391 cubic metres per day amounting to 50,347 cubic metres over the full 6-days of pumping.

Groundwater level drawdowns were observed at observation bore at 75 m, 136 m and 875 m radial distances from the pumped bores centre. The highest quality transient drawdown data was assessed using the 75 m radius observation bore, while separate surface water interference or resolution issues affected data at 136 m and 875 m radii, respectively.

2 Responses Critical of the Compliant Aquifer Test & Other Matters

Responses relating to the compliant aquifer test were provided from the following groups and individuals:

2.1 Otago Regional Council – Consultant Reviewer and Officer

Two individuals for ORC have provided responses to the relevant MGL commissioned report(s):

1. ORC Consultant Reviewer (Groundwater and Geochemistry): Alexandra Badenhop
2. ORC Planning Officer: Shay McDonald

The responses from Alexandra Badenhop and Shay McDonald deal with groundwater resource effects assessment and proposed water consent conditions, respectively.

2.2 Environmental Defence Society

Leanne Morgan provided responses in the form of supplementary evidence. Primarily, Dr Morgan was critical of the conduct of the aquifer test and the lack of extension into a cumulative drawdown effects assessment.

2.3 Counsel for the Trevathan Family

The Trevathan Family in the Lindis Valley raised concerns about poor groundwater quality or mine related contaminants affecting their property and groundwater-based water supplies.

2.4 Counsel for Canyon Vineyard & Thompson Gorge Road Residents

Counsel for Canyon Vineyard and Thompsons Gorge Road Residents, Rosie Hill and Lucy King (Todd Walker), provided a critical response to the compliant aquifer test report under the heading of “Water usage and groundwater take effects”. Further on in the response, on page 5 the response covers “Water usage, effects on groundwater, and dust mitigation”, which is relevant to proposed consent conditions relating to remedial actions in the case of water supply failure.

I respond to those responses below.

3 Otago Regional Council Response

3.1 Consultant Reviewer Comments

The entirety of the reviewer’s comment can be repeated as follows:

“6 Groundwater Take, Bendigo Aquifer

Consent is sought for a take of 110L/s from the Bendigo Aquifer, 6.5 km west of the proposed gold mining site for process water and dust suppression. The aquifer test parameters determined by the original pumping test analysis were $T = 4500 \text{ m}^2/\text{day}$ and $S_y = 0.25$. A longer higher rate pumping test was completed at 97.1 L/s using combined pumping of two bores (80 L/s & 18.7 L/s) for six days. The maximum proposed pumping rate of 110 L/s could not be achieved. Transmissivity was indicated to be between 4100 and 5500 m^2/day with a specific yield of 0.12-0.14. Based on the range of values calculated, the value of transmissivity calculated from the Neuman analysis of the observation bore Obs-2 (75 m from the principal pumping bore) was used. Drawdown in this well was 0.59 m after 144 hours of pumping.

6.1 Drawdown

The revised transmissivity and storage parameters are lower than those previously used in the cumulative drawdown assessment. The report acknowledges that the revised aquifer parameters will result in increased drawdown effect on surrounding bores, but no updated assessment of drawdown effects has been provided. This should be rectified.”

The reviewer correctly notes that the full-rate, multi-day aquifer test in July 2026 failed to achieve the desired 110 L/s but accepted values for transmissivities were reduced by 9%, while specific yield was reduced by more significantly by between 100% and 150%. Furthermore, the reviewer notes the lack of a revised drawdown effects assessment or calculations.

3.2 Response to ORC Consultant Reviewer Comments

3.2.1 Background

It is acknowledged that aquifer tests on the same bore(s) but for contrasting lengths of constant rate and rate(s) of pumping may provide different aquifer properties when analysed with the same methodologies. The July 2024 test pumped 20.67 L/s over 2 days, equating to a pumped volume of 3,572 cubic metres. The July 2026 test pumped 97.1 L/s over 6 days equating to a pumped volume of 50,336 cubic metres, meaning that the pumped volume of the July 2024 constant rate test was only 7.1% of the volume pumped in July 2026. Table 1 compares the two constant rate tests.

Table 1: Comparison of 2024 (2-day @ 20.7 L/s) and 2026 (6 day @ 97.1 L/s) Constant Rate Tests

	9 – 11 July 2024 48-hour CRT	24-30 July 2026 144-hour CRT
Duration (days)	2	6
Mean Constant Pumping Rate (L/s)	20.67	97.1
Pumped Groundwater Volume (m³)	3,572	50,336
Range of Derived Transmissivity (m²/d)	4,508 – 6,580	4,098* - 5,518
Accepted Transmissivity (m²/d)	4,500	4,100
Accepted Horizontal Hydraulic Conductivity (m/d)	250	190
Accepted Specific Yield (%)	25 %	15 % [‡]

Note: CRT = Constant Rate Test. * While a lower transmissivity value of 3,630 m²/d was derived, the more reliably derived 4,098 m²/d is given in Table 1 for reasons provided below. [‡] The specific yield was subsequently adjusted to 10 % following crude calibration within the drawdown calculations and model analysis of the 6-day July 2026 pumping test data.

It should be noted that while the accepted value used in drawdown effects assessment, tended to select the lowest derived transmissivity, the value of was 3,630 m²/d from residual drawdown analysis of secondary pumped bore was in fact the lowest in the July 2026 aquifer test. However, this lower value transmissivity value was discounted as the associated Theis recovery analysis of bore the secondary pumped bore may have violated some of the basic preconditions or limitations due to the close proximity of the primary pumped bore with this larger bore's pumping rate dominating residual water table effect. As a result, the next lowest transmissivity value of 4,098 m²/d as selected and rounded up to 4,100 m²/d.

There is a convention that the lowest plausible derived transmissivity should be used when the derived value is to be subsequently used in drawdown effects analysis. The lower value will produce the lower calculated or modelled drawdowns at surrounding bores.

3.2.2 Explanation and Response

3.2.2.1 Constant Rate Test Pumping Rate

The proposed groundwater take for the MGL mine water supply is proposed to be taken from two bores in dual pumping mode. In the yet-to-be commissioned MGL bore field, two bores approximately 150 m apart would be installed and operated to provide the mine water supply via a pipeline connection to the mine site. The proposed two-bore bore field has yet to be installed but elements of which are currently under construction. Until the bores and power supplies are commissioned, the means for undertaking a long-duration constant rate test were restricted to the capacity of diesel generator to power temporary pumping equipment and the capacity of (the) existing bore(s). A test production bore (CB13/0215) had been installed in June 2024 and used in the 20.7 L/s, two-day constant rate test. This 400 mm diameter bore was capable of brief periods of pumping up to 110 L/s but not multi-day pumping. A step drawdown test on the test production bore (PB-1, CB13/0215) was undertaken on 21 July 2026 in order to determine the ability of this bore to sustain up to a week of pumping above 90 L/s. In fact, it was determined that the safe multi-day constant rate for the bore was approximately 80 L/s. PB-1 will form one of the two production bores used to provide the mine site with water long term.

Rather than abandon the aquifer test due to the lack of time to install a second test production bore and undertake development, a workaround of tasking the former observation bore used in the 2024 pumping tests as a secondary pumped bore was undertaken. The test production bore would pump at ~80% of 100 L/s while the former observation bore would pump at ~20%. This arrangement was implemented by fitting a 5-inch diameter, 3-phase electric submersible pump into Obs-1 (rebadged PB-2 and approximately 13 m to the west of PB-1) and a combined rate of approximately 100 L/s appeared feasible.

MGL has since agreed that the groundwater take consent maximum daily rate may be adjusted downward from 110 L/s towards the constant rate test level achieved in July 2026 pumping test. During the constant rate test in July 2026, the combined test bores ranged between 97 and 98.8 L/s, averaging 97.1 L/s over 6-days. Accordingly, MGL chose to undertake a compliant pumping test with the risk that any approvals decision may include the lesser maximum pumping rate equivalent to 97 L/s, i.e., 8,380 cubic metres per day. Indeed, this was subsequently included in new proposed consent conditions provided to the Panel on 28 August 2026. Higher precision, more accurate hydraulic properties for the southeast quadrant were derived from the July 2026 test data analysis.

3.2.2.2 Drawdown Effects Assessment

RFI-11 (Q6) requested a compliant pumping test but included no mention of a drawdown effects assessment. On receiving the compliant aquifer test report, ORC officers requested an assessment of drawdown effects. A report was provided to MGL at the 11th hour and was regarded by MGL as a draft (too late to be properly reviewed and submitted).

4 Environmental Defence Society (EDS) Response

4.1 Response to EDS Supplementary Evidence by Leanne Morgan

4.1.1 Drawdown Effects Assessment

The EDS supplementary evidence from Dr Leanne Morgan notes in summary, the following:

“17. A proper compliant pumping test has now been done for the Bendigo Aquifer groundwater take, but effects on neighbouring bore owners are still unknown. The revised results point to more water table drawdown. A cumulative drawdown assessment, accounting for other consented takes in the area, is required to determine whether other bore users will be affected, and experts agreed in conferencing it is needed, but it has still not been carried out.”

In the body of the supplementary evidence, Dr Morgan expands on the difficulties that she found with the compliant aquifer test report.

1. The aquifer test failed to achieve 110 L/s and a proximal observation bore was co-opted as an auxiliary supplemental pumping bore.
2. One of the observation bores was also lost from transient curve fitting due to surface water interference effects.
3. Dr Morgan disputed a comment on drawdown extent arising from the revised aquifer parameters on a theoretical basis.
4. No cumulative drawdown effects assessment has been provided.

Each one of these points have a response –

1. The MGL bore field is not yet installed. In July, MGL had as pumping test assets 1 x test production bore and 1 x observation bore. As the test production bore was not capable of carrying the full sought-after 100 L/s a work-around was required, so two further observation bores were installed.
2. Unfortunately, the setting out of observation bore number 3 (Obs-3 or CB13/0263) in middle July 2026 resulted in the bore not being installed in its planned position, including being placed on the banks of Bendigo Creek, which resulted in interflow infiltration intermittently mounding the underlying water table measured at the observation bore.
3. The question of drawdown extent was largely immaterial to an aquifer bounded by basement rock margins and rivers.
4. The question of cumulative drawdown effects assessment is responded to below.

The thrust of Dr Morgan's points was that the compliant aquifer test was still not to a standard necessary to support an assessment of drawdown on surrounding groundwater users. I was struck by the contrast between the standard that Dr Morgan was holding MGL's groundwater take application to, and the standard of pumping tests provided by applicants to support groundwater take consents for irrigation across the Bendigo Aquifer.

Table 2 provides a summary of ORC rated pumping tests provided with consent applications since 2002.

Table 2: Groundwater Takes with recorded Pumping Tests submitted in Support of Consent Applications

Consent Number	Consent Rate (L/s)	Test Type	Obs bores?	Date of Test	Flow Rate	Duration	Ranking: Setup & Report	Ranking of Analysis	Compliant Pumping Test?
RM14.128.01	108	CRT	N	7/04/2014	105	6	Average	Inaccurate	No
2001.928	32	SRT	N	24/09/2001	23	6	Unreliable	Inaccurate	No
2002.318	36	SRT	N	25/04/2002	16	4	Unreliable	Not assessed	No
RM13.038.01	40	CRT	Y	17/05/2007	35.5	24	Average	Fair	No
RM10.340.01.V2	110	SRT	N	15/02/2008	100	24	Average	Marginal	No
RM11.180.01.V1	85	SRT	N	15/03/2011	100	8.1	Average	Not assessed	No
RM12.323.01	35	CRT	Y	28/01/2008	24	12	Unreliable	Marginal	No
RM17.194.01	260	SRT	N	19/05/2014	98	6	Average	Marginal	No
RM18.215.01	15	SRT	N	26/06/2010	15	4	Unreliable	Inaccurate	No
RM13.091.01.V1	110	SRT	Y	28/01/2013	96	18	Average	Not assessed	No
RM24.008.01	12	SPC	N	3/03/2021	18.9	2.5	Average	Not assessed	No
RM17.208.01	40	SRT	N	15/05/2024	25	4	Unreliable	Not assessed	No
RM10.340.02.V2	120	SRT/CRT	N	3/11/2008	120	24	Average	Fair	No
Probably RM14.172.01	90	SRT	N	31/03/2015	103	24	Average	Not assessed	No
No Gw Take Consent required	Nil, ORC SOE Bore	SRT	N	21/05/2021	3.7	4	Not rated	Not assessed	Yes
2001.A30	76.31	SRT	N	11/11/2002	80	4	Unreliable	Inaccurate	No

Note: CRT – Constant Rate Test. SRT = Step Rate Test. SPC = Specific Capacity Test. Ranking = data quality rating for aquifer test implementation, and the analysis of field data.

Of the pumping tests submitted to ORC listed in

Table 2, none of the tests achieved a 'Good' ranking for implementation or analysis of data with many being rated as unreliable or inaccurate, respectively. Furthermore, none of the pumping tests complied with the ORC aquifer test guidelines, except the step rate test by ORC itself for its monitoring bore, despite in some cases being granted consent as recently as 2018 or later. The MGL recent pumping test as a constant rate tests deriving and confirming groundwater properties of transmissivity, horizontal hydraulic conductivity and the storage coefficient of specific capacity would be regarded as fit for purpose and compliant with the ORC guidelines

Dr Morgan laid out that she perceived the groundwater users' effects assessment as lacking rigorous cumulative drawdown assessments, involving the combined drawdown of all Bendigo Aquifer bores modelled at their full allocated rates. I can appreciate the desire to reduce any degree of uncertainty, but ORC practices in reviewing drawdown effects assessments do not extend to cumulative effects assessments. I have been able to find one other instance of drawdown effects assessments for a recent groundwater take consent application of a large groundwater take from the Bendigo Aquifer.

A drawdown effects assessment was undertaken in October 2013 and with reference to Schedule 5B of the Regional Plan: Water by ORC science personnel as no assessment had been undertaken by the applicants, H M & K A English (Consent RM13.091 to take groundwater at a rate of 96 L/s). The assessment used the data of a step rate test conducted by McNeill Drilling to derive an aquifer transmissivity. The drawdown effects assessment then used an assumed specific capacity value and the Theis Equation to calculate estimated 150 day drawdown at the rate of 96 L/s. Further to the drawdown calculations as surrounding groundwater users who had written in opposition to the proposed take, estimation of the residual bore freeboards taking into account self-induced drawdown at each surrounding bore was also undertaken. This extension of the assessment experienced difficulties due to lacking data for bores in terms of their specific capacity and pump unit depth. The consent was recommended for grant by the hearing panel convened to hear the application. The same groundwater consent was more recently increased to 110 L/s without requirement for a further pumping test or drawdown effects assessment. To my knowledge, it has never been the policy or the practice of ORC to require cumulative drawdown effects assessment in the Bendigo Aquifer or anywhere else in Otago Region.

18. *"The conditions circulated on 28 August 2026 make some improvements, but significant gaps remain. A new process has been added to protect bore owners near the Bendigo Aquifer take, but the one-kilometre notification radius was not worked out using the method Otago Regional Council prescribes. Using that method gives a larger area. The process is also reactive; it only starts once a bore owner finds they can't access their full water allocation and reports it."*

It should be noted that the ORC Schedule 5B of the Regional Plan: Water, 0.2 metre drawdown threshold relates to a threshold for consideration in a non-notified consent process. The FTAA Bendigo – Ophir Gold applications process is arguably notified, so the 0.2 metre drawdown threshold has less relevance. No doubt the 1-kilometre radius was chosen among planners as the distance from the proposed bore field that a reasonable possibility of drawdown effect requiring management within a consent conditions framework. Kōmanawa Solutions' MODFLOW modelling suggests that the 0.2 metre, $t = 365$ -day drawdown contour encompassing most of the Bendigo Aquifer east of State Highway 8. However, all Bendigo Aquifer bores would be capable of accommodating 0.2 metres of drawdown without impact on pumping potential. A radius of 1,000 metres around the proposed MGL bore field is approximately equivalent to a Theis Equation calculated drawdown of 0.63 metres. In my professional judgement, this is a reasonable outer limit to set in the consideration of intensive drawdown management at a precautionary level.

The conditions circulated on 28 August 2026 details a process for the perception of drawdown effect triggering a hydrogeological and water bore condition survey that seeks to confirm the cause and effect of the MGL bore field within a 40-day timeframe (since reduced to 20-days in the 14 September 2026 version of the conditions). This would be followed by the sharing of remedial options for preventing any repeat of the loss of allocated water resources.

5 Trevathan Family Response

5.1 Response of the Trevathan Family to RFI-11 Reports

The Trevathan Family through counsel expressed concerns relating to groundwater quality in the Lindis Valley setting of their properties.

“33. That evidence indicates that the fundamental questions about the risks to groundwater remain outstanding with the information provided by the Applicant in RFI11 leaving a number of significant unanswered questions regarding the environmental risks of the project. It now appears likely that there will be contaminant exceedances at key monitoring locations. There remains a lack of clarity on what the effects of that may be on the aquifers, but the RFI11 response suggests that water quality will be affected both with respect to domestic supply and irrigation uses. This is discussed in the evidence of Ms Webster-Brown.

34. For the Trevathan’s this is a significant concern. If their domestic and livestock supplies are contaminated that will give rise to significant effects on them, and their business. It may give rise to adverse health effects. A partial response to this has been their request for specific insurance.

35. They also seek that additional ground water monitoring bores are installed along their boundary so that they can have confidence that the water traveling into the ground under their property and relied upon by them is good quality.

36. Beyond that they simply seek to reinforce their concern regarding this issue and ask that the Panel carefully evaluate the evidence presented to it, which is trite to say.”

5.2 Response to Trevathan Family Concerns

The proposed conditions of consent require a series of groundwater performance and compliance monitoring bores:

Table 3: Summary of Shepherds Creek Catchment Water Quality Monitoring

Groundwater Monitoring Bore	Location	Distance Downstream of the Terminus of Shepherds Valley Fill
GW-3 Bore	Shepherds Creek Gorge floor	200m
Surface Water Compliance Monitoring Site: SC-01	Shepherds Creek Gorge floor	475m
GW-2 Bore	Immediate exit of Shepherds Creek Gorge adjacent SC-01	775m
GW-1 Compliance Bore	Rabbiters Hut	925m
GW-22 Bore	Adjacent wastewater field	2,100m
GW-10 Bore	Adjoining Ardgour Valley Aquifer	3,200m

Four groundwater monitoring bores are placed to intercept groundwater in the various gravel and weathered schist deposits along the lower Shepherds Creek Valley, as shown in Figure 1. The Trevathan property boundary is 4,500 metres from the downstream of the terminus of Shepherds Valley Fill. The approximate centre line of groundwater paths for the Shepherds Creek alignment is sketched, alongside the location of the Trevathan properties as indicated in their Section 53 comment. ORC maps two registered bores on this property and the bore owner is given as Noel George Trevathan and N Trevathan, the position of which are marked in Figure 1.



Figure 1: Location of Shepherds Creek catchment groundwater monitoring bores, plus SC-01

The Trevathan Family response requests that “additional ground water monitoring bores are installed along their boundary so that they can have confidence that the water traveling into the ground under their property and relied upon by them is good quality.” The Trevathan property is across the Ardgour Valley Aquifer (AVA) and parts of the Lindis Alluvial ribbon Aquifer (LARA) as mapped by ORC. These aquifers are composed of sandy gravel. On either side of the Ardgour Road the depth to the water table is shallow to moderately shallow, between 3 – 14 metres below ground. The gravels are highly permeable and porous, allowing creeks such as Shepherds and Dry Creek to pass underground, for other than flood conditions.

Kōmanawa Solutions has characterised the groundwater around the Trevathan Family properties in 2025 (Dumont & Rekker, 2025). Among the groundwater modelling simulations was the extent to which Shepherds Creek groundwater would penetrate the Ardgour Valley Aquifer and Lindis Alluvial Ribbon Aquifer on the way to seeping through the bed of the Lindis River, as plotted in Figure 2, Figure 3 and Figure 4.

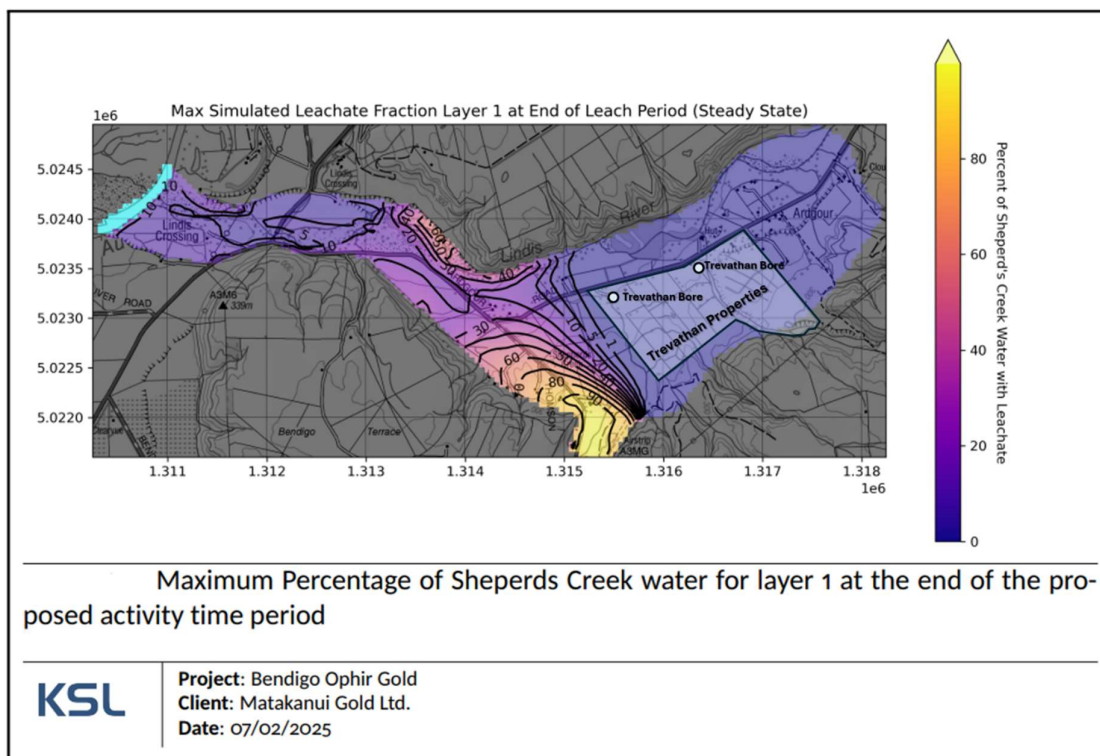


Figure 2: Modelled maximum percentage of Shepherd's Creek water in the Lindis alluvial aquifers, Layer 1

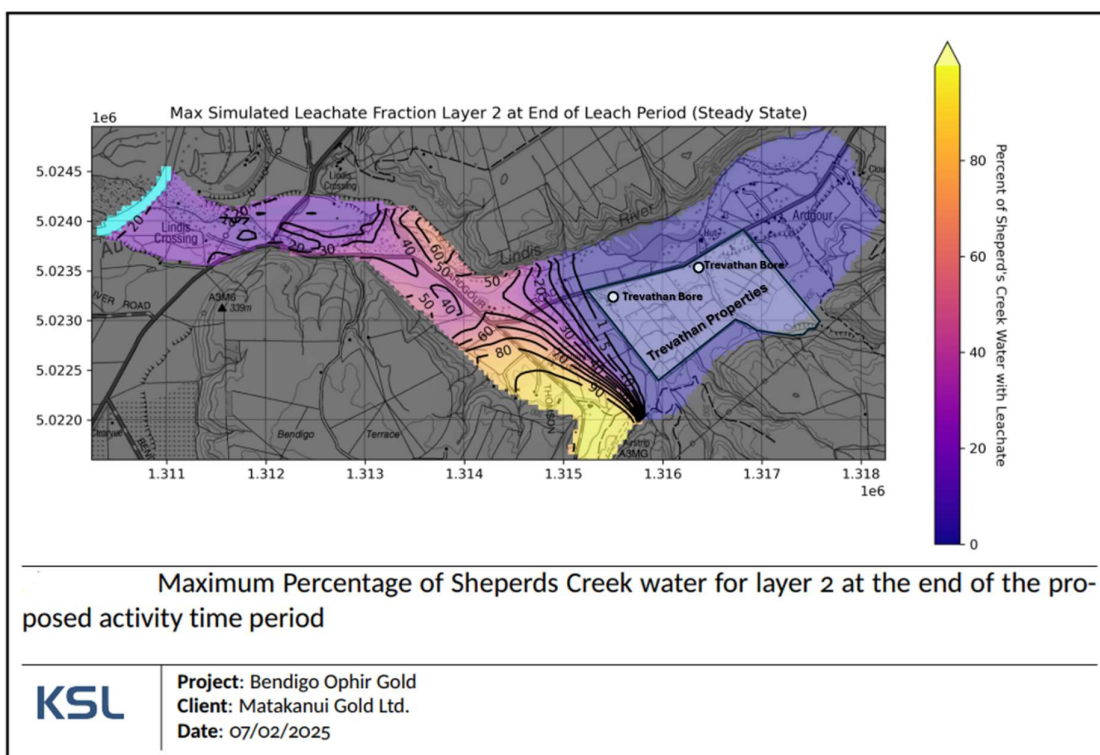


Figure 3: Modelled maximum percentage of Shepherd's Creek water in the Lindis alluvial aquifers, Layer 2

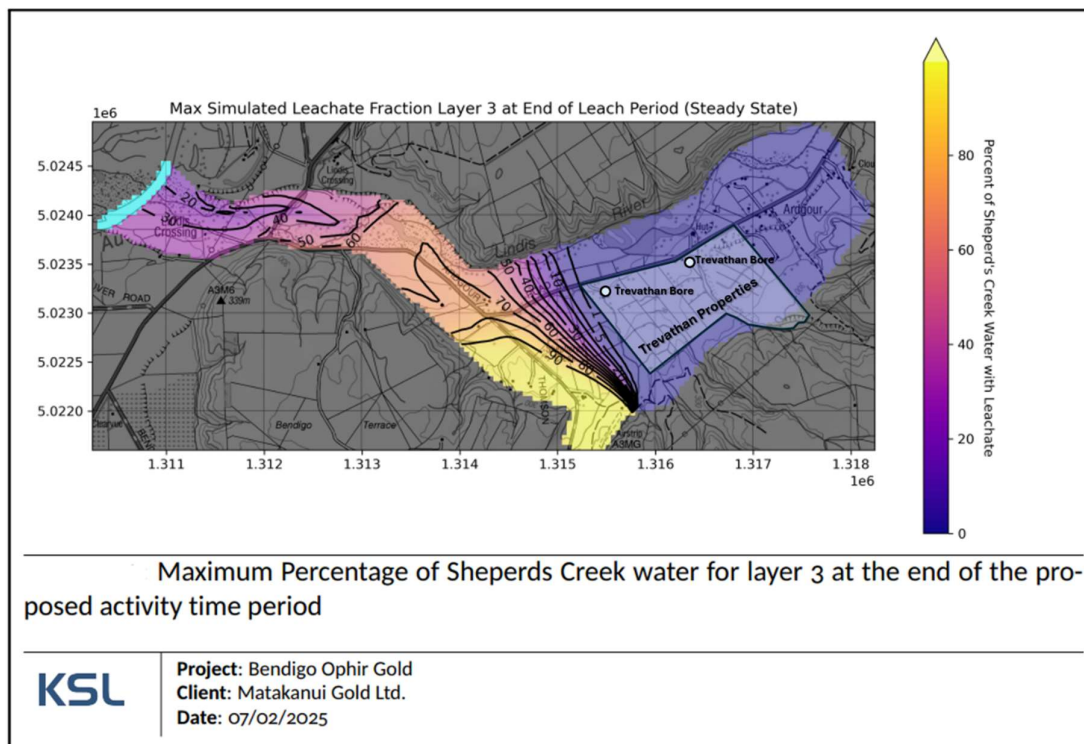


Figure 4: Modelled maximum percentage of Shepherds Creek water in the Lindis alluvial aquifers, Layer 3

The three groundwater model realisations covering all depths of the AVA and LARA each indicate that less than 1% of Shepherds Creek groundwater would cross the Trevathan Family property boundaries and towards the closest Trevathan bore, G41/0152. The mechanism for the low percentage groundwater origination from Shepherds Creek was attributed to the contributions of Lindis River, Dry Creek and Land Surface Recharge displacing Shepherds Creek derived groundwater downstream in the direction of Lindis Crossing. Therefore, the risk of Trevathan Family groundwater being materially affected by Shepherds Creek groundwater or surface water is low.

Thus, the string of surface water compliance at SC-01, groundwater compliance at GW-01, groundwater performance monitoring at GW-02 and GW-10 combined to provide adequate groundwater quality monitoring for the Ardgour Valley Aquifer. As the Trevathan Family properties' groundwater resources are demonstrably influenced by the water quality of the upstream Lindis River and Dry Creek, each unaffected by the Shepherds Creek catchment, the Trevathan Family's request for installation and surveillance of boundary groundwater monitoring bores is not justified.

6 Canyon Vineyard & Thompsons Gorge Residents

The relevant and specific criticisms in the response of the counsel for the Canyon Vineyard & Thompsons Gorge Residents relate to the following:

- That the compliant aquifer test was performed in winter rather than in the driest, lowest groundwater conditions with "peak summer drawdown".
- The results of the compliant aquifer test.
- The conditions of consent proposals for protection of groundwater users' access to their allocated groundwater supplies.
- The ability for MGL to continue operations requiring groundwater supply, other than for dust suppression.

6.1 Response to Canyon & TGR Concerns

6.1.1 *Aquifer Test during Peak Summer Conditions*

Aquifer tests are generally undertaken to derive aquifer hydraulic properties, this case transmissivity, horizontal hydraulic conductivity and storage coefficients. The undertaking of aquifer tests in Otago within the permitted activity rule for 'down-hole testing' (Rule 12.2.2.3) is specifically conditioned to exclude an adverse effect on surrounding groundwater users, i.e., "Condition b) No lawful take of water is adversely affected as a result of the taking". Furthermore, when MGL applied for the temporary groundwater take consent to authorise the compliant aquifer test, the term of the consent was set at 13 October 2026, so that testing could not extend into a period when frost-fighting or irrigation could be anticipated to have commenced.

6.1.2 *Results of the Aquifer Test*

The Canyon and TGR response relating to the compliant pumping test and the inference that the radius of influence within the test report of "catastrophic" outcomes for the Bendigo Aquifer is misguided. Reference to the original groundwater effects report (B.02) reveals this is not the case. Section 5.3.1.3 of the B.02 document relates the Theis Equation calculations of arising drawdown effects to the capacity of surrounding bores to absorb the additional drawdown of the MGL bore field, finding no cause for surrounding groundwater users' access to their allocated water resources to be curtailed. While the compliant aquifer analysis reported the selection of the most conservative transmissivity of 4,100 square metres per day, this value was only 9% lower than the value of 4,500 m²/d used in the 2025 assessment within document B.02. Accordingly, no significant change to the conclusions with the original groundwater take drawdown effects assessment arises.

6.1.3 *The Conditions of Consent Proposals for Protection of Groundwater Users' Access to Water*

The rationale for the hydrogeological assessment being set to a maximum of 40 days is related to the time-consuming nature of the tasks in undertaking a survey and preparing such a report. This timeframe has since been reduced to 20 days.

6.1.4 *Discontinuation of Groundwater Take*

I am not aware of any proposed consent conditions that require the discontinuation of the proposed MGL bore field groundwater taking for the duration of the hydrogeological survey, reporting and remedial actions.