

Before Independent Commissioners appointed by the West Coast Regional Council

In the matter of the Resource Management Act 1991 (**the Act**)

And

In the matter of an application for resource consent under sections 88 and 127 of the Act

And

In the matter of Discharge to land consent (RC-2024-0122) and variation of resource consent (RC2021-0097-V10) to enable the exercise of the discharge consent where that could lead to the discharge of contaminants off-site at Taylorville Resource Park, Taylorville.

Summary of evidence of Richard Griffiths for Taylorville Resource Park Limited

Dated: 3 September 2025

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Summary of Richard Griffiths:

1. From June 2024 onwards ENGEO have had an engagement with the applicant to oversee compliance monitoring and develop technical input to support this temporary discharge consent and wider comprehensive consent for increased operations.
2. In order to support the temporary discharge consent, ENGEO prepared a hydrogeological assessment report informed by a range of data sources:
 - 2.1. Ground investigations completed over several stages by multiple consultants
 - 2.2. Ongoing discharge monitoring
 - 2.3. Surface water sampling of Noname Creek, the roadside drains and downgradient
3. The objective of the assessment was to inform feasibility of a temporary leachate discharge to ground, to help alleviate capacity issues for leachate retained in ponds collected from the current operational and closed cells.
4. To inform our risk assessment, a conceptual site model was developed to determine likely downgradient receptors that could be at risk from inadvertent discharge from the site. The CSM determines that the most likely pathway for water discharged to ground will be horizontally through upper gravel layer, discharging into drains on Taylorville Road which find their way to Grey River via connecting tributaries.
5. The CSM informed probabilistic modelling of known contaminants based on direct measure of surface water in retention ponds on site which contain a dilute treated leachate. The models predict that, for contaminants presenting health or ecological risks and exceeding ambient groundwater conditions, the concentrations leaving the site will have sufficiently mixed back down to ambient conditions and below safe risk thresholds.
6. Our models in the hydrogeological assessment report are based on a 200 m setback from receptor, however subsequent re-calculations made on the basis of 100 m (which other experts will not have had a chance to review) following caucusing indicate this also to be the case.
7. The evidence presented acknowledges that contaminant flow through the underlying Kaiata Mudstone towards the Grey River terrace (and the town supply) is highly unlikely. This is on the basis that the mudstone has a permeability in orders of magnitude less than the overlying gravels, forcing water to flow preferentially towards surface water bodies.
8. The evidence recommends an adaptive monitoring programme to ground truth and validate probabilistic models, while offering opportunity to prescribing appropriate actions to monitor and assess ongoing risk, and indeed terminate the proposed activity where a viable off-site effect was likely to occur.

Consideration of Evidence by Others

9. I have considered further the evidence by Mr Carl Steffans of PDP, representing WCRC, and Natalie O'Rourke of Tonkin & Taylor (representing GDC). I thank Natalie and Carl for their considerations and feedback. The points they raise provide a good basis for what I agree will be required to achieve the wider comprehensive consents.
10. We consider the work completed on site, working towards the comprehensive consent, to be in progress, and with the applicant engaged with a programme of continuous improvement to ensure on site data quality accurately monitors site performance and assess risk.
11. Natalie and Carl's evidence raises attention to data uncertainty and reliability in informing the risk models. I consider on the basis of the work completed to date, which is empirically informed and peer-reviewed, that the risk associated with the proposed discharge to off-site receptors remains low. It's important to recognise that any data models carry some level of uncertainty, which is why we advocate for a robust monitoring and response plan as a safety net.
12. Acknowledging these considerations we propose a more robust version of the discharge monitoring plan in the conditions than was previously released last week – herein referred as a Groundwater Discharge Monitoring and Response Plan.
13. This plan includes provision for a minimum four week period of pre-discharge baseline sampling to improve our understanding of ambient conditions, leachate quality and which will include a more comprehensive range of contaminants beyond what has currently been reported.

Expert Witness Caucus – 1 September 2025

14. Natalie and Carl met with Sean and I at caucus on 1 September and I thank them for their time and engagement. At the caucus it was broadly agreed that:
 - 14.1. Whilst not excluding ecological amenity, the town supply is recognised as the most sensitive receptor in the receiving downgradient catchment.
 - 14.2. With consideration of the town supply being across gradient than prevailing conditions, there remains some potential for groundwater to flow further to the south in response to mounding effects.
 - 14.3. If there should be some continued focus on surface water, this should be given towards the easternmost culvert along Taylorville Road, which drains to Noname Creek 2.
15. While we did reach a consensus on some issues, they both reiterated their positions, which broadly match the scope of their evidence. Fundamentally we believe the key points of disagreement arise from:
 - 15.1. The possible presence of fractures within the mudstone conveying water from beneath the site to the town supply, and

- 15.2. Uncertainty of water quality conditions proposed to be discharged, incorporating additional contaminants of concern not investigated to date and lack of adequate baseline.
16. On behalf of TRPL we put forward a revised condition for the Groundwater Discharge Monitoring and Response Plan, with more detail regarding a baseline assessment and what this might look like.
17. We collectively agreed that if the consent was granted that a condition similar to that proposed would be workable, however we ran out of time to fine tune the detail. We would anticipate this can be resolved with more time after the hearing.

Conclusions

18. For there to be a viable risk associated with contamination, we need to go back to the conceptual site model and demonstrate a complete contaminant source-pathway-receptor linkage relationship.
19. With this in mind, we continue to recognise the town supply as being the clear and most significant receptor in proximity of the site and the principal concern by both WCRC and GDC.
20. In terms of a viable pathway for this temporary discharge, its difficult to justify one that viably transmits contaminants of concern to downgradient receptors at risk levels. Water from the discharge will preferentially flow through the gravels and enter the roadside drains where it will dilute through multiple phases.
21. Should a fracture zone exist within the mudstone, its ability to transmit water would be significantly constrained and the contaminant load associated with a temporary discharge would be negligible.
22. It's equally important to understand that we are not envisaging a situation that we have a source of contamination exiting the site. This is a diluted leachate that will be sufficiently attenuated through dispersion and mixing to a level that that water associated with the discharge will not be allowed to leave the site at risk levels.
23. The work completed to date is commensurate to the level of risk posed by this temporary discharge. While valid points regarding uncertainties in data have been raised, this should not be allowed to undermine what the consent hopes to achieve; a proactive, practical and sustainable solution to manage what is in effect a legacy problem.
24. Our proposed Groundwater Discharge Monitoring and Response Plan represents an effective and adaptive tool to reduce risk arising from data uncertainties, and will include establishment of baseline conditions and provision to proactively manage any effects before risk levels are realised.
25. The plan acknowledges and addresses the perceived gaps, particularly contaminants of concern not currently being covered by testing to date. If it appears that

contaminant levels are trending towards an exceedance of pre-agreed discharge limits, discharge will not occur until something has been done that addresses it.

26. Should this consent be granted we want to continue working proactively and collaboratively with WCRC and their technical specialists to ensure the best possible outcomes are achieved, this is recognised through the proposed conditions, which include an established hold point for approval by WCRC prior to discharge arising.

Dated: 3 September 2025

Signed:



Richard Griffiths