

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.

Joint witness statement for Ecology

Dated: 1 September 2025

Joint witness statement

Introduction

1. A conference of the Ecology experts was conducted on Monday 1 September 2025. This joint witness statement has been prepared to clarify:
 - 1.1. The issues/matters on which the expert witnesses agree;
 - 1.2. The issues/matters on which they do not agree and the reasons for their disagreement; and
 - 1.3. Any proposed measures that might assist to resolve issues/matters of disagreement.
2. The participants were:
 - 2.1. Laura Ellen Drummond, Biosearches
 - 2.2. Jarred Bradley Arthur, Pattle Delamore Partners
3. In preparing this statement the experts have reviewed and agree to comply with the Code of Conduct for Expert Witnesses contained in Part 9 of the Environment Court Practice Note 2023.

Matters discussed

4. The following matters were discussed:
 - 4.1. existing ecological values of receiving environments; and
 - 4.2. potential and actual ecological effects on surface water environments.
5. Existing ecological values

Points of agreement

- 5.1. We are in general agreement that, to the best of our knowledge, the outlay and flow paths of surface waterbodies as depicted in Figure no. 2 (sampling locations and cross sections) of the ENGEO memorandum (dated 17 March 2025) are accurate. Specifically, there are three distinct streams being Noname Creek, Grey Tributary and Noname Creek 2 (as

well as associated roadside drains). Jarred Arthur has not visited the site in person, but will do so prior to the hearing.

- 5.2. Noname Creek 2 has not been ecologically surveyed and values are not well understood. This was because original hydrogeological modelling by ENGEO showed that groundwater pathways from the disposal area did not go towards this waterway at the time of the ecological site assessment by Laura Drummond.
- 5.3. The ecological values of Noname Creek and Grey Tributary have been revised. We agree that each waterbody has moderate values using the criteria set out in EIANZ guidance and based on habitat, macroinvertebrate and known fish values.
- 5.4. There are potential barriers to the upstream passage of some fish species into the Grey Tributary and Noname Creek from the Grey River. However, in the absence of a targeted fish passage assessment, there remains uncertainty about how significant these are for preventing indigenous fish species. In particular, the upstream passage of climbing fish species that can be very apt at migrating structures or steep inclines (e.g., banded kokopu, kōaro, eels and lamprey).
- 5.5. The fish survey conducted in October 2024 was commensurate with that generally used as rapid scan for species presence. There is potential that this assessment underrepresents the value of the fish community present in the streams given the proximity of the site to the coast.
- 5.6. Macroinvertebrate survey results are an accurate representation of stream benthic invertebrate communities. Specifically, Noname Creek has a community representative of pollution-sensitive taxa, and Grey Tributary a community representative of a sediment-dominated river bed.
- 5.7. Roadside Drains contain negligible ecological values based on Laura Drummond's site visit and associated photographs.
- 5.8. We acknowledge that there is the presence of riverine wetland systems downgradient of the landfill and proposed disposal to land area. These wetlands are mostly associated with the floodplain of the Grey River and Grey Tributary. The values of

wetlands have not been robustly assessed, but the evidence of Laura Drummond has noted that these environments are ecologically significant under the West Coast Regional Policy Statement.

Points of disagreement and reasons

- 5.9. Both parties are in general agreement with the revisions to stream ecological values provided by Laura Drummond in her evidence (see paragraphs 5.1 – 5.8 above). The value of fish communities may be underestimated.
- 5.10. There are no outstanding disagreements noting that Jarred Arthur has not yet been to site but will do so prior to hearing.

Measures that might assist resolving issues/matters of disagreement

- 5.11. There are no outstanding disagreements between the parties, however it is acknowledged that there are uncertainties about the extent of values in Noname Creek 2, and the significance of fish barriers and consequently fish values in the waterways.
- 5.12. In respect to 5.2, conditions of consent could include requirements to monitor values and/or water quality in Noname Creek 2 and other receiving waterbodies. This is subject to ongoing hydrogeological discussions and any likelihood that contaminant fate is towards the surface water catchments (see paragraph 6.5).

6. Potential and actual ecological effects

Points of agreement

- 6.1. There is general agreement that potential adverse effects are likely limited to those relating to water quality impacts resulting from groundwater contaminants arising in surface waterbodies.
- 6.2. We acknowledge that, to date, there has been uncertainty and/or disagreement between hydrogeologists around potential groundwater mounding, contaminant pathways, and resulting groundwater/surface water quality effects from the proposed discharge to land.

- 6.3. To adequately address questions on potential effects on surface water ecosystem values, both ecologists require some form of agreement or shared position between groundwater experts. This will aid us to form opinions and, if possible, come to a shared agreement on effects to ecology.
- 6.4. We are of a shared opinion that, given surrounding stream environments have moderate ecological values, receiving water quality should not degrade attribute bands as set out in the National Policy Statement for Freshwater Management 2020. Likewise, resulting toxicants in receiving surface waters should be within 95th percentile protection concentrations as per Australian and New Zealand Guidelines for Fresh and Marine Water Quality.
- 6.5. We agree that monitoring of surface water bodies to monitor and manage effects on ecology may be a useful inclusion in the conditions of consent. However, this is subject to further discussions between hydrogeology experts on contaminant pathways and timelines, and the overall duration of the consent.
- 6.6. We are uncertain how sensitive the floodplain wetlands (see Section 5.8) are to potential contaminant discharges from the proposed disposal area. However, we consider that contaminant effects would likely be commensurate with any water quality impacts modelled to occur on the Grey Tributary. Wetland effects may require additional consideration or assessment if an effect is found to be likely on the Grey Tributary due to their hydrological connection (subject to the opinion of hydrogeologists).

Points of disagreement and reasons

- 6.7. As it currently stands, each party does not formally have any disagreements around potential or actual effects of the proposal on surface water ecosystems. However, we wish to highlight that the evidence of each ecologist, to date, has come to different conclusions. These differences in opinion are due primarily to the different hydrogeological information sources/opinions that each piece of evidence was based upon.

- 6.8. In conclusion, ecologists require greater certainty in groundwater contaminant pathways and loading to surface water systems before forming individual positions on the extent and magnitude of ecological effects in receiving environments.

Measures that might assist resolving issues/matters of disagreement

- 6.9. Agreement, or a shared position, between hydrogeologists will provide greater certainty for ecologists to form individual opinions on potential and actual impacts to the ecology of downstream receiving environments.

Date: 1 September 2025

Signatures:



Laura Ellen Drummond



Jarred Bradley Arthur