

APP-20222055

Summary of evidence by Mark Hamer 4/07/2023

1. Please take my evidence as read. However, I will summarise the main points of my ecological review.
2. I skip to point 8 of my evidence and reiterate the in the applicants AEE No information was supplied on surface water ecological values or impacts.
3. However, 4 threatened native fish may be present based on a desk desktop review of New Zealand Freshwater Fish Database records from within a nearby radius and upstream of the proposed site.
4. Of these 4 Gollum Galaxias are likely to be present, Lamprey could be present, Longfin eel are likely to be present and torrentfish are unlikely to be present.
5. The way in which increased nutrient levels effect stream ecology is by increasing algae, aquatic plant and cyanobacteria growth, this in tern alters the macroinvertebrate community found shifting from healthy communities dominated by mayfly, stonefly and caddis flies to poorer communities that dominated by worms, snails and chironomid fly larvae.
6. Based on information heard today and in the absence of confirmed stream ecological or fish assessments by the applicant, if the consent was to be granted, I would recommend to minimise adverse cumulative ecological effects particularly from sediment and nutrients the following.
7. Further mitigations to that proposed including; extending the very limited riparian plantings to all of the waterways to provide better fish habitat with shade and a supply of food, you could plant just the northern sides of the east/west running waterways.
8. Extend proposed sediment retention bunds to all sub-catchments across the farm rather than just the approx. 63 ha proposed. This could potentially be undertaken prioritising cropping areas first.
9. Prior to the 3 inline stream sediment traps being installed fish recovery should be undertaken to collect and remove any gollum galxias, longfin eel or lamprey present and release them upstream of the works.
10. The points above should influence any proposed mitigations and consent conditions if granted.
11. In response to questions from the commissioners I also stated that the native fish would be just hanging on rather than thriving in these heavily modified watercourses.