dBEFORE THE COMMISSIONER

IN THE MATTER OF the Resource Management Act 1991

AND

IN THE MATTER OF Proposed Plan Change 7 to the Ashburton District Plan

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STATEMENT OF EVIDENCE OF MARK JAMES TAYLOR
(ECOLOGY)
For CONISTON PARK LIMITED

Dated 1 December 2025

Introduction

1. My full name is Mark James Taylor. I am an ecological consultant in respect to aquatic values. I hold the qualification of a Bachelor of Science (Zoology).

2. I have 41 years' experience in aquatic habitat assessment, firstly nine years with MAF Fish (Ministry of Agriculture and Fisheries, Fisheries Research Division), followed by eight years with NIWA (the National Institute of Water and Atmospheric Research) and since 2001, within my own company, Aquatic Ecology Limited (AEL).

3. I, and my colleagues at Aquatic Ecology Limited, have many years' of experience in Plan Change Applications from either rural or in this case lifestyle residential (Residential D) to medium density Residential C, including green-field surveys, wetland assessments, and eco-hydraulic modelling, and experience in waterway naturalisations from their former aligned states. However, we have also worked with civil construction companies for the translocation of fauna away from civil works, and local governments on resource surveys.

4. I am a member of the Limnological Society of New Zealand (now New Zealand Freshwater Sciences Society), and was member of the Styx River Living Laboratory Board of Management (2002-2014). I have sat on ECAN technical panels involved in providing advice on minimum flows for waterways in the Ashley, Halswell and Ellesmere catchments (2001-2005).

Code of Conduct

5. Although this is a Council hearing, I have read the Code of Conduct for Expert Witnesses (contained in the Environment Court Practice Note 2023) and I agree to comply with it. Except where I state that I rely on the evidence of another person, I confirm that the issues addressed in this statement of evidence are within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from my expressed opinions. My qualifications as an expert are set out above.

6. In preparing my evidence, I have reviewed:

   a) The s.42A report prepared by the Council officers, including an internal review of AEL's ecology report by Dr. Christian Chukwuka (App. 5).

   b) The urban design evidence by Anne Eleanor Wilkins

   c) The submissions and further submissions.

Scope of Evidence

7. In April 2024 I, through AEL, was engaged by David Harford Consulting Ltd on behalf of the applicants, Coniston Park Ltd, to undertake an aquatic ecology survey of the proposed Plan Change Area, which included Wakanui Creek. The waterway is named Wakanui Creek on NZ Map 260 Series BY21 (1:50:000 scale).

8. We evaluated the fish and macroinvertebrate fauna in Wakanui Creek where it flowed through the proposed Plan Change Area. The field team recorded brown trout and upland bully, neither species has conservation status. While upland bully is a native fish, it is very common, its conservation status has been recently elevated from "not threatened" to "naturally uncommon" (Dunn *et al.* 2023). However, this species remains well spread in the middle reaches of Canterbury rivers.

9. There are some options for stormwater disposal but importantly stormwater will be fully treated. Please refer to the Engineering evidence of Mr Selwyn Chang. In summary, stormwater will be managed (treated and attenuated) prior to discharge in accordance with ADCs Global Stormwater consent or in accordance with a specific discharge consent obtained prior to construction. This will include some discharge to go to the water way and potentially discharge to ground subject to approval.

10. We were of the view that some stormwater overflow into the upper Wakanui Creek would not be harmful, and may benefit the trout fishery in this locality. We caught two medium-sized trout in the vicinity. We made some general notes about ideal habitat requirements for the brown trout and upland bullies.

11. Some culverting will be required, and they are expected to comply with regulations set out in the NES-F 2020 (National Environmental Standards for Freshwater 2020).

12. AEL recommended an indigenous riparian zone along both banks of Wakanui Creek, with plantings suggested in Novo's 2023 Urban Design Report. The buffer width is a minimum 5 m from the water's edge in accordance with the Esplanade Reserve requirements in the Ashburton District Plan. . This width, with a high planting density will serve to intercept most of the nutrients, especially nitrogen, before they reach Wakanui Creek.

13. I wish to comment on several assertions by Dr. Christian Chukwuka in his review of our report. These appear as Appendix 5 in the Sec. 42A Officers Report. I disagree with some of the assertions made in his review. He suggests that we may have missed identifying eels due to inappropriate sampling techniques, seasonality, weather conditions, and most boldly, skill level of the AEL team.

14. I assure Dr. Chukwuka, that electric-fishing in wadeable water with moderate water current, is a highly effective means of fishing of all species, including eels and mudfish. The catch of 15 fish of all sizes, using a duration of 12 minutes of electric fishing current, would suggest that the fishing machine, and the AEL team, was effective and efficient at catching and identifying fish. The field conditions were fair, and AEL has caught hundreds of fish in April in the 21 years of AEL's operation, so I am unsure why Dr. Chukwuka believes seasonality issues are a potential problem.

15. We state in our report on the dried state of the lower reaches of Wakanui Creek, which extends for kilometres, and the frequent mouth closure. We have also fished Wakanui Creek previously, at Smithfield Road in 2023, and also failed to identify eels, and just the non-migratory upland bully, the same species we identified in the Coniston Park Ltd proposed development area.

16. In Appendix 5, Dr. Chukwuka also speculates on possible adverse ecological effects of stormwater discharge into Wakanui Creek even though all of the stormwater discharge frequency and magnitudes has not been conducted. These effects can not be predicted at the Plan Change, and most of these can be mitigated with anti-scour, even if they are a potential problem. The speculative remark about increased nutrients associated with Plan Change is unconsidered, especially in regards to the riparian planting proposed (anticipated to be 5 m from top of bank), and that the former runoff from rural stocked land was likely to be high in nutrients, and the riparian strip through the rural landuse land was narrower than 5m (Google Earth).

17. The MCI index was formulated as an index of organic pollution (Stark 1985), and the low values obtained reflect just that, a high level of pollution sourced from rural land use and the presence of farm stock. The discussion regarding sources and affects zinc seems out of place in respect to reviewing AEL's high-level review of the ecology. The sources of zinc are well-known, as our effective means of combating its effects through effective stormwater treatment. Again, detailed stormwater quality and quantity impacts are covered under the operational stormwater discharge consenting in respect to the resident ecological values occurs after the hurdle of Plan Change is crossed. They are not covered at the Plan Change level, because the engineering details are often not available to provide a definitive conclusion.

18. Dr Chukwuka talks about an environmental management plan (often referred to as EMPs), and these too, are developed with the civil contractors during the construction phase/early groundworks consenting. AEL have been involved in contributing to many of these for developments in Mid-Canterbury, but always after Plan Change has been achieved, otherwise the preparation of these sizeable documents are a wasted effort.

19. The Officer's Sec 42A Report, in para 122, also questions the appropriateness of many of Dr. Chukwuka's remarks in respect to consideration at the Plan Change level. It is not that his remarks lack validity in most instances, but that many of the issues raised are required to be considered at a later consenting stage, when more detail is available to provide solutions.

20. With that said, under this proposal, with my current knowledge and significant experience in residential developments, I see no reason why effective stormwater treatment cannot mitigate the change in land use from a Residential D to a Residential C zoning. Particularly so if much of the higher concentrations of urban-based metals, during the “first flush” zinc and copper are exposed to microbial breakdown and assimilation in ground soakage and the riparian buffer strips.

Signed Mark James Taylor, 

References:

Dunn, N. R.; Closs, G. P.; Crow, S. K.; David, B. O.; Goodman, J. M.; Griffiths, M.; Hicks, A. S.; Hickford, M. J. H.; Jack, D. C.; Kitson, J. C.; Ling, N.; Waters, J. M.; Wylie, M. J.; Hitchmough, R. A.; Makan, T. 2023. Conservation status of New Zealand freshwater fishes, 2023. Department of Conservation, Wellington. *New Zealand Threat Classification Series No*. *46*. 66 p.

National Environmental Standards for Freshwater 2020. Resource Management (National Environmental Standards for Freshwater) Regulations. New Zealand Government, Wellington. 60 p.

Stark, J. D. 1985. A macroinvertebrate community index of water quality for stony streams. National Water and Soil Conservation Authority, *Water & Soil Miscellaneous Publications No. 87*. 1–38 p.