Aquatic Ecology

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Jocelyn Lewes

Dear Jocelyn,

Plan Change 81 – Skellerup South Block – s92 response

Para 25. This paragraph confirms that the reviewer agrees that the waterways will be of limited ecological value, but is of the view the waterways may be of some heritage value due to their age, possibly of 40 years or more. This is largely a subjective opinion.

Para 26. I remain of the view that aquatic values in the waterways are likely low, which Dr. Burrell appears to agree. I expect low biodiversity in PC 81 waterway, partly due to the distance from the intake, PC 73 is slightly closer to the intake and biodiversity may be higher here, because most of the species in the Paparua Irrigation network are sea migrants and will occupy habitats further upstream, including PC 73.

It is important to note that the while the drain is being removed from the land block, the fish can be translocated to the edge of the block. Because the new habitat is not tied to function as an irrigation race, it could be constructed with fish refugia and more hydraulic variation to provide an aquatic habitat of a better quality than the linear drain which is currently there. While there is some relatively minor spatial loss of aquatic habitat this could be easily compensated by improving the quality of the remaining segment along the property boundary.

I have not visited the site, but based on my interpretation of the older Google Earth imagery, the drain reach immediately upstream of the terminal soak hole appears to dry, and therefore possibly would not a good candidate for remediation along its course. It appears the soakhole location has been moved around in the block over the years, and this may reflect the changeable nature of the length of surface flow available. I also add that due to prior rural land use, ephemeral waterways can become weedy and stagnant as they dry, forming an unattractive aesthetic in the proposed residential setting.

The naturalisation of waterways to provide superior ecological function is commonplace in New Zealand, and indeed, in neighbouring raceway which flow through residential Rolleston. I agree this has aesthetically, but often ecologically, been successful. But these upstream examples differ from the Holmes Block because they have strong perennial flows compared to the suspected weak ephemeral flow in the Skellerup South Block. Truncating and enhancing the waterway may therefore provide more permanent habitat at its new terminus.

It's important to note that any adult eels, including the longfin eel, a species with conservation status, can be released to Te Waihora, rather than the potential brood stock being doomed to die in the current blind drain without breeding.

In my desktop report, I mention to visiting the site to assess the ecology and flow permanence of the existing raceway. The Applicant appears to be quite open-minded about the fate of the raceway, and additional ecological information may provide some guidance as to its future going forward.

I have read Appendix H from MKT, and I consider that under WM 13.7, relocating fish to an enhanced naturalised habitat, with an indigenous riparian border (P 11.8), is consistent with the Mahaanui Iwi Management Plan (MIMP). However, I await their opinion on the above.

Yours sincerely,
Mark Taylor