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Sonja Nicol
Environment Southland
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Dear Sonja

REVIEW OF EFFECTS OF THE FIORDLAND TRAIL ON WETLAND VALUES

Environment Southland have received a retrospective resource consent application (APP-20191150 W4931) from the Fiordland Trails Trust to modify a wetland due to construction of a multi-use trail on the eastern margin of Lake Manapouri. The trail crosses the wetland approximately two kilometres northeast of Manapouri township. A report accompanying the application states that the wetland is significant in terms of Section 6(c) of the RMA. The report then goes on to say that the effects of construction of the trail on the wetland are very low owing to the small area of wetland affected. Environment Southland required an independent assessment of the likely effects of trail construction on the wetland, which was provided on 26 February 2019 (Wildland Consultants 2019a).

Following this, it was suggested (K. Lloyd, email to Environment Southland, 13 March 2019) that potential fish passage through culverts installed under the trail should be reassessed, a ditch excavated on one side of the formed trail should be filled in, monitoring of the infilled area should be undertaken to check for settling of the substrate (with re-filling if required), and monitoring of subsequent colonisation by rautahi (*Carex coriacea*) should be undertaken. The applicant has agreed to undertake these works and monitoring, and provided photographic evidence that showed fish passage should not be restricted through the culverts. If the infilling work is carried out successfully, this should remedy the adverse hydrological effects on the wetland to the point that they are less than minor.

The residual adverse effects related to the direct loss of wetland vegetation caused by trail construction, and control of willows (*Salix* spp.) upstream of the wetland, and of Scotch broom (*Cytisus scoparius*) adjacent to the trail through the wetland, were suggested as options to mitigate these residual adverse effects (Wildland Consultants 2019b). The Fiordland Trails Trust noted that the willow trees were on private land, creating difficulty for enforcement in consent conditions, and proposed that instead, the Trust would undertake further pest plant management within the wetland as an alternative option to enhance the wetland.

PROPOSED WEED CONTROL

The Trust proposes to control noxious weed species including gorse (*Ulex europaeus*), Scotch broom, and Darwin's barberry (*Berberis darwinii*) in an approximate 2,000 metre squared area centred on the trail where it crosses the wetland, in order to improve indigenous plant dominance within the wetland and adjacent areas. The Trust would also discuss removal of the upstream willow trees with the landholder.

EVALUATION

The proposed weed control would comprise a positive effect on the indigenous wetland vegetation and vegetation on wetland margins. This positive effect should be sufficient to address the residual adverse effects on the wetland. Performance standards, such as post-operational inspection and reporting, should be considered, to ensure the weed control is effective and that it is not adversely affecting indigenous vegetation.

Ongoing discussion by the Trust with the upstream landholder is supported; if this also enabled the upstream willow trees to be controlled, that would be very positive.

CONCLUSION

In our opinion, the residual adverse effects of wetland vegetation clearance caused by track construction can be addressed by the positive effects of weed control over the 2,000 metre squared area centred on the wetland and its riparian margins. Overall, the ecological effects on the wetland should be no more than minor if these actions, and the actions suggested earlier, are undertaken with sufficient care and diligence.

It should be noted that these conclusions are made without the benefit of having visited the site.

Please don't hesitate to contact me if you require further input or discussion.

Yours sincerely

Kelvin Lloyd
Principal Ecologist

REFERENCES

Beale Consultants 2018: Te Anau - Manapouri multi-purpose trail. Ecological assessment of Leg 6 wetland crossing. Prepared for the Fiordland Trails Trust.

Robertson H.A., Ausseil A-G., Rance B., Betts H., and Pomeroy E. In press. Loss of wetlands since 1990 in Southland, New Zealand. *New Zealand Journal of Ecology 43*: in press.

Wildland Consultants 2019a: Review of effects of Fiordland Trail on wetland values. *Wildland Consultants Ltd Contract Report No. 4957*. Prepared for Environment Southland.

Wildland Consultants 2019b: Review of effects of Fiordland Trail on wetland values. *Wildland Consultants Ltd Contract Report No. 4957b*. Prepared for Environment Southland.