



MEMO

TO Shannon Watson
COPIED TO Megan Oliver, Roger Uys, Iain Dawe, Sharyn Westlake
FROM Evan Harrison
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FILE NUMBER

Eastern Bays Shared Path notified consent – Review of Appendix B, Freshwater Fish Passage Requirements

I have reviewed the following report to assessing the impacts of the proposed construction works on the freshwater fish passage requirements:

- Appendix B - Eastern Bays Shared Path: Freshwater Fish Passage Requirements

Below I have split my review into general and specific comments.

General comments

I find the assessment of fish species present and analysis of fish passage barriers appropriate for the purpose of the survey. I agree with the authors' conclusion regarding requirements for pipe extensions and I also agree with the conclusions referring to the potential for the seawall design and outlet level relative to the existing beach level to have potential adverse effects on fish passage if they become perched. The avoidance and mitigation measures proposed are appropriate and I strongly support the need for a freshwater ecologist with fish passage experience to be involved in the design of the outlets.

Specific comments

- The outlet specific assessment approach used by the author is appropriate given the variability between locations. I strongly support the recommendations for modifying the seawall at some locations to allow for fish passage and the need to avoid blockage of outlets by beach nourishment during peak migrations of banded kokopu (locations listed in Table 6 of the report which will require monitoring of outlets during and after construction, and where necessary clearance of gravels and sand to maintain opening especially during migration periods).

- For the 30 Cheviot Road and Lowry Bay South streams I agree that the duckbill valve outlets which have been consented will impede fish passage for habitats present upstream. If possible this structure needs to be reviewed, but I note it may be outside the scope of this project.
- I agree with the proposal that where pipe outlets have both fish and penguin values there is the potential to create a solution that provides for both fish and penguin passage.
- Ongoing monitoring to assess the effectiveness of any fish passage mitigations put in place will be essential for ongoing freshwater fish passage within the area subject to seawall construction.
- The other recommendations noted in the report in relation to ground truthing of GIS layers for waterways and fish surveys in Eastern Bay streams are worthwhile for noting for future work, but do not impede the assessment of potential effects undertaken in this report.