

Speaking Notes for hearing on consent for Cold Gold Clutha to gold dredge in the upper reaches of Mata-au/Clutha River

Resource Consent Application: RM 22-434

Submitter: Marilyn Duxson

Date: 13th November 2023

Thank you for the opportunity to present at this hearing.

My name is Dr Marilyn Duxson, and I live at 413 Maori Point Rd.

Background:

BSc (Hons) University of Melbourne (majoring in Zoology & Botany)

MSc University of Melbourne

PhD University College London

Starting as a Postdoctoral Fellow in 1983, and retiring as a Senior Lecturer in 2012, I was a teaching and research academic at the University of Otago Medical School. I served on many research committees, as a reviewer for academic journals, and published over 40 papers in international journals in addition to supervising many graduate students.

I outline my professional history as evidence that, although not a freshwater scientist, I am well educated in many aspects of biology and accustomed to evaluating the quality of evidence.

In 'life 2', my husband and I co-own Maori Point Vineyard and Maori Point Wines, situated at 413 Maori Point Road, Tarras, which we bought as bare land in 2000. The land is adjacent to the river reserve. The property now includes an 8 hectare vineyard, and a winery with tasting room which attracts both local and international visitors. In addition, we live on the land, and have a separate cottage that is rented as tourist accommodation. Thus we are residents living close to the river, have locals and tourists visiting both the winery and the cottage, who regularly use the river. We also employ up to 10 local workers. For all of us, the Mata-au is an integral part of the environment.

I will now talk to my original submission, which was laid out in 5 points.

- 1) **Potential effects of the dredge on our personal quality of life. &**
- 2) **Effects on experience of national & international visitors**

I strongly disagree with the author of the S42a opinion that the effects on recreational value and the effects on natural character and amenity (discussed in section 6.1S104(1)(a)) from operation of the Cold Gold Clutha dredge working the river along the Maori Point stretch of the Mata- au/Clutha river would be 'no more than minor'.

Although our house does not face onto the river, we clearly hear the river flow from the house on quiet days, as there is no bank, or any solid obstruction to sound between the bend of the river (at the north end of Maori Point Rd) and our house. Noise from the dredge would be much louder than that of the river flow, and would be clearly heard from our house and garden. To live with a constant thrum of industrial noise coming from the dredge would have a major effect on the amenity of the environment in which we live.

I also disagree that the presence of the dredge in the river would not be apparent to many people. Although the river is deeply incised along Maori Point Rd, there is a well-established walking/anglers track along the edge of the river from the north of Maori Point Rd to the boundary of our property; we walk this track every day, as do most visitors to our cottage, and many other neighbours, as well as fishermen. Visitors to the tasting room are invited to picnic by the river. Within the incised environment of the river bank, both noise and fumes from the dredge would be trapped and amplified for these users, and the deep pleasure of the peaceful river and bush would be much degraded. That the view of the river *from the road* is limited is completely irrelevant in this regard.

The number of visitors to the close environment of the river bank is expected to increase substantially with the completion of the approved cycleway along the Mata- au/Clutha river, which will join the existing track, which currently ends just downstream of Luggate, with the track extending from Cromwell to Pisa Moorings.

In addition, with respect to the amenity of the natural environment in which we live, the submitted evidence from Antony Ohau Ward-Holmes makes me aware that extended family and visitors swimming or kayaking in the river and floating down the clear stretches (a daily event in summer), would likely be endangered by the cables anchoring the dredge, if it was working in the Maori Point area. This would be

another significant loss to our enjoyment of life at 413 Maori Point Rd, and obviously includes the threat of death or injury to friends and family.

None of these issues are of 'no more than minor effect' to those of us living and recreating along the river

3. Environmental Risks

On initial reading of the environmental report from E3 Scientific, commissioned by the applicants, I was struck by the apparently slight nature of the evidence they used to draw their conclusions. In response to this, I sought the advice of a qualified and experienced freshwater biologist. I am very grateful to, Dr Roger Young of the Cawthron Institute, for agreeing to present his expert evidence on the nature and biology of the Mata-au/Clutha river and risks to the health of the river, should this consent be granted.

I will just cover a couple more points before handing over to Dr Young.

My original submission voiced concerns about the risk of spread of *lagarosiphon* through the river due to operation of the dredge. I contacted Professor Carolyn Burns, Emeritus Professor of Zoology at University of Otago, who is a freshwater biologist, but specialises in the biology of lakes rather than rivers. Her response is copied below, highlighted in blue.

Hi Marilyn

I'm really not the person to provide an affidavit about *Lagarosiphon* although I do know that the stems are easily broken at nodes and that each internode fragment is capable of rooting and starting a new patch, so that any mechanical disturbance caused by strong currents or strong waves created by winds, jet boats, motor boat propellers, anchors being dropped and retrieved, etc. can lead to stem breakage with the possibility of transport of the fragments downstream. *Lagarosiphon* is also readily transported to new sites around boat propellers, clinging to the hulls of boats, floating in bilge water and clinging to fishing gear.

This information suggests that a dredge, systematically working the river bed over a 7 year period, is likely to accelerate the spread of existing patches of *lagarosiphon* into new potential habitat, both along the river edges and into Lake Dunstan downstream.

The displacement of *didymo* from rocks on the river bottom, and into the free running water is another issue, and one I haven't seen addressed in the submissions and reports I have read. As everyone will know, the river bottom, which was once a wonderful spectrum of rock colours and shapes is now coated in a thick layer of white algae. However, usually there is not a lot of free floating *didymo*. I raise the issue that the action of the suction dredge is likely to displace *didymo* from the rocks passing through, and significantly increase the amount of *didymo* floating down the river. This would be very detrimental to the quality of fishing and swimming in the river, and be very likely to foul jet boat engines. I'd appreciate comment on this from other submitters.

Finally,

4 & 5 On the challenge of this application to the *mauri* of the river; and in support of the cultural assessment submitted by Aukaha

We (my husband and I) wish to strongly voice our support for the protection and preservation of the magnificent Mata-au, and to add our voices to those of Aukaha who speak on behalf of the Ngai Tahu whanau. To quote the submission of Aukaha, "The awa has its own whakapapa, is a source of life and well-being, a wellspring of knowledge, memory and connection, and is a focus for identity" Unquote. This is not a river to be further raped and exploited for a minor commercial benefit to a few people. It has only just recovered from the attacks of the past century. Please let it live in peace.

Nga mihi, thank you for listening to me, and I pass over to Dr Roger Young