

LANDSCAPE MEMO - RESPONSE TO HEARING PANEL QUESTIONS

RC220255 TO CENTRAL OTAGO DISTRICT COUNCIL, RM220834 TO QUEENSTOWN LAKES DISTRICT COUNCIL & RM22.434 TO OTAGO REGIONAL COUNCIL – COLD GOLD LTD

RESOURCE CONSENT APPLICATION FOR SUCTION DREDGE MINING ON THE CLUTHA RIVER/ MATA AU

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INTRODUCTION

1. The hearing panel have requested a written reply to the following questions in regard to the landscape effects relating to the proposed activity.

COMMENT ON ASSESSMENT ABSENT PERMITTED BASELINE

INTRODUCTION

2. I have been asked to assess the effects on landscape character and views and visual amenity of the proposal without considering the permitted baseline.
3. Effects on landscape are the impact on the values of that landscape that arise from change.

'A landscape effect is an outcome for a landscape value. While effects are consequences of changes to the physical environment, they are the outcomes for a landscape's values that are derived from each of its physical, associative, and perceptual dimensions. Change itself is not an effect: landscapes change constantly. It is the implications of change for a landscape's values that is the effect¹.

4. The values pertaining to the Clutha River/Mata Au are outlined in my brief of evidence. The values that will be affected by the dredge primarily generally relate to aesthetics and experiential qualities. These effects generally result from the scale, form, and nature of the activity.

When assessing landscape effects it is also important to note that *'landscape effects are assessed against; the landscape values (embodied in certain attributes), and the relevant provisions (what the objectives and policies say with respect to landscape values, what type and magnitude of development or change in the landscape is anticipated).*²

¹ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022, Page 135

² Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022, Page 136

5. Therefore, even if we set aside any permitted baseline, no landscape is frozen in time. All landscapes change and evolve. This dynamic aspect of a landscape is part of the landscape's character. When assessing the effects of a proposed activity, the manner in which a landscape is anticipated to evolve is therefore important. To consider only the landscape as it exists on the ground today, is not a complete consideration.
6. The objectives and policies of the Queenstown Lakes Proposed District Plan, the Central Otago District Plan and the rules in The Regional Plan: Water all direct that commercial activities, including those specifically relating to mineral extraction and gold mining are anticipated in the Clutha River / Mata Au. However, the magnitude of the proposed dredge exceeds that which is anticipated, without a consent.

EFFECTS ON LANDSCAPE CHARACTER

7. In terms of its impact on the landscape character, *'the character of a landscape is made up of a distinct combination of physical, associative, and perceptual attributes. A landscape's character entails: both tangible and intangible attributes and the attributes in combination (as a whole) and especially the combination that makes a place distinct.'*³ The overall landscape character of the relevant section of the Clutha River / Mata Au is derived from attributes relating to both naturalness and human influence.
8. I consider that the proposal will have an affect the landscape character for the duration of the activity. The dredge is an impermanent feature, both in that it will not be located in any particular stretch of the river for a prolonged period of time and in that no permanent structures are associated with the activity. When mining ceases, the dredge and associated equipment will be removed, and the only remnant will be a slipway that will be very difficult to discern.
9. While mining activity is anticipated within the Clutha River/Mata Au, the size and design of the proposed dredge are not. The proposal will increase human influence and the level of commercial activity within the river corridor throughout the duration of the work. It introduces an additional unnatural element to the river corridor, where human influence is already evident through exotic vegetation, bridges, pylons, pump stations, farm/recreational tracks, and established commercial and recreational activities involving water sports, boating, and fishing.
10. Despite existing human influence, the river possesses a high degree of naturalness marked by clear geomorphology, turquoise water colour, turbidity, and patches of native vegetation along the margins. Introducing a somewhat unusual and large man-made vessel will temporarily adversely affect the natural and aesthetic qualities contributing to the landscape character of the river corridor and its margins, with the impact varying depending on the location.

³ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022, Page 105

11. The character of the river is also informed by human factors, which include a rich history of gold mining in the Clutha River/Mata Au. Visible remnants like tailings along the river convey a part of the history of the river and the broader district. Depending on the observer, the proposal's connection to this historical context may have a temporary positive effect.
12. *'Values are ascribed by people. Even natural values, which may be referred to as 'intrinsic', are ascribed by people'*. Depending on people's values, the dredge may be seen as having both positive and negative effects on landscape character. The adverse effects on landscape character, specifically regarding naturalness and aesthetics, will be somewhat offset by positive effects on associative attributes related to the river's history. Gold mining activities are also anticipated within the Clutha River/Mata Au, as indicated in relevant statutory documents, and therefore form part of the receiving environment. However, I consider that, overall, the degree of adverse effects on naturalness and experiential qualities is likely to outweigh the positive effects. While mining activities are expected in the Clutha River/Mata Au, the scale of the activity must be considered.
13. Adverse effects on landscape character will be limited to a small part of the operational area at any one time and the landscape values of the wider Clutha River/Mata Au will be largely maintained while the activity is carried out. Overall, I consider that the degree of adverse effects on landscape character of the operational area would be low-moderate. The landscape character will be fully restored when the dredging operation ceases. The proposal will not result in any lasting effects on landscape character.

EFFECTS ON VIEWS AND VISUAL AMENITY

14. With regard to effects on views and visual amenity, *'visual effects are a subset of landscape effects. A visual effect is a kind of landscape effect. It is a consequence for landscape values as experienced in views. Visual effects are a subset of landscape effects. A visual assessment is one method to help understand landscape effects.'*⁴ The values that relate to views and visual amenity are described in my brief of evidence. The values of the Clutha River/Mata Au relate to both natural and modified elements which contribute to the values as experienced in views.
15. As discussed in my brief of evidence, the operational area has a high flow, strong current and there is limited public access. As such, it is less frequented by members of the public for recreational use than other more accessible waterbodies in the district. The relevant viewing audiences are outlined in my brief of evidence. Additional viewing audiences were identified in the Peer Review Report by Richard Denney dated 10 November 2023 (**the Denney Report**). Identified viewing audiences include owners and visitors of elevated private properties, and Bowan Road and Trevathan Way.

⁴ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022, Page 135

16. With regard to views from the state highways, my findings remain unchanged. The incised nature of the river is such that views river corridor are very limited. Additionally, views are generally distant the river forms a small part of wider panoramic view and road users are likely to be travelling at high speeds making views fleeting. As such, the likelihood of a user of either state highway seeing or recognising the dredge as an unusual element is very low.
17. Regarding views from Maori Point Road, I consider that in the absence of a permitted baseline the degree of adverse effects will increase from very low to low at most. Again, views are very limited, the river is visible from short stretch of road (approximately 300m). Again, the relevant stretch of river forms a part of wider panoramic view and road users are likely to be travelling making views fleeting. The river is in closer proximity to the road and the dredge may be recognisable in views. However, given, the expanse of views and the recessive nature of dredge I do not consider it will be dominant in views, for the brief time that the dredge may be in this stretch of river. As such, the existing views and visual amenity will be largely maintained.
18. With regard to views from the Clutha River/Mata Au River and its margins, including users of public reserve land, public trails and users of the unformed legal road corridors, the conclusions of my evidence remain largely the same if we disregard the permitted baseline. For the most part, the relevant stretch of the Clutha River/Mata Au is not easily accessible by members of the public. However, I understand that the river is used by a limited number of (generally experienced) people for water sports, fisherman, pedestrians, and cyclists. Both the members of the public and the dredge are transient and adverse effects on views and visual amenity will be limited to situations where the two meet. The transient nature of both the dredge and river users is such that views of the dredge and sediment plume will be very limited. In these views, the dredge and associated sediment plume will likely be seen as a large and somewhat unusual element within the river corridor. In close proximity, the dredge will be highly visible and be at odds with the natural and aesthetic qualities that contribute to the views and visual amenity. However, values are prescribed by people and the given the associative attributes relating to gold mining in the Clutha River/Mata Au, the dredge will not necessarily be offensive. On balance, when considering the transient nature of both the public and the dredge, I consider the degree of adverse effect will range from low to be moderate-high at most depending on proximity to the dredge.
19. With regard to private land abutting the Clutha River, the incised and meandering nature of the river is such that views of the surface of the river are limited. From locations where the surface of the river is visible, the river forms part of wider views that generally comprise improved agricultural land, rural living development and roading with a mountainous backdrop. While the dredge is operational within stretches of river that can be seen from private properties, it will add a somewhat unusual, man-made element to these views. While the dredge is impermanent in views from rural living sites, the views themselves are not. As such, while the dredge is operational in these stretches of river the residents are likely to be more

affected that transient river users. Most dwellings are located on the upper terraces and are considerably setback from the river. However, there are a couple of dwellings, near Bowman Road and River Ridge Road, that are located on the lower terraces in close proximity to the river. As such, the dredge would be highly visible in close proximity in views if and when operational in the stretch of river adjacent to these dwellings and the degree of adverse effect could be up to a high degree. I understand that the applicant is willing to accept the condition recommended by Mr Denney regarding time spent in 250m stretches. I consider with these controls the degree of adverse effects reduces to a moderate or low effect.

CONCLUSIONS

20. If the permitted baseline is not considered, the adverse effects on landscape character during operation would be of low to moderate degree, with full restoration expected upon cessation of the dredging operation. The proposal is not anticipated to have any lasting effect on landscape character. The degree of adverse effects on views and visual amenity varies from very low to high, with rural living properties near the river being most affected during the time the dredge is close to the viewer. There is an opportunity to reduce the degree of adverse effect through consent conditions proposed by the applicant, with those condition effects are within the low to moderate range

CUMULATIVE EFFECTS ON PERMITTED ACTIVITIES

21. I understand that the applicant has the mining rights for the relevant stretch of river, making them the sole lawful entity permitted to extract minerals in the operational area. It is my understanding that, should the consent be approved, the application intends to impose a condition restricting mining activities on the relevant river stretch solely to the use of the dredge. This measure is intended to prevent any cumulative effects.

COMMENTS ON RULE 13.5.1.7 OF THE REGIONAL PLAN: WATER (RPW)

22. I have been asked to look at rule 13.5.1.7 of the RWP and comment on if any points a-j change my opinion on the permitted baseline used in my assessment. This rule provides for suction dredging as a permitted activity with the bed of a river provided:

- *The internal diameter of the nozzle does not exceed 150 mm;*
- *The mining activity does not occur in those rivers, or parts of rivers, listed in Schedule 7 during any identified time period; and –*
- *The mining activity is not carried out within 20 metres of any structure which has foundations in the river bed, or any ford or pipeline; and -*
- *The activity does not cause any flooding or erosion; and*
- *No refuelling is carried out while the dredge is within the wet bed of the river unless an effective spill tray has been installed; and*

- *The area dredged lies within the wet bed of the river, and no material is removed from within or under the banks of the river; and*
- *No suction dredge is operated within 500 metres of another dredge; and*
- *No explosives or earthmoving machinery apart from the dredge is used to move material in the river bed; and*
- *Any rocks moved to allow suction dredging to occur are returned as close as possible to the site from which they were removed; and*
- *There is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 100 metres downstream of the point of discharge of the dredge; and*
- *No lawful take of water is adversely affected as a result of the bed disturbance.*

23. When carrying out my assessment I considered this rule relevant to the permitted baseline as it provides for suction dredging. Key takings from the list with regard to adverse effects on views and visual amenity are:

- *the permitted nozzle size is 150mm because this indicates the difference in scale between what is permitted and proposed.*
- *the separation distance of 500m because this indicates that several smaller dredges could operate within this stretch of river simultaneously as a permitted activity.*
- *and the requirement that there is no conspicuous change in the colour or visual clarity of the water body beyond a distance of 100 metres downstream of the point of discharge of the dredge because this related to adverse effects on views of the river and the proposed activity includes conditions to maintain compliance with 100m mixing zone the majority of the time.*

24. Sections 104(2) state that when forming an opinion 'a consent authority may disregard an adverse effect of the activity on the environment if a national environmental standard or the plan permits an activity with that effect.' With the exception of the three points listed in paragraph 23 above, the points in the Rule 13.5.1.7 of the RWP either refer to activities that are not allowed (i.e. do not permit an adverse effect) or relate to issues not relevant to landscape. My opinion on the permitted baseline used in my assessment remains unchanged.

COMMENT ON THE TEN-HECTARE PER YEAR WORKING AREA.

25. In terms of views and visual amenity and landscape character, the dredge is transient. I understand there will be no permanent, legible change to the river once the mining activity is complete in a section of the river. As such, I do not consider the size the area worked over a year will contribute to landscape effects.

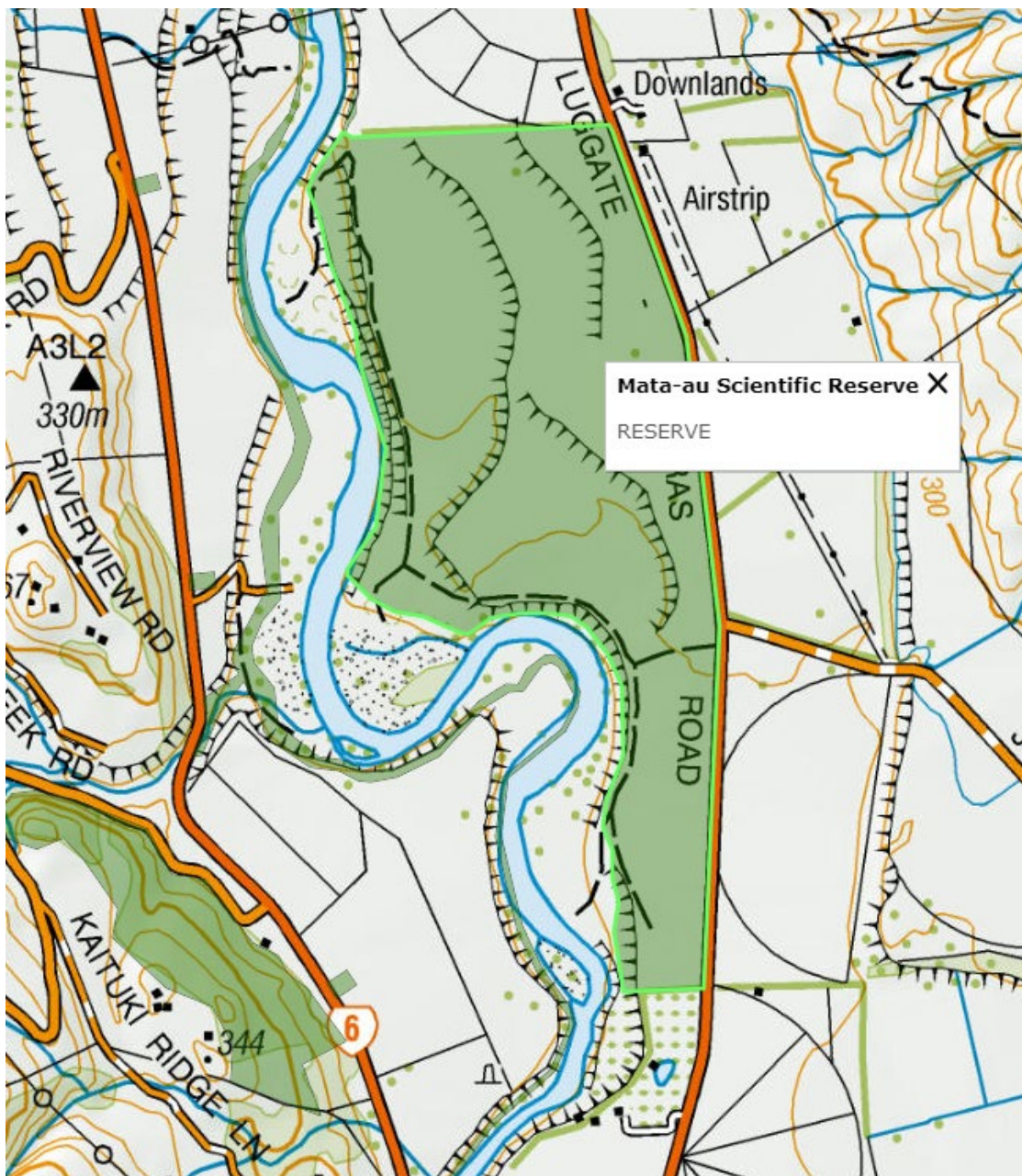
Once the dredge has finished in an area and moved on, there will be no evidence that that area has been worked and no lasting effects on views and visual amenity or landscape character.

26. The area that is mined over the course of a month, or a year, does not determine how long the dredge is present in a particular part of the river. Mr Denney's recommended condition in his 16 October memo is helpful in that regard and is accepted by the applicant.

ASSESSMENT OF SECLUSION FOR RIVER USERS

27. Seclusion relates to the state of being private and away from other people, road and buildings. A sense of seclusion along the river corridor is created by a delicate interplay of various factors. The limited access, coupled with the low visitor numbers, contribute to a feeling of seclusion in parts of the operational zone. The incised nature of the river, visually separates the river corridor from the upper terrace, increasing the seclusive experience, despite being sandwiched between intensively farmed rural land, rural living, and two State Highways. As discussed in my evidence, in areas where the river can be accessed there is often dense vegetation along the river margins limiting views towards the surface of the river. This likely contributes to the feeling of seclusion creating visual visual separation from any activities on the river. The topographical constraints and limited public access result in several river sections being inaccessible by land vehicle or foot. As such, the sense of seclusion is likely most appreciated by the users of the surface such as kayakers as they are able to access parts of the river that others are unable to access via land.
28. The experience of seclusion varies within the 23km of river corridor that the operational area covers. The upper parts of the operational area offer less in the way of seclusion when compared to the lower reaches. Factors including the formal track, proximity to Luggate, the state highways, and various rural industrial activities lessen the sense of seclusion. Notably, during the site visit, the presence of informal/unauthorized living arrangements along public access to the river and the river margins, particularly between Luggate and Maori Point Road, introduced an element of imposition rather than seclusion.
29. In locations where the viewer is in close proximity to the dredge there will be a reduction in the sense of seclusion. These effects on the sense of seclusion will likely be fleeting, because both parties are transient, particularly those recreating on the surface of the river who will move past the dredge. There will be a fleeting moderate degree of adverse effects on the sense of seclusion that is comparable to that experience as a boat or jet ski passes or a group of paddlers. Or it may be similar to passing an irrigation pump on the river's edge which is not uncommon along the Clutha River/Mata Au. As discussed in my evidence, this experience is not necessarily offensive or unexpected given the associative values relating to goldmining in the Clutha River/Mata Au and relating to recreational use, including by motorised vessels.

30. With regard to seclusion from the Mata Au Scientific Reserve, the reserve sits on the upper terrace overlooking the river rather than within the incised river corridor. The elevated landform provides for panoramic views over the river and surrounding landscape from the terrace edge, but views of the river are not available from the bulk of the reserve which is visually and topographically separated from the corridor of the Clutha River/Mata Au by a steep escarpment. I have included a snip from the Department of Conservation Maps identifying the reserve area to clarify that the reserve does not extend to the lower terraces adjacent to the river. It is my understanding that the land between the reserve and the river is owned by Contact Energy.



31. Seclusion generally relates to a sense of privacy and being away from people, buildings and roads. I refer to my photographs from viewpoints 8, 9 and 10 of my evidence in chief; views towards the river from

within the reserve overlook intensively farmed rural land, State Highway 6 and several rural living developments within the Queensberry area. I consider that the degree of seclusion of the terrace overlooking the river is lesser than that experienced within the river corridor, because of the apparent human activity. The dredge will not be visible from the bulk of the Mata Au Scenic Reserve and will not have an adverse effect on the sense of seclusion from these areas. From the locations along the terrace overlooking the river, the proposed dredge will add an additional activity (that is legible but separated by topography) to a landscape that is not particularly secluded. I consider that the degree of adverse effects on seclusion from within the Mata Au Scientific Reserve, when the dredge is within the vicinity, will be of a low degree at most. In contrast, for observers who are on the spurs on the lower terraces that sit below the reserve the degree of adverse effect on seclusion could be up to a moderate-high degree if the dredge were operational in this stretch of river. I understand that conditions have been proposed to create an exclusion area in this stretch of river during the summer months when it is likely to be used, in my view that is an appropriate approach.