

**BEFORE THE COMMISSIONER APPOINTED ON BEHALF OF
THE OTAGO REGIONAL COUNCIL, CENTRAL OTAGO DISTRICT
COUNCIL AND QUEENSTOWN LAKES DISTRICT COUNCIL**

Under The Resource Management Act 1991
(the **Act**)

In the Matter of an application for resource consents
for Suction Dredge Mining on the
Clutha River/ Mata Au

Between **COLD GOLD CLUTHA LIMITED**
Applicant

And **OTAGO REGIONAL COUNCIL**
(RM22.434)
QUEENSTOWN LAKES DISTRICT
COUNCIL (RM220834)
CENTRAL OTAGO DISTRICT
COUNCIL (RC220255)
Local Authorities

**BRIEF OF EVIDENCE OF JESSICA MCKENZIE (LANDSCAPE
ARCHITECT)**



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INTRODUCTION

1. My name is Jessica McKenzie. I reside in Queenstown. I hold the qualifications of Master of Landscape Architecture and Bachelor of Landscape Architecture (with honours) from Lincoln University. I am a member of the New Zealand Institute of Landscape Architects and served on the committee of the Southern Branch of the New Zealand Institute of Landscape Architects between 2020 and 2023. I have been employed as a landscape architect by Vivian and Espie Limited, a specialist resource management and landscape planning consultancy based in Queenstown, since January 2020.
2. The majority of my work involves advising clients regarding the management of landscapes and amenity that the Resource Management Act 1991 provides and regarding the landscape provisions of various district and regional plans. I also produce assessment reports and evidence in relation to the proposed development. The primary objective of these assessments and evidence is to ascertain the effects of the proposed development in relation to landscape character and visual amenity.
3. Although this is a Council hearing, I confirm that I have read and agree to comply with the Code of Conduct for Expert Witness contained in the Environment Court Consolidated Practice Note 2023. This evidence is within my area of expertise except where I state that I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

SCOPE OF EVIDENCE

4. The applicant seeks consent from the Queenstown Lakes District Council (**QLDC**), the Central Otago District Council (**CODC**) and Otago Regional Council (**ORC**) for a suction dredge mining operation on the Clutha River/ Mata Au and to construct a slipway. This evidence has been prepared in response to the Minute 2 Direction of the Commissioners requesting an expert Landscape

Assessment. The assessment is in accordance with the NZILA Guidelines¹ and includes an assessment of the dredge barge and the sediment plume created from the dredge spoil discharge.

5. My evidence relates to effects on visual amenity and landscape character concerning the proposed development. In the preparation of this evidence:
 - I visited various locations along the Clutha River/Mata Au and the surrounding area on October 12, 2023, and I am generally familiar with the area.
 - I have read the following documents:
 - (i) *The application for resource consent prepared by Terramark dated 14 May 2021.*
 - (ii) *The Central Otago District Council and Queenstown Lakes District Council s42A Report dated 6 June 2023.*
 - (iii) *The Otago Regional Council s42A Report dated 14 September 2023.*
 - (iv) *The submissions.*

ASSESSMENT

Introduction and description of the proposal

6. The proposal is to carry out suction dredge mining using a maritime vessel in the upper Clutha River/Mata Au and to construct a slipway to provide access to the river. The dredge is a self-powered commercial vessel being a lichen coloured, steel pontoon catamaran 23.9 metres in length and with a beam of 6.6 metres. Once in the river the dredge will remain in the river and be moored when not in use. Crew and supplies will be transported by way of a small 5.5m service tender.

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



Figure 1: Image of the proposed dredge

7. The dredge will operate in the stretch of the Clutha River/Mata Au between the Luggate Bridge and Lindis Crossing. Exclusion zones are proposed around 'Devils Nook' and within 50m of any tributary confluence greater than 1m in width. No mining will occur within the river margins, and the area will be left in a tidy condition following mining in any given area.
8. The proposal is to 'spot mine' sections of the river. I understand that this involves preliminary investigations where approximately 200m of river is dredged to identify if an economical seam of gold is present. If an economic seam is identified in the section of river, this seam will be systematically dredged. I understand that the time spent in a particular area varies but may extend to a period of months. Where gravels are deeper, progress upriver occurs more slowly. If no seam is identified the dredge moves on to spot mine a different section of river. No more than a hectare will be mined in any given month and over any calendar year this is not likely to exceed more than 10ha.
9. The mining activity will create a sediment plume from the dredge spoil discharge. I understand that the plume is typically constrained to a narrow channel and will introduce no 'new' material into the river system, the discharge is existing bed sediments and water. The

sediment plume generally dissipates within 50m of the dredge and will be indiscernible by 100m. I have not witnessed the dredge in action at the time of writing but have seen video footage showing the extent of the plume. I understand that the dredging activity is actively managed to meet proposed conditions and monitoring will be undertaken to confirm compliance.

10. In addition, a slipway is to be constructed on the banks of the Clutha River/Mata Au near Queensbury within the Central Otago District. The location has been chosen in a part of the river where access to the river is available and very little earthworks (less than 10m³) is required to form the slipway.

Methodology

11. The methodology for this assessment has been guided by:
 - The Te Tangi A Te Manu, Aotearoa New Zealand Landscape Assessment Guidelines.
 - The landscape-related provisions of the QLDC Proposed District Plan (**PDP**), the CODC District Plan (**CODP**) and the ORC Regional Plan.
12. When describing effects, we will use the hierarchy of adjectives given in the bottom row of the table below. The top rows show how the adjectives that we use can be related to specific wording within the RMA².

			SIGNIFICANT			
LESS THAN MINOR	MINOR	MORE THAN MINOR				
VERY LOW	LOW	LOW-MOD	MODERATE	MOD-HIGH	HIGH	VERY HIGH

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

Existing Landscape

Physical attributes

13. The Clutha River/Mata Au runs from Lake Wānaka to the Pacific Ocean 75km south of Dunedin. The operational area of river relevant to this application meanders approximately 23km from the Luggate Bridge to Lindis Crossing. This section of river snakes through an incised river corridor with steep escarpments and terraces stepping up from the river level to the valley floor. The stretch of the Clutha River/Mata-Au where mining is proposed varies between approximately 70-100m in width.
14. The Clutha River is characterised by considerable flow, that has carved out an incised river channel cutting through the Upper Clutha Basin. The land adjacent to the river is generally improved agricultural land with sporadic nodes of rural living.
15. The operational area is predominantly narrow and single channel, contained between impressive, steep escarpment faces with a rock and gravel substrate and occasional alluvial landforms of outwash and fan gravels, boulder deposits and side channels. Within the vicinity of Luggate the river forms a series of distinctive loops including Devil's Nook. Vegetation within the river margins and banks is generally a mix of willow trees, poplar trees, wilding conifers, kanuka and native grey shrubland species.
16. The broader landscape context contains large-scale landforms, and the high-lying terraces are open, dominated by pasture with vineyards, shelterbelts, and isolated areas of kanuka. The steep topography of the riverbank limits access (and therefore human influence) in several sections of river. In areas where topography is gentler, informal tracks provide vehicle, pedestrian, and cycle access to parts of the river. The wider valley floor comprises improved primary agricultural landscape and the township of Luggate, rural living activity and two State Highways.

Associative attributes

17. The Clutha River/Mata-Au is a statutory acknowledgement area which recognises the special relationship Ngāi Tahu has with the river.³
18. The Clutha River/Mata Au is recognised as a for its recreational opportunities. The river itself provides for fishing, water sports (including kayaking, swimming and jetboating) and the trails along the river's edge provide for runners, walker and bikers. However, 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 areas e.g. between the Lake Wanaka Outlet and Luggate Bridge.
19. The formalised walking and cycling tracks end at the Red Bridge on the true left bank of the river (Newcastle Track) and the Upper Clutha River Track on the true right bank currently finishes a few kilometres east of Luggate at a fisherman's access. Downstream of these points there is land public land available, but access is more informal. I understand that it is anticipated that public tracks will continue to be formed but the timelines for this are not known.
20. The Clutha River/Mata Au has historical associations with the gold mining. Remnants of the mining carried out during the gold-rush history can be seen in the form of tailings on the river edge.
21. The Clutha River/Mata Au also has association with hydroelectricity particularly further downstream from the relevant stretch of river, near Lake Dunstan and the Clyde Dam.

Perceptual attributes

22. The Clutha River/Mata Au is recognised for its aesthetic qualities and impressive views relating to the carved landforms, turquoise water colour, water clarity, and the contrasting colours of the surrounding landscape. These views are dynamic with the seasonal

³ Ngāi Tahu Claims Settlement Act 1998

colour changes of the exotic riparian vegetation and fluctuating flow contributing to the river's scenic values. The river terraces and carved escarpments indicate the formative processes.

23. When experienced from the river margins or the surface of the river the incised nature of the river and vegetated banks create a sense of enclosure. Within this enclosed corridor, there is a notable sense of seclusion. Close to the water, the power of the river becomes palpable through the sheer volume of water, its force, currents, turbulence, and the accompanying sounds. There is also an evident degree of human influence and modification through established tracks, structures, and watercraft. Additionally, water pumps and associated infrastructure for irrigation and quarrying are integrated into the existing landscape. In some areas, especially those closer to Luggate, road noise and rural industrial activities contribute to the discernible human influence experienced. These human interventions are generally acknowledged as integral to the surrounding agriculture and industry.

Natural Character

24. *“Natural character has been interpreted as: the naturalness or degree of modification of an area. An area’s distinct combination of natural characteristics and qualities... Natural character is a type of character—the distinct combination of an area’s natural characteristics and qualities, and that naturalness is one attribute of that natural character.”⁴*
25. The natural character of the Clutha River/Mata Au is described in the Natural Character, Riverscape & Visual Amenity Assessment⁵. I generally agree with the findings in that report and have summarised these below.

⁴Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines', Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022. Paragraph 9.01-9.04.

⁵ Natural Character, Riverscape & Visual Amenity Assessments | Clutha/Mata-Au Water Quantity Plan Change – Stage 1, Boffa Miskell, 15 October 2018

26. *The degree of natural character of the active bed is described as very high due to the relative lack of modification through damming or artificial diversions and the habitat provided for fish and aquatic species.*
27. *The degree of natural character of the river margin is described as high due to the relative lack of development within the margins (limited to bridges, pylons, pump stations and farm/recreational tracks. Vegetation with the margins is introduced exotic species with some areas of kanuka/ manuka shrubland, matagouri/briar shrubland and short tussock grassland, that offer a level of naturalness.*
28. *The degree of natural character relating to the context of the river is described as high. The context is dominated by pastoral land with a growing number of rural lifestyle properties close to the margins, with impressive remnant outwash surfaces that have been eroded away, shaped and sculpted by river action to create well-defined, large-scale landforms. The outwash plains provide habitat for native plants, beetles and birds.*
29. *The degree natural character relating to experiential qualities of the river is described as high as open views are enable legible association between river landforms; terraces, terrace faces and active river floodplain. The turquoise waters cue to the river's glacial source lakes. I note that because of its incised nature, in many views the river itself is screened by topography. Nearer to the river, the combination of the volume of water, power, currents, turbulence, clarity and colour and sounds creates a sense of awe and respect. The presence of rural/lifestyle properties close to the margins has an impact on the experience of natural character.*

Landscape Values⁶

30. The Clutha River/Mata Au is identified as an ONF in the Queenstown Lakes District. I note that while the Clutha River is not identified as an ONF in the Central Otago District, the values of the river are much the same.
31. Environment Court Decision [2019] NZEnvC 160⁷ found that the corridor of the Clutha River within the Queenstown Lakes District is an ONF. The Court directed that the QLDC prepare a schedule of the landscape values of the Clutha River ONF to be inserted into the QLPDP. That Schedule is yet to be prepared, however, the Court endorsed (with some qualifications) a description of the landscape values of the Clutha River ONF that was presented to it in evidence. That description of landscape values is:

Clutha River Mata Au ONF

(a) Very high biophysical values: strong flow characteristics, water quality, rare switchback feature at Devils Nook.

(b) High naturalness values: relative lack of landform modification, natural patterns of margin vegetation, water quality/clarity.

(c) High legibility/expressiveness values: river course pattern e.g. meanders deeply cut banks indicating ongoing formative processes.

(d) High aesthetic values: intense water colour contrasting surrounding vegetation, dramatic enclosing escarpments visible from public tracks and reserves.

(e) High experiential values: ability to interact with the water, sequentially experience the feature on tracks.

⁶ The NZILA Guidelines define landscape values at paragraph 5.6 and the glossary as “the reasons a landscape is valued (e.g. why it is special, or meaningful, or healthy)” and note that “values are embodied in physical attributes”. Also, at paragraph 5.58, it is helpfully notes that “hybrid terms such as ‘visual amenity’, ‘rural amenity’ and ‘natural amenity’ are shorthand for ‘landscape values that contribute to amenity values’”.

⁷ *Hawthenden Limited, Upper Clutha Environmental Society (Inc), Seven Albert Town Property Owners James Wilson Cooper and Allenby Farms Limited v Queenstown Lakes District Council* [2019] NZEnvC 160

(f) High shared and recognised values: e.g. local groups to protect river's scenic and recreational values and enhance public access.

(g) High cultural values to Ngai Tahu: seasonal migrations and transport route. (reference this all as para 137 of the decision).

32. I agree with this description of the values of the Clutha River corridor and adopt it for the purposes of this assessment.

Relevant Statutory Context

33. The proposed activity requires consent from the ORC, CODC and the QLDC.

34. The entire operational area is within the ORC jurisdiction. The operational area within the QLDC jurisdiction is between Luggate Bridge and Queensberry with exclusion zones at Devil's Nook and within 50m of a tributary of over 1m. The operational area within CODC's jurisdiction is between the Queensberry and Lindis Crossing with exclusion zones below the Lindis River Confluence and within 50m of a tributary of over 1m.

Otago Regional Policy Statement:

35. The Partially Operative Otago Regional Policy Statement gives high-level guidance regarding landscape issues. In very general terms, the landscape-related parts of this policy statement require the identification of ONFs and highly valued landscapes and set policies in relation to their management. Following a direction from the Minister for the Environment, the Otago Regional Council notified a new Proposed Regional Policy Statement (**PRPS**) on 26 June 2021. This policy statement is currently progressing through the hearing process, and as such little weight can be given to it.
36. The PRPS provisions are particularly high level in nature and the provisions in the QLPDP are consistent with the PRPS provisions. The CODP predates the PRPS, therefore, the PRPS provisions have not necessarily been given effect to in the Central Otago

District. Schedule 3 of the PRPS sets out the criteria for identification of ONFs and ONLs. Identification of ONFs and ONLs using this process has been carried out in the Queenstown Lakes District and the Clutha River/Mata Au has been identified as an ONF in the QLPDP. Identification of ONFs and ONLs using the PRPS criteria has not been carried out in the Central Otago District. However, in my opinion, the biophysical, sensory and associative attributes that contribute to the river being identified as an ONF in the Queenstown Lakes District are relevant to the entire operational area, including that within the Central Otago District.

QLDC

37. I understand that the zoning and rules of the QLPDP relevant to this application are not under appeal and can be treated as operative. I understand that the proposal is treated as non-complying despite it being a discretionary activity pursuant to the QLPDP as this was the activity status of the activity at the time consent was lodged, prior to appeals on the QLPDP being resolved.
38. The proposal is a discretionary activity pursuant to the current version of the QLPDP because the suction dredge mining does not meet the permitted activity standards in Rule 21.4.34 for mining activities and also because the dredge is to be moored in the river and is a motorised craft for commercial boating activities.
39. The relevant landscape Objectives and Policies include:

Policy 6.3.3.4 recognises that the landscape values of Outstanding Natural Landscapes are a significant intrinsic, economic and recreational resource, such that new large scale renewable electricity generation or new large scale mineral extraction development proposals are not likely to be compatible with them.

Policy 6.3.3.5 seeks to maintain the open landscape character of Outstanding Natural Features and Outstanding Natural Landscapes where it is open at present.

Policy 6.3.5.4 seeks to provide for appropriate commercial and recreational activities on the surface of water bodies that do not involve construction of new structures.

Objective 21.2.1 seeks that a range of land uses, including farming are enabled while:

- a. Protecting the landscape values of Outstanding Natural Features and Outstanding Natural Landscapes;*
- b. Maintaining the landscape character of Rural Character Landscapes and maintaining or enhancing their visual amenity values;*
- c. Maintaining or enhancing amenity values within the rural environment; and*
- d. Maintaining or enhancing nature conservation values.*

Policy 21.2.1.5 Have regard to the location and direction of lights so they do not cause glare to other properties, waterbodies, roads, public places or views of the night sky.

Objective 21.2.12 seeks that the natural character of lakes and rivers and their margins is protected, or enhanced, while also providing for appropriate activities, including recreation, commercial recreation and public transport.

Objective 21.2.5 seeks that prospecting, exploration and mineral extraction opportunities are provided for on the basis the location, scale and effects would protect, maintain or restore rural amenity, water, wetlands, landscape and indigenous biodiversity values.

Policy 21.2.5.1 seek to have regard to the importance and economic value of locally mined high-quality gravel, rock and other minerals including gold and tungsten.

Policy 21.2.5.4 seek to ensure potentially significant adverse effects of extractive activities (including mineral exploration) are avoided, or remedied particularly where those activities have potential to

degrade landscape quality, character and visual amenity, indigenous biodiversity, lakes and rivers, potable water quality and the life supporting capacity of water.

Objective 21.2.12 seeks that the natural character of lakes and rivers and their margins is protected, or enhanced, while also providing for appropriate activities, including recreation, commercial recreation and public transport.

Policy 21.2.12.5 seeks to Protect, maintain or enhance the natural character and nature conservation values of lakes, rivers and their margins from inappropriate activities with particular regard to nesting and spawning areas, the intrinsic value of ecosystem services and areas of indigenous fauna habitat and recreational values.

Policy 21.2.12.7 seeks to ensure that the location, design and use of structures and facilities are such that any adverse effects on visual qualities, safety and conflicts with recreational and other activities on the lakes and rivers are avoided, remedied or mitigated.

CODC

40. I understand that the proposed activity is a discretionary activity pursuant to the CODP due to breaches in standards relating to the size of the marine vessel and number of employees for the commercial dredging operation. I also understand consent is required for the construction of the slipway due to the breaches in earthworks volume standards and vegetation removal.

41. The relevant landscape Objectives and Policies include:

Objective 4.3.3 – (Landscape and Amenity Values) seeks to to maintain and where practicable enhance rural amenity values created by the open space, landscape, natural character and built environment values of the District’s rural environment, and to maintain the open natural character of the hills and ranges.

4.4.8 Policy – (Adverse Effects on the Amenity Values of Neighbouring Properties) seeks to ensure that the effects associated with some activities including (but not limited to):

(c) Glare, particularly from building finish,

Objective 5.3.1 – (Amenity Values, Environmental Quality and Natural Character) seeks to maintain and enhance the amenity values and environmental quality, and to preserve the natural character of the District’s lakes and rivers and their margins.

5.4.1 Policy – (Water Surface and Margin Activities) seeks to manage the effects of activities (including the design, location and/or operation of structures) upon the water surface and margins to ensure that:

(c) The protection of amenity, recreational and landscape values in or near the water body is promoted or otherwise provided for;

Landscape Effects Assessment

42. *‘Landscape effects are consequences for landscape values which arise from changes to a landscape’s physical attributes. Change itself is not an effect. Rather, an effect is an outcome for a value. Landscapes are always changing. To assess landscape effects, it is therefore necessary to first identify the landscape’s values and the attributes (physical characteristics) on which such values depend. Landscape effects can be adverse or positive. Effects are considered against the existing landscape values, and the outcomes (or landscape values) sought in the statutory provisions.’⁸*
43. Section 6(a) and 6(b) of the Resource Management Act require the preservation of the natural character of rivers and their margins and the protection of the rivers and their margins and outstanding natural features and landscapes from inappropriate subdivision, use, and development. The Clutha River/Mata Au is identified as an ONF in

⁸ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines’. Tuia Pita Ora New Zealand Institute of Landscape Architects, July 2022. Pg 166.

the QLPDP but is not identified as an ONL or ONF within the CODP. Despite this, the values of the river and its margins (and the QLPDP ONF) continue throughout the entire operational area and are detailed in paragraphs 13 to 29 above.

44. When considering effects, we must take into account the receiving environment and activities that could be reasonably anticipated. I note that several submissions are concerned about adverse effects on amenity related to noise. I understand that the dredge will operate within the noise limits permitted, and as such, this has not been addressed. In the operational area of the Clutha River/Mata Au, permitted activities that can be reasonably anticipated include:
- The ORC provides for Suction dredge mining within the bed of a river as a permitted activity, provided 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.
 - The CODP provides for a 6m boat for commercial purposes (including dredging), provided no more than three persons are employed as a permitted activity, pursuant to Rule 4.7.6B and 5.7.4B.
 - Suction dredging is provided for by the Regional Plan: Water (RPW) providing no more than three persons are employed per activity as per the CODP. Operation of up to 55 separate 6m dredges with a maximum internal nozzle of 150mm could operate within the operation area pursuant to Rule 13.5.1.7 of the RPW. The applicant acknowledges this is fanciful but considers there are areas where it would be reasonable to anticipate operation of three or four dredges as permitted activity. I note that Ms Royce also adopts this approach in the section 42A report.
 - In the QLPDP provides for suction dredge mining that does not exceed 13 horsepower is a permitted activity pursuant to Rule 21.4.33.

- Boats and other floatation devices for the purpose of recreation are permitted in both Queenstown Lakes and the Central Otago Districts.
45. The proposed activity will introduce a commercial dredging operation along a stretch of the Clutha River/Mata Au approximately 23km long. When assessing the effects on landscape character I have taken into consideration the activities which can be reasonably anticipated within the operational area including multiple smaller dredging operations and a sediment plume of up to 100m.
 46. Natural character and landscape values of the Clutha River/Mata Au ONF/ONL are detailed in the landscape values section. The identified natural character and values of the river and ONF will be very largely maintained. There will be a temporary effect to the water quality and clarity while the sediment plume dissipates. In a similar vein the dredge will introduce a human element that will have a temporary effect on the degree of naturalness, aesthetic, and experiential values in the location where the dredge is operating. However, dredging activities are anticipated within the Clutha River/Mata Au and the introduction of associated human elements, and the sediment plume is also reasonably anticipated, albeit, using smaller vessels. The increased bulk of the vessel will have a very low adverse effect on landscape character as compared to perhaps 3 or 4 smaller dredges, as is provided for.
 47. The activity will bring a temporary and localised change to landscape character. To consider whether this will adversely affect landscape values, we need to consider existing values while taking account of reasonably anticipated activities, including smaller mining vessels. In this regard, I consider the proposal represents a different configuration and perhaps an intensification of an activity that is reasonably anticipated.
 48. Adverse effects on landscape character will be limited to a small part of the operational area at any one time. The landscape values of the Clutha River/Mata Au will be largely maintained while the activity

proceeds and will be fully restored when the dredging operation ceases. The proposal will not result in any lasting effects on landscape character.

Visual Effects Assessment

49. Visual effects are “*Visual effects are effects on landscape values as experienced in views. They contribute to our understanding of landscape effects. They are a subset of landscape effects... a proposal that is in keeping with the landscape values may have no adverse visual effects even if it is a large change to the view. Conversely, a proposal that is completely out of place with landscape values may have adverse effects even if only occupying a small portion of the view.*”⁹
50. Amenity values are defined in the RMA as ‘*those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes*’. When assessing effects on amenity we must consider not only the visual but other sensory attributes that may contribute to pleasantness, we must also what is reasonably anticipated by the relevant statutory provisions.

Visual Catchment and Viewing Audiences

51. Context and Viewpoint Plans are attached as Appendix 1 and associated photographs are attached as Appendix 2 to this evidence. These are useful in illustrating the degree of visibility of the Clutha River/Mata Au from various viewpoints. The relevant viewing audiences in relation to the proposed activities are:
- Users of State Highway 8A (SH8A)
 - Users of State Highway 6 (SH6)
 - Users of Maori Point Road

⁹ Te Tangi a te Manu: Aotearoa New Zealand Landscape Assessment Guidelines’, Tuia Pito Ora New Zealand Institute of Landscape Architects, July 2022., paragraph 6.25 and 6.27.

- Users of the Clutha River/Mata Au River and its margins
- Users of the Upper Clutha River Track
- Users of public reserve land including Kane reserve, Reko Point Conservation Area, Clutha River Marginal Strip, Autaia Scenic Reserve, Sandy Point Conservation Area, Mata-au Scientific Reserve
- Users of the unformed legal road corridors along the edge of the Clutha River/Mata Au between the Mata-au Scientific Reserve and Lindis Crossing.
- Occupiers of private land abutting the Clutha River/Mata Au

Users of State Highway 8A (SH8A)

52. SH8A runs along the valley floor to the east of the Clutha River/Mata Au. The river itself is generally considerably setback from the SH8A and the incised nature of the river corridor is such that the waterway is visually separated from the road by topography. For the most part, the surface of the Clutha River/Mata Au is fully screened by existing topography and vegetation in road users' views.
53. Glimpses of the Clutha River/Mata Au are available from three short stretches of SH8A between the Luggate Bridge and River Ridge Road. The stretches of road from which the river is visible are illustrated on the attached Context and Viewpoint Plans. A section of the river, approximately 400m long, will be visible from the Luggate Bridge. A section of the river, approximately 450m long, will be visible from a stretch of road between the Kane Road intersection and Glenfoyle Road, and a section of the river, approximately 1.8km long, will be visible from an elevated stretch of road between Sandy Point and River Ridge Road, at a distance of over 1.5km.
54. Views of the river from SH8A are fleeting, and the transient nature of the dredge is such that it will not remain in one spot for extended periods. Consequently, the likelihood of road users seeing the

dredge is very low. Since road users are likely to be travelling at speed and the dredge is a recessive colour, it is unlikely that a road user will identify the dredge or recognise it as a mining operation, and the existing nature of views and visual amenity will remain largely unchanged. I consider the degree of adverse effects on views and visual amenity for the users of SH8A will be negligible.

Users of State Highway 6 (SH6)

55. SH6 runs along the valley floor to the west of the Clutha River/Mata Au. Again, the river itself is generally considerably setback from the SH6 and visually separated from the road by topography. For the most part, the surface of the Clutha River/Mata Au is fully screened by existing topography and vegetation in road users' views.
56. Glimpses of the Clutha River/Mata Au are available from a short stretch of road just south of Pukerangi Drive. A sliver of the river is visible from a distance of over 500m. The river will be a small part of wider views, which include a pastoral foreground and midground punctuated by amenity and shelter trees, buildings, and a mountainous backdrop. If the dredge is located along this stretch of river, it will be challenging to distinguish within these complex views and will not detract from the existing visual amenity, which includes several instances of human modification in conjunction with the more natural elements of the river, terraces, and mountains.
57. Views towards the river from SH6 are very limited and the transient nature of the dredge is such that it will not remain in one spot for an extended period. As such, the likelihood of road users seeing the dredge is very low. Again, given road users are likely to also be travelling at speed and the dredge will be located at a considerable distance, is recessively coloured and in a complex view, it is unlikely that a road user will recognise the dredge and the existing nature of views and visual amenity will remain largely unchanged. The degree of adverse effects on views and visual amenity of the users of SH6 will be negligible.

Users of Maori Point Road

58. Maori Point Road is a gravel shortcut road approximately 6km in length, running between SH8A and SH8. Again, the river itself is generally considerably set back from the road and visually separated by topography and vegetation, with the exception of a stretch of the Clutha River/Mata Au that is visible from a short section of Maori Point Road near the intersection with SH8A. The degree of visibility is illustrated in photographs from viewpoints 11 and 12 in Appendix 2.
59. The visible section of the Clutha River/Mata Au forms a horseshoe shape, with the arc near Maori Point Road. The incised nature of the river is such that the apex of the horseshoe is obscured by topography, and two sections of the river (approximately 350m when looking west and 1.1km when looking southwest) are visible. The views of the river are in the peripheral vision of road users. The primary view for southbound travellers includes pastoral flats and terraces with a backdrop of the Dunstan Mountains. The primary view for northbound travellers also includes pastoral flats with a backdrop of mountains, including Trig Hill and the Grandview Mountains. The pastoral foreground and midground are punctuated by shelter trees, forestry, and rural living development in both directions.
60. Again, the dredge moves regularly and will not be a permanent fixture in views. If the dredge is located within this stretch of the river, the dredge and its associated sediment plume will be fleetingly visible in the peripheral view of road users. The dredge will constitute a small part of the views toward the river, and the use of recessive colours will ensure that it does not considerably detract from the turquoise water and contrasting colours of the willows and kanuka on the banks. The dredge will add an additional instance of human modification to a part the Clutha River/Mata Au Corridor, where dredging and boats (albeit at a smaller scale) are anticipated. The proposal will not detract from the anticipated visual amenity,

which includes several instances of human modification in conjunction with the more natural elements of the river, terraces, and mountains.

61. I understand that a sediment plume up to 100m is also permitted in this section of river and therefore can be reasonably expected in views. I also note the plume will travel downstream, as such, it will be more evident in the upstream views to west, where the sediment plume will be visible in the foreground of the dredge. In views where the road user is looking downstream the sediment plume will be considerably screened by the dredge and will be less distinguishable. In any event, the sediment plume will form a very small part of the river in these views and is anticipated.
62. Views towards river from Maori Point Road are fleeting, and the transient nature of the barge is such that it will not remain a location for more than a couple of months. As with views from the State Highways, the likelihood of road users seeing the dredge is very low. When compared to permitted activities along this stretch of river, which could include multiple smaller dredging activities and associated sediment plumes or other vessels of various kinds, it is considered that one larger, recessively coloured dredge will markedly detract from the views and the anticipated visual amenity experienced from Maori Point Road. However, the degree of this detraction and the adverse effects on views and visual amenity of the users of SH6 will be very low at most.

Users of the Clutha River/Mata Au River and its margins, Users of public reserve land and users of the unformed legal road corridors

63. Marginal strips, unformed legal roads, and public reserves run along the banks of the Clutha River/Mata Au, theoretically providing public access along the length of the river. However, this public land is generally set back from adjacent roads. The limited to access through Kane Reserve, via the Upper Clutha River Track, via the Mata-Au Scenic Reserve, via the Lower Lindis Conservation Area, and via unformed legal roads and slivers of marginal strip (as shown

on Appendix 2) are not easily identifiable on the ground, as illustrated in the photograph from viewpoint 5 of Appendix 2. The Sandy Point Walk provides access to Sandy Point Conservation Area overlooking the river, but access to the river itself is limited by a steep escarpment. As such, the public land along the banks of the Clutha River is difficult to access and is not as well used or frequented by members of the public as the upper reaches of the Clutha River/Mata Au or other more accessible rivers.

64. That being said, the Clutha River/Mata Au itself provides for recreational users, including kayakers, jet boaters, and swimmers. The presence of humans, vessels and flotation devices is not unexpected in views, particularly during the summer. However, the high flow and turbulent currents, as well as concerns regarding water safety, restrict the operational area of the Clutha River/Mata Au to largely experienced swimmers, kayakers, jet boaters, and fisher people and as such, the viewing audience from the river itself is also very limited.
65. In views from the surface of the river and the river margins, the dredge and sediment plume will be clearly visible, in close proximity, in the event that the dredge and river users cross paths. In these views, the dredge and associated sediment plume will likely be seen as an unusual element within the river corridor but not one that is necessarily offensive or unexpected. As discussed above, dredging is anticipated within the Clutha River/Mata Au particularly within the Central Otago District (approximately 82% of the relevant stretch of the river), where multiple commercial dredging operations (and associated sediment plumes) can be undertaken as a permitted activity. Dredging is also anticipated with the Queenstown Lakes District albeit at a smaller scale and not as a commercial activity. As such, dredging activity forms part of the anticipated views and visual amenity along this stretch of river, albeit at a smaller scale than that proposed. Other vessels not associated with dredging are also permitted.

66. Again, 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 the event that a river user encounters the dredge an additional instance of human modification and changes in water colour will be briefly visible. In these views, the attributes and values of the Clutha River/Mata Au including the turquoise water colour, low turbidity, natural landforms and vegetation patterns, and relative sense of enclosure and seclusion that contribute to the user experience will be largely maintained. I understand that a condition has been proposed limiting the proximity of dredging to anglers and avoid adverse effects on this specific recreational activity.
67. Visibility of the river corridor from adjacent public reserve land is somewhat limited, with dense vegetation and topography providing considerable screening, as illustrated in photographs from viewpoints 3 and 4 of Appendix 2. Elevated, open viewpoints provide some clearer views of the water, as illustrated in photographs from viewpoints 1-2, 6-10, and 13 of Appendix 2. When in operation, within sections of the river that can be seen, the dredge and sediment plume may be visible to members of the public. Again, the transient nature of both the dredge and the public is such that views of the dredge and sediment plume will be very limited.
68. In the event that views of the dredge are gained, it will form a small part of wider views that comprise a mix of the natural river course and margins surrounded by modified farmland, rural living, and rural industrial activities. Most public locations are within the Central Otago District, where commercial dredging and boating activities are permitted and are therefore considered as part of the views and visual amenity reasonably anticipated, albeit at a smaller scale.
69. I also understand from Mr Hall that people who do encounter the dredge while operational often show a lot of interest in it. It is likely that for some it will hold associations with the historic mining of the area and will be an interesting and potentially positive element. For others their perception of it will differ.

70. Overall, given the limited viewing audience, the transient nature of the dredge and members of the public, and that dredging activity is anticipated within the operational area, the degree of adverse effects on views and visual amenity will be of a low degree at most.

Users of the Upper Clutha River Track

71. The Upper Clutha River Track runs along southwestern side of the Clutha River/Mata Au from Albert Town to approximately 4.7km past the Luggate Bridge. The stretch of track below the Luggate Bridge is adjacent the operational area. I note that the Devils Nook is an exclusion area. The track meanders between the river and established rural industrial activities near Luggate creating a level of amenity that is somewhat pleasant but not particularly tranquil or remote. As the trail continues downstream, the adjacent land becomes more pastoral, and the track drops down to the toe of the bank near the river, creating a more secluded experience.
72. The river is intermittently visible with topography and vegetation providing screening as is illustrated in the photograph from viewpoint 1 of Appendix 2. In these views the impressive turquoise river is seen through the considerable established vegetation. While the dredge is operational in this section of river, passing views of the dredge and associated sediment plume will be available to track users. The dredge (being 6.6m wide and 23.9 m long) will occupy a small portion of the river which varies in width from over 100m wide near the bridge to nearer 50m downstream. As such, the dredge will form a relatively small part of a wider view that encompasses the river, surrounding vegetation, and the mountainous backdrop. The dredge will be viewed as a large vessel that is sympathetically coloured and its associated sediment plume.
73. The Upper Clutha River Track is entirely within the Queenstown Lakes District, where mineral extraction and dredging are anticipated by the plan as a small-scale, non-commercial activity. As such, a small amount of dredging forms part of the visual amenity anticipated within the river adjacent to the track as does other

boating activity and vessels. The dredge will be on a larger scale than that anticipated and will be commercial in nature. It will constitute an additional instance of human modification in views, where human intervention is evident. The transient nature of the dredge is such that any adverse effects on views and visual amenity will be temporary, and there will be no permanent changes to the values of the Clutha River/Mata Au.

74. Overall, given the limited viewing audience, the transient nature of the dredge and track users, and the anticipation of some dredging activity within the operational area, the degree of adverse effects on views and visual amenity will be of a low degree at most.

Private land abutting the Clutha River/Mata Au

75. The land abutting the Clutha River/Mata Au is primarily productive rural land with ad hoc nodes of rural living, concentrated between the Sandy Point walk and the Mata Au Scientific Reserve, near Maori Point Road, and in the Queensberry area. Dwellings and associated domestication are located on the upper terrace and are generally set well back from the river. Given the incised nature of the river, views toward the surface of the river from the dwellings are relatively limited and the meandering nature of the river and the topography limits views toward the river to parts of the bank and the terrace edge. Mature kanuka and willow trees line the river margins and spread up the escarpment, interrupting views toward the river from many locations. I note that the boundaries of properties adjacent to the river are somewhat arbitrary and often do not extend to the river's edge, further limiting views toward the river from private land.
76. As with views from the various public locations described above, views of the dredge and associated sediment plume may be gained from private land when it is operational in the adjacent stretch of river. In these views the dredge and sediment plume will occupy a small portion of the river, and the existing panoramic views will

continue to be dominated but rural paddocks, the river corridor and the mountainous backdrop.

77. The rural living development adjacent to the operational area is predominantly located within the Central Otago District. I understand that the dredge will comply with the noise standards in the District Plans. As discussed above, several smaller scale, commercial dredging operations could operate along the relevant stretch of river as a permitted activity. As such, dredging and associated sediment plumes can be reasonably anticipated to form part of the views and visual amenity. The proposed dredge is a larger scale and potentially making it more recognisable in views than a permitted dredge. However, in stretches of river more than 500m in length there could potentially be multiple conspicuously coloured dredges operating as a permitted activity. The proposal is for one recessively coloured dredge which would have a similar or lesser effect on views and visual amenity than the permitted situation.
78. Notwithstanding the above, from some private viewpoints, where owners observe the river, the presence of the vessel, when it is located in the particular view (perhaps for months) will equate to an adverse effect on the view (depending on that persons perception of the activity). Overall, given the limited viewpoints, the transient nature of the dredge and the changes to amenity anticipated by activities permitted in the CODP. The degree of adverse effects on views and visual amenity from neighbouring private properties will be of a low degree at most.

ISSUES RAISED BY THE SUBMISSIONS

79. In summary, the issues raised by the submission relating to landscape and visual effects include:

Landscape Character

- *Concerns about adverse effects on Natural Character*

- *Disagree that the dredge will cause no adverse impact on natural character. The Clutha River is a peaceful natural place, where people go to enjoy nature.*

Views and visual amenity

- *Concerns about adverse effects on amenity values.*
- *Disagree that the dredge will cause no adverse impact on amenity values. The Clutha River is a peaceful natural place, where people go to enjoy nature.*
- *Concerns about visual effects relating to the shade of green of the dredge and the scale.*
- *Concerns about visual effects relating to the plume of dirty water.*
- *Concerns about noise affecting the amenity values.*
- *Dredge will have an adverse effect on the amenity values (peaceful outdoor experience) of those using the river for recreation.*
- *Concerns about views from State Highway 8.*

AMENDMENTS TO THE PROPOSAL FOLLOWING THE SUBMISSIONS

80. The proposal has been amended in response to the submission and the amendments relevant landscape and visual amenity effects include:
- *Operational Hours have been revised. The amended proposal is for hours of operation to be between 7am-8pm rather than 7am-10pm in the application.*
 - *Inclusion of a conditions requiring the consent holder must not commence suction dredging activities within 150 metres of an angler that is actively fishing.*
 - *I understand water clarity is to be managed in real time so operations can be adapted to respond to changing conditions etc.*

Regular testing to confirm visual measure is to be carried out to ensure compliance with the relevant conditions.

COMMENTS ON ISSUES RAISED BY THE SUBMISSIONS

81. The issues raised in the submissions are discussed in the landscape effects assessment and visual effects assessment above. By way of summary, the suction dredge mining activity is a temporary activity that will have an adverse effect on landscape and amenity values of the Clutha River/Mata Au of a low degree at most while operational. The river will be reinstated to its original condition as the mining activity is carried out and when the operation ceases there will be no legible change to the natural character or values of the Clutha River/Mata Au.

CONCLUSIONS

73. The proposed operational area is the stretch of Clutha River/Mata Au between the Luggate Bridge to Lindis Crossing (approximately 23km of river). With regard to effects on views and visual amenity, the proposed operational area will be considerably screened by topography and established vegetation from both public and private locations. The transient nature of both the dredge and the viewing audience creates limited viewpoints and a limited viewing audience; visibility is only available when both cross paths. Additionally, dredging can be carried out as a permitted activity in both the Queenstown Lakes District and the Central Otago District, and as such, can be reasonably anticipated in views, and forms part of the anticipated amenity values of the Clutha River/Mata Au. In my opinion, the proposed suction dredge mining activity within the Clutha River/Mata Au will have an adverse effect on views and visual amenity of a low degree at most.
74. With regard to landscape character, I note that the Clutha River/Mata Au is identified as an ONF in the QLPDP and it possess the same or similar values within CODC, despite not being formally recognised as an ONF. It is also subject to Section 6 of the RMA regarding matters

of national importance. The suction dredging activity is anticipated in both the Central Otago District and the Queenstown Lakes District. The bulk of the operational area is within the Central Otago District, which provides for commercial dredging operations using vessels up to 6m and up to three staff as a permitted activity. A separation distance of 500m is required, and therefore several commercial activities could be carried out simultaneously along the 23km stretch of the river. As such, when compared to what is reasonably anticipated, I consider that adverse effects on landscape character, including natural character are very low at most and the values and natural character of the Clutha River/Mata Au are preserved.

75. The relevant Objectives and Policies provide for mining and commercial activities on the river if landscape character, visual amenity values, and the natural character of rivers and their margins are protected or enhanced. I consider that, on balance, landscape character, visual amenity, and the values of the Clutha River/Mata Au are maintained and protected. The activity will have a limited viewing audience and scale, colour, and the transient nature of the dredge will ensure that the degree of adverse effects on views and visual amenity from these locations is of a low degree at most.

76. For the reasons set out in this evidence, I consider that the proposal sits comfortably with the CODP and QLDPD and provisions that relate to the proposed activity. I consider that the proposal will appropriately protect the natural character, landscape character, and amenity values of Clutha River/Mata Au.

Jessica McKenzie

26 October 2023