Cold Gold Clutha Limited

Combined Decision

Otago Regional Council
Queenstown Lakes District Council
Central Otago District Council

17 January 2024

Table of Contents

1.0 Introduction

1.1 Appointments

[001] We, Rob van Voorthuysen (Chair), Jane Sinclair and Craig Welsh, acting under delegated authority from the Otago Regional Council (ORC), Queenstown Lakes District Council (QLDC) and Central Otago District Council (CODC) have been jointly appointed to hear and decide the resource consent applications lodged by Cold Gold Clutha Limited (applicant) for suction dredging activities in the upper Clutha River / Mata-Au[1] between downstream of the Luggate Bridge and the confluence with Lake Dunstan (with two exclusion areas); and for the construction of slipways on the bank of the Mata-Au.

1.2 Decision format

[002] This combined Decision report contains our decisions on the consents sought from all three councils. In section 3 we deal with the QLDC and CODC consents and in section 4 we deal with the ORC consents. In the remainder of this section (section 1) we address background matters that are relevant to a greater or lesser degree for all three councils, followed by process matters (section 2).

1.3 Description of the proposal

[003] The applications were described in the applicant's AEE[2], the two Section 42A Reports and the evidence of Peter Hall. We adopt those descriptions, but some of the more salient points are:

- The applicant currently operates[3] a barge mounted section dredge[4] between the Roxburgh Dam and the Tuapeka Mouth on the Mata-Au and has sought consent to undertake that activity further up the Mata-Au on a 22.7 km reach of river immediately downstream of the Luggate Bridge down to the confluence with Lake Dunstan;
- Two areas will be excluded from dredging:
  - From 100m upstream of the confluence of Luggate Creek with the upper Mata-Au and for a distance of 350m downstream, terminating at the downstream extent of the island within Devils Nook[5]; and
  - An 8.2km reach of the delta portion of the upper Mata-Au from its confluence with Lake Dunstan to its confluence with the Lindis River[6];
- Consent has been sought for the construction of a slipway at Queensberry to enable the entry of the suction dredge into the river and a slipway at Beaumont to enable the remove of the dredge from the lower Mata-Au[7];
- The applicant holds Crown Minerals Mining Permits over the affected reach of the upper Mata-Au;
- The dredge operates on a steel pontoon catamaran which is 23.9m long and 6.6m wide, with a hull depth of 1.45m. The dredge's draft is 0.8m, it displaces approximately 75 tonnes, and it is propelled by twin 550 horsepower Detroit diesel engines driving Ultrajet 375 water jets;
- The Detroit engines have wet exhaust systems to reduce noise;
- The Detroit engines are used for manoeuvring the dredge on the river. The dredge is normally static for dredging operations and manoeuvring generally occurs infrequently, approximately once per week;
- The dredge uses two 500 kg main mooring anchors to position itself in the river for normal operations. These anchors are dropped into the wet bed of the river with anchor warps crossed over for stability. The dredge also occasionally utilises two 150 kg stern anchors where necessary for additional stability.

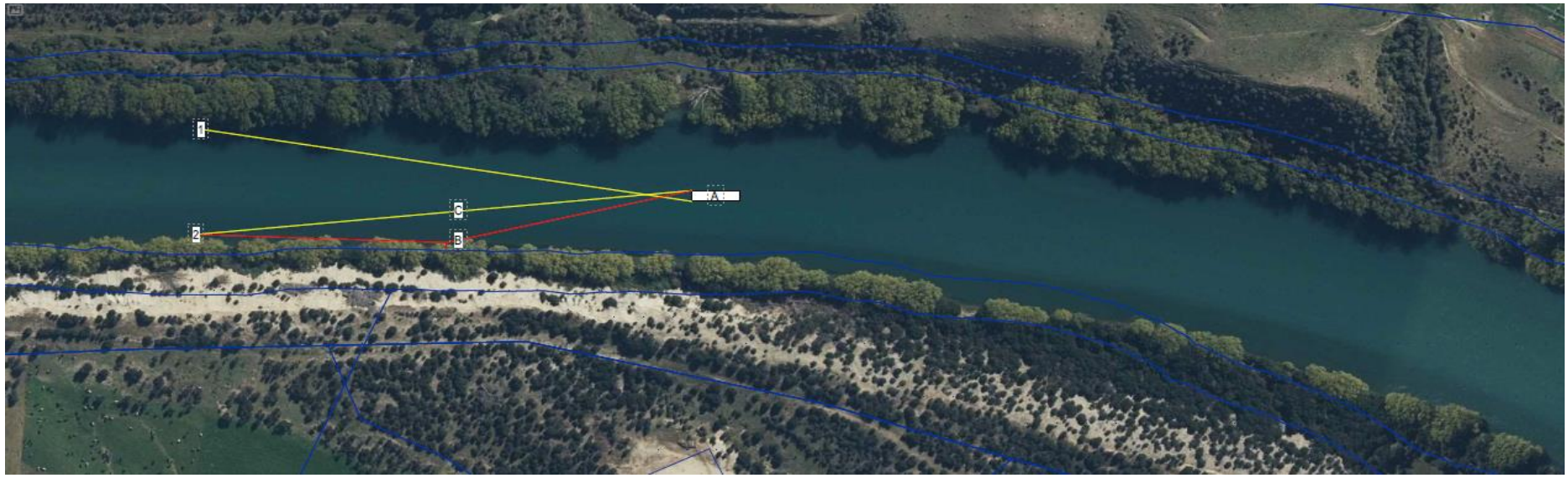
[1] In the remainder of this Decision, we refer to the river as the 'upper Mata-Au'.
[2] Cold Gold Clutha Limited, Terramark Limited, 14 May 2021. Pages 4 to 14.
[3] Under resource consents RM20.087.01, .02 and .03 since 2012.
[4] A Maritime New Zealand registered vessel named 'CGC1', with vessel number MNZ 134266.
[5] NZTM 2000: E1305697 N5040203 to NZTM 2000: E1307834 N5018386
[6] NZTM 2000: E131105 N5024451 and NZTM 2000: E1307834 N5018386
[7] We note Condition 1 of RM22.434.04 in the applicant's recommended conditions that formed part of their Reply addresses the Beaumont slipway.

Side lines are used on occasion for added stability with those lines being fastened to shore-based trees or rocks;

- The anchor lines are up to 250m long. Once the anchors are set the dredge is allowed to float downstream and it then works its way back upstream by winching in the anchor lines. 200m of each 250m length of anchor lines is dredged;
- In a new location the applicant carries out a series of 'spot dredges' to see whether there is enough gold present. If not, the dredge moves the anchors lines and a different location is 'spot dredged'. If no locations on an anchor set have enough gold, then the anchors are recovered and the dredge is moved elsewhere. The dredge always works heading upstream from its starting location, typically mining a 10m – 15m wide strip, but that mined strip can be up to 30m wide;
- Dredging locations are limited to 1500m stretches that are identified in the applicant's annual work programme. Dredging occurs only in the wetted bed and is constrained by the 0.8m draft of the dredge. No more than a 1500 m length of river is mined at one time;
- It is possible to spend anywhere from a week to 3 months on a single 250m anchor set;
- The crew access the dredge using a small jetboat that is tethered alongside the dredge and moored on the riverbank overnight;
- The suction dredge uses hydraulically driven high-pressure water pumps to generate water flow and suction in the main pipe via venturi induction jets. It is powered by a 600-horsepower marine diesel engine. The suction pipe has an internal diameter of 350 mm and is lowered to the riverbed by hydraulically driven winches. The depth of dredging ranges from 2m to 12 below the riverbed. The dredge will target gold bearing gravels above bedrock;
- The river gravels are sucked up as a slurry and then discharged onto a classification screen at the rear of the dredge to remove oversize materials and excess water. The gravels are discharged immediately back to the river while classified material is pumped on board and fed through gold recovery systems (comprising standard gold riffle tables). All fines and water are then discharged to the river. No chemicals are involved in the process;
- Surface water is abstracted at a maximum rate of 400 L/s and 18,720 m^3 per day over a 13-hour working day from 7am to 10pm. In his evidence Peter Hall offered to reduce the operating hours to 8am to 8pm (a 12-hour day)[8];
- Refuelling of the dredge is a two-step process involving filling a 400 L tote tank on the jetboat from a self-bunded shore-based diesel storage tank. The fuel is then decanted into 1000 HDPE fuel tanks on the dredge once the jetboat is tethered to the dredge. The dredge consumes around 700L for fuel for a 12.5-hour shift and may be refuelled daily or every second day;
- The dredge has no sewage holding tank and a 'cartridge' toilet is currently used by the crew (similar to toilets in camper vans). The full cartridge is manually removed and taken ashore to be emptied in camper van wastewater disposal facilities. We note that the applicant volunteered to establish and maintain a Portaloo for use by staff at the same location as the dredge's shore-based fuel storage tank; and
- The dredge employs six full time employees including a certified Skipper, but is normally operated by a two-man crew.

[004] We include diagrams[9] overleaf of the dredge's anchoring arrangement on two actual stretches of the upper Mata-Au. The yellow lines show the anchors lines if not secured by side lines. Each red line depicts an anchor line secured by a side line. Backing lines are also used in case the anchors slip. These lines are tied between the anchors and the shoreline or suitable instream rocks (where available).

[8] Condition 9 of RM22.434.01 in the applicant's recommended conditions that formed part of their Reply.
[9] Provided by Peter Hall.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[005] Further details of the proposal (including as amended by the applicant prior to and during the hearing) are set out in the effects assessment sections of this Decision.

[006] The applicant has sought a consent duration expiring on 25 February 2031 to align with the expiry of mining permit 60593.

2.0 Process matters

2.1 Written approvals and notification

[007] Land Information NZ provided written approval of the ORC applications. No written approvals were given with regard to the landuse applications to QLDC and CODC.

[008] The applications to all three councils were publicly notified with the period for submissions closing on 23 June 2023 for the ORC applications, 23 June 2023 for the application to CODC[10] and 26 June 2023 for the application to QLDC[11].

2.2 Submissions received

[009] The ORC received 41 submissions. Eleven late submissions were received following the close of the submission period and two unofficial submissions (not on the prescribed form) were received during the submission period. All late and unofficial submissions have been accepted by ORC. The submissions were summarised in ORC Section 42A Report[12] and we adopt that summary without repeating it here.

[010] The CODC received 15 submissions, all in opposition. The QLDC received 12 submissions, with 11 in opposition[13] and one in support. Four late submissions were received by the CODC and three late submissions were received by QLDC. The Panel have delegated authority from both councils to consider late submissions and we resolved that they should be accepted. The submissions to CODC and QLDC were summarised in the CODC and QLDC Section 42A Report.[14] We adopt that summary without repeating it here.

[011] We were provided with full copies of all of the submissions. We record that we have read and had regard to all the submissions that were lodged, regardless of whether or not the submitter appeared before us at the hearing.

2.3 Site visit

[012] We undertook a site visit on the afternoon of Monday 13 November 2023 accompanied by ORC Staff member Sophie Craig. We viewed the dredge from the shore and from the water[15] when it was operating at Birch Island, Rongahere, near Beaumont. On the afternoon of Wednesday 15 November 2023, we conducted an unaccompanied site visit to view the upper Mata-Au. We viewed the river from Māori Point Road (including from the residences at 525 and 455 Māori Point Road), the Mata-Au Scientific Reserve on the true left bank of the river, from the true right bank below the Luggate Bridge, and from State Highways 6 and 8.

2.4 Hearing

[013] We conducted a hearing at the Harvest Hotel (also known as The Gate) from Tuesday 14 November to Thursday 16 November 2023.

[10] RC220255
[11] RC220834
[12] Appendix E and section 3.2.1 to 3.2.3.
[13] We note that the submission from Fish & Game NZ to the QLDC was amended to neutral in a letter dated 25 October 2023.
[14] Appendix 2.
[15] The Cold Gold operations manager took us out on a small jetboat and we viewed the dredge from all sides.

[014] We heard from a number of submitters[16]. Copies of the evidence and legal submissions that were presented are held by the respective councils. We do not summarise that material here, but we refer to it in the remainder of this Decision where appropriate. We took our own notes of any verbal answers to questions that we posed.

[015] We adjourned the hearing on Thursday 16 November 2023 pending receipt of the applicant's written closing or Reply submissions[17] which we received on Tuesday 19 December 2023. We closed the hearing on Wednesday 10 January 2024 having concluded that we required no further information from any of the participants.

2.5 Natural and Built Environment Act 2023

[016] The transitional provisions of the Natural and Built Environment Act 2023 (NBA) imposing new maximum durations for some freshwater-related consents do not apply because the consents were applied for before 23 August 2023. In any case, we note that the NBA was subsequently repealed prior to the finalisation of this Decision.

2.6 Precautionary approach

[017] The precautionary principle, or precautionary approach, is an international law environmental principle. There is no universal 'definition' of the precautionary principle. We understand it is most commonly understood to mean "*uncertainty does not justify inaction*". Although the Resource Management Act (RMA or 'the Act') does not expressly mention the precautionary principle, we understand that the Courts have consistently recognised that a precautionary approach is inherent in the Act's provisions.

[018] It is commonly understood that a precautionary approach should be adopted for applications where there is scientific uncertainty regarding potential adverse effects that might be either potentially significant or irreversible. Its application is often used for 'new' and potentially 'unproven' proposals where information is incomplete or relationships not well understood.

[019] The adoption of a precautionary approach is advocated by some of the relevant statutory instruments, including Policy 5.4.8(g) of the partially operative Regional Policy Statement. The precautionary principle is also promoted in the Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 and the Kai Tahu ki Otago Natural Resource Management Plan 2005 for water abstractions.

[020] A precautionary approach usually translates into an adaptive management regime. That involves allowing an activity to operate for a limited period of time while monitoring information is gathered on its effects on the environment. That ongoing operation of the activity (or its cessation) is then determined by the nature and scale of those monitored effects.

[021] In this case while the applicant's proposal is not 'new' (it has been operating in the lower Mata-Au for some time) there is a paucity of information regarding it effects. For example, the applicant has not (to our knowledge) undertaken before and after studies of the effects of dredging on aquatic ecology in the lower Mata-Au. Nor has it maintained a record of any entrained fish and the fate of those fish. There is also a lack of knowledge about the exact receiving environment in the upper Mata-Au. For example, we do not know precisely which portions of the river will be dredged and nor do we know the composition of the riverbed at those locations (there is no analysis of riverbed substrate particle size, composition or gravel depth above bedrock).

[16] Riki Pararat, Korako Edwards and Tim Vial for Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga (referred to collectively as 'Kā Rūnaka); Dr Marilyn Duxson and Dr Roger Young; Duncan Kenderdine; Tony Ohau Ward-Holmes; Esther Water, Paul Benjamin; Phillip Wilson; Bilee Marsh; Ngaio Hart; Roger Tompkins; Jeff Forsee; Kim Fogelberg; Reginal Hall and Oliver Moon.

[17] The Reply submissions from Ms Irving were accompanied by Supplementary Evidence from Peter Hall and Mark Hamer, Additional Information from Jessica McKenzie, a letter from Marshall Day Acoustics; and amended suites of conditions.

[022] Tellingly, Kā Rūnaka seek that the applications be declined because they say they have not been provided with sufficient information to enable them to assess the effects of the proposal on Māori cultural values and interests.

[023] In light of the above discussion, we find that should consent be granted, it would be appropriate to adopt a precautionary approach and a form of adaptive management.

2.7 Alternative dredging proposition

[024] In the applicant's Reply Ms Irving submitted[18]:

> "Permitted dredging activity is also Cold Gold's 'Plan B' in the event this consent is declined so that it may recoup the costs associated with obtaining the mining permit. It will establish a small fleet of permitted dredges. These dredges will have to operate within the terms of the permitted activity rules, but will not be subject to the various controls promoted by the Applicant such as the exclusion areas. They will also necessarily operate in the shallower, more ecologically sensitive areas of the river that would not be worked by the proposed dredge."

[025] We are unsure what the intent of that submission was. Should the applicant wish to undertake permitted activities in the upper Mata-Au then that is their prerogative. We have not had regard to any such 'alternative dredging' proposal, nor have we sought to compare it to the Cold Gold Clutha Limited applications before us.

3.0 QLDC and CODC consents

[026] The application to QLDC seeks land use consent for:

(a) Mineral extraction within a watercourse

[027] The application to CODC seeks land use consent for:

(a) The use of a maritime vessel for commercial use,
(b) Earthworks and exotic vegetation clearance within 10m of the margin of a waterbody associated with a slipway; and
(c) To enable more than three persons to operate a commercial activity.

3.1 The Proposed Queenstown Lakes District Plan

[028] It was common ground that the proposed activity will be undertaken in the following zones of the Proposed District Plan (Queenstown Lakes PDP): Water (zoned Rural) and Rural Zone. Further, the Mata-Au is classified as an Outstanding Natural Feature (ONF) and is an identified Wāhi Tūpuna -Te Rua Tūpāpaku. In addition, the Mata-Au is also a Statutory Acknowledgement Area.

[029] At the adjournment of the hearing, initial disagreement on the overall activity status of the proposal had been resolved, with Ms Royce accepting Ms Irving's legal submission[19] that the proposal should be assessed as a discretionary activity. We agree and find resource consent is required under the Queenstown Lakes PDP as follows:

Rule	Purpose	Activity Status
21.4.34	Mining activities that do not comply with permitted activity standards	Discretionary
21.15.8	Establishment of a structure or mooring that passes across or through the surface of the river or is attached to the bank of the river	Discretionary

[18] Paragraph 5.
[19] Opening Submissions of Counsel, paragraphs 11 to 22.

[030] Further, we also agree with Ms Royce that resource consent is required as a discretionary activity under Rule 21.15.10[20] relating to use of a motorised craft for commercial activity. Therefore, we find the proposal requires resource consent as a discretionary activity under the Queenstown Lakes PDP.

3.2 Central Otago District Plan

[031] We were informed the area of dredging within the Central Otago District Council jurisdiction is located within the Water Surface and Margin Resource Area and the Rural Resource Area. Further, the Mata-Au is identified as a Statutory Acknowledgement Area. It was common ground that resource consent is required for the following:

Rule	Purpose	Activity Status
5.7.4B	Relating to maritime vessels involved in commercial operations shall not exceed 6m in length not withstanding any vessel that complies with the suction dredge provisions of the ORC's Regional Plan: Water	Discretionary
5.7.2(b) and (c)	Relating to earthworks within 10m of a waterbody and removal of vegetation from within 10m of any waterbody	Restricted Discretionary
4.7.6B(b)	Relating to no more than three persons shall be engaged in any activity of a commercial nature	Discretionary

[032] Therefore, we find the proposal requires resource consent as a discretionary activity under the Central Otago District Plan.

3.3 Effects assessment

3.3.1 Permitted baseline

[033] When forming an opinion for the purposes of section 104(1)(a) of the RMA we may disregard an adverse effect of an activity on the environment if a national environmental standard or a plan permits an activity with that effect.[21]

3.3.1.1 Queenstown Lakes Proposed District Plan

[034] Relevant to the consents required from the QLDC, Rule 21.4.32(c) of the Queenstown Lakes PDP provides for mining activity by suction dredge, so long as the total motive power of any dredge does not exceed 13 horsepower (10 kilowatt). The proposed activity does not comply with this rule.

[035] The applicant contented *"the permitted activity rule does not specify a maximum number of dredges. As the permit within the QLDC jurisdiction is approximately 7.1km long, the permitted baseline would enable 14 six-inch dredges to operate as of right. This would include mining within the 'Devils Nook' and Luggate Creek confluence area considered to be ecologically sensitive; which Cold Gold have elected to exclude from any mining activity."*[22]

[036] Ms Royce considered the permitted activity rules provided a very restricted permitted baseline which '*adds limited value to the assessment of effects*'[23]. In her end of hearing report[24], she agreed the permitted activity rules provide for suction dredge activities of a lesser scale. However, the exclusive mining permits held by the applicant meant the concurrence of other permitted suction dredge activities could be construed as fanciful. She considered it unlikely the applicant would operate 14 six-inch dredges located 500m apart in

[20] We note Ms Royce referred to Rule 21.15.11 relating to motorised commercial boating activities being prohibited on certain rivers.
[21] Section 104(2) of the RMA.
[22] AEE, page 12.
[23] QLDC and CODC Section 42A Report, page 21, paragraph 82.
[24] Planner Review – CODC and QLDC, Kirstyn Jane Royce, 15 November 2023.

the upper-Mata-Au, and raised an associated cumulative landscape and visual amenity effect should that occur.

[037] Richard Denney also addressed the permitted baseline, contending that as the proposal intends to comply with Queenstown Lakes PDP noise limits, the noise levels fall within a permitted baseline. Additional Queenstown Lakes PDP permitted activities include motorised vessels for recreational activities and commercial activities regarding search and rescue, hydrological survey, public scientific research, resource management monitoring, water weed control and access to adjoining land for farming. We understand non-motorised vessels for recreational use are also permitted.

[038] In her closing legal submissions, Ms Irving clarified the applicant holds the mining permit for the proposed dredging area which is an exclusive right. However, she advised the applicant could allow third parties to carry out dredging in the permit area and in the event the consent applications before us are declined, the applicant's Plan B is *"to establish a small fleet of permitted dredges. These dredges will have to operate within the terms of the permitted activity rules but will not be subject to the various controls proposed by the Applicant such as the exclusion areas. They will also necessarily operate in the shallower, more ecologically sensitive areas of the river that would not be worked by the proposed dredge."*[25]

[039] Having considered the above matters, we prefer Ms Royce's evidence, that the permitted activity rules 'provide for a very restrictive permitted baseline' and accordingly, we elect not to disregard any effects of the proposal activity under s104(2) of the RMA. We addressed the applicant's alternative dredging proposition in section 2.8 of this Decision.

3.3.1.2 Central Otago District Plan

[040] Permitted activities provided for in the CODC Plan did not appear to be specifically set out in the AEE. However, in a response to a section 92 further information request, Mr Sycamore explained *"… the permitted activity rule enables up to 55 separate dredges each with a maximum internal nozzle of 150 millimetres. As noted in the application, it is fanciful to consider the permitted area would include 55 dredges equally spaced 500 metres apart, however this provides some context of what activity and effects arising from that activity could, by right occur without consent."*[26]

[041] Ms Royce advised the CODC Plan provides for commercial operations which employ no more than three persons pursuant to Rule 4.7.6B. Further, the applicant has offered to comply with the daytime noise limits. She also informed us that the operation of a maritime vessel requires resource consent and as such, no permitted baseline is available for this aspect of the proposal. Ms Royce stated *'…that said, suction dredging can occur as provided for by the Regional Plan: Water (RPW) providing no more than three persons are employed as per the district plan.'*[27]

[042] Ms Royce went on to state that while the applicant has recognised that it is fanciful to assume that 55 separate dredges, each with a maximum internal nozzle of 150mm, would operate within the mining permit area, the applicant considers there are areas of the upper Mata-Au where three or four dredges operating under the CODC Plan's permitted activity rules have been observed. She explained the applicant considers a credible permitted baseline includes numerous dredges operating, each disturbing the riverbed and aquatic habitat and resulting in noise emissions near residential properties as of right.

[043] Ms McKenzie advised *'the CODP provides for a 6m boat for commercial purposes…'*[28]. She opined up to 55 separate 6 metre dredges with a maximum internal nozzle over 150 mm could operate within the operation area pursuant to Rule 13.5.1.7 of the RPW. While agreeing with Ms Royce that would be fanciful,

[25] Closing Submissions of Counsel, paragraph 5.
[26] Section 92 Response, dated 19 April 2023.
[27] QLDC and CODC Section 42A Report, paragraph 78.
[28] Evidence in Chief (EIC) McKenzie, paragraph 44.

Ms McKenzie considered there are areas of the upper Mata-Au where it would be reasonable to anticipate the operation of three or four dredges as a permitted activity.

[044] While Ms Royce accepted that four dredges may realistically operate in the river at any given time, she considered these would be more likely to be spread out rather than clustered within one consolidated area. She also considered that the frequency and duration of four independently owned and operated dredges would be different to the applicant's proposed daily operating hours and its seven day a week operation over the consent period. Overall, she considered there was a very limited permitted baseline to be applied to the CODC consent applications.

[045] Having considered the above matters, we prefer the evidence of Ms Royce and find there is a 'very limited' permitted baseline under the CODC Plan. Accordingly, we elect not to disregard any effects of the proposal activity under s104(2) of the RMA.

3.3.2 Noise effects

[046] A number of submitters raised noise effects as an issue of concern[29]. Submitters considered noise would be significant when compared to the area's current low ambient noise levels. Further, they considered the application has understated the number of residences potentially affected by the activity, particularly in the vicinity of Māori Point Road.

[047] The application was supported by a noise testing assessment[30]. We understand this assessment was carried out in 2013 at a location further downstream of the proposed operating area. Mr Sycamore emphasised consent had not been sought to breach the district plan's noise standards. He explained there were difficulties in providing an updated noise assessment, largely due to the nature of the application and the existing location of the dredge at Beaumont. He also explained that further modifications to the dredge are proposed, including additional noise attenuation measures which aim to reduce noise generation effects, and this will occur prior to relocating the dredge upstream. He considered that a noise assessment carried out prior to the dredge's upgrade and relocation would be erroneous. Mr Sycamore concluded; based on the noise testing carried out to date, the dredge's operating history and intended compliance with district plan noise standards; "*noise will not result in any adverse effects on adjoining property owners*."[31] In response to concerns raised by submitters, he advised the nighttime hours of operation had been reduced from 10pm until 8pm and a 7am start remained acceptable[32]. Further, an expert noise assessment would be provided prior to commencement of the upper Matu-Au operation. We note in the suite of conditions attached to the applicant's Reply submissions[33], the hours of operation are now proposed to have a start time of 8am.

[048] Initially, Ms Royce considered the noise testing assessment could not be relied on "…*as the assessment is undated, and the methodology is unverified and uncalibrated*."[34] She was not confident compliance would be achieved to the district plan's noise standards and advised greater certainty was required. By the end of the hearing, she considered that although expert noise assessment is normally required before a consent is granted, in this case, given the circumstances explained by Mr Sycamore, a site-specific noise assessment would be premature at this time. She generally agreed with the applicant's approach of requiring the submission of a site-specific noise assessment as a condition of consent prior to commencing operation, together with a review condition that enabled noise consent conditions to be revisited should the need arise.

[29] Including Dr M Duncan & Dr J Harris, Roger Tompkins, Bendigo Management, Billie and Wayne Marsh, Penrith Holdings, Rob van der Mark, Duncan Kenderdine, Central Otago Whitewater Inc, Ngaio Hart, The Otago Fish and Game Council, Kim Fogelberg, Esther Water, and Tony Ward-Holmes.
[30] CGC Dredge Noise Testing, submitted with the application, testing undertaken between Ettrick and Millers Flat, undated.
[31] AEE, page 17
[32] EIC Sycamore, paragraph 69.
[33] Closing Submissions of Counsel, Appendix 1, condition 6
[34] QLDC and CODC Section 42A Report, paragraph 117.

[049] The applicant's final proffered conditions stated that a noise assessment would be carried out within two months of commencing operations by a suitably qualified and experienced noise engineer to confirm methods by which compliance with noise standards in the relevant district plans could be achieved. In particular, whether any setback distance needed to be maintained from any dwelling in order to comply with the noise standards. A copy of the noise assessment would be submitted to each Council for certification.

[050] While we would have preferred a site-specific noise assessment upfront, given the modifications proposed to the dredge and the consent conditions offered by the applicant, we are generally satisfied that appropriate measures can be put in place to ensure compliance with the district plans noise standards and our consideration of potential noise effects does not weigh against a grant of consent.

3.3.3 Landscape character and visual amenity

[051] Effects on landscape character and visual amenity were matters of contention between the parties, with numerous opposing submitters raising landscape and visual amenity concerns.[35]

[052] From our understanding of the proposal and the landscape in question, we agree with Richard Denney[36] that the key landscape considerations for maintaining and enhancing landscape values relate to:

- Sensitivity (capacity) of the landscape to absorb the proposed land use which is variable across the upper Mata-Au;
- The larger scale of the activity (vessel size) compared to permitted activities; and
- The duration of activity and associated 'temporary' effects.

3.3.3.1 Temporary activity

[053] The definition of 'temporary' was a matter of concern for opposing submitters, particularly Mr Ward-Holmes and Mr Kenderdine. Mr Kenderdine stated *"...that the activity could occur in an area or view shaft for more than a year - that is not what most people would call temporary."*[37] Mr Kenderdine was also concerned that there was no clear picture of the duration of activity in an area, how the dredge would move and its actual working hours. We agree with the parties, including submitters,[38] that the definition of 'temporary' is relevant. We accept Mr Denney and Ms Royce's advice that '*it is difficult to find a definitive guide within the relevant statutory plans*'[39]. Ms Royce also referred us to caselaw[40].

[054] The landscape architects agreed the proposed dredging activity was unlikely to leave a lasting adverse effect on landscape as the operation, once completed, would remove the dredge and any associated structures and the only lasting element would be the proposed Queensbury slipway. We note consent conditions have been proposed which require the slipway area to be rehabilitated at the expiry of the consent.

[055] In regard to temporary effects, Mr Denney advised the dredge is unlikely to be fixed in one position for a long duration. As set out in section 1.3 of this Decision, we understand the dredge could spend anywhere from a week to three months on a single anchor set, before it moves on to the next anchor set location. Mr Denney advised there are no conditions defining a maximum duration at each anchoring point, stating "*The*

[35] Mathew Evans, Dr Duncan & Dr Harris, Roger Tompkins, David and Neroli Mortimer, Bendigo Management, Billie & Wayne Marsh, Rob van der Mark, Duncan Kenderdine, Kim Fogelberg, Central Otago Whitewater Inc, Ngaio Hart, Aukaha Limited on behalf of Te Rūnanga o Moerakii, Kāti Hūirapa Rūnaka ki Pukateraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga, Dave Cassidy, Jeff Forsee, Paul Fleet, Esther Water, Tony Ward-Homes, Bex Thornton, Douglas Aubelle, Gregory Dougherty, Jennifer Parr & Callum Grant, Lucille Anna Ferrier, Morgan Nathan Hudson and Hank Weathington, NZ Professional Fishing Guides Association, Penrith Holdings Limited, Rob van der Mark, Serge A Bonnafoux, Todd Adolph, Paddle Wanaka Limited.

[36] Landscape peer review expert engaged by the Councils.

[37] Mr Kenderdine, Hearing speaking notes, page 1.

[38] Particularly Duncan Kenderdine's submission.

[39] QLDC and CODC Supplementary Section 42A Report, paragraph 26; Landscape Assessment Peer Review Report, Richard Denny, paragraph 25.

[40] *Westcoast Environmental Network Inc v Westcoast Regional Council and Buller District Council* [2013] NZ EnvC 47 & *Trilane Industries Limited v Queenstown Lakes District Council and Nature Preservation Trustee Limited* [2020] NZHC 1647.

anchoring of the vessel with 250m range of manoeuvrability over a visible stretch of water over 500 metres in length would accumulate an ongoing presence of the activity within one location. Given the application notes up to three months at each anchoring spot and there are visible stretches of the river that extend over 1.5 km there is potential for the dredge to be operating in river views for over a year."[41]

[056] Mr Denney considered the dredge would be transient in nature, but at a very slow pace compared to other water-based activities, and it had potential to occupy single views for over a year. He also considered the duration of 'temporary' effects would be variable and would affect viewers to varying degrees depending on viewer sensitivity and relative and variable presence of landscape values at locations across the upper Mata-Au application area. He opined *"a visual element of the scale proposed that detracts from the scenic natural values for a week, month or year will have differing impact, and this will vary over the seasons of the year…and the frequency that it is viewed…, and the sensitivity of the viewer.*"[42] He concluded that when visible and for the duration that it was within view, adverse effects of the dredging operation would vary from 'very low' to potentially 'moderate-high'.

[057] To ensure the duration of adverse effects on views from certain locations was within assured limits, Mr Denney recommended amendments to the applicant's volunteered proposed condition as follows (his amendments shown in bold):

> *Exclusion areas and times*
>
> 3. *This consent authorises the use of the bed of the Clutha River/Mata-Au for suction dredge mining, between the downstream of the Luggate Bridge (NZTM 2000:E1305697 N5040203) and the confluence with Lake Dunstan (NZTM 2000:E1307834 N50118386), with the following exclusion areas where suction dredge mining is prohibited:*
>
> ***To include the Mata-Au Scientific Reserve along the stretch of the river parallel to the riverside reserve boundary.***
>
> ***The dredge shall not occupy a single 250m stretch of the river for a duration longer than three months or relocate back within the 250m stretch from the date of first anchoring within the 10 year life span of the consent:***
>
> - ***within 1km of any visible rural dwelling from the river that is accessed from Māori Point Road and associated side roads (public and private), and River Ridge Road and associated side roads (public and private),***
> - ***and within 500 metres of the Upper Clutha River Trail.***
>
> ***This is to ensure duration of adverse effects on views from these locations is within an assured duration limit.***

[058] In her closing legal submissions, Ms Irving submitted the applicant was willing to partially accept'[43] the conditions proposed by Mr Denney relating to restrictions in relation to River Ridge, Māori Point Road, and Bowman Road lifestyle areas[44] and the avoidance of the Mata-Au Scientific Reserve from 1 October to 31 March each year (other than to pass through the area between other dredging locations).

[059] The applicant's latest version of the 'exclusions and times' condition stated:

> *19. That dredge shall not occupy a single 250m stretch of the river for a duration longer than three months or relocate back within that 250m stretch from the date of the first anchoring within the lifespan of this consent within the areas identified in yellow below.*

[060] Two maps were included in the set of conditions identifying the three lifestyle restriction areas. The applicants offered Condition 20 states:

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[41] Landscape Assessment Peer Review Report, paragraph 26.
[42] Landscape Assessment Peer Review Report, paragraph 45.
[43] Closing Submissions of Counsel, paragraph 27.
[44] These were referred to maps attached to Mr Denney's Landscape Memo dated 16 October 2023 prepared in response to questions from the Panel.

> *20. The dredge shall not occupy (except if passing through to other locations) the stretch of river identified as purple – Mata-Au Scientific Reserve Summertime exclusion area between 1st October and 31st of March each year.*

[061] We note these conditions are in addition to the conditions proposed relating to the exclusion of the delta portion of the upper Mata-Au from the confluence of Lake Dunstan to confluence of the Lindis River and the area known as Devil's Nook.

[062] However, it appears the applicant does not accept Mr Denney's recommendations for conditions relating to the restriction for the Upper Clutha River Trail, the reference to the 1km visibility from any rural dwelling located on Māori Point Road and River Ridge Road and associated side roads, nor the clarification that the 250m distancing is monitored as a measure of river length rather than river width.

[063] We have taken guidance from Section 3(b) 'Meaning of Effect' of the RMA, which states effects include any temporary or permanent effects. We understand that while conditions have been offered to limit the dredge's duration at certain locations and to exclude certain areas, there were no duration times offered for other locations which could be up to three months at each anchoring spot. We accept Mr Denney's evidence that the dredge will be transient in nature, but it would move at a very slow pace, and has potential to occupy single views for over a year. We also agree with Mr Denney that the duration of temporary effects would be variable and would affect viewers to varying degrees and this would depend on viewer sensitivity and relative and variable presence of landscape values at locations across the upper Mata-Au application area. We consider that the anchoring of the dredge with a 250m range of manoeuvrability over a visible stretch of water over 500m in length would constitute an ongoing presence of the activity within one location. Additionally, given there are visible stretches of the river that extend over 1.5km in length, we agree that there is potential for the dredge to be operating in river views for over a year.

3.3.3.2 Effects on Landscape character

[064] In the AEE, Mr Sycamore concluded '*the river is capable of including a floating dredge with no adverse impact on values*'[45]. His opinion was based on the wider scale of the operational area, proposed consent timeframe, permitted baseline, temporary nature of the activity in any one location, use of sympathetic colours, and volunteered consent conditions. We note Mr Sycamore's opinion was not informed from advice from a landscape architect.

[065] In her QLDC and CODC Section 42A Report, Ms Royce concluded '*that in the context of the policy framework, and recognising the mobile nature of the dredge, the exclusion zone, and the minimal disturbance to the form of the river, I consider the proposal appears to sit comfortably within the policy framework in respect of natural character and landscape values*.'[46] However, she advised that the Panel might gain more comfort from expert landscape assessment.

[066] Subsequent to the receipt of the QLDC and CODC Section 42A Report, the Panel issued a Minute[47] directing the consent authorities to commission and provide a landscape and visual effects assessment. In response to the Minute, the applicant engaged Jessica McKenzie, a landscape architect. Ms McKenzie prepared and submitted landscape evidence which was later peer reviewed by Richard Denney on behalf of QLDC and CODC.

[067] Mr Denney and Ms McKenzie generally agreed on the following matters:
(a) landscape values of the upper Mata-au;

[45] AEE, page 14
[46] QLDC and CODC Section 42A Report, paragraph 102.
[47] Minute 3, dated 4 October 2023.

(b) the Mata-au is identified as an ONF in the Queenstown Lakes PDP. However, the upper Mata-au has the same or similar values within the jurisdiction of the CODC, despite not being formally recognised as an ONF in that district;
(c) the presence of a sediment plume of up to 100m long would have low adverse effect on landscape character as overall it would be a very small change to the values of the river landscape; and
(d) adverse effects would not be significant, with Ms McKenzie concluding those effects would be 'very low' and Mr Denney concluding they would be 'moderate-low' when considered in a wider context of the river landscape.

[068] However, there was some disagreement between the landscape experts about effects when assessed at a more localised scale. There was also disagreement on the weight that should be attached to the permitted baseline. As we noted earlier, we have elected to disregard the effects of activities permitted by the district plans. Nevertheless, for completeness we discuss the expert's opinions that were based on the application of a permitted baseline.

[069] Ms McKenzie's evidence placed significant weight on the permitted baseline. She emphasised that while suction dredge activity is anticipated under both district plans, most of the operational area is located within the Central Otago district. Further, that the CODC District Plan provides for commercial dredging operations as a permitted activity, providing certain criteria are met. Ms McKenzie considered several commercial dredging activities could be carried out simultaneously, and that when compared to what is reasonably anticipated, adverse effects of the applicant's proposal would be very low and landscape values would be maintained.

[070] Mr Denney disagreed the permitted baseline could be relied on. He advised that when assessed at a more localised perspective, adverse effects would be slightly higher, but temporary, as the dredge moved from location to location. He also disagreed that landscape values would be maintained, stating '*the proposal would not maintain, protect or enhance the landscape values of the river, but adverse effects would be variable, localised and temporary between locations…*'[48]. He considered limited weight should be applied to the permitted baseline and the different scale of activity between permitted and that proposed had been underestimated. He did not agree the proposal presented an alternative configuration and intensification of an activity that is reasonably anticipated on the upper Mata-Au, advising the degree of upscaling was proportionately large. Mr Denney considered the scale of adverse effects would be slightly higher than Ms McKenzie's conclusion, stating *"the larger scale of commercial vessel proposed is not anticipated. Its general industrial form, noise and limited movement I consider would have a moderate -low adverse effect on the natural values that contribute to landscape character of the overall river landscape of assessment, specifically in regard to values that are experiential, shared and recognised, albeit relatively small."*[49] While he agreed immediate adverse effects would be localised, he considered there would also be an association of the dredge to the river that would have broader adverse effects on landscape values, albeit relatively small.

[071] Responding to questions from the Panel on an assessment that does not rely on the permitted baseline, Ms McKenzie provided additional information that formed part of the applicant's Reply submissions. In that evidence she acknowledged the proposal would affect landscape character for the duration of the activity. However, the dredge was an impermanent feature, in that it would not be located in any particular stretch of the river for a prolonged period and there were no associated permanent structures. She advised when mining ceased, the dredge and any associated equipment would be removed. While she considered mining activity was anticipated by the district plans, she accepted that the size and design of the dredge are not.

[072] She further considered the proposal would increase human influence and the level of commercial activity on the river. However, that despite there being an existing level of human influence evident on the upper Mata-Au, the river still possessed a high degree of naturalness and "*introducing a somewhat unusual and*

[48] Landscape Assessment Peer Review Report, paragraph 67.
[49] Landscape Assessment Peer Review Report, paragraphs 34 and 35.

large man-made vessel would temporarily adversely affect the natural and aesthetic qualities contributing to the landscape character …, with the impact varying, depending on location.' She considered the character of the river was informed by its rich history of gold mining and that adverse effects would be partly offset by positive effects on associated attributes related to the river's history. She acknowledged the degree of adverse effects on naturalness and experimental qualities was likely to outweigh the positive effects, and that while mining activities were expected, the scale of the activity must be considered.

[073] Ms McKenzie concluded that landscape character effects would be limited to a small part of the operational area at any one time, and the landscape values of the wider Mata-Au would be largely maintained. She considered adverse effects would be of a 'low-moderate' degree, with full restoration expected upon cessation of the dredging operation.

Finding

[074] We find there is a degree of consensus between the landscape architects on the likely degree of landscape character effects, and we accept there would be adverse effects of a 'low to moderate' degree on landscape character which weighs against a grant of consent, albeit to a minor degree.

3.3.3.3 Effects on Visual Amenity

[075] Visual effects of the dredge and its associated sediment discharge plume were key matters of concern for opposing submitters.

[076] In the AEE, Mr Sycamore concluded those adverse effects would be less than minor. His opinion was based on the incised nature of the river corridor, intermittent visibility from public locations, temporary nature of the activity, and the discrete colour of the dredge. As outlined above, his planning opinion was not informed by advice from a landscape architect. Ms Royce, largely agreed but advised '*…the Panel may gain more comfort from an expert landscape assessment, given the matters raised by submitters*.'[50]

[077] The landscape architects agreed the dredge would be visible from parts of State Highways 6 and 8, Māori Point Road, the surface of the Mata-au and its margins, upper Clutha River Track, public reserves, unformed legal roads, and from private land that abuts the river. In addition, Mr Denney advised the proposal would be visible from other private properties beyond those that abut the river, and that Māori Point Road included the side roads down to the river.

Visual effects of the sediment discharge plume

[078] It was widely accepted that the Mata-Au is renowned for its turquoise colour and water clarity and the visual effects of the proposed sediment discharge plume on these qualities were issues in contention between the parties.

[079] Both landscape experts initially advised a 100m plume can be expected within views as part of the permitted baseline and consequently the relevant consideration was the visual effect beyond 100m, up to 200m as sought by the applicant. They also agreed that some viewers may not find the visual presence of the discharge plume necessarily offensive.

[080] Ms McKenzie opined because dredging can be carried out as a permitted activity, the associated discharge plume could be reasonably anticipated in views, and that formed part of the anticipated amenity values of the upper Mata -Au. She acknowledged visibility of the plume would vary and would be more evident from elevated locations, noting as the plume travels downstream, it would be more evident in upstream views to the west. She concluded adverse effects would be of a low degree at most.

[081] Mr Denney advised visibility of the plume would vary depending on location, light conditions, types of sediment discharge and water clarity. He considered a visible discharge plume from a mining vessel would likely have an association that was not positive, particularly in the context of the upper Mata-Au with its

[50] QLDC and CODC Section 42A Report, paragraph 102

valued water clarity and turquoise blue qualities. Mr Denney considered the degree of adverse effects would be higher than as assessed by Ms McKenzie, concluding *'moderate to high from specific views where the proposal is visible*'[51]. While he acknowledged effects would be temporary, he considered they would vary depending on the length of the visible stretch of water and the occupancy of the dredge in such views. He was also concerned with the duration of visibility and advised that it is possible the dredging operation could be visible for over a year on longer stretches of river, especially if gold yields were favourable.

[082] The relevance of the permitted baseline was a key discussion point at the hearing. As such, both landscape architects were asked to provide additional assessments that did not rely on a 100m discharge plume as part of a permitted baseline.

[083] Disregarding a 'permitted baseline' for the sediment plume, Ms McKenzie considered that the degree of adverse effects would vary from very low to high, with rural living properties located near the river being most affected when the dredge was close to these viewers. She advised *'there is an opportunity to reduce the degree of adverse effect through consent conditions proposed by the Applicant, and with those conditions, effects are within the low to moderate range*.'[52].

[084] Mr Denney considered the sediment plume would be a new visible element not anticipated and therefore, the adverse effect of a 200m sediment plume would result in greater adverse visual effects. However, he advised quantifying the magnitude of the effect was difficult due to insufficient information to enable him to understand the plume at its 'worst' possible scenario i.e., dredging finer silt or clay size sediments, when the water is at its clearest, when flows are slower, and where elevated views are available. He stated '*based on the information submitted, it is apparent that the high volume and flow of water mixes the plume quickly and the sediment being from the river is not of an 'unnatural' colour*.'[53] However, he maintained his opinion that '*there would be an association of the plume to the vessel and mining activity, with potential negative perceptions of such in a visual context of ONF values*.'[54] He 'estimated' effects would likely remain within the 'moderate level', at around 'moderate to low' to 'moderate' at most, and these effects would be temporary in nature.

Finding

[085] We prefer Mr Denney's evidence that visibility of the plume would vary depending on location, light conditions, types of sediment discharge and water clarity, and the association of the plume to the dredge and mining activity will likely have potential negative perceptions in a visual context of the Mata-Au ONF values. We also accept Mr Denney's evidence there is insufficient information to understand the visual impact of the plume at its worst possible scenario and therefore we are uncertain on the degree of adverse effects. Nevertheless, we note Mr Denney 'estimates' that potentially the effects could be 'moderate' and this uncertainty weighs against a grant of consent.

State Highway 6 and 8A

[086] In regard to views from State Highways 6 and 8A, Ms McKenzie and Mr Denney both agreed adverse effects would be acceptable with Ms McKenzie concluding negligible effects and Mr Denney 'low' effects. Their opinions were based on no substantial extent of views or vistas of the river from the highways, and where visible the dredge would be a small part of the view, and its visibility would be relatively brief. We note Mr Denney considered that the dredge should be painted a more recessive darker colour and that road users included all road users such as cyclists and walkers who have more time to ponder views. On the evidence we find adverse visual effects from either state highway would not weigh against a grant of consent.

[51] Landscape Assessment Peer Review Report, paragraph 65.
[52] Landscape Memo - Response to Hearing Panel Questions, Jessica McKenzie, 12 December 2023, paragraph 20.
[53] Landscape Memo, Denny, 16 October 2023, page 1.
[54] Landscape Memo, Denny, 16 October 2023, page 1.

[087] However, the landscape experts disagreed on the degree of adverse visual effects on users of: Māori Point Road; the river margins, river, reserves, and unformed legal roads; the Upper Clutha Track; and private land. We discuss each of these areas below.

Māori Point Road

[088] The landscape architects differed in their opinions on the degree of adverse effects on users of Māori Point Road with Ms McKenzie concluding 'very low' whereas, Mr Denney concluded 'moderate at most'.

[089] Ms McKenzie's conclusion was based her understanding of the permitted baseline, fleeting nature of views, as well as the transient nature of the dredging activity. She considered the dredge would not remain in a location for more than a couple of months and when compared to permitted activities, which could include multiple smaller dredging activities with associated sediment plumes, that '…*one larger, recessively coloured dredge will markedly detract from the views and the anticipated visual amenity experience from Māori 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*'[55].

[090] Mr Denney noted as Māori Point Road was an elevated viewpoint, the dredging activity would be more visible. He also considered that Ms McKenzie's estimated duration of effects to be insufficient, stating '*based on a 1.1km view to the southwest noted in the report, and up to 3 months at each anchoring point with a 250m range, the vessel could be in view for up to a year*.'[56] He acknowledged some viewers may see the vessel as a curiosity and a point of interest, rather than adversely affecting views. However, in the visual context of the landscape values identified for the upper Mata-Au and its scenic qualities, visibility of the dredging operation would have 'moderate' at most adverse effects on river views over the period of visibility.

[091] As outlined above, at our request, both landscape architects provided supplementary evidence that disregarded the permitted baseline. In that evidence, Ms McKenzie advised adverse effects would increase from 'very low' to 'low', while Mr Denney's conclusions largely remained the same.

[092] Ms McKenzie's conclusion was based on views being limited, visibility of the river from a short stretch of road, views forming part of a panoramic view, and as viewers are likely to be travelling their views will be fleeting. She acknowledged the river was in closer proximity here compared to other places, and the dredge would be recognisable in views of the river. However, given the expanse of views and the recessive appearance of the dredge, she considered '*it will not be dominant in views, for the brief time that the dredge may be in this stretch of river. As such, existing views and visual amenity will be largely maintained*.'[57]

[093] On the other hand, Mr Denney considered "*the larger scale of dredge is some distance from that anticipated by the permitted baseline, … there is an existing presence of a limited number of recreational boat users on the river, albeit limited, in such that the dredge would not be a new element in terms of presence of vessels on the waterway. It would however be of a larger scale and differing character, …and is effectively a shed on a pontoon*"[58]. He also considered it would occupy parts of the river for much longer durations, compared to the infrequent passing of recreational boaters. We note Mr Denney's recommended condition (set out above) limiting the duration of the activity where visible from rural living properties would also be applicable to views from Māori Point Road. We discuss this condition further below in the assessment of private land abutting the river.

[55] EIC McKenzie, paragraph 62. We have assumed Ms McKenzie meant users of Māori Point Road in her conclusion.
[56] Landscape Assessment Peer Review Report, paragraph 42
[57] Landscape Memo - Response to Hearing Panel Questions, Jessica McKenzie, 12 December 2023, paragraph 17.
[58] Landscape Memo, Denny, page 2.

Finding

[094] Having considered the evidence, we prefer Mr Denney's evidence that adverse visual effects of the dredge will be 'moderate at most' when viewed by users of Māori Point Road and this weighs against a grant of consent.

Users of the Mata-au/Clutha River and its margins, users of public reserve land and users of unformed legal roads

[095] Visual effects from public land and from the surface of the upper Mata-Au were key matters of concern for opposing submitters. Opposing submitter Ms Marsh submitted "*the mighty Mata-Au is best appreciated close up, beside, inside, on top of, and certainly not inside a car*."[59]

[096] It was generally accepted that due to limited public land access opportunities, the river was not easily accessible for members of the public, and as such, access is largely of a 'locals' nature, with visitor numbers relatively low compared to other locations. It was also agreed visibility from adjacent reserves and marginal strips was variable due to the willow trees restricting views.

[097] Ms McKenzie concluded adverse effects would be 'low' based on a limited viewing audience, the transient nature of the dredge, the transient nature of members of the viewing public, and dredging being an anticipated activity.

[098] Mr Denney considered the limited public land access and local use added to the secluded nature of the river which was a characteristic of value to its users. This was evident in the submissions, for example Mr Kenderdine stated "…*residents treat the river as a precious resource. For its peace and beauty in their daily lives, and a solace for the hardworking families as they walk its banks in the early morning and evening."*[60] Further, Ms Marsh described *"That sense of wildscape, that feeling of seclusion, a secret and silent place."*[61], and Ms Waters considered the proposal would prevent or limit people recreating which was an activity from which many people derived wellbeing – "*through spending time with others in a nourishing environment*".[62] In addition, Dr Duxson stated "*the Mata-Au is an integral part of the environment*."[63]

[099] Mr Denney advised many of the reserves and trails are elevated and have scenic views, such as the Mata-Au Scientific Reserve and along parts of the Upper Clutha River Track. He considered Ms McKenzie's assessment too narrow and existing visual amenity values at places such as the Mata-Au Scientific Reserve would be high due to its predominantly natural context dominated by the river. He stated "*it is difficult to see how the visual presence of the scale of vessel proposed at this location would have a very low adverse visual effects on such values…"*[64]. He considered visual assessment of the immediate context was complex, and the duration of effect should be considered. He opined *"a visual element of the scale proposed that detracts from the scenic natural values for a week, month or year will have differing impact, and this will vary over the seasons of the year…and the frequency that it is viewed…, and the sensitivity of the viewer."*[65] He concluded that when visible and for the duration that it was within view, adverse effects of the dredging operation would vary from 'very low' to potentially 'moderate-high'.

[100] Without relying on the permitted baseline, Ms McKenzie reiterated the transient nature of the dredge and people (the viewing audience) and how adverse effects would be limited to situations where the two meet. She acknowledged the dredge would '*be seen as a large and somewhat unusual element within the river corridor*'[66] and "*in close proximity … will be highly visible and be at odds with the natural anaesthetic qualities*

[59] Speaking notes Billie Marsh.
[60] Submission of Duncan Kenderdine, paragraph 4.
[61] Billie Marsh, hearing speaking notes.
[62] Esther Water, hearing speaking notes.
[63] Dr Duxson, hearing speaking notes.
[64] Landscape Assessment Peer Review Report, paragraph 45.
[65] Landscape Assessment Peer Review Report, paragraph 45.
[66] Landscape Memo - Response to Hearing Panel Questions, Jessica McKenzie, 12 December 2023, paragraph 18.

that contribute to the views and visual amenity."[67] However, values are prescribed by people and given the associated gold mining attributes, the dredge would not necessarily be seen as offensive. Ms McKenzie concluded adverse effects would range from 'low' to 'moderately high' at most, depending on the proximity of the viewing audience to the dredge.

[101] Ms Waters, an opposing submitter, urged the Panel to not allow the applicant to dredge for gold on the basis of historic and cultural association. She was *"deeply disquieted by the suggestion in the applicants AEE that the proposed activity somehow benefits our community through its associative links to historic goldmining."*[68] She also submitted *"there is no direct explanation regarding the negative (and social) impacts of historic goldmining. It is only alluded to and then glanced over."*[69] Further that *"the omission of any direct reference to negative environmental impacts helps to frame their proposed activity, with its historic and cultural associations, in an entirely positive light*."[70]

[102] Mr Denney advised the effect would remain similar to that previously advised by him. He considered the larger scale of the proposed dredging operation was some distance from that anticipated by the permitted baseline. He considered that given the existing presence of a limited number of recreational boat users, the dredge would not be a new element in terms of presence of vessels on the waterway, but *"it would be of a larger scale and differing character and as noted in my report is effectively a shed on a pontoon."*[71] He considered the dredge would occupy parts of the river for a much longer duration compared to the infrequent passing of recreational boaters. He concluded the larger scale of the dredge would have similar adverse effects whether or not the permitted baseline was considered to be an appropriate point of comparison.

Finding

[103] We prefer Mr Denney's opinion that when visible, depending on its proximity to viewers, adverse effects on users of the upper Mata-Au and its margins, public reserves and unformed legal roads would range from 'very low' to potentially 'moderate-high'. We find 'moderate-high' adverse effects weigh against a grant of consent.

The Upper Clutha River Track

[104] The landscape experts also had differing opinions on adverse visual effects from this viewing location, with Ms McKenzie concluding 'low at most' and Mr Denney advising a range of 'very low to moderate'. We understand the Upper Clutha River Track is a walking and cycling track located within the Queenstown Lakes District and of relevance to this application the trail is located along the true right of the river bank and extends downstream from the historic Red Bridge at Luggate.

[105] Ms McKenzie considered the river intermittently visible with topography and vegetation providing screening, as well as the dredge occupying *"only a relatively small part of a wider view*"[72]. Further, *"the dredge will be viewed as a large vessel that is sympathetically coloured..."*[73]. Her conclusions relied on the permitted baseline and as such, *"a small amount of dredging forms part of the visual amenity anticipated within the river…"*[74]. She considered that due to the transient nature of the dredge, adverse effects would be temporary and there would be no permanent changes.

[106] Mr Denney advised the trail has an observed higher level of use and is in proximity to the recently expanded residential area of Luggate. He advised the track is easily accessed from the highway, and is located adjacent to the freedom camping area at Red Bridge. He supported the proposed exclusion area of Devil's Nook, as this removed an area where views of the river are particularly dramatic and scenic, and frequented

[67] Landscape Memo - Response to Hearing Panel Questions, Jessica McKenzie, 12 December 2023, paragraph 18.
[68] Ms Water, Hearing speaking notes.
[69] Ms Water, submission, page 3.
[70] Ms Water, submission, page 3.
[71] Landscape Memo, Denny, page 2
[72] EIC McKenzie, paragraph 72.
[73] EIC McKenzie, paragraph 72.
[74] EIC McKenzie, paragraph 73.

by the public. He also noted that parts of the trail have elevated viewpoints where the proposed activity would be more visible. He acknowledged the Luggate Rural Industrial Sub Zone detracted from wider river views to a small degree. Mr Denney agreed there would be a diversity to the visual perception and associations of the dredge in the context of river views, and this would be both positive and negative. In regard to natural and scenic values, he considered the dredge would detract from such values where it was visible to a 'very low' to 'moderate' degree and that such effects would be temporary according to the duration the dredge was present in the field of view, which he considered could be more than a year.

[107] In their supplementary evidence disregarding the permitted baseline, Mr Denney advised his conclusions remained largely the same. Ms McKenzie also advised her conclusions would be the same, but acknowledged the limited number of people who use the public trails. She reiterated the transient nature of the dredge and users of the trails, acknowledging the dredge will be '*a large and somewhat unusual element' and when in close proximity, the dredge will be highly visible'*. She concluded adverse effects would range from 'low' to be 'moderate to high', depending on the proximity of viewers to the dredge.

Finding

[108] We agree with the landscape architects that the degree of effect will depend on the proximity of the dredge to a viewer on the Upper Clutha River Track and the duration it is visible for. We find potential adverse effects of a 'moderate' to 'moderate to high' degree weigh against a grant of consent.

Private land abutting the river

[109] Ms McKenzie advised that the land abutting the river was primarily productive rural land with some ad-hoc nodes of rural living, concentrated between the Sandy Point walk and the Mata-Au Scientific Reserve, and in the Queensbury area. She also advised dwellings were located on the upper terrace and are generally 'set well back from the river' and due to the incised nature of the river, views of the river from dwellings are relatively limited. Further, the meandering nature of the river, topography, and vegetation also limited views. Where visible, she considered the activity would occupy a small portion of the river. However, the panoramic views would continue to be dominated by rural paddocks, the river corridor and a mountainous backdrop.

Ms McKenzie considered dredging activity could be reasonably anticipated to form part of views. However, she advised the larger scale proposed by the applicant would make the dredge more recognisable. She advised in a stretch of river greater than 500m in length, there may be multiple conspicuously coloured dredges operating as a permitted activity, and that one recessively coloured dredge would have a similar or lesser effect than such permitted activities. Notwithstanding this, she acknowledged *"from some private viewpoints of the river the presence of the dredge when located within a particular view (perhaps for months) will equate to an adverse effect on the view (depending on that person's perception of the activity)."*[75] Ms McKenzie concluded adverse effects would be 'low' given the limited viewpoints, transient nature of the dredge and changes to amenity anticipated by permitted activities.

[110] Mr Denny considered Ms McKenzie's assessment was too narrow and advised there were several dwellings that do not abut the Mata-Au, but are orientated towards river views. He also did not agree that the rural living properties had been designed in an ad-hoc manner and visibility of the river from lifestyle dwellings was limited. In his opinion there were several instances where buildings were orientated to maximise desirable and attractive views of the river, and in some places, there was also a reduction in riverside vegetation which better enabled river views.

[111] Mr Denney advised static or fixed viewpoints from private properties and dwellings were different in nature to passing visitor views. In the former case, the duration of the visual effect was more lasting, rather than in passing where you might have many viewpoints along the river. He opined effects from a private dwelling were longer and more present in the degree of change to that view and emphasised *"the duration of effect is more relevant, as a larger than anticipated commercial dredge within the same private view for potentially*

[75] EIC McKenzie, paragraph 78.

over a year would have a more lasting visual effect on the viewer compared to an infrequent visitor."[76] However, Mr Denney acknowledged this also would depend on the sensitivity of the viewer. He concluded the visual presence of the dredge from private viewpoints where visible, would range between 'very low' to 'moderate' for the duration of its visibility.

[112] In her supplementary evidence that disregarded a permitted baseline, Ms McKenzie reiterated her earlier assessment that where the river is visible, it is the part of wider view and that while the dredge is operational it will add an unusual man-made element to the view. She advised the dredge was impermanent, but the views were not, and as such, when the dredge is operational, she agreed that residents were likely to be more affected than transient river users. She reiterated most dwellings are located on the upper terrace, considerably set back from the river. However, there were some dwellings located on the lower terrace, in close proximity to the river and in this situation, the dredge would be highly visible in close proximity and adverse effects would be 'high'. However, she considered Mr Denney's recommended condition regarding time spent in 250m stretches would reduce adverse effects to 'moderate' or 'low'.

[113] Mr Denney's supplementary conclusions remained largely the same, but he clarified a change to his recommended condition relating to the duration of the dredge at locations visible from within 1km of rural dwellings. We have earlier set out Mr Denney's recommended amendments to the conditions offered by the applicant which were in response to concerns raised on duration of views. However, we were informed in closing submissions that the applicant was 'only willing to partially accept' Mr Denney's amendments and proffered modified wording to that recommended by Mr Denney.

Finding

[114] On the evidence we find that potential adverse effects on the visual amenity enjoyed by private land abutting the river weighs against a grant of consent.

3.3.4 Natural character of the riverbed

[115] Natural character encompasses a number of elements and features that are relevant to district council and regional council functions. To avoid duplication, we address adverse effects on the natural character of the riverbed in this section of our Decision. We addressed landscape aspects of natural character in section 3.3.3.

[116] Section 6(a) of the RMA requires us to recognise and provide for the preservation of the natural character of rivers and their margins and the protection of them from inappropriate subdivision, use, and development. This is a matter of national importance.

[117] Dr Young considered that the lake-fed nature of the upper Mata-Au was a critically important feature and contributed towards many of its special characteristics[77]. Flow changes are buffered by Lake Wānaka upstream, so the river does not experience the same level of extreme high and low flows that would be typical of a rain-fed river. Dr Young also noted that similarly, sediment washed into Lake Wānaka settled out within the lake, so there was a low supply of sediment to the upper Mata-Au, further contributing to its stable environment. Dr Young challenged the applicant's assessment regarding flow and habitat stability noting, "*In the application and associated e3Scientific report, the upper Clutha River is described as a 'highly unstable environment' (page 22), a 'highly variable and unstable environment' (page 22) and 'a highly dynamic and mobile river' (page 26) with an 'unstable benthic environment' (page 27). In fact, the opposite is true*."[78]

[118] Dr Young agreed that the upper Mata-Au was certainly a very large river[79], but due to its relatively low flow variability, there would be a relatively small amount of bed disturbance caused by high flows. He concluded

[76] Landscape Assessment Peer Review Report, paragraph 52.
[77] EIC Young, paragraph 11.
[78] EIC Young, paragraph 25.
[79] EIC Young, paragraph 26.

that the upper Mata-Au's relatively stable flows, and resulting riverbed stability, contributed to its unique natural characteristics and aquatic ecosystem productivity.

[119] Ms Barnett considered[80] that Dr Young had overemphasised the source of the river being Lake Wanaka, without consideration of other tributary inflows, including the Hawea River (although she acknowledged this was also a Lake fed river) and the Cadrona River. She noted that those tributaries would periodically result in large pulses of sediment in the upper Mata-Au, along with fluctuations in river flows, and therefore habitat disturbance in the upper Mata-Au. However, Ms Barnett's evidence did not dissuade us from accepting Dr Young's point that the section of the river we are considering has relatively stable flows with very little natural riverbed disturbance.

[120] We find the low level of natural riverbed disturbance to be a primary feature of the natural character of the bed of the upper Mata-Au.

[121] Dr Young considered that artificial disturbance of the upper Mata-Au riverbed, as proposed in the application, would be likely to have a detrimental effect on the aquatic ecosystem because there was very little natural streambed disturbance along this segment of the river. This was not refuted by Ms Barnett.

[122] We understand from the applicant's evidence that the bed of the upper Mata-Au will be significantly disturbed in the areas where gold is extracted. We heard from Peter Hall that the depth of the gravels to bedrock can be anything up to 12m deep[81] (the 'extraction zone'). The areas to be dredged are not presently defined as this "*depends on where the gold is*"[82]. There could be several swaths dredged in the same vicinity if there is gold present, with each swath typically 10m to 15m wide. The method of dredging will completely reorganize the riverbed structure in spite of material being returned to the river behind the dredge. For example, the material located at the bottom of the extraction zone will be brought to the surface and deposited on the surface of the riverbed.

[123] We note the Applicant volunteered a condition to limit disturbance of the riverbed to one hectare per month. That equates to 12 hectares of disturbance per annum or approximately 96 hectares of disturbance over the anticipated eight-year period of dredging. That is a large area of riverbed.

[124] Overall, we find that the dredging proposal will result in significant long term (if not permanent) changes to the natural character of the bed of the upper Mata Au. The proposal will clearly not preserve the natural character of the riverbed which is contrary to section 6(a) of the RMA. This weighs strongly against a grant of consent.

3.3.5 Light spill

[125] Several submitters were concerned the dredge's operational and navigational lights would be intrusive in the rural environment and cause adverse effects. The application stated that while lights on the dredge may be visible from adjacent roadways and some properties, that lighting will comply with district plan standards. Mr Sycamore considered lighting effects would be minimal as the lights would be directed downward to limit light spill and the dredge typically operates away from public views and would be located in an incised riverbed. He advised it would be appropriate to impose a condition of consent to manage any adverse effects and to ensure compliance was achieved.

[126] Ms Royce agreed adverse lighting effects would be no more than minor[83]. Her opinion was based on the singular nature of the dredge, its duration in any given location, the applicant's reduced nighttime[84] hours

[80] Memorandum dated 16 November 2023.
[81] EIC Hall, paragraph 6.
[82] We understand that the location of the gold is unknown, but the Applicant considers gold is present based on historical information. EIC Hall, paragraph 4.
[83] QLDC and CODC Section 42A Report, paragraph 137.
[84] Operations to cease at 8pm.

of operation, and the distance to notional boundaries. She considered any adverse effects could be appropriately managed by conditions.

[127] On the evidence we find that if granted a suitably worded condition would adequately manage any adverse effects from light spill and light spill issues do not weigh against a grant of consent.

3.3.6 Navigational safety

[128] In our Decision we distinguish between navigation safety and effects on surface water recreation and public access to and along the river. Navigation safety pertains to navigation safety aspects of the vessel *CGC1* (the dredge). Navigation safety of *CGC1* is primarily managed by Maritime New Zealand and by the QLDC and ORC Harbourmasters.

[129] The applicant provided a copy of its approved Maritime Transport Operator Plan which is designed to provide the infrmation, policies and procedures necessary for the safe, effective and compliant operation of the vessel. The Harbourmasters consulted during the assessment of the proposal did not identify any navigation safety issues associated with the operation of the *CGC1*. Instead, they focused their attention on addressing surface water recreation effects which we address below.

[130] According to the applicant *CGC1* is purpose built to operate in the Mata-Au. We accept that it has been purpose built to extract gold from the riverbed. However, we were very concerned by video evidence provided by Ms Fogelberg that showed the dredge struggling to avoid a rocky outcrop whilst travelling downstream under power. It appeared that the engine system and steering system was not able to maneuver the vessel appropriately with the result being that the vessel narrowly missed a rocky outcrop located on the bank of the river. The vessel appeared to be very cumbersome in the lower Mata Au.

[131] Peter Hall addressed this matter in his Summary Evidence[85]. He explained he was on board the vessel at the time and was concerned about the approach being taken but had to defer to the skipper. He stated "*This manoeuvrer was the first time that we relocated the dredge following its launch in 2012*." He then explained that:

> *"Since the day that video was taken we only manoeuvre the dredge backwards. This means that it moves more slowly because we are working the engines against the current. This allows us to maintain full control over both speed and trajectory. Our manoeuvrers on the river are now much more mundane than they appear in the video."*

[132] We heard that the upper Mata Au is a fast-flowing river which we witnessed on our site visit. We also saw that it is relatively narrow, incised (with limited to no shore-based access in long stretches), and has many riverbed rock hazards over its length.

[133] We accept that the applicant is comfortable the vessel will be able to navigate in the upper Mata Au environment by facing upstream and maneuvering the vessel backwards, and we acknowledge that navigation safety is primarily addressed by MNZ and Harbourmasters. However, on the basis of the evidence before us, we remain concerned about the risk of an accident involving the dredge occurring in the upper Mata Au and this weighs against a grant of consent.

3.3.7 Surface water activities and public access

Surface water activities

[134] We were told that there is no data outlining the number of people who undertake surface water activities in the proposal area. Ms Royce identified[86] the upper Mata Au supports a number of commercial river

[85] At paragraphs 22-25.
[86] QLDC and CODC Section 42A Report, paragraphs 174 to 176.

operators and recreational users. This was confirmed by several submitters we heard from[87]. The QLDC Harbourmaster stated[88] that in addition to the commercial operators identified by Ms Royce, there were multiple school and recreational user groups who utilise the upper Mata-Au.

[135] We noted from the evidence that the types of surface water activities include non-powered activities that head downstream such as rafting, kayaking, canoeing, drift diving, river surfing and the like. However, those activities also include powered craft such as jet boats and jet skis that head in both directions, including upstream from Lake Dunstan.

[136] In reply to the lack of "hard data" available on the number and type of surface water users, Peter Hall referenced[89] a small survey of river usage under taken by the Cold Gold Clutha's operations manager. However, this was a very discrete survey and we did not place much weight on it.

[137] We prefer the evidence of the numerous lay submitters, Ms Royce and the QLDC Harbourmaster who demonstrated that the upper Mata Au is a well-used water body for surface water activities. The applicant seemed to accept this. In the applicant's Reply, Peter Hall[90] acknowledged that there were likely to be a higher number of water users on the proposed stretch of the river (we understand that to be compared to the lower Mata-Au).

[138] A number of submitters raised concerns about safety effects of the proposal on surface water activities that occur in the upper Mata Au. In particular the risks to surface water activities arising from colliding with (above, on, or beneath the surface of the river) the proposed mooring warps, backing lines and side lines. Collision with these wires could result in severe injury or death.

[139] The proposed backing lines and side lines are described in the ORC s92 request response from Terramark dated 18 July 2023 as follows:

> *"To ensure the anchors can't fail (lose grip) the anchors are additionally backed off to an adjacent willow or rock with a wire rope. These usually submerge within 5m of the bank or rock. When on long warps (>150m), we sometimes use "side wires" to enhance the spread of the anchor wires for improved stability. Similar to the backing wires, a wire rope is affixed partway down the anchor warp and attached to a tree or exposed rock."*

[140] In response to our questions, the applicant provided a wire diagram and video explaining the mooring system in more detail.

[141] Ngaio Hart (representing Central Otago Whitewater Inc) gave evidence demonstrating how difficult it was to see the wires from the water surface in a kayak. Reginald Hall[91] stated that the backing lines and side lines rise and fall in the water as they are loaded and unloaded in response to dredge movement. They do not remain static on the riverbed. He also made the point that the river at the proposed dredging site was considerably narrower that the lower Mata-Au. Therefore, anchor cables would be shorter, thus lighter and produce less catenary (sag). Reginald Hall's evidence was not refuted by the applicant and we accept it.

[142] The stretch of the upper Mata-Au where mining is proposed varies between approximately 70 – 100m in width[92]. The vessel is 23.9 metres in length and with a beam of 6.6 metres[93]. The wiring diagram provided by the applicant indicates that the wires (backing wires and/or side wires) will span the entire navigable

[87] Including Kim Fogelberg, Duncan Kenderdine, Ngaio Hart, PM Benjamin, Tony Ward-Holmes.
[88] Written response to Panel questions (undated).
[89] Supplementary Evidence (SE), paragraphs 20 to 22.
[90] SE, paragraph 4.
[91] A certified Marine Engineer and Skipper who is currently a Tug Engineer at Lyttleton Port Company and who used to work on the dredge.
[92] QLDC and CODC Section 42A Report, paragraph 19.
[93] QLDC and CODC Section 42A Report, paragraph 13.

channel. It is apparent to us that the dredge and the mooring system will be a dominant feature within the river channel.

[143] At the hearing, the applicant accepted that there were risks to surface water activities and considered that the dredge mooring system could be adapted to address collision risks for surface water activities. This was addressed further in the applicant's Reply submissions.

[144] The applicant liaised with the ORC and QLDC Harbourmasters and proffered further refinements to the mooring system to address safety issues. These were outlined in Mr Peter Hall's Supplementary Evidence. In her Reply submissions[94] Ms Irving submitted "*Regardless, the issue of concern to everyone is clear – that of the anchor warps being surface bearing.*" However, we consider this is not accurate. The lay evidence from surface water users outlined significant concerns with the backing wires and the side lines.

[145] Peter Hall's Supplementary Evidence addressed changes to the anchor warps that we consider will mitigate safety issues for surface water users[95], but it did not address backing lines and side line concerns. Mr Hall's proffered condition states that no mooring or anchor lines are permitted to extend above the river surface beyond the port or starboard beam of the dredge, but specifically excludes the anchor backing lines. It is apparent from the anchoring procedures outlined in Appendix 1 of Mr Hall's Supplementary Evidence that the backing lines will stay in place until the dredge is ready to move to a new location. Mr Hall did not provide any more information with regard to the side lines.

[146] The revised consent conditions[96] attached to the applicants Reply submissions introduced a watch keeper requirement whereby the dredge operators would react to situations where other water users are exposed to navigational hazards from the dredge operations. We consider that mitigation measure would not adequately address the surface water recreation safety concerns raised by the submitters such that the potential risk to other surface water users is avoided. We use the word "avoided" deliberately, given that the risk to other water users includes injury and even death by drowning. That is clearly an unacceptable "*potential effect of low probability which has a high potential impact*" as defined in section 3(f) of the RMA.

[147] Overall, on the basis of the available evidence above, we consider that the proposed mooring system poses an unacceptable risk to the safety of surface water activities that occur in the upper Mata Au. This weighs strongly against a grant of consent.

Public Access

[148] Section 6 of the Act identifies public access to and along rivers as a matter of national importance. We consider that the proposal will have minor effects on public access to the Mata-Au from the riverbanks. However, on the basis of our preceding assessment, we find that there will be significant restrictions to public access along (within) the upper Mata-Au arising from the proposal. This weighs against a grant of consent.

3.3.8 Slipway

[149] A slipway is proposed at a property located near Queensberry on the true right of the upper Mata-Au within the Central Otago District, approximately 1km downstream of the boundary to the Queenstown Lakes District. We understand the formation of the slipway requires the earth to be scraped and the removal of two popular trees. We were also informed that the location of the slipway is in the vicinity of several registered archaeological sites. In her end of hearing report[97], Ms Burrows informed us the proposed location was close to a number of archaeological sites, particularly G40/161 'mining tailings'. We were given limited information on those registered archaeological sites.

[94] Paragraph 79.
[95] This was verified via correspondence between the applicant and the appropriate Harbourmasters.
[96] RM22.434.01 condition 14.
[97] Addendum to Staff Section 42A Recommending Report, page 4.

[150] Ms McKenzie considered the slipway would be difficult to discern. Mr Denney was also largely satisfied with the effects of the slipway on landscape character and visual amenity and he recommended a landscape reinstatement condition requiring the slipway area to be reshaped to a natural contour and grassed, and any associated structures removed. He also noted that any land based structures should use recessive colours.

[151] We accept the advice of the landscape architects and Ms Burrows and find, subject to appropriate conditions including managing earthworks, an accidental discovery protocol relating to the presence of archaeological sites, and reinstatement at the lapsing of the consent, the Queensbury slipway would not weigh against a grant of consent.

[152] We note that the applicant also intends to construct a 'temporary' slipway at Rongahere Road, Beaumont. We understand that is required to enable the dredge to be removed from the lower Mata-Au prior to its transportation to the upper Mata-Au. We received no specific evidence about the location of this 'temporary' slipway or its likely effects, which could conceivably include effects on the safety of the roadway from which access to the slipway will be obtained. We find this weighs against a grant of consent, albeit to a minor degree.

3.3.9 Māori cultural values and interests

[153] We discuss the effects on Māori cultural values and interests in section 4.2.5 of this Decision. We do so because the majority of concerns expressed by Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga (referred to collectively as 'Kā Rūnaka) relate to instream matters. We record that our findings in that section apply equally to applications that we assess under delegated authority from the CODC and QLDC.

3.3.10 Cumulative effects

[154] Cumulative effects were not specifically considered as an issue in the applicant's AEE or in the Section 42A Reports. However, various references were made by both landscape architects to a scenario if multiple suction dredging operations were to be carried out as a permitted activity. Mr Denney also identified a cumulative effect associated with the Luggate industrial area. Further, cumulative effects were referenced in association with other man-made objects found along the river and in the context of the applicant retaining their existing dredging operation on the lower Mata-Au as well as the operation sought as part of this consent.

[155] Ms McKenzie drew our attention to human influence evident in the environment, through "*exotic vegetation, bridges, pylons, pump stations, farm/recreational tracks, and other established commercial and recreational activities involving sports, boating and fishing*."[98] However, while we witnessed some of these structures on our site visits, we had no evidence presented to us on their specific locations along the river. We also consider through the process of the hearing we gained a reasonable understanding of other users on the river, including other commercial activities.

[156] Ms McKenzie provided detailed comment on sediment plume visibility and compared the potential effects of multiple plumes from smaller permitted activities versus one larger plume as proposed. Mr Denney advised he understood smaller permitted activity dredges would be separated by 300m but "*without a full understanding on the exclusivity of mining licences, and navigational safety requirements on the river, there could be a context where the proposed plume could be viewed in addition to the other permitted plumes in the same view but at a minimum 300 metres proposed separation between potential blooms any accumulative effect would be negligible*"[99].

[157] To address potential cumulative effects, the applicant proposed a condition that will (i) result in the surrender of the existing downstream dredging permit prior to commencing dredging under this consent, if granted,

[98] Landscape Memo - Response to Hearing Panel Questions, Jessica McKenzie, 12 December 2023, paragraph 9.
[99] Landscape Assessment Peer Review Report, paragraph 51.

and (ii) prevent permitted activity dredging occurring within the mining permit area while the consented dredging takes place.

[158] In her closing legal submissions, Ms Irving submitted that with these proposed conditions there were no cumulative effects that arise from the application. She submitted that the assessment of the permitted baseline provided a point at which adverse effects can be disregarded and the only context within which cumulative effects would arise is where, on a real-world assessment of the receiving environment, we were to conclude that there would be an exercise of permitted activity rights. Due to the nature of the mining permit regime and the conditions proposed above, she submitted that was not a possibility.

[159] We have previously decided not to apply the permitted baseline in this case and it would consequently be inappropriate to disregard any effects of the proposed activity under section 104(2) of the RMA. Further, given the applicant has volunteered a condition to relinquish its consent in the lower Mata-Au and to prevent permitted activity dredging occurring within the upper Mata-Au mining permit area our consideration of cumulative effects has narrowed. On the basis of the evidence before us, we consider adverse cumulative effects do not weigh against a grant of consent.

3.3.11 Positive effects

[160] Peter Hall[100] outlined the positive effects of the proposal. This included profits going to the owners of Cold Gold Clutha (100% New Zealand owned), employment of six permanent full-time staff, and employment of local businesses such as engineering suppliers and maintenance contractors who in turn spend locally. We received no information to demonstrate the significance of that local spend for the district and regional economy. It appears to us to be relatively minor from a district or region wide perspective.

[161] Peter Hall outlined the benefits of gold as a commodity. However, we do not know how much gold will be extracted if consent is granted, and the commodity is able to be supplied from other sources globally. In other words, we consider that the benefits to society from gold as a commodity cannot be attributed to this proposal.

[162] The company currently extracts gold under various consents and mining permit 53215 which extends over 66 kilometres of the riverbed on the lower Mata Au from Tuapeka Mouth and upstream to immediately before the Roxburgh Dam. The permit comprises 900.7ha and expires on 6 June 2031[101]. The applicant has proposed a consent duration for mining in the upper Mata Au expiring on 25 February 2031. We heard that if we were to grant consent for the applications before us, the applicant would cease dredging the lower Mata Au and move the dredge upstream. They will not operate in both areas at the same time.

[163] We heard no evidence to indicate that continuation of mining in the lower Mata Au is not financially viable. That being the case, it appears that any positive effects associated with the dredging activity will simply be transferred from one site to another within the same time period, with no actual increase in employment or use of contractors and local businesses, along with the benefits of any 'spend' by those parties.

[164] Consequently, we do not consider that the positive effects of the proposal are sufficient to outweigh its adverse effects.

3.3.12 Other submitter issues

[165] We are not aware of any other relevant issues raised by submitters.

3.3.13 Overall findings on effects

[166] We have found that a number of adverse effects weigh against a grant of consent, namely:
(a) Potential adverse effects relating to visual amenity;

[100] Summary Statement Hall, paragraph 5.
[101] QLDC and CODC Section 42A Report, paragraph 32.

(b) Effects on the natural character of the river bed;
(c) Effects on navigational safety, namely the risk of an accident involving the dredge;
(d) Potential effects on Māori cultural values and interests; and
(e) Effects on surface water activities and public access, particularly an unacceptable risk to the safety of surface water activities that occur in the upper Mata Au;

[167] In our view these adverse effects are not outweighed by the positive effects of the proposal, as those positive effects are largely confined to the financial benefits that will accrue to the applicant.

3.4 National environment standards and other regulations

[168] We discuss relevant national environment standards and other regulations pertaining to the consents required from the ORC in section 4.3 of this Decision. Ms Royce advised that there were no national environment standards relevant to the consents required from the QLDC and the CODC. No other party drew our attention to any such matters and we ourselves were not aware of any.

3.5 National policy statements

[169] In section 4.4 of this Decision, we discuss the National Policy Statement for Freshwater Management 2020 (NPSFM) and the National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB) insofar as they are relevant to the consents required from the ORC.

[170] We consider our section 4.4 findings on the NPSFM to be equally relevant to the consents required from the QLDC and the CODC and consequently, we do not discuss that matter here. In terms of the NPS-IB, we are satisfied on the available evidence that the vegetation removal activities associated with the proposed slipways do not offend the objectives of that national policy statement.

3.6 Regional policy statements

[171] The Operative Regional Policy Statement for Otago (PORPS) was made partially operative on 14 January 2019 and fully operative 15 March 2021. We accept the advice of the planning experts that significant weight should be attached to this document.

[172] Given our findings on the effects of the applications, we consider the proposal to be inconsistent with a number of provisions of the PORPS including:

(a) Policy 1.1.2 as the proposal does not recognise and provide for Kāi Tahu values;
(b) Policy 2.1.2 as the proposal does not recognise and provide for the relationship of Kāi Tahu's culture and traditions with their ancestral water and other taoka;
(c) Policy 2.2.1 as the proposal does not recognise and provide for Kāi Tahu's values, interest and customary resources;
(d) Policies 3.1 and 3.1.2, 3.1.11 as the proposal will not maintain or enhance values of ecosystems and natural resources, including the natural functioning and character of the riverbed and natural features and landscapes;
(e) Objective 5.1 as the proposal will not maintain public access along the upper Mata-Au;
(f) Policy 5.1.1 and Objective 5.4 as the proposal will not protect the public health and safety of in-stream river users; and
(g) Policy 5.4.8 as the proposal will not avoid the outstanding natural features in the upper Mata-Au.

[173] We find that having regard to the operative RPS weighs against a grant of consent.

[174] We consider the proposed Regional Policy Statement that was originally notified in June 2021 in section 4.5 of this Decision where we conclude that little weight should be placed on its provisions at this point in time.

3.7 Queenstown Lake District Plan

[175] The Queenstown Lakes District currently has two District Plans, namely an Operative District Plan and a Proposed District Plan (PDP). We agree with Ms Irving's opening legal submissions that the PDP should be given more weight due to the fact it has been through the hearing and decision-making process, and in most cases, matters have been resolved on appeal to the Environment Court, particularly in respect to the policy framework applicable to ONF and Rural Character Areas. For that reason, we do not address the Operative District Plan here.

[176] In light of our findings with regard to adverse effects of the proposal on the environment under section 104(1)(a) of the Act, we consider the proposal to be inconsistent with many of the relevant provisions of the Queenstown Lakes PDP identified by the planning witnesses, including the following:

(a) Strategic Objectives 3.2.4 as the distinctive natural environment and ecosystems of the upper Mata-Au will not be protected, including 3.2.4.1 as it relates to sustaining or enhancing life supporting capacities, 3.2.4.3 as it relates to the natural character of the beds and margins of the river, 3.2.4.4 that water quality is maintained or enhanced, 3.2.4.5 as public access along the upper Mata-Au will not be maintained or enhanced, 3.2.4.6 as values of significant indigenous fauna will not be protected, 3.2.4.7 as the survival chances of endangered species of indigenous animal communities will not be maintained or enhanced;

(b) Strategic Objective 3.2.5 as the proposal does not protect the values of the ONF;

(c) Strategic Objectives 3.2.7 and 3.2.7.1 as the proposal does not protect Ngāi Tahu values, interests and customary resources, including taonga species and habitats and wāhi tūpuna;

(d) Strategic Policy 3.3.20 as it relates to adverse effects on nature conservation values of the upper Mata-Au and its bed and margins such that its life supporting capacity is safe guarded and its natural character is maintained or enhanced;

(e) Strategic Policy 3.3.30 as the proposal will not protect the landscape values of the Mata-Au which is an ONF;

(f) Strategic Polices 3.3.50 as the proposal has not appropriately avoided, remedied or mitigated adverse effects on wāhi tūpuna, and 3.3.51 as it relates to managing wāhi tūpuna in a culturally appropriately manner;

(g) Objective 5.3.3 as the proposal will not protect Ngāi Tahu taonga species and related habitats; and Policy 5.3.3.1 as adverse effects on taonga species and habitats have not been appropriately avoided, remedied or mitigated;

(h) Objective 5.3.5 as we are not persuaded that the proposal will appropriately manage and protect wāhi tūpuna and all their components;

(i) Policy 5.3.5.5 as the proposal does not avoid adverse effects on the relationship between Ngāi Tāhu and the wāhi tūpuna;

(j) Policies 6.3.3, 6.3.3.1, and 6.3.3.3 in terms of managing activities on an ONF and the protection of landscape values and cultural values;

(k) Policy 6.3.5 relating to managing activities on the Mata-Au that protect the values of the ONF; and related policy 6.3.5.4 providing for appropriate commercial activities on the surface of water;

(l) Objective 21.2.1 as the proposal will not protect or enhance the natural character of the Mata-Au and its margins;

(m) Policy 21.2.1.4 as the proposal does not minimise visual effects of the activity;

(n) Objective 21.2.3 with supporting Policy 21.2.3.1 relating to safe guarding the life supporting capacity of water through integrated management of effects;

(o) Objective 21.2.5 as the location, scale, and effects of the proposal do not protect, maintain or restore rural amenity, water landscape and biodiversity values;

(p) Policy 21.2.5.4 which seeks to ensure potentially significant adverse effects of extraction activities 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 life supporting capacity of water. We are not persuaded the proposal achieves those outcomes;

(q) Objective 21.2.12 in relation to the protection or enhancement of the natural character of the Mata-Au and its margins including policies 21.2.12.1 (statutory obligations, wāhi tūpuna and spiritual and cultural traditions of tangata whenua), 21.2.12.2 relating to enabling people to access recreational experiences on the river and its margins, 21.2.12.3 in terms of avoiding or mitigating adverse effects of an intrusive commercial activity in an area of recreational use, nature conservation values and wildlife habitat; 21.2.12.5 in terms of protecting, maintaining and enhancing natural character and nature conservation values of the Mata-Au and its margins from inappropriate activities with regarding to spawning, intrinsic value of ecosystems and areas of indigenous fauna habitat and recreational values; 21.2.12.6 relating to recognising and providing for the maintenance and enhancement of public access to and enjoyment of the margins of the river, and 21.2.12.7 relating to avoiding, remedying or mitigating adverse effects on visual qualities, safety and conflicts with recreational activities on the river; and

(r) Objective 39.2.1 relating to recognising and providing for Manawhenua values within identified wāhi tūpuna area with associated Policies 39.2.1.1 recognising that mining activities may have effects that are incompatible with Manawhenua values where they occur with a wāhi tūpuna area, and 39.2.1.3 relating to avoiding remedying or mitigating adverse effects on Manawhenua values.

[177] We find that having regard to the Queenstown Lakes PDP weighs against a grant of consent.

3.8 Central Otago District Plan

[178] In light of our findings with regard to adverse effects of the proposal on the environment under section 104(1)(a), we consider the proposal to be inconsistent with many of the relevant Central Otago District Plan objectives and policies identified by the planning witnesses, including the following:

(a) Objective 3.3.4 - Wai (Water) as the proposal does not recognise the significance of wai to Kai Tahu ki Otago's spiritual beliefs, cultural traditions and practices, and nor does it provide for these where appropriate;

(b) Policy 4.4.2 (Landscape and Amenity Values) as the effects of the proposal do not adequately avoid, remedy or mitigate adverse effects on the landscape, natural character and amenity values of the rural environment within which the upper Mata-Au resides;

(c) Objective 4.3.4 (Recreation Resources) as the proposal will not maintain and enhance the quality of the District's upper Mata-Au recreation resource and public access to that resource;

(d) Objective 4.36 as the proposal does not preserve the natural character of the upper Mata-Au or its margin;

(e) Policy 4.4.13 (Public Access to Significant Features) as the proposal does not promote the provision of public access opportunities to the upper Mata-Au, which is acknowledged to be a significant natural and physical land feature, that includes areas of value for recreational purposes;

(f) Objective 5.3.1 (Amenity Values, Environmental Quality and Natural Character) as the proposal does not maintain and enhance the amenity values and environmental quality, nor preserve the natural character of the upper Mata-Au and its margin;

(g) Objective 5.3.2 (Recreational Values) as the proposal does not maintain the recreational values of the surface and margins of the upper Mata-Au;

(h) Objective 5.3.3 (Public Access) as the proposal does not maintain and enhance public access, to and along the surface and margins of the upper Mata-Au;

(i) Policy 5.4.1 – (Water Surface Activities) as the proposal does not ensure the safe and efficient navigation of any powered or non-powered craft using the upper Mata-Au water surface is not compromised; and conflict with other resource users on that water surface is not appropriately avoided, remedied or mitigated; and public access along that water surface is not provided for;

(j) 5.4.6 Policy (Public Access) as the proposal does not make adequate provision for public access along the surface of the upper Mata-Au;

(k) Objective 5.3.4 (Safe and Efficient Navigation) as the proposal does not ensure that the safety and efficiency of navigation is maintained on the surface of the upper Mata-Au.

[179] We find that having regard to the Central Otago District Plan weighs against a grant of consent.

3.9 Section 104(1)(c) other matters

[180] At the hearing we raised the issue of whether or not a bond should be required in the event that the applicant's business operation ceased trading. A bond would involve ensuring that the dredge would be removed from the Mata-Au and thereafter safely disposed of. In Reply the applicant proffered condition 4 for consent RM22.434.01 which was worded so as to require that the "... *Consent Holder shall provide evidence to the Council demonstrating that it holds Public Liability Insurance of no less than $5 Million Dollars. The consent holder must maintain this level of insurance at all times while exercising this consent and the associated permits RM22.434.02-04. Evidence of the insurance being held shall be provided to the Council on request.*

[181] Public Liability insurance may cover damage caused by the dredging operation to other river users or existing riverbank structures. However, we are not sure that would extend to removing the dredge from the river. Should consent be granted we would prefer an expanded condition that sets out exactly what the public liability insurance covers.

[182] Submitters Dr Duxson and Dr Harris raised concerns about effects of the proposal on a walking and cycle trail that is proposed for construction along the upper Mata-Au riverbank from downstream of the Luggate Bridge to the head of Lake Dunstan (true left bank).

[183] Ms Marsh provided evidence at the hearing on this matter including a letter from Southern Lakes Trails outlining that access through private land had been organised and that an alignment for the trail had been settled. However, access through public land is still subject to Department of Conservation and Land Information New Zealand approval . We also heard that resource consents had yet to be lodged for the proposed walking and cycle trail.

[184] Ms Irving addressed this matter in her Reply submissions[102]. She submitted that the proposed walking and cycle trail was not a relevant matter as it is not part of the receiving environment. It is not a permitted activity and does not have appropriate resource consents. We accept that submission and do not consider effects on users of the proposed Southern Lakes Trail further.

[185] No other matters were brought to our attention.

3.10 Part 2 matters

[186] We are aware of the case law which outlines that if the lower order statutory instruments appropriately deal with Part 2 matters, then no further assessment of Part 2 matters is required.

[187] In this case, the Queenstown Lakes PDP is a contemporary document that we understand to fully encapsulate Part 2 matters. The CODP is an older document and we are less certain about the extent to which it adequately addresses Part 2 matters, including any such matter embodied in national policy statements.

[188] Having said that, we address Part 2 matters in section 4.10 of this Decision insofar as they relate to the consent required from the ORC. In terms of the consents required from the QLDC and CODC we note that the applications to those territorial authorities equally inconsistent with those Part 2 matters.

[102] Paragraphs 65 and 66.

[189] For the reasons outlined in section 4.4 of this Decision, we also find that the applications to the QLDC and CODC are inconsistent with s8 of the RMA.

3.11 Consent duration and lapsing

[190] As we noted previously, the applicant has sought a consent duration expiring on 25 February 2031 to align with the expiry of mining permit 60593. Should consent be granted then we consider that eight-year term to be appropriate. We also consider that there would be no need to deviate from the normal lapse period of five years after the date of commencement of the consent, as specified in s125 of the RMA.

3.12 Consent conditions

[191] We were provided with recommended conditions by Ms Royce and Mr Sycamore that were updated as part of the applicant's Reply submissions. We are grateful for that assistance and we considered the mitigation embodied in the recommended conditions in our evaluation of the effects of the proposal. However, as our Decision is to decline the applications, we do not discuss consent conditions further.

3.13 Determination

[192] We decline the resource consents sought by Cold Gold Clutha Limited from the Queenstown Lakes District Council and the Central Otago District Council.

[193] Our reasons are detailed in the body of this Decision, but in summary they include:

(a) A number of potential adverse effects weigh against a grant of consent including effects on visual amenity, natural character of the bed of the upper Mata-Au, navigational safety, surface water activities and public access along the upper Mata-Au, and perhaps most significantly, effects on Māori cultural values and interests including in terms of the mauri and health of Mata-Au;

(b) The potential adverse effects of the proposal are not outweighed by its positive effects;

(c) The proposal is inconsistent with significant elements of Part 2 of the Act;

(d) The proposal is inconsistent with the NPS-FM 2020;

(e) The proposal is inconsistent with a significant number of provisions in the Queenstown Lakes PDP and the Central Otago District Pan; and

(f) The proposal is inconsistent with the Kai Tahu ki Otago Natural Resource Management Plan 2005, the Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008, and the Sports Fish and Game Management Plan for Otago Fish and Game Region 2015 – 2025.

[194] Having declined the applications to the QLDC and CODC we record that we did not rely solely on s104(6) of the RMA which provides discretion for a consent authority to decline an application on the grounds that it has inadequate information to determine the application. While inadequate information was a relevant matter, we were also able to make findings in relation to s104(1)(a), 104(1)(b) and 104(1)(c) matters.

4.0 Otago Regional Council consents

4.1 Consents required and consent category

[195] Resource consents are required from the ORC under the Regional Plan: Water for Otago (RPW), as follows:[103]

Rule	Purpose	Activity Status
13.5.3.1	Alteration of the bed of a river for the purpose of suction dredging	Discretionary
12.1.5.1	Take and use of surface water (non-consumptive)	Discretionary
12.C.3.2(i)	Discharge of contaminants (sediment-laden water) to surface water	Discretionary

[103] ORC Section 42A Report, section 5 'Status of the Application'.

13.5.3.1	Construction of a slipway in the bed of a river.	Discretionary

[196] It was common ground that the proposal is therefore to be assessed as a discretionary activity.

4.2 Effects assessment

[197] We now assess the actual and potential effects on the environment of the proposed activities.

4.2.1 Permitted baseline

[198] As we noted earlier, when forming an opinion for the purposes of subsection 104(1)(a) of the RMA we may disregard an adverse effect of the activity on the environment if a national environmental standard or a plan permits an activity with that effect.[104]

[199] Relevant to the consents required from the ORC, Rule 13.5.1.7 of the RPW provides for suction dredge mining within the bed of a river as a permitted activity, providing eleven conditions are complied with. The applicant's dredge does not meet condition (a)[105] which is that "*The internal diameter of the nozzle does not exceed 150 m."*

[200] The applicant contended that Rule 13.5.1.7 provided a permitted activity baseline whereby multiple smaller dredges might operate on a stretch of the river provided they were 500m apart (as required by condition (g) of Rule 13.5.1.7). We find that to be a fanciful proposition because:

(a) On the applicant's own evidence, no other mining activity can occur within the extent of the applicant's Crown Minerals Mining Permit;

(b) The applicant is the only party authorised under the Crown Minerals Act to undertake dredging in the Mata-Au and while it now states that if consent is declined it will operate smaller dredges on the river margins that does not relate to the central portion of the river relevant to the applications before us;

(c) We were provided with no probative evidence of multiple smaller dredges operating concurrently 500m apart on the upper Mata-Au in the past; and

(d) When questioned as to whether smaller dredges (with internal diameter nozzles up to 150mm) could dredge gravel in the area they proposed[106], Peter Hall responded that they could not, and that they need to be tethered to the riverbank and used with divers.

[201] In her end of hearing report Ms Burrows advised that in her opinion the permitted baseline under Rule 13.5.1.7 of the RPW was not applicable. Her reasons were:

(a) A 'permitted activity suction dredge' could not physically operate within the affected stretch of the riverbed, because the permitted activity dredging activity uses divers and cannot operate in high velocity water; and

(b) There is a significant size difference between the permitted activity suction dredge nozzle (150mm) and that proposed (350mm) which allows for much greater throughput of gravels.

[202] We agree with Ms Burrows.

[203] Accordingly, we elect not to disregard any effects of the proposed activity under s104(2) of the RMA.

4.2.2 Water quality

Suspended sediment

[204] The primary contaminant that will be discharged to the river by the applicant's proposal is sediment dredged from the riverbed. That sediment will have a range of grain sizes that may well vary from site to site,

[104] Section 104(2) of the RMA.
[105] It also does not, or may not, meet other conditions including (e), (i) and (j).
[106] With gravel depths from 2m to 12m below the bed.

although we were provided with no evidence on actual riverbed sediment composition in the 22km reach of the upper Mata-Au that is intended to be dredged. Nevertheless, we understand that some coarser sediments will quickly settle to the riverbed once discharged from the rear of the dredge. Other finer grained sediment will settle more slowly and will remain in suspension for some time. The sediment plume will therefore extend an unknown distance downstream. In addition, as the amount and composition of the fine grain sediment is unknown, the colour or clarity of the plume is also an unknown. This is relevant to how visible the plume is.

[205] In response the applicant proposed a suite of conditions as follows:

> 6. *There must be no conspicuous change in colour or visual clarity of the Clutha River / Mata-Au beyond a distance of 200 metres downstream of the point of discharge at any time, subject to compliance with conditions 7 and 8.*
> 7. *If there is a conspicuous change in colour or visual clarity of the Clutha River / Mata-Au beyond a distance of 100 metres downstream of the point of discharge, the discharge activity must cease until there is no conspicuous change in colour or visual clarity beyond 100 metres downstream of the point of discharge.*
> 8. *If there is a conspicuous change in colour or visual clarity of the Clutha River / Mata-Au beyond a distance of 200 metres downstream of the point of discharge, the discharge activity must cease and the Consent Holder must immediately notify the Consent Authority.*

[206] The implication of those offered conditions is that the applicant has effectively requested a zone of reasonable mixing of 200m. That is relevant to our consideration of the application under ss107(1)(c) and (d) which we address in section 4.9 of this Decision. There are also issues regarding monitoring any "*conspicuous change in colour or visual clarity*" which we discuss in section 4.2.6 of this Decision. However, the issue for us to assess here is whether a sediment plume up to 200m long is an "acceptable" effect on water quality *per se*.

[207] On the evidence available we find that is an acceptable effect, primarily because the contaminant (sediment) is naturally occurring and the effect (the sediment plume) is temporary (or transient) from both a spatial and temporal perspective. There will be no enduring adverse effects on water quality once the sediment plume has dissipated. We find that effects on water quality *per se* from the sediment discharge do not weigh against a grant of consent.

[208] We note that does not however axiomatically imply that effects on aquatic ecology are acceptable. We discuss that in section 4.2.3 of this Decision.

Human Sewage

[209] The dredge has no sewage holding tank which in our experience is unusual for a vessel of that size, particularly one which is occupied by several crew members for up to 13 hours a day. Peter Hall advised that the dredge is fitted with a cassette toilet for use by the crew. It is the same type of toilet commonly used in large self-contained campervans or caravans.

[210] The applicant has two toilet cassettes, allowing one to be fitted when a full one requires emptying. The cassettes have a capacity of 20L and typically require emptying once or twice a week. Peter Hall advised that for the proposed upper Mata-Au operation the cassettes would be removed from the dredge when full and emptied at a dump station either in Cromwell, Wanaka or Hawea[107]. Using the middle of the reach of river in contention as a reference point, utilising those dump stations would respectively require an 80km, 40km or 60 km round trip for a crew member at the end of a long working day.

[211] We heard from Oliver Moon who previously worked on the dredge. His evidence was that crew members simply urinated off the side of the vessel as the cassette toilet could not be used while standing up. He also

[107] Summary Statement (SS) Hall, paragraph 14.

advised that he had noticed a rope hanging over the side of the vessel and asked a crew member what it was for. He was told that when the toilet cassette was full, a rope would be tied to it and it would be thrown overboard to empty into the river.

[212] Peter Hall strongly disputed that such practices had occurred. He agreed that if some of staff had been doing that, then that was completely unacceptable[108]. In Reply the applicant proffered a condition requiring records to be kept relating to the emptying of the cassette toilet including, date and location of disposal. Those records would go some way to addressing the issue raised by Mr Moon.

[213] We also observe that the applicant's proposal to place a Portaloo at the site of the shore-based fuel storage tank may also go some way to reducing the risk of sewage entering the river, although we assume that facility might only be used by the applicant's staff when they were not on board the dredge.

[214] Having said that, it goes without saying that any discharge of raw, untreated human sewage into the Mata-Au would be a significant adverse effect that must be avoided. We understand that the toilet cassette would weigh around 20kg when full. It is therefore conceivable that it might be dropped into the river when being transferred from the dredge to the tender vessel (a small jetboat). In our view that would constitute[109] a "*potential effect of low probability which has a high potential impact*".

[215] To ensure that potential effect is actually avoided with certainty, we find that if consent is granted the dredge should have an onboard toilet and sewage holding tank installed prior to its operation in the upper Mata-Au. That holding tank would then need to be emptied as and when required by a specialist commercial operator that was skilled and experienced in such matters. That process would need to be subject to operational procedures that would be provided to ORC and certified as being both practically achievable and enforceable.

[216] As the applicant has not proposed such an approach, we find that weighs against a grant of consent.

[001] We note that as part of the applicant's Reply submissions Peter Hall advised[110] that "*To operate plumbed ablution facilities would require multiple holding tanks for water and wastewater. Minimising the draft of the vessel was an important design consideration and holding tanks would have quite an impact on that*." He added that "*In reality a trip to empty the tanks and then reestablish the dredge on its anchors could consume 1-2 days, and a significant amount of fuel*." While that may well be the case, we do not find that to be a sufficient reason for not managing onboard ablutions in a manner that would assuredly avoid adverse effects on the water quality of the culturally significant Mata-Au.

Refuelling

[002] As we noted in section 1.3 of this Decision, the dredge consumes around 700L of diesel fuel a day. Peter Hall explained that refuelling the dredge is a two-step process. Firstly, a 400L tank (called a ute tank) on the 'pilot boat' (which we understand to be a jetboat) is filled from a shore based South Fuels self-bunded bulk diesel storage tank. The pilot boat then travels to the dredge and the fuel is transferred to the dredge using an electric pump with a hose and automatic nozzle. That process would occur at least twice a day.

[003] Peter Hall explained[111] that there were multiple shutoff points in the shore-based system which are kept closed unless refuelling is occurring, including an automatic shutoff nozzle similar to that found at any petrol station for filling vehicles. Additionally, a remote cut-off switch is used to stop the ute tank pump on the pilot boat.

[108] SS Hall, paragraph 10.
[109] Section 2 RMA.
[110] SE Hall, paragraph 11.
[111] EIC Hall, paragraphs 18 to 20.

[004] There is obviously scope for a fuel spill to occur as part of this process, particularly in a fast-moving river environment. We understand other vessels using the upper Mata-Au are refuelled in the normal manner, namely at shore-based petrol stations. We were concerned about graphic evidence presented by submitters showing the shore-based fuel nozzle dangling from a willow tree overhanging the river edge. We understand that this was the system being used to fill the tank on the jet boat. That did not portrait responsible practice.

[005] Clearly any fuel spill into (or adjacent to) the river must be avoided as it would be difficult to remedy or mitigate the effects of a fuel spill into the river. Ideally that would entail the dredge being refuelled from the shore-based tank while securely moored to the riverbank. That would avoid what we consider to be a risky in river fuel transfer process. In the absence of that occurring, we cannot be confident that fuel spills into the river will be avoided during the eight-year duration sought.

[006] In saying that, we find it is inadequate to simply impose conditions that the 'ute tank' is fitted with an "*industry standard hose and filler nozzle with automatic cut-off*" and that "*the Consent Holder must ensure that no contaminants, including fuel or oil, enter the Clutha River / Mata-Au*". We must be satisfied that any such conditions are sufficient to actually avoid fuel spills. We are not persuaded that is the case and we consequently find that weighs against a grant of consent.

HDPE liner

[007] The dredge's suction pipe is currently lined with a 25mm thick HDPE liner which is gradually eroded by the gravel and sediments entrained in the pipe during dredging operations. Peter Hall's evidence was that the HDPE liner requires replacement around every 1500 to 1800 hours[112]. Several submitters, including Mr Moon, were concerned that this introduced micro-plastics to the Mata-Au and that could in turn adversely affect water quality and aquatic ecology.

[008] As part of the applicant's Reply, Peter Hall advised that in light of those submitter concerns the applicant was willing to commit to no longer using an HDPE liner. He stated that prior to the commencement of dredging activities in the upper Mata-Au the HDPE liner would be replaced with a steel alternative. That was reflected in amended condition 5 of RM22.434.03. We find that would suitably address that particular potential adverse effect.

4.2.3 Aquatic ecology

[009] As we discuss in section 4.4 of this Decision, it is of paramount importance that the gold mining operation prioritises the health and well-being of the Mata-Au and its freshwater ecosystem[113]. We now assess what we understand from the evidence to be the relevant components of that freshwater ecosystem. Before doing that, we acknowledge the applicant's commendable concession to exclude the ecologically sensitive areas around Devil's Nook and the lower section of the Mata-Au below the Lindis River confluence.

Macroinvertebrates

[010] Riverbed macroinvertebrates are dominated by the larval stage of terrestrial insects.

[011] Mr Hamer was of the view[114] that there was the potential to locally reduce "macro-invertebrate abundance" for a short time period by physically removing them from the riverbed, and releasing them with low mortality rates at the surface to drift back to the riverbed. That had the potential to increase macro-invertebrate availability as a food source to predatory fish. It could also influence the aquatic larvae "life stage" of some macro-invertebrate taxa; however, it was very unlikely to influence "population trends".

[112] SS Hall, paragraph 19.
[113] NPSFM 2020 Objective 2.1.
[114] EIC Hamer, paragraph 30.a

[012] We also heard from Dr Roger Young[115] who was concerned that three small hand-net macroinvertebrate samples taken from the river margins[116] provided a very poor representation of the macroinvertebrate community in the upper Mata-Au from the Luggate Bridge to the head of Lake Dunstan. Dr Young advised[117] (we have omitted his references for ease of reading):

> *Regular monitoring at the Luggate Bridge site on the Clutha River has found 10–30 types of aquatic invertebrates in samples collected over the period from 2002 to 2022. Pollution-sensitive mayflies, stoneflies and caddis flies have made up 30–70% of the invertebrates recorded in these samples. Macroinvertebrate Community Index (MCI) scores have ranged between 85 and 110 over the 2002–22 period. These relatively low MCI scores would typically represent mild to moderate pollution (fair to good condition) in rain-fed rivers, but in the case of the upper Clutha River they are more likely to reflect the lake-fed nature and stable flows of the river, rather than any concerns with pollution or river health. A feature of lake-outlet rivers like the upper Clutha is the extremely high abundance of filter-feeding caddis flies, which feed on plankton sourced from the lake and contribute to an extremely productive ecosystem.*

[013] Tefffery Barnett[118] advised, without having seen the actual NIWA data, that in her opinion the MCI scores clearly indicated low scoring taxa. We would have expected Ms Barnett to have viewed the MCI data herself before providing her opinion to us. In that regard, as part of the Reply submissions, Mr Hamer advised[119] that he had obtained the MCI data from NIWA. He agreed that the net spinning community hydropsyche caddisfly "*Aoteapsyche*" was known to proliferate within the first 75 m of some lake outlets and has a low MCI score of 4 as suggested by Dr Young. However, having viewed the NIWA data he observed that by the distance sampled downstream at the Luggate Bridge (approximately 18 km), the invertebrate community had returned to a more normal and diverse community. Mr Hamer considered that the low MCI scores were reflective of sediment tolerant taxa present in the shallow, slower flowing areas able to be sampled by the applicant.

[014] Having noted the above evidence, we are not persuaded that much turns on the reasons for the recorded low MCI scores in the upper Mata-Au. More importantly, it is clear that any macroinvertebrates present in areas to be dredged (which could be relatively close to the shore given that the dredge can operate in depths of 0.8m) will be disturbed in a manner that in all likelihood will be fatal. We accept that dredged areas can be readily re-colonised by macroinvertebrates from upstream and surrounding areas and that periodic disturbance can be beneficial for macroinvertebrates. Therefore, this adverse effect will be of a temporary but unknown duration.

[015] Of more concern to us was the issue identified by Dr Young whereby once fine sediments in the plume settled, they would smother the riverbed and reduce food and habitat quality for macroinvertebrates. He noted[120] that the release of fine sediment in a concentrated pulse would be something quite unusual for the upper Mata-Au. We received no evidence from the applicant on the extent of adverse effects that the fine sediments in the plume would have on downstream macroinvertebrates (noting that to be an adverse effect additional to that occurring in the immediately dredged area). We also received no evidence relating to the spread of the plume across the current. However, from our site visit we observed strong currents along the entire river system. Hence, it is conceivable that the sediment plume will spread out across the river as it moves downstream. This would make the area of "sediment settling" much larger that the area dredged.

[016] On the evidence we are unable to reach a conclusion regarding the degree of adverse effects of the proposal on macroinvertebrate community health and well-being. This weighs against a grant of consent.

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[115] Evidence of Roger Young for Marilyn Duxon,9 November 2023, paragraph 35.
[116] That was the scope of monitoring used by the applicant to characterise the macroinvertebrate nature of the upper Mata-Au.
[117] EIC Young, paragraph 13.
[118] Memorandum dated 16 November 2023, page 4 of 8.
[119] SE Hamer, paragraph 5.
[120] EIC Young, paragraph 18.

Fish habitat

[017] The applicant intends to operate throughout the year and so it there is the potential to adversely affect fish habitat, including fish spawning habitat. The relevant fish and their spawning periods[121] are:

Species	Spawning period
Clutha flathead galaxias	1 August to 15 November
Kōaro	1 April to 30 May
Longfin eel	Do not spawn within rivers
Upland bully	1 October to 31 December
Common Bully	1 August to 28 February
Brown trout	1 May to 30 June
Rainbow trout	1 June to 30 August

[018] From the evidence, we understand that the upper Mata-Au supports populations of longfin eel, upland bully, common bully, rainbow trout, brown trout and (landlocked) Chinook salmon. Kanakana (lamprey) are not present upstream of the Clyde Dam and kōaro may be present, but they typically reside in tributary streams and gravelly shallows in mainstem rivers.

[019] In order to mitigate this potential adverse effect, and on the assumption that fish spawning primarily occurs in tributaries and not the Mata-Au main stem, the applicant commendably offered to avoid dredging within 50m of the confluence of a number of tributaries[122] with the Mata-Au. The applicant has also offered to avoid dredging within 50 metres upstream or downstream of the confluence of the Mata-Au with any tributary stream having a width greater than one metre, when measured one metre beyond the confluence with the Mata-Au.

[020] We find that would adequately avoid adverse effects on fish spawning in tributary streams.

[021] As is evident from the submission of Kā Rūnaka, tuna or eels are of great cultural significance. We note that longfin eels do not spawn in rivers. Mr Hamer advised[123] that juveniles less than 300 mm long prefer shallow riffle habitat less than 0.5 m deep and larger longfin eels prefer macrophyte beds, along stream edges, undercut banks, instream debris and in shade. He considered that because shallow habitats less than 0.8m deep (at all times) and habitats less than 1.0m deep during the trout spawning season would be avoided, along with Lagarosiphon major macrophyte beds, the <u>majority</u> (our emphasis) of longfin eel habitat would be excluded from the area to be suction dredged.

[022] We accept that evidence, but are we are unable to conclude that all longfin eel habitat will be avoided. We find that weighs against a grant of consent, particularly in light of the importance placed on long fin eels by Kā Rūnaka, as we discuss further in section 4.2.5 of this Decision.

[023] Turning to trout, Dr Young advised[124] that studies of brown trout spawning habitat preferences indicated that trout spawning occurs over a wide range of water depths greater than 0.15m and well beyond 0.8m. We observe that could conceivably include areas in the main steam of the river. Mr Hamer[125] agreed that some trout spawning in the Mata-Au main stem was likely. Dredging any in-stream spawning areas would clearly be an adverse effect.

[024] Dr Young was concerned that the period of trout egg incubation within the gravels had not been taken into account by the applicant. He advised[126] that trout eggs (ova) remain within the gravels for about 4–6 weeks

[121] From Table 9 of the Freshwater Assessment prepared by E3 Scientific for the applicant.
[122] Schoolhouse Creek, Albert Burn, Un-named watercourse 2,800 metres downstream of Poison Creek, Poison Burn, Un-named watercourse 2,360 upstream of Poison Creek, Sheepskin Creek, Trig Burn.
[123] EIC Hamer, paragraph 14.
[124] EIC Young, paragraph 32.
[125] EIC Hamer, paragraph 11
[126] EIC Young, paragraph 30.W

after spawning. After hatching, the young trout (alevins) remain within the gravels for several weeks, during which time they are susceptible to disturbance of the riverbed. He concluded that any disturbance exclusion period needed to incorporate not just the spawning period, but also the additional periods required for egg incubation and alevin sheltering. This would extend the disturbance exclusion period by 2–3 months.

[025] The applicant has offered to avoid dredging activities in water less than 1m deep during the sports fish spawning season (1 April to 31 October). However, having regard to Dr Young's evidence, we find a 'precautionary' exclusion period would span 1 April to 30 November and it would relate to the entire main stem of the Mata-Au, and not just in proximity to tributary streams. That is not on offer from the applicant.

[026] The evidence from submitters[127] was that the upper Mata-Au comprised prime trout habitat. Relevantly, under s7(h) of the RMA we must have particular regard to "*the protection of the habitat of trout and salmon*".

[027] On the evidence, and in the absence of precluding dredging in the main steam of the Mata-Au during 1 April to 30 November, we are unable to conclude that the spawning habit of trout will be protected should the application be granted. Our finding relates both to the disturbance of any main stem spawning habitat (directly by the suction dredging) and to the effects of the fine sediment plume on trout egg incubation and alevin sheltering (including in shallow areas not actively dredged but which might nevertheless be affected by a fine sediment plume up to 200m long).

[028] We find that that potential adverse effects on fish habitat, including spawning habitat, weigh against a grant of consent.

Fish entrainment

[029] We understand that fish (primarily trout and eels) may be entrained into the suction dredge, albeit infrequently. Mr Hamer noted[128] that to be consistent with the anecdotal evidence from the applicant. Despite reference[129] to overseas experiments where juvenile trout were purposely fed into a suction dredge, we are not persuaded that any fish entrained in the applicant's suction dredge (along with the gravel slurry) and thereafter discharged onto the classification screen at the rear of the dredge will escape back to the river unharmed in any way. We noted that the overseas experiments did not include gravel in the entrainment process.

[030] We find fish entrainment to be a minor potential adverse effect that weighs against a grant of consent, albeit not to any significant degree.

Fish migration and fish passage

[031] Increases in suspended sediment can affect fish migration. However, in this case the increase in suspended sediment will be limited to the plume below the dredge and the area in which it settles on the bed, as opposed to the entire river as might occur from poor landuse practices. The evidence[130] was that the migration pathway of eels was unlikely to be affected by the plume because migrating adults travel mostly at night and along the riverbank edges. Longfin elver do not appear to show any avoidance of suspended sediment.

[032] With regard to trout, Mr Hamer[131] advised adult trout would be able to avoid the dredge operation, and if they choose to be in the sediment plume the sediment levels were low enough as to not adversely affect them. In terms of fish passage generally, Mr Hamer[132] was of the view that the suction dredge was likely to act as a local deterrent to upstream "fish passage", but due to the narrow width of the sediment plume in

[127] Including fishing guide Jeff Forsee and fisher Roger Tompkins.
[128] EIC Hamer, paragraph 15.
[129] Ibid.
[130] E3 Scientific, memorandum dated 19 April 2023 (Response to Cultural Impact Assessment – Suction dredge gold mining in the Clutha River).
[131] EIC Hamer, paragraph 11.
[132] EIC Hamer, paragraph 30.c

comparison with the width of the upper Mata-Au and the dredging activity ceasing at night, fish would be able to move upstream past the dredge. We reiterate that we did not receive evidence confirming that the plume would be of narrow width.

[033] We note that the applicant now intends to operate up to 8pm at night. That would still involve some hours of darkness, particularly in winter months. Consequently, we are not persuaded that adverse effects on eel migration will be avoided. That weighs against a grant of consent.

[034] However, having said that, we find that the proposal is unlikely to have an adverse effect on fish migration and fish passage generally.

Lagarosiphon disturbance

[035] *Lagarosiphon major* macrophyte beds occur throughout the Mata-Au along the river edge, in back eddies, bays, the lee of bends and under the occasional willow tree. Lagarosiphon will grow to similar depths to where it is found in Lake Wanaka, approximately 6m[133].

[036] There was concern from submitters that the operation of the dredge could dislodge bits of Lagarosiphon which would lead to it spreading in downstream areas. However, we understand that as a highly invasive species, Lagarosiphon has probably already established in any riverine habitats that are able to support its growth. Consequently, the operation of the dredge is unlikely to add to the existing problem in the river even if it did unintendedly encounter a Lagarosiphon bed.

[037] In that regard we took comfort from the evidence of Dr Young[134] who advised that he expected Lagarosiphon would be found in suitable habitats throughout the river, from the outlet of Lake Wānaka downstream. He suggested that care should be taken to avoid transferring it to other waterways where it was not present. In that regard, the applicant has offered what we consider to be comprehensive conditions requiring the consent holder to take all reasonable precautions[135] to minimise the spread of pest plants and aquatic weeds.

[038] Nevertheless, the applicant intends to avoid dredging in Lagarosiphon beds. The applicant advised that new sites for mining are identified and then assessed, which involves observing the watercourse from the riverbank and the jet boat. They considered any beds of Lagarosiphon would be easily observed during these scouting trips and then avoided[136]. Given the high clarity of the upper Mata-Au water in the stretch to be mined, we are satisfied with that approach[137]. We also note that Mr Hamer's verbal evidence to us was that cameras attached to the end of the suction pipe would enable the dredge operators to see and avoid any Lagarosiphon beds.

[039] We find that the issue of potential Lagarosiphon spread does not weigh against a grant of consent.

4.2.4 Indigenous birds

[040] There is the potential for the dredging operation to disturb indigenous bird[138] nesting activities. Mr Hamer[139] advised that the applicant has volunteered to avoid endemic bird nesting on the upper Mata-Au banks by

[133] EIC Hamer, paragraph 17.
[134] EIC Young, paragraph 33.
[135] Including water blasting machinery and cleaning it with suitable chemicals or agents to kill didymo prior to its use in the river; avoiding weed beds, removing vegetation caught on machinery; and prior to leaving the site, water blasting all machinery following the completion of works to reduce the potential for pest species being spread from the bed of the watercourse.
[136] ORC Section 42A Report, section 6.1.5.c.
[137] In that regard we are not persuaded by Ms Barnett's suggestion that an ecologist needs to define a 'suitable strategy' for identifying Lagarosiphon beds.
[138] Including Black-billed gulls, Black fronted terns, Australasian crested grebe, South Island Pied Oystercatcher, Pied Stilt, Banded Dotterel, Southern Black-backed Gull and the Caspian Tern.
[139] EIC Hamer, paragraph 20.

250m. To facilitate that he undertook a desktop exercise[140] and identified eleven[141] potential river gravel bed areas where endemic riverine birds might nest. He suggested that if suction dredging was planned to be undertaken within 250m of those areas during the bird breeding season of late August to early February, then the applicant would assess these areas at least 10 days prior to undertaking dredging using the relevant sections of the Protocol for best practice in monitoring braided river birds.

[041] In answer to our questions, as part of the applicant's Reply Mr Hamer advised[142] that the eleven beaches were all present in their current locations in 2005 when the earliest usable satellite images were available. Historical aerial photos showed that the beaches were present in their current 1955 to 1976. He concluded that the beaches were stable and there was no need to update their location during the consent term. We accept that evidence.

[042] In Reply the applicant amended that approach to preclude dredging activity within 100m of any of the eleven areas that are found to be used by endemic birds for breeding. In addition, the consent holder would be required to establish at least six pest traps around the breeding area (subject to landowner consent).

[043] We find that to be a suitably cautionary approach and note that for her part Ms Barnett considered the originally proposed 250m exclusion 'buffer' to be overly conservative, referring to NZTA and Auckland International Airport using a 50m zone and Northport using a 45m zone[143].

[044] We are satisfied that, subject to the mitigation measures outlined above, the issue of potentially disturbing nesting indigenous birds does not weigh against a grant of consent.

4.2.5 Māori cultural values and interests

[045] Ngāi Tahu's association with the Mata-au is recognised by the Crown and provided for as a Statutory Acknowledgement Area in the Ngai Tahu Claims Settlement Act 1998.

[046] We firstly acknowledge Ms Burrows[144] reference to the recent decision of *SKP Incorporated v Auckland Council* [2018] NZEnvC 81 at [157] which stated "*persons who hold mana whenua are best placed to identify impacts of any proposal on the physical and cultural environment valued by them, and making submissions about provisions of the Act and findings in relevant case law on these matters. We approve of that approach*". We agree with Ms Burrows that it is mana whenua who are best placed to assess the effects of a proposal on Māori cultural values and interests.

[047] In that regard mana whenua Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga (referred to collectively as Kā Rūnaka) opposed the applications. Kā Rūnaka provided written evidence from Korako Edwards, Riki Parata and Tim Vial[145].

[048] The position of Kā Rūnaka was probably best summarised by Mr Edwards[146] as follows:

> *The Mata-Au is a wāhi tūpuna. Kā Rūnaka seek the preservation of wāhi tūpuna in a condition or state that would resemble what it would have looked like to the ancestors from generations past. Activities that alter the shape, behaviour, water quality or mauri of waterways will continue to degrade the condition of wāhi tupuna.*

[140] Using Satellite imagery and GIS.
[141] These were shown in Figure 4 and Table 1 of Mr hammer's evidence.
[142] SE Hamer, paragraph 17(e).
[143] Based on the considerable literature on the highest mean flight initiation distance for Threatened or At Risk NZ birds.
[144] Addendum to Staff Section 42A Recommending Report, page 2.
[145] Mr Vial also co-authored the Cultural Impact Assessment commissioned by the applicant.
[146] EIC Edwards, paragraph 3.

[049] Mr Parata advised[147] that mahinga kai was the Kāi Tahu whānui resource system that underpinned mana whenua relationships with rivers, lakes, wetlands, and the broader environment. He added that for mahinga kai to be sustained, populations of species must be present across all life stages and must be plentiful enough for long term sustainable harvest.

[050] We understand that Kā Rūnaka's view was that there was not enough information to assess the potential effects of the applications on instream benthic environments and in particular taoka species[148] and their survival. However, Mr Edwards considered that from a cultural perspective the artificial removal of macroinvertebrate species from the streambed did not put the health and wellbeing of the Mata-Au first. That in turn did not support the mauri of the Mata-Au and would not support Kāi Tahu aspirations for a recovering Mata-Au and eel fishery.

[051] Mr Edwards was also concerned about the effect of underwater noise from the dredge on aquatic fauna. On that particular issue Mr Hamer[149] considered that sound from the suction dredge was most likely to lead to "behavioural responses" such as avoidance and movement away from the sound.

[052] Mr Parata[150] advised that mauri was a critical element of the spiritual relationship of Kāi Tahu with wai Māori. A cornerstone for mana whenua in exercising kaitiakitanga over the Mata-Au was to avoid activities which further degraded the mauri of the river. Kā Rūnaka's position was that it was unable to assess whether the proposed dredging activity provided for the mauri of the Mata-Au and gave effect to Te Mana o te Wai.

[053] Mr Vial[151] addressed statutory provisions including the NPS-FM 2020. He considered that the concept of Te Mana o Wai represented a paradigm shift in freshwater management. He referred to the Environment Court's observation in the *Aratiatia* case that: "*the usual RMA focus on the scale and significance of effects of resource use [is redirected] onto the mauri or lifeforce of water and the enquiry becomes how do users of resources protect the water's mauri and health*." Mr Vial considered that the applicant had not demonstrated that the current proposal protected the mauri and the health and wellbeing of the Mata-Au. We address the NPS-FM further in section 4.4 of this Decision.

[054] We assessed the potential adverse effects of the applications on water quality and aquatic ecology earlier in this decision. We acknowledge Mr Parata's[152] view that an assessment of the current state of the awa using western scientific disciplines is not an appropriate starting premise for assessing the effects of activities on cultural values and that the preferred approach is a comprehensive understanding of those cultural values, and assessing whether and to what degree a proposed activity aligns with them. Having said that, our earlier findings with regard to macroinvertebrates and fish habitat (including spawning habitat) lend weight to Kā Rūnaka's concerns.

[055] We acknowledge the evidence provided by the Kā Rūnaka witnesses. On the evidence we are unable to be confident that the applications will avoid adverse effects on mahinga kai or protect the mauri and health of upper Mata-Au. Accordingly, we accept Mr Vial's[153] conclusion that "... *the proposal does not safeguard the relationship of mana whenua with this significant awa*." This weighs heavily against a grant of consent.

4.2.6 Monitoring

[056] It goes without saying that conditions of consent that set standards to be met must be capable of being monitored for compliance. In this case, the primary issue of concern related to how any "conspicuous change in colour or visual clarity" after reasonable mixing would be monitored. The weight of technical

[147] SS, Parata.
[148] Including ammocoetes (juvenile kanakana that live 3-4 years in the sediment after their larval stages), Kākahi from spat to adult, eggs of multiple fish species including kanakana and galaxiids and also migrating elver.
[149] SS Hammer, paragraph 12.
[150] SS Parata, paragraph 7.
[151] SS Vial, paragraphs 9 and 11.
[152] SS Parata, paragraph 1.
[153] SS Vial, paragraph 17.

evidence was that the preferred methods for monitoring visual clarity (using a Secchi disc or a black disc) were simply not capable of practical implementation in a deep and fast-moving river such as the upper Mata-Au.

[057] The best means of assessing a 'conspicuous change in colour or visual clarity' was considered by the applicant and the ORC peer reviewers to be a turbidity meter. Ms Barnett advised that turbidity meters can be highly accurate and can have a resolution of 0.02 NTU or better in water with a turbidity of less than 1 NTU.

[058] It appeared to be common ground amongst the experts that any workable monitoring condition should relate to comparing the turbidity (as a proxy for clarity) of the river water upstream of the dredge compared to turbidity 100m and 200m behind and downstream of the dredge. In our view this would necessitate the establishment of trigger levels at those distances that related to an acceptable degree of change to the upstream turbidity, rather than to some absolute NTU value. We find that approach would better relate to the actual effect of the activity and better accommodate any natural variance in upstream water clarity.

[059] In Reply Ms Irving submitted[154] the applicant has proposed a two-part condition[155] to monitor the sediment plume. The first relates to a video of the activity and the second relates to turbidity monitoring. In brief, the turbidity monitoring would be undertaken at least twice daily, immediately upstream of the dredge and 100m and 200m downstream of the dredge. The samples taken at 100m must achieve no more than a 2NTU change if the upstream sample is less than 8NTU. Where the upstream sample is greater than 8NTU the downstream sample must not be more than 5NTU higher. The 200m samples must not exceed the upstream sample. Should non-compliance occur then the dredge operator would be required to immediately slow down or stop dredging and carry out a repeat sample within 10 minutes to confirm compliance that has been achieved.

[060] After the dredge has been operating for two months the consent holder would be required to commission a suitably qualified independent expert to review the video footage and sampling data to confirm that there was no conspicuous change in colour or visual clarity of the Mata-Au beyond a distance of 200 metres downstream of the dredge.

[061] We are satisfied that should the applications be granted, the monitoring conditions proffered by the applicant in the Reply would be appropriate.

4.2.7 Positive effects

[062] We assessed the positive effects of the proposal in section 3.3.11 of this Decision. We record that our findings in that section apply equally to applications that we assess under delegated authority from the ORC.

4.2.8 Overall finding on effects

[063] We have found that a number of adverse effects weigh against a grant of consent, namely:

(a) Potential adverse effects relating to human sewage and fuel spills;
(b) The effects of proposal on macroinvertebrate community health and well-being;
(c) Potential adverse effects on fish habitat, including trout spawning habitat;
(d) Potential adverse effects on eel migration;
(e) The effects of the proposal on the natural character of the riverbed (discussed in section 3.3.4);
(f) The effects on fish entrainment; and
(g) Significantly, effects on Māori cultural values and interests, including in terms of mahinga kai and the mauri and health of Mata-Au.

[154] Paragraph 14.
[155] Condition 6 in RM22.434.03 as set out in the applicant's Reply.

[064] In our view these adverse effects are not outweighed by the positive effects of the proposal, as those positive effects are largely confined to the financial benefits that will accrue to the applicant[156].

4.2.9 Other submitter issues

[065] We are not aware of any other relevant issues that we need to address, over and above those set out in sections 3.3.2 to 3.3.10 and 4.2.2 to 4.2.6 of this Decision.

4.3 National environment standards and other regulations

[066] Ms Burrows drew our attention to the National Environmental Standard for Sources of Human Drinking Water, the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 and the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010. She advised that the proposed discharges would not introduce or increase the concentration of any contaminants in drinking water such that it exceeded the identified criteria and values, no resource consents were required under the NES-FM, and the Measurement and Reporting of Water Takes Regulations were not applicable to the proposal.

[067] We heard no evidence to the contrary and so we find a consideration of national environment standards and other regulations does not weigh against a grant of consent.

4.4 National policy statements

[068] We are not aware of any national policy statement being relevant to our consideration of the consents required from the ORC other than the National Policy Statement for Freshwater Management 2020 (NPSFM) and the National Policy Statement for Indigenous Biodiversity 2023 (NPS-IB).

[069] Under Objective 2.1(1)(a) of the NPSFM we must prioritise the health and well-being of water bodies and freshwater ecosystems. On the evidence, given our overall finding on the effects of the proposal, we are not persuaded that the applications do prioritise the health and well-being of the upper Mata-Au.

[070] Under Policy 1 freshwater is to be managed in a way that gives effect to Te Mana o te Wai. Section 1.3 of the NPS-FM explains that Te Mana o te Wai encompasses six principles relating to the role of tangata whenua in the management of freshwater. On the evidence provided by Kā Rūnaka we are not persuaded that the applications provide for the principle of mana whakahaere and Kā Rūnaka's obligations to make decisions that maintain, protect, and sustain the health and well-being of, and their relationship with the Mata-Au. Nor are we persuaded that the applications provide for the principle of Kaitiakitanga and Kā Rūnaka's obligation to preserve, restore, enhance, and sustainably use Mata-Au for the benefit of present and future generations.

[071] Under Policy 7 the loss of river extent and values is to be avoided to the extent practicable. The applications will not avoid the loss of river extent and values as the riverbed will be dredged down to a significant depth and the sediments discharged back to river in such a manner that the riverbed will be permanently altered.

[072] Under Policy 8 the significant values of outstanding water bodies are to be protected. It was common ground that the upper Mata-Au is an outstanding natural feature. We understand one of its principal significant values is its remarkable high clarity which we viewed for ourselves on our site visit. Introducing a sediment plume of with a length of up to 200m length and an unknown width for up to eight years does not protect that significant value.

[073] Under Policy 9 the habitats of indigenous freshwater species are to be protected. In this case those habitats include the riverbed gravels and indigenous bird nesting beaches. The latter will be adequately protected in our view, but the former will not.

[156] In saying that we understand that no new jobs will be created and no new contracting of services will be required over and above those already in place for the existing operation on the lower Mata-Au.

[074] Under Policy 10 the habitat of trout and salmon is protected, insofar as this is consistent with Policy 9. The habitat of trout, particularly spawning habitat in the mainstem of the Mata-Au, will not be protected.

[075] Under Policy 15 communities are to be enabled to provide for their social, economic, and cultural well-being in a way that is consistent with this National Policy Statement. Granting the applications will not materially contribute to the social, economic, and cultural well-being of the community. Referring to section 3.3 of this Decision, granting the applications would be detrimental to the well-being of recreational river users and adjoining property owners whose dwellings overlook Mata-Au. On the evidence of Kā Rūnaka, granting the applications would be detrimental to their cultural well-being.

[076] We find that granting the applications would be inconsistent with the NPS-FM and would not give effect to Objective 2.1(1) of that superior instrument. On that basis alone we find that the applications to the ORC should be declined.

[077] We received little if any evidence on the relevance of the NPS-IB to the applications. However, we did receive evidence relating to the effects of the proposal on native fish, particularly tuna (eels), and native birds that may roost or nest on gravel beaches in the upper Mata-Au.

[078] We note that the NPS-IB has a single objective 2.1(1)(a) which is "*to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity after the commencement date*". That is to be achieved by[157], amongst other things, "*...recognising the mana of tangata whenua as kaitiaki of indigenous biodiversity*".

[079] In Reply Ms Irving submitted[158] that "*With respect to indigenous biodiversity the activity has responded by applying the exclusion areas for areas of key importance to indigenous species being the Delta, the Nook, close to tributary confluences, shallow water and potential native bird nesting habitat beyond that already excluded*." We accept those submissions, but it is nevertheless difficult for us to determine whether or not the applications would meet that the NPS-IB objective given our earlier findings in relation to macroinvertebrate community health and well-being, tuna habitat and Māori cultural values and interests. Nevertheless, on the available evidence we find that the applications may be inconsistent with the NPS-IB, which weighs against a grant of consent.

4.5 Regional Policy Statements

[080] Given our finding on the NPS-FM there is arguably no need to assess the regional policy statements. However, we do so for the sake of completeness.

[081] The Regional Policy Statement for Otago (RPS) 1998 has been revoked and the Operative Regional Policy Statement for Otago (PORPS) has been made partially operative[159]. We agree with Ms Burrows that that significant weight can be given to the partially operative RPS.

[082] Given our findings on the effects of the applications we consider the proposal to be inconsistent with a number of provisions of the Operative RPS including:

(a) Policy 1.1.2 as the proposal does not recognise and provide for Kāi Tahu values;

(b) Policy 2.1.2 as the proposal does not recognise and provide for the relationship of Kāi Tahu's culture and traditions with their ancestral water and other taoka;

(c) Policy 2.2.1 as the proposal does not recognise and provide for Kāi Tahu's customary uses and cultural values;

[157] Objective 2.1(1)(b)(i)
[158] Paragraph 57(b).
[159] The provisions that are the subject of ongoing Court proceedings and are not made operative are now limited to Policy 4.3.7 (significant infrastructure) and specific methods of Chapter 3.

(d) Policies 3.1.1 and 3.1.9 as the proposal will not maintain or enhance important recreational values, aquatic ecosystem health, the natural functioning of the upper Mata-Au, or the habitat of trout therein;

(e) Policy 3.1.2 as the proposal will not maintain or enhance the natural functioning and character of the upper Mata-Au riverbed;

(f) Objective 5.1 as the proposal will not maintain public access along the surface of the upper Mata-Au;

(g) Policy 5.1.1 and Objective 5.4 as the proposal will not protect the public health and safety of in-stream river users on the upper Mata-Au;

(h) Policy 5.4.1 as we are not persuaded the proposal will avoid significant adverse effects of discharges of human waste to the Mata-Au; and

(i) Policy 5.4.8 as the proposal will not avoid the outstanding natural features in the upper Mata-Au (primarily Mata-Au's outstanding water clarity).

[083] Having regard to the operative RPS our findings above weigh against a grant of consent.

[084] On 30 September 2022 Council notified the freshwater instrument components of the proposed Regional Policy Statement that was originally notified in June 2021. Ms Irving submitted that proposed Regional Policy Statement has been through a highly contested process where the matters of relevance to the applications were directly at issue. She advised that no decision had been made and therefore the final outcome remained highly uncertain. Ms Irving submitted that little weight should be placed on its provisions at this point in time.

[085] We accept that submission, but note that insofar as any provisions in the proposed RPS might mirror those in the Operative RPS, the proposal would axiomatically be inconsistent with those proposed RPS provisions.

4.6 Regional Plan: Water for Otago (RPW)

[086] Given our finding on the NPS-FM there is arguably no need to assess the RPW. However, we do so for the sake of completeness.

[087] The proposal is a discretionary activity under the RPW. Ms Burrows[160] considered that there was inadequate information to assess whether the proposal meets Objective 5.3.2, Policy 5.4.2, Objective 7.A.2, Policy 7.B.2, Policy 7.B.6. Those provisions relate to, or require input relating to, assessing effects on cultural values. In light of our assessment in section 4.2.5 and 4.4 of this Decision, we go further than Ms Burrows and conclude that the proposal is inconsistent with those RPW provisions.

[088] Referring to our effects assessment, we find that the proposal is also inconsistent with a number of RPW objectives including:

(a) Objective 5.3.3 because, as set out in section 3.3.4 of this Decision, the proposal will not protect the natural character of the bed of the upper Mata-Au from inappropriate use;

(b) Objective 5.3.4 as the proposal will not maintain or enhance the amenity values of the upper Matau-Au; and

(c) Objective 5.3.5, because as set out in section 3.3.7 of this Decision, the proposal will not maintain or enhance public access along the upper Mata-Au.

[089] Having regard to the RPW weighs against a grant of consent.

[160] ORC Section 42A Report, section 6.3.9.

4.7 Section 104(1)(c) other matters

[090] The Kai Tahu ki Otago Natural Resource Management Plan 2005 and the Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 are relevant other matters. Mr Vial considered that the applications were inconsistent with the relevant objectives and policies of those Iwi Management Plans. In his view the proposed suction dredging of the Mata-au did not sustain the relationship of mana whenua with the Mata-Au, nor did it ensure that the awa supported thriving mahika kai[161].

[091] We accept Mr Vial's evidence on that matter and it weighs against a grant of consent.

[092] The Sports Fish and Game Management Plan for Otago Fish and Game Region 2015 – 2025 is also a relevant other matter. We find that the proposal is not consistent with that document insofar as it will not protect trout spawning habitat and amenity values in the upper Mata-Au. That weighs against a grant of consent.

[093] In section 3.9 we discussed the issue of a bond. Our findings there also pertain to the ORC consents.

4.8 Section 105(1) matters

[094] Section 105(1) of the RMA states that where an application is for a discharge permit to do something that would otherwise contravene Section 15 or Section 15B of the Act we must have regard to certain matters, namely:

- the nature of the discharge and the sensitivity of the receiving environment to adverse effects;
- the applicant's reasons for the proposed choice; and
- any possible alternative methods of discharge, including discharge into any other receiving environment.

[095] We have discussed the nature of the discharge and the sensitivity of the upper Mata-Au receiving environment to adverse effects in section 4.2 of this Decision. RMA ss105(1)(b) and (c) are not overly relevant, because the applicant has chosen to utilise their existing gold dredge (which is understandable if not entirely suitable given the nature of the upper Mata-Au and our concerns regarding the management of human sewage and refuelling) and there is no alternative receiving environment for the water and gravel discharged from the rear of the dredge.

4.9 Section 107(1) matters

[096] Section 107(1) of the RMA states that a discharge permit shall not be granted if, after reasonable mixing, the contaminant or water discharged is likely to give rise to certain listed effects.

[097] Referring to our concerns regarding the 'risky' nature of instream refuelling of the dredge, on the evidence we are unable to conclude that over the intended eight-year consent duration the proposal would be likely to not produce any conspicuous oil or grease films (s107(1)(c)).

[098] The applicant has proposed conditions to avoid any conspicuous change in the colour or visual clarity in the river arising from the sediment plume after reasonable mixing. The intent is to cease operations if turbidity 'triggers' (as a proxy for visual clarity) are breached. Notwithstanding the concerns of some submitters and their experts regarding the efficacy of turbidity meters, we are satisfied that s107(1)(d) does not impose a bar to the granting of consent.

[099] However, in terms of s107(1)(g), we are unable to conclude that the proposal would likely to not have significant adverse effects on aquatic life, particularly macroinvertebrates, trout eggs and juvenile trout.

[161] EIC Vial, paragraph 63.

[100] We find that a consideration of s107(1) matters leads to a conclusion that we "shall not grant" the discharge permits sought by the applicant.

4.10 Part 2 matters

[101] We are aware of the case law which outlines that if the lower order statutory instruments appropriately deal with Part 2 matters, then no further assessment of Part 2 matters is required. However, we note that in the *Lindis* decision[162] the Court concluded that notwithstanding the Court of Appeal decision in *RJ Davidson Family Trust v Marlborough District Council,* it was desirable to assess Part 2 matters because of inconsistencies in the RPW.

[102] Consequently, we address Part 2 matters here.

[103] We find the proposal in inconsistent with:

(a) s6(a) as it will not preserve the natural character of the bed of the upper Mata-Au;

(b) s6(b) as it will not protect the upper Mata-Au (an acknowledged outstanding natural feature) from inappropriate use;

(c) s6(d) as it will not maintain and enhance public access along the surface of the upper Mata-Au;

(d) s6(e) as it does not adequately recognise and provide for the relationship of Kā Rūnaka and their culture and traditions with their ancestral water;

(e) s7(a) with regard to Kā Rūnaka's exercise of kaitiakitanga;

(f) s7(c) as it will not maintain and enhance amenity values of the upper Mata-Au;

(g) s7(f) as it will not maintain and enhance the quality of the upper Mata-Au's environment; and

(h) s7(h) as it will not protect the habitat of trout in the mainstem of the upper Mata-Au.

[104] Turning to s8 of the RMA, we understand that in *New Zealand Maori Council v Attorney General* the Court of Appeal found that the three main principles of the Treaty of Waitangi could be summarised as partnership, participation and active protection. We have already found, from the evidence of Kā Rūnaka, that the proposal will not actively protect Māori cultural values and interests. It is therefore inconsistent with s8.

4.11 Consent duration and lapsing

[105] As we noted previously, the applicant sought a consent duration expiring on 25 February 2031 to align with the expiry of mining permit 60593. Should consent be granted then we consider that eight-year term to be appropriate. We also consider that there would be no need to deviate from the normal lapse period of five years after the date of commencement of the consent, as specified in s125 of the RMA.

4.12 Consent conditions

[106] We were provided with recommended conditions by Ms Burrows and Mr Sycamore. We are grateful for that assistance and we considered the mitigation embodied in the recommended conditions in our assessment of the effects of the proposal. However, as our Decision is to decline the applications, we do not discuss consent conditions further.

4.13 Determination

[107] We decline the resource consents sought by Cold Gold Clutha Limited from the Otago Regional Council.

[108] Our reasons are detailed in the body of this Decision, but in summary they include:

(a) A number of potential adverse effects weigh against a grant of consent including: potential effects relating to human sewage and fuel spills; the effects on macroinvertebrate community health and

[162] *Lindis Catchment Group Limited vs ORC* [2019] NZEnvC 166 at [508].

well-being; potential adverse effects on fish habitat (including spawning habitat), potential effects on eel migration; adverse effects on the natural character of the riverbed; effects of fish entrainment; and perhaps most significantly, effects on Māori cultural values and interests including in terms of mahinga kai and the mauri and health of Mata-Au;

(b) The potential adverse effects of the proposal are not outweighed by its positive effects;

(c) The proposal is inconsistent with significant elements of Part 2 of the Act;

(d) We are arguably barred from granting consent under s107 of the RMA;

(e) The proposal is inconsistent with the NPS-FM 2020 and may be inconsistent with the NPS-IB 2023;

(f) The proposal is inconsistent with a significant number of provisions in the Operative Regional Policy Statement and the Regional Plan: Water for Otago; and

(g) The proposal is inconsistent with the Kai Tahu ki Otago Natural Resource Management Plan 2005, the Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008, and the Sports Fish and Game Management Plan for Otago Fish and Game Region 2015 – 2025.

[109] We also note that, referring to section 3 of this Decision, the proposal has adverse effects on landscape character, visual amenity, natural character, navigational safety and surface water recreational activities. Those matters are arguably relevant to our assessment of the applications made to the ORC and that further weighs in favour of declining those applications.

[110] Having declined the applications to the ORC we record that we did not rely solely on s104(6) of the RMA which provides discretion for a consent authority to decline an application on the grounds that it has inadequate information to determine the application. While inadequate information was certainly a relevant matter, we were also able to make findings in relation to s104(1)(a), 104(1)(b) and 104(1)(c) matters.

Rob van Voorthuysen (Chair)

Jane Sinclair

Craig Welsh

17 January 2024