Before the Independent Hearing Panel

In the Matter	of the Resource Management Act 1991 ('the RMA')
And	
In the Matter	of an application to the Southland Regional Council for resource consents to establish and operate a gold mining activity near 972 Waikaka Road, Chatton North, Southland
By	Waikaka Gold Mines Limited ('the Applicant')
Reference	APP-20242608 – Southland Regional Council ('Environment Southland')

Evidence of Jacob Smyth on behalf of Southland Fish & Game Council

Date: 26 November 2025

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1. My name is Jacob James Smyth. I am a Resource Management Officer for the Southland Fish & Game Council ('Fish & Game'), based in Invercargill. I have worked for Fish & Game since September 2008.

2. I hold a Bachelor of Arts (majoring in History) and a Bachelor of Laws from the University of Otago (2001). I was admitted as a Barrister and Solicitor of the High Court of New Zealand in May 2001.

3. In my role, I assess and provide advice on notified and non-notified resource consent applications, regional plans, district plans, and regional policy statements, focusing on their effects on game birds, trout and salmon fisheries, and recreational hunting and angling values in Southland. I also undertake fieldwork to assess and monitor sports fish and game populations and habitat condition, including drift dives and spawning surveys.

4. I am an active recreational angler and hunter with a lifelong interest in these activities. Apart from an 18-month period spent overseas, I have held annual adult whole-season sports fish and game licences every year since the early 2000's.

5. In mid-2009 and mid-2011, I carried out spawning surveys on the Waikaka Stream, including the 4.1 km reach between Waikaka Road and Mine Bridge that overlaps the proposed mining area and the sections proposed for relocation.

6. In March 2014, I undertook electric fishing in an unnamed tributary of Waikaka Stream between Watts and Clinker Hill Roads, upstream of the proposed site.

7. I have also carried out multiple days of compliance checks on game bird hunters in the Waikaka, Wendon, and Greenvale areas during the annual gamebird season, including those hunting on the Waikaka Stream and nearby ponds.

Code of conduct for expert witnesses

8. This evidence is being provided to the Hearing Panel by me as a witness with relevant expertise and experience, rather than as an expert witness. I draw on my experience with Fish & Game since 2008, including knowledge of the local environment and its sports fish and game bird values and habitats. I also rely on my general knowledge, published sources, and the relevant experience of colleagues as communicated to me.

9. I prepared Fish & Game's written submission opposing the instream works and discharge consents sought by the Applicant from Environment Southland.

10. I have met with the Applicant's representatives — Warren Batt (Geologist), Noel Becker (On-site Manager), and Anita Collie (Planner) — both online and in person, before and after lodgement of Fish & Game's written submission, to discuss the application. I have also spoken twice by phone and corresponded by e-mail with the Applicant's freshwater ecologist, Ramon ('Ross') Dungey, about the ecological aspects of the application, including the proposed temporary relocations of Waikaka stream and its rehabilitation. I have provided Mr Dungey with Fish & Game's spawning records for Waikaka Stream, including the location of surveyed reaches.

11. I have read the expert witness code of conduct and will comply with it in preparing and presenting my evidence. I have not omitted any material facts known to me that could affect or alter the views I have expressed.

Scope of evidence

12. From Fish & Game's perspective, the key matter is the impact of the Applicant's proposal to temporarily divert five sections of the Waikaka Stream and Shepherds Creek for about one year each. After the diversions, the streams will be reinstated, and the Applicant will rehabilitate the channels and riparian margins.

13. My evidence will address the following matters with respect to the application:

    a. Statutory functions of Fish & Game Councils;

    b. Characteristics of the Waikaka catchment;

    c. Trout spawning biology and habitat;

    d. Brown trout spawning and juvenile rearing habitat in Waikaka Stream;

    e. Recreational fishing for brown trout in Waikaka Stream;

    f. Public access to Waikaka Stream;

    g. The proposal to divert and rehabilitate Waikaka Stream; and

    h. Comment on the draft consent conditions proposed by the Applicant.

14. In preparing my evidence, I have read the following documents:

    a. Submissions to Environment Southland;

    b. The s 42A report prepared by Alexandra Smith for Environment Southland; and

    c. Evidence of the Applicant's expert witnesses.

Statutory functions of Fish and Game Councils

15. The Southland Fish and Game Council is the statutory manager of sports fish and game birds within the Southland Region under the Conservation Act 1987 and the Wildlife Act 1953.

16. Sports fish, as defined in Schedule 1 of the Freshwater Fisheries Regulations 1983, include brown trout (*Salmo trutta*), including hybrids and all life stages — eggs, fry, and spawn.

17. Fish and Game Councils are statutory body established under the Conservation Act to, among other functions:

    a. Manage, maintain and enhance the sports fish and game resource in the recreational interests of anglers and hunters (s 26Q(1));

b. Assess and monitor the condition and trend of ecosystems as habitats for sports fish and game (s 26Q(1)(a)(iii));

c. Represent the interests and aspirations of anglers and hunters in the statutory planning process (s 26Q(1)(e)(i)); and

d. Advocate the interests of the Council, including its interests in habitats (s 26Q(1)(e)(vii).

Waikaka catchment characteristics

18. Waikaka Stream runs northwest to southeast through the proposed mining site, while Shepherds Creek flows south and joins Waikaka Stream within the site.

19. Waikaka Stream rises in the Wendon and Greenvale areas, where small hill-country streams form its headwaters. It flows southeast through rolling hills and flat farmland, joins the Pukerau Stream, and enters the Mataura River downstream of Hamilton Park in Gore.

20. Hydrologically, Waikaka Stream is characterised by moderate, stable baseflows combined with flashier responses to rainfall events typical of small hill-fed tributaries. This results in variable but generally reliable flow, with higher velocities in the upper – mid reaches. These hydrological patterns, along with its variable channel and instream forms (run – riffle – pool sequences) and riparian vegetation, support important brown trout habitat.

21. The middle and lower reaches of Waikaka Stream are heavily influenced by pastoral farming and historic mining activities. These sections are highly modified, with extensive excavation and drainage works straightening the channel, reducing natural meanders, and shortening its length. Drainage has also removed large areas of riparian wetland. Regardless, Waikaka Stream still supports a brown trout fishery of meaningful value.

Trout spawning biology and habitat

22. Adult trout migrate upstream into smaller, gravel-bottomed rivers and tributaries to spawn from late autumn to midwinter (McDowell 1990). The timing of trout spawning varies between brown and rainbow trout, locations, and according to water temperature and flow. Trout select stable gravel streams with suitable velocity, depth, and substrate size, where they excavate nests, or redds, by digging depressions in gravel, depositing their eggs, and covering them with gravel.

23. Successful spawning requires gravel small enough for female trout to move; if the substrate is too large, they avoid the area. A maximum temperature of 12°C is recommended for healthy brown trout spawning (Jonsson & Jonsson 2009).

24. Timing of egg development depends on water temperature (generally development is slower in colder waters) and eggs can take between one and several months to develop into fry.

25. Fry remain within the redd gravels for several weeks before emerging into the flowing water environment. Development of eggs and fry within redds is the most critical aspect of successful spawning and juvenile recruitment of trout into adult populations. During this time redds must remain physically undisturbed with low

suspended and deposited sediment loads to allow the flow of highly oxygenated cold water through the redd gravels to the developing juveniles.

26. Mechanical disturbance within or upstream of spawning grounds can directly disturb redds or adversely influence fry development through physical damage to eggs, sediment release and lack of oxygen flow through gravels with some studies reporting 99% mortality for mechanically shocked eggs (Dwyer et al. 1993).

27. Fry grow to fingerlings (~100 mm) in their first year. In Southland, juvenile brown trout typically migrate downstream from their natal streams during late spring to early summer, often after their first year of life, though timing can vary. This movement is prompted by growth, the need for deeper and more stable habitat, seasonal warming, high-flow events, and competition.

28. Under s 26ZJ(1)(b) of the Conservation Act 1987 it is an offence to disturb or harm the eggs or larvae of any freshwater fish, including sports fish such as trout.

Waikaka Stream – Spawning and juvenile rearing habitat for brown trout

29. All river and still-water sports fisheries in Southland, including the brown trout fishery associated with the Mataura catchment, are wild and self-sustaining through natural spawning, rearing, and recruitment of juveniles into the adult population. The recreational brown trout fishery associated with the Mataura catchment depends on the abundance and condition of adult brown trout, which in turn is directly linked to habitat quality and overall ecosystem health.

30. Waikaka Stream is an important spawning and nursery habitat for brown trout in the mid-Mataura catchment, supporting adult trout that migrate into it to spawn. Although Waikaka Stream is not covered by the Water Conservation (Mataura River) Order 1997, it contributes to recruitment of juvenile brown trout to the mid Mataura River, recognised for its nationally outstanding brown trout fishery and angling amenity.[1]

31. In Southland, adult brown trout typically begin upstream spawning migration in May–June, depending on flow conditions, with peak spawning from June to August.

32. Fish & Game spawning surveys over a 22 km section of the Waikaka Stream — from Waikaka Road to Howe Road Bridge, including the proposed relocation reach - show that adult brown trout spawn throughout this stretch. The upper and downstream boundaries of each of the four surveyed sections are depicted in **Appendix 1** of this evidence.

[1] The Water Conservation (Mataura River) Order 1997 recognises the nationally outstanding brown trout fisheries and angling amenity of:

a. the Mataura River from its source to the sea;
b. the Waikaia River, the Otamita Stream, and all Mataura tributaries upstream of the Otamita Stream; and
c. the Mimihau Stream, the Mokoreta River, and all their tributaries.

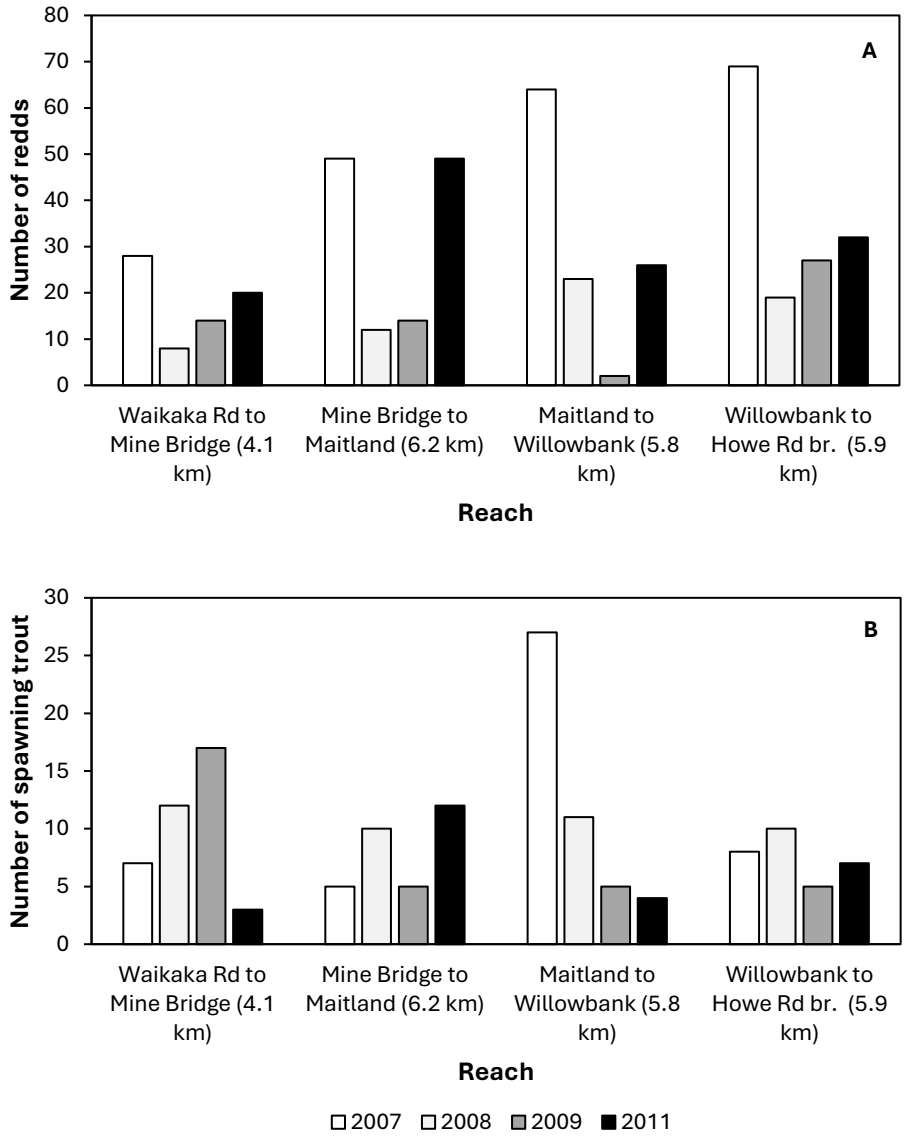

Figure 1: Number of brown trout redds (A) and spawning brown trout (B) seen during spawning surveys conducted by Fish & Game in mid-June / early-July, 2007 - 2011.

Waikaka Stream – Recreational fishing for adult brown trout

33. Waikaka Stream provides brown trout angling opportunities, with an estimated 99 ± 60 angler days recorded on it during the 2021 / 2022 season (Stoffels & Unwin 2023). The fishing season runs from 1 October to 31 April, with a daily bag limit of two brown trout. Anglers may use fly, spin, or bait fishing, with the the mid to upper reaches offering challenging fly fishing.

34. In 2013 NIWA conducted an angler survey of river fisheries managed by Fish & Game (Unwin 2013). Randomly sampled respondents were asked to identify rivers that they had fished over the last 3 – 5 years, to rate their enjoyment of the fishery on a scale from 1 (least enjoyable) to 5 (most enjoyable) and to identify up to three reasons, from a list of 10, why they fished each river. These 10 reasons were: close to home, close to holiday home, ease of access to river, area of fishable water, scenic beauty, wilderness feeling, angling challenge, anticipated good catch rate;

anticipate large fish and other (including a brief description). 431 rivers with at least 10 responses were analysised.

The three most highly ranked reasons by 11 respondents for fishing Waikaka Stream (in equal order of importance) were close to home (36%), ease of access (36%) and angling challenge (36%).

The 'mean enjoyment score' ranking on a scale of 1 – 5 for Waikaka Stream was 2.36, which falls between:

a. Scale point 2 – "Often enjoyable but not exceptional"; and

b. Scale point 3 – "Consistently enjoyable".

These results indicate that anglers value Waikaka Stream fishery for its easy access, proximity to Gore, and the challenge of a small stream fishery.

For comparison:

a. Mataura River (above Gore): Mean enjoyment score - 3.03 (188 respondents), which aligns with scale point 3.

b. Mataura River (below Gore): Mean enjoyment score - 2.71 (171 respondents), sitting between scale points 2 and 3; and

c. Other Mataura tributaries in farmed and developed lowland catchments show similar scores, such as:

   i. Mokoreta River – 2.40 (10 respondents);

   ii. Mimihau Stream – 2.71 (17 respondents);

   iii. Otamita Stream – 2.61 (23 respondents);

   iv. Waimea Stream – 2.50 (24 respondents);

   v. Waikaia River – 2.88 (33 respondents).

   All sitting between scale point 2 and 3.

35. Exotic crack willow (Salix fragilis), is a dominant and important habitat feature of Waikaka Stream, offering both overhead and in-stream cover as well as a food source. It was likely planted originally to control streambank erosion after extensive channel modification and straightening for land development and mining.

From late December to early February, crack willows produce willow grub (*Pontania proxima*). The larvae develop in leaf blisters and often drop onto the water below.

Willow grub is a key food source for brown trout, which feed at or just below the surface near willow trees. Their abundance supports trout growth and condition and is an important contributor to the brown trout fishery in willow-lined streams like Waikaka Stream.

Anglers often imitate willow grubs with small pale flies fished at the surface, taking advantage of their predictable emergence and abundance. This makes willow grubs a central part of both the Waikaka Stream food web and its angling experience.

36. I acknowledge Shepherd's Creek has low recreational brown trout fishing value.

37. The Waikaka Stream and its margins, including nearby ponds, also provide habitat for native and introduced gamebirds, especially Mallard ducks, which are hunted recreationally during the annual May–July game bird season.

Waikaka Stream - Public Access

38. Waikaka Stream supports recreational values, particularly brown trout fishing. Anglers typically access Waikaka stream from public roadside points and walk upstream or downstream to fish. Upstream access near the proposed mining site is via Waikaka Road bridge, and downstream access is via Mine Bridge, also off Waikaka Road.

39. While upstream access is proposed to remain available during mining and diversion works, restricting access downstream of Waikaka Road Bridge will limit recreational fishing opportunities.

40. I consider that the Applicant should implement measures to minimise both the duration and extent of access restrictions to Waikaka Stream wherever practicable.

Waikaka Stream Diversion and Rehabilitation

41. The application and accompanying evidence for the Applicant provides that the proposed diversion of Waikaka Stream will cause temporary loss of aquatic habitat, which the Applicant proposes to reinstate and rehabilitate.

42. The aquatic ecology evidence of Mr Dungey identifies key habitat features of existing Waikaka Stream that are essential to maintaining fishery and ecological values.[2] These include:

    a. Riffles with coarse gravel and cobbles;

    b. Undercut banks;

    c. Overhanging vegetation, including grasses, shrubs, and willows;

    d. Large woody debris;

    e. Deep pools; and

    f. Boulder clusters

    I consider that following are also required to maintain the brown trout fishery values:

    a. Unrestricted upstream and downstream fish passage for juvenile and adult brown trout;

[2] Evidence of Ramon Ross Dungey on behalf of Waikaka Gold Mines Limited – Ecology and Water Quality, 19 November 2025 – Paragraph 66.

b. Riffles with suitable sized brown trout spawning gravels (10 – 50mm) with little sediment deposition;

c. Avoiding disturbance of the stream bed during the brown trout spawning period, particularly 1 June – 31 October; and

d. Maintenance of low water temperatures, particularly through the brown trout spawning period.

A key concern is the loss of overhead cover and instream refuge habitat from removed overhanging vegetation and undercut banks during stream relocations. These features are likely to take years to fully rehabilitate in the realigned channel.

43. Shade is an important feature of Waikaka Stream, currently provided by large deciduous crack willow trees, which are found both upstream and downstream of the proposed site. I support the proposal to incorporate willow trees into the rehabilitated diversion channel planting scheme. Planting hybrid willows will not, however, produce the willow grubs currently produced by crack willow along Waikaka Stream margins. These grubs are an important food source for adult brown trout and a defining feature of the stream's small-stream fishing experience.

44. I note the differing views expressed by Messrs Strong and Dungey in evidence on the potential benefits and negative effects of crack willow removal from both river management and ecological perspectives. Wagenhoff and Young (2013) highlight that the ecological effects of willows — and their removal — are complex and site-specific. The impact of willows, the risks of removal, and the benefits of restoring native riparian vegetation depend on factors such as stream size and shape, hydrology, catchment land use, and the extent and species of willow present.

45. Setting aside the potential negative ecological impacts of crack willow removal identified by Mr Dungey[3], which I agree with, and whether the potential benefits outweigh the risks, I consider that preventing crack willow from recolonising the proposed Waikaka Stream rehabilitation site is likely to be difficult and require an ongoing commitment in time and cost because:

a. Waikaka Stream upstream of the site is dominated by extensive stands of mature crack willow, which there is no proposal to eradicate.

b. Crack willow reproduces rapidly through detached branches that can float downstream and root on wet river margins. Juvenile crack willow grows vigorously and can rapidly outcompete native riparian shrub and tree species, which grow at much slower rates.

c. Crack willow is difficult to eradicate and typically requires herbicide application during active growth, followed by cutting and removal of material from the floodplain to prevent subsequent downstream mobilisation. Cutting alone often triggers vigorous regrowth. Ongoing monitoring and follow-up maintenance are essential to manage regrowth and new infestations of crack willow from upstream.

46. I support the preparation of a detailed diversion channel design, including construction methodology, planting and habitat creation specifications, and a

[3] Evidence of Ramon Ross Dungey - Paragraph 25.

monitoring plan prior to construction. The long-term success of the diversion channel in maintaining brown trout and other fishery values will depend on the careful implementation of these measures, particularly the establishment of diverse instream habitat, sufficient shade, and woody debris.

47. Historic survey maps overlaid on recent aerial imagery (see **Appendix 2**) and historic aerial photographs[4] show that the Waikaka Stream once had a more natural, meandering form with greater variation in width and length, including within the proposed mining area. Channelisation and straightening have replaced this with more uniform habitat, reducing the variety of features such as riffles and pools that are vital for brown trout, especially for juvenile rearing and spawning.

48. The degree of riverine modification of Waikaka Stream and Shepherds Creek over time can be quantified using the Natural Character Index (NCI), which provides a standardized measure of a river's naturalness by comparatively assessing physical, ecological, and visual attributes. Changes in NCI scores over time can indicate the extent and impact of human modifications.[5]

49. River engineering advice provided to the Applicant by Cameron Hall of R J Hall and Associates (31 May 2024) attaches a report by Dr Henry Hudson (December 1999) intended to guide the proposed diversion of Waikaka Stream by L & M Mining. Dr Hudson notes that:

    a. The Waikaka Stream is a meandering gravel-bed stream that has been extensively modified over time by mining and land development; and

    b. Aerial images and topographic maps show the stream has been straightened, resulting in a loss of channel sinuosity (length).

    Dr Hudgson recommends that the low flow channel sinuosity through the proposed mining reach be increased from 1.25 to 1.48 to better reflect its historic natural form.

    From a brown trout habitat perspective, Dr Hudson's advice to reinstate a sinuous pool – riffle low flow channel remains sound. I consider that the proposed Waikaka Stream relocation offers an opportunity to restore its natural character by increasing the sinuosity of the low-flow channel, either:

    a. Within the existing footprint, including riparian margins, without encroaching onto adjoining farmland; or

    b. By returning the stream to its original surveyed bed (see **Appendix 2**). On the true left, the surveyed bed of Waikaka Stream is bordered by a parallel marginal strip. This approach would also resolve public access uncertainties where the stream has been diverted or laterally migrated away from its surveyed bed.

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[4] https://retrolens.co.nz/#/main . Accessed 25 November 2025.

[5] See for example: Report to Environment Southland – *Natural Character Index Assessment: Upukerora River and Whitestone River, Te Anau*: June 2025 by Anataia van Leeuwen (Environmental Consultant) & Prof. Ian Fuller (Principal Fluvial Geomorphologist); and
Report for Environment Southland - *Natural Character Index (NCI) for Whitestone and Upukerora Rivers*: April 2023 by Professor Ian Fuller.

50. It is unclear from the application whether the Applicant has obtained the necessary permissions from the Department of Conservation to carry out mining within areas of marginal strip adjacent to the Waikaka Stream, or from Land Information New Zealand to mine within areas of hydro land and if so, what conditions attach to rehabilitation of the diverted stream within these areas.

Proposed conditions of consent

51. I have reviewed the proposed conditions of consent attached to Anita Collie's planning evidence (Attachment [B]) for Waikaka Gold Mines Limited, dated 19 November 2025, focusing on the Environment Southland conditions labelled 'Section 2' related to instream diversions and the rehabilitation of Waikaka Stream and Shepherds Creek.

52. For brevity, I do not repeat the consent conditions I support, such as those relating to fish salvage. I focus on the conditions I consider should be amended with reference to brown trout habitat and recreational fishing. I agree with Mr Dungey[6] that an adaptive management plan is needed to guide the rehabilitation of Waikaka Stream and Shepherds Creek, allowing flexibility to respond to observed needs and changing habitat conditions.

River Diversion Condition Set

53. Condition 28 provides that no works shall take place in Waikaka Stream or Shepherd's Creek between 1 May and 30 November unless a qualified ecologist confirms that no spawning sites are present in the affected reach. I have reservations about this approach for Waikaka Stream, given strong evidence that brown trout spawning occurs throughout the diversion reach. Spawning surveys must also be carefully timed and conducted at appropriate flows to reliably detect activity; otherwise, brown trout eggs and fry are likely to be disturbed.

54. I consider that a more precautionary and certain approach would be to prohibit works in the Waikaka Stream bed from 1 June to 31 October inclusive.[7] I support Mr Dungey's proposal to confine the timing of instream works to 1 November to 31 March inclusive.[8]

Rehabilitation of Waikaka Stream and Shepherd's Creek

55. I consider that Condition 33 should be amended to require that Fish & Game is also consulted in the design of any channel and habitat features, given its statutory role in managing the Waikaka Stream brown trout fishery.

56. Condition 35(a) requires rehabilitated reaches to have a riparian margin at least 5 metres wide on each bank, planted with native species and hybrid willows for bank stability and shade. While the intent is laudable, I consider the condition needs further thought. Priority should be given to establishing grass to protect any exposed soil within the riparian zone and prevent sediment entering Waikaka Stream and Shepherd's Creek. It is also important to consider the high likelihood of crack willow recolonising from upstream sources and outcompeting slower-growing species, particularly natives, the Applicant proposes to plant.

[6] Evidence of Ramon Ross Dungey – Paragraph 129.
[7] Brown trout can spawn outside June – October, particularly in May and November, but most spawning occurs within the June – October period.
[8] Evidence of Ramon Ross Dungey – Paragraph 95.

57. I consider condition 35 could be improved from an ecological management perspective by requiring:

    a. The placement of appropriately sized brown trout spawning gravels (10 – 50 mm) throughout the riffle habitats, especially at the head and toe; and

    b. The sinuosity of the low flow channel to be increased from 1.25 to 1.48 to better reflect its historic natural meandering form.

58. Condition 36 appears to largely duplicate Condition 33. In any event, I consider that Condition 36 should be amended to require that Fish & Game is also consulted in the design of any channel and habitat features, given its statutory role in managing the Waikaka Stream brown trout fishery.

59. Conditions 37 and 38 requires ecological monitoring of the rehabilitated sections of Waikaka Stream and Shepherd's Creek for three years. I consider that:

    a. Three years is relatively short, especially as Mr Dungey notes that it may take 3 - 5 years to remedy effects, particularly instream shading.[9] I recommend extending the monitoring period to five years.

    b. Condition 38 should also require annual brown trout spawning surveys, with GPS mapping of redds, from early June to mid-July. This would monitor brown trout spawning habitat use, including the effectiveness of reconstructed riffles, and allow comparison with previous Fish & Game surveys.

    c. Consideration should be given to performing a natural character assessment comparing the existing Waikaka Stream and Shepherds Creek, i.e. current state prior to temporary diversions, and the rehabilitated reaches toward the expiry of the monitoring period.

60. I consider condition 39 should be amended to require that the annual monitoring report is also provided to Fish & Game, given its statutory role in managing the brown trout fishery in the Waikaka Stream.

<u>Stream Diversion Management Plan</u>

61. No Stream Diversion Management Plan has yet been prepared for the proposed Waikaka Stream diversion. I consider that preparation and certification of this plan is essential to safeguard trout habitat, maintain ecological integrity, and ensure that the diversion does not compromise the recreational and ecological values of the stream.

<u>Financial bond – Waikaka Stream and Shepherd's Creek diversion</u>

62. The proposed suite of consent conditions provides for a bond to be imposed under ss 108(2)(b) and 108A of the RMA to ensure compliance with the Closure and Land Rehabilitation Plan certified by Gore District Council.[10] However, it is unclear if the bond is proposed to ensure compliance with the Stream Diversion Management Plan, which will be certified by Environment Southland and is meant to guide the

[9] Evidence of Ramon Ross Dungey - Paragraph 91.
[10] See proposed consent conditions 122 to 131 attached to planning evidence of Anita Collie on behalf of Waikaka Gold Mines Ltd – dated 19 November 2025.

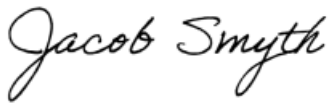
rehabilitation of Waikaka Stream and Shepherds Creek following the five temporary diversions.

63. For clarity and certainty, I consider that:

    a. The financial bond conditions should be amended to include reference to compliance with all conditions that address rehabilitation of Waikaka Stream and Shepherds Creek, including the Stream Diversion Management Plan certified by Environment Southland; and

    b. A financial bond provides a clear mechanism to guarantee that restoration of instream habitat, streambanks, and surrounding riparian areas is completed to an acceptable standard, even if the Applicant is unable or unwilling to carry out the required rehabilitation. This protects ecological values, including trout habitat, and the recreational use of the Waikaka stream.

64. I will be attending the consent hearing in-person on Thursday, 4 December and will be available to answer any questions from the Hearing Panel in relation to my evidence.



Jacob Smyth
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Appendix 1 – Trout spawning survey sites on the Waikaka Stream

Figure 1 - Waikaka Rd to Mine Bridge (4.1km)

Figure 2 - Mine Bridge to Maitland (6.2km)

Figure 3 - Maitland to Willowbank (5.8km)

Figure 4 - Willowbank to Howe Road (5.9km)

Appendix 2 – Surveyed bed of the Waikaka Stream