Central Otago Winegrowers

Comments to the Fast Track Expert Consenting Panel

Re: Bendigo–Ophir Gold Project (FTAA 2024)
On behalf of Central Otago Winegrowers Association (COWA)

1. Introduction and Position

The Central Otago Winegrowers Association (COWA) represents vineyard owners and wine producers across the Central Otago region. We submit to represent the interests of our industry and do so with the support of New Zealand Winegrowers.

We acknowledge the intent of the Fast Track Approvals Act to enable projects of regional and national benefit. We also acknowledge that mining has historically contributed to the Central Otago economy and continues to do so in parts of the region.

Our submission is therefore not made in opposition to development, nor to mining as an activity. Rather, it is made to assist the Panel in considering whether this specific proposal, of the scale proposed, and in this specific location, appropriately recognises and manages its effects on an already established, high-value, place-based industry.

Our membership holds a range of perspectives from limited concern through to deep concern about long-term impacts. What is consistent, however, is a shared interest in ensuring that any decision is made with a full understanding of the long-term implications for the wine and tourism economy that already exists in this landscape.

The key issue for the Panel is whether the proposed activity is compatible with an existing, high-value, place-based industry that depends on environmental integrity, land use stability, and long-term certainty.

In preparing this submission, COWA commissioned independent technical and scientific assessment alongside the international expert evidence set out in Section 8. This included baseline environmental monitoring of arsenic in vineyard soils, irrigation groundwater, and surface water across the Bendigo vineyard area, the results of which inform the technical analysis in Section 4. That work was carried out by Williamson Water & Land Advisory (WWLA), peer-reviewed by suitably qualified environmental practitioners, and forms part of the evidential record before the Panel.

2. The Existing Environment – A Long-Term Regional Asset

The proposed project sits within the heart of the Central Otago wine region. It is directly adjacent to the Bendigo subregion, which represents approximately 25% of the region's vineyard area. While the proposal is proximate to the Bendigo subregion, the potential effects are not confined to geographic boundaries. In a fine wine region operating under a Geographical Indication, reputational effects extend across the entire Central Otago region.

Central Otago's existing environment is intrinsically linked to its wine industry, which has developed in direct response to the region's distinctive landscape, climate, and soils.

2.1 Central Otago Wine – Defining the Existing Environment

For Central Otago wine, Pinot Noir is the defining expression of the region's landscape, culture, and economy. Central Otago's unique combination of climate, altitude, and soils creates a rare environment where Pinot Noir achieves exceptional purity, intensity, and site expression, placing it at the heart of the region's identity.

More than a product, Pinot Noir underpins a high-value economic ecosystem spanning wine production, tourism, hospitality, and regional branding. It reinforces Central Otago's reputation as a premium destination, attracting visitors, investment, and global attention while supporting skilled employment and long-term economic resilience.

Within the national context, Central Otago wine represents New Zealand's fine wine offering, which is low-volume, high-value, and globally differentiated. Its strength lies in its association with purity, sustainability, and authenticity, attributes central to both consumer demand and New Zealand's international reputation. As set out in the accompanying economic evidence, this premium positioning delivers disproportionate value to the regional economy.

Importantly, the value of Central Otago wine is cumulative and intergenerational, growing over time through vine maturity, deepening expertise, and strengthening global recognition, and it stands as a cornerstone of the regional and national economy - not for its scale but for its enduring economic, cultural, and reputational value grounded in the integrity of its landscape.

International expert evidence consistently reinforces that fine wine regions derive their value from an enduring relationship between land, people, and product, and that this relationship is particularly sensitive in regions still developing their global reputation, such as Central Otago. Emma Jenkins MW, who has followed Central Otago's development with professional attention over many years, puts this directly: Central Otago is 'a region still in the middle of its story' - deepening its understanding of subregional terroir and discovering what its unique soils are capable of producing. As she notes, 'reputations under construction are more readily jeopardised than those already fully formed, and history shows the damage done during a formative period tends to outlast the cause of it.'

That vulnerability has a specific market dimension. The wine industry think tank Areni Global identifies that the incoming generation of fine wine consumers actively pursues environmental credentials — and disengages when transparency is absent. Wine tourism is growing at approximately 13% per year globally, projected to reach over US$330 billion by 2034, driven specifically by experiential and sustainability-oriented travel. Central Otago is well positioned to capture a significant share of that growth. A development that undermines the region's environmental narrative does not merely risk existing value; it forecloses future value that has not yet been realised.

2.2 Terroir, Geographical Indication, and International Context

A defining feature of fine wine regions is the concept of *terroir*. Terroir refers to the combined influence of natural and human factors - soil, climate, altitude, aspect, and the practices of the people working the land, which together shape the character, quality, and distinctiveness of a wine. In Central Otago, where conditions are highly site-specific, terroir is directly expressed in the wines, making the integrity of land and environment fundamental to both quality and value.

This relationship is formally recognised through Geographical Indications (GI). A GI is a legally protected designation that identifies a product as originating from a specific place, where a given quality, reputation, or characteristic is attributable to that origin. In wine, a GI functions as both intellectual property and a recognised mark of authenticity in domestic and international markets. “Central Otago” is a registered Geographical Indication, functioning as both intellectual property and a mark of authenticity in domestic and international markets. Its value is inseparable from the condition and perception of the landscape from which it derives. The application for “Bendigo” to apply for GI status was underway but has been interrupted by the gold mine project.

The importance of protecting winegrowing landscapes is well illustrated by Burgundy, one of the world’s most established Pinot Noir regions. Burgundy’s vineyard landscape, the *Climats of Burgundy*, was inscribed as a UNESCO World Heritage Site in 2015 in recognition of its outstanding universal value, reflecting centuries of interaction between people and land in the production of fine wine. This designation affirms that such landscapes are not only productive, but cultural assets of global significance. Central Otago Winegrowers Association supported this application, reflecting shared values of land stewardship and long-term development.

Central Otago’s connection with Burgundy is ongoing. Since 2006, the Burgundy Exchange programme, established by Sophie Meunier (Domaine Jean-Jacques Confuron) and Nick Mills (Rippon), has enabled annual exchanges of young winegrowers between the regions. Over 100 participants have taken part, fostering shared understanding of terroir, tradition, and innovation.

This relationship has produced direct institutional support for COWA's concerns. Cyprien Arlaud (Domaine Arlaud, President of the association of the Climats du Vignoble de Bourgogne — Patrimoine mondial) and Aubert de Villaine (Domaine de la Romanée-Conti, President of Honour of the same association) have written jointly to this Panel on behalf of that UNESCO World Heritage body. Their letter states that the potential of Central Otago for producing great Pinot Noir, and the dedication of its local growers, has led Central Otago to be 'especially adopted as respected peers and valued friends, by the growers of Burgundy.' They are explicit: “it would be stupefying and we would feel hurt and angry if a proposal that places the long-term integrity and well-earned reputation of Central Otago at risk were to be approved.” They call directly for the project to be rejected.

This relationship reinforces that Central Otago is part of a global network of fine wine regions where long-term success depends on protecting land, landscape, and reputation.

2.3 Organic and Biodynamic Viticulture

Central Otago is a leader in organic and biodynamic viticulture in New Zealand, with approximately 30% of vineyard area under organic management. This reflects a deliberate regional commitment to environmental stewardship, soil health, and long-term sustainability.

Organic viticulture avoids synthetic chemicals, instead relying on biological and ecological processes to manage soil health, pests, and disease. Biodynamic viticulture goes further, treating the vineyard as a self-sustaining ecosystem. It incorporates regenerative practices, soil microbiology, and holistic land management, often guided by seasonal and lunar cycles, with a strong emphasis on building long-term soil vitality and resilience.

Achieving and maintaining organic or biodynamic certification is both complex and resource-intensive. It requires:

- Multi-year transition periods
- Ongoing compliance and auditing
- Greater labour input and management skill
- Higher exposure to environmental variability

Crucially, these systems depend on the integrity of surrounding land and environmental conditions. External contaminants, dust, or changes to soil and water systems may compromise certification status, undermine vineyard health, and impact market access. The viticulture expert commissioned by COWA identifies a specific biological mechanism of concern: arbuscular mycorrhizal fungi, which are present throughout Central Otago vineyards and critical to vine water and nutrient uptake, are "far more sensitive to heavy metal contamination than most other fungi, and in comparison to plants, they are extremely sensitive." Long-term arsenic accumulation in soils, even at levels that do not produce observable plant physiological effects, could shift the soil biota from a fungi-dominated to a bacteria-dominated composition. This is an insidious transition; it would occur gradually over many seasons and would be difficult to detect early. Its effects on vine health and wine character would be potentially irreversible, and they could continue long after mining operations have ceased.

In Central Otago, organic and biodynamic practices are not niche - they are central to the region's premium positioning and reputation for authenticity, sustainability, and quality.

In Central Otago viticulture and winemaking is not simply a land use. It is a developing global wine region, built over decades and increasingly recognised for:

- Premium, place-based wine production led by Pinot Noir
- Strong domestic and international market positioning
- A growing tourism economy centred on landscape, wine, and experience
- A reputation for environmental stewardship and authenticity

This is reinforced by:

- The region's Geographical Indication (GI) status
- Significant capital investment and long development timeframes inherent in viticulture
- A growing base of organic and biodynamic production, where environmental perception is integral to market positioning

As outlined in the material before the Panel, this is a long-horizon industry, where value is built incrementally over generations and is not readily reconfigured once established. If unencumbered by the proposed gold mine, this investment and value creation will continue for the long term, unlike gold mining which by comparison is a short-term extractive industry.

3. Nature of the Proposed Activity

The Bendigo–Ophir Gold Project is described as a large-scale, open cast and underground mining operation, with associated infrastructure including processing plant, tailings storage, waste rock facilities, and water management systems.

It is also, by its nature, a time-limited activity. The Mine Closure Plan lodged with the application estimates a total operational project life of 31 years, including pre-development, construction, operation, and active closure phases. This is followed by a post-closure active water treatment period of a further 20 years and passive treatment requirements anticipated to continue for several decades beyond that — meaning the environmental management obligations of this project extend well into the 22nd century.

This creates a fundamental consideration for the Panel: The proposal introduces a short- to medium-term industrial land use into a landscape supporting a long-term, intergenerational primary production and tourism economy.

That incompatibility is not, in COWA's assessment, a matter of degree. François Millet, a viticultural and winemaking consultant with over 40 years of experience across the world's leading fine wine estates, is direct: "There is a total incompatibility of coexistence between viticulture and the mine." That assessment, from a practitioner who has worked in New Zealand, reflects the view of international wine expertise that this is not a question of impact management but of fundamental land use conflict.

4. Key Areas of Potential Effect

4.1 Dust, Airborne Contaminants and Viticulture

COWA commissioned expert viticultural analysis of arsenic pathways from Rex Sunde, an experienced viticulture consultant whose assessment was peer-reviewed by BRI researchers. That work distinguishes between different contamination pathways, and the Panel should understand the distinction. On the question of arsenic uptake through soil into grapevine vascular tissue, COWA's own expert concludes the risk is low under typical Central Otago conditions: soil pH, iron, manganese, calcium levels, and organic matter content all act as buffers against arsenic mobility at the root zone. Negligible amounts reach berries via the vascular system. COWA does not seek to overstate this pathway.

However, Sunde identifies two distinct risk pathways that are material:

- Direct deposition of arsenic-bearing dust onto grapes during the growing season, particularly during harvest. This is a direct food safety and market access risk, independent of any soil pathway.
- Long-term accumulation of arsenic in vineyard soils with consequent disruption to soil biota, specifically mycorrhizal fungi, as detailed in Section 2.3. This is a diffuse, cumulative, and irreversible risk.

The expert environmental assessment by Pattle Delamore Partners (PDP), commissioned by Santana, concludes that with proposed mitigation in place, dust effects would be less than minor. COWA accepts the general methodology. However, that conclusion is expressly conditional on mitigation controls being maintained. As WWLA notes in their review of the PDP assessment, the high-arsenic soil stockpile is located in the southwest of

the project area, and under the predominantly north-westerly and south-easterly wind conditions within the mine valleys, direct deposition to Bendigo vineyards is assessed as unlikely during normal operations. But Santana's own meteorological data shows frequent high PM10 events from November to April — precisely the period covering bud burst, flowering, and harvest. The risk is low on average; it is not zero under adverse conditions.

A further pathway not addressed in the original submission should be drawn to the Panel's attention. The processing plant will discharge gaseous contaminants including hydrogen cyanide (HCN) and ammonia (NH3), as identified in Santana's own air discharge assessment. These are chemically distinct from dust and present separate deposition pathways with different consequences for organic certification. WWLA identifies a further internal inconsistency in Santana's Water Management Plan: the document contains conflicting provisions as to whether mine pit water, which will carry elevated arsenic and sulphide concentrations from dewatering, can be used for dust suppression on haul roads within approximately 970 metres of Bendigo vineyards. This requires clarification before any consent is issued.

4.2 Water Availability, Quality and Equity

Water is fundamental to viticulture in Central Otago's semi-arid climate.

COWA established baseline arsenic conditions across the Bendigo vineyard area prior to any mining activity. Sampling of five irrigation groundwater bores at Bendigo vineyards — including Mondillo, Folding Hill, Quartz Reef, Schoolhouse, and China Terrace — found arsenic concentrations below the laboratory limit of reporting (0.0011 g/m³) in every bore. A surface water sample taken from the Lake Dunstan Lakefront Irrigation Scheme also returned arsenic below the limit of reporting. Current soil arsenic within the vineyards ranges between 3.93 and 9.03 mg/kg — within expected background concentrations for this geology and well below applicable thresholds. Arsenic in the current environment, in every medium that matters for viticulture and winemaking, is effectively undetectable.

This baseline matters because Santana's proposed compliance regime does not adequately protect it. WWLA identifies a structural flaw in how arsenic compliance limits were set:

- The proposed surface water arsenic compliance limit of 0.045 mg/L is the 90% ANZG species protection threshold, derived with reference to Rise and Shine Creek — which carries naturally elevated arsenic from historic hard-rock mining. Shepherds Creek, which is the primary discharge point for all water leaving the proposed mine area and which ultimately soaks into the Ardgour Alluvial Aquifer and through to the Bendigo Aquifer, has current arsenic concentrations of 0.0008–0.0024 mg/L. The proposed compliance limit represents a 20–50-fold increase over current Shepherds Creek baseline before any regulatory action is triggered. This is not protective of the resource that Bendigo vineyard operators depend on.
- The drinking water standard for arsenic is 0.01 mg/L. The proposed groundwater compliance threshold is set at the maximum acceptable value — meaning any exceedance triggers action only after the drinking water standard has already been breached. There is no early-warning tier. WWLA recommends a two-step response procedure: a review level well below the maximum acceptable value, and a defined action level, with monitoring of upward trends as the primary alert mechanism.

Beyond compliance thresholds, key concerns include:

- The interconnected nature of the aquifer systems serving Bendigo vineyards. Shepherds Creek soaks into the Ardgour Alluvial Aquifer well short of the Lindis River; that aquifer discharges into the Lindis, which in turn recharges the Bendigo Aquifer. Contamination does not dilute into a major river — it concentrates into the aquifer from which vineyard irrigation bores draw.
- Elevated arsenic concentrations, above the drinking water standard of 0.01 mg/L, have already been noted within the schist aquifer and within historic adit water at the proposed mining site. Dewatering of open pits will mobilise this groundwater into surface water networks and, ultimately, toward the Bendigo Aquifer. Santana proposes to manage mine dewatering water through a closed-loop system during operations. WWLA accepts the design intent, but notes that the monitoring regime does not currently include a groundwater monitoring well at the base of Shepherds Creek where it enters the alluvial flats — the point at which contamination would first enter the broader aquifer system and at which early intervention would still be possible.
- Long-term water treatment and monitoring requirements extending beyond the life of the mine. Active water treatment post-closure will be required for approximately 20 years; passive treatment requirements are anticipated for several decades beyond that. Santana's Water Management Plan acknowledges a total treatment obligation of approximately 50 years plus 'several decades.' This exceeds the typical duration of a resource consent by a significant margin, raising unresolved questions about re-consenting obligations, financial assurance, and regulatory continuity across what may be multiple generations of regulatory frameworks.
- Potential high-consequence environmental effects associated with a failure of tailings storage facilities, and equity considerations in water allocation and permit duration.

4.3 Long-Term Soil Health and Irreversibility

The most significant concern is not immediate contamination, but:

- Gradual accumulation of contaminants
- Potential disruption to soil biology
- Long-term impacts on vine health and wine expression

These effects are cumulative, difficult to detect early, and potentially irreversible.

These risks must be understood in the context of a fine wine region where soil, microbiology, and site expression are fundamental to long-term value. In Central Otago, soil health underpins both terroir and the viability of organic and biodynamic systems. Degradation of soil quality is therefore not only a production risk, but a direct threat to the intergenerational value of the region's primary industry, with potential consequences for certification, wine character, and long-term land use.

The specific mechanism of concern is the sensitivity of arbuscular mycorrhizal fungi — present universally in Central Otago vineyards — to arsenic accumulation. These fungi improve vine root area, and thereby water and nutrient uptake, by orders of magnitude. They are, in Rex Sunde's assessment, "far more sensitive to heavy metal contamination than most other fungi, and in comparison to plants, they are extremely sensitive." Regular deposition of arsenic-bearing dust over the mine's operational life could change the balance of soil flora and fauna in a way that "would be insidious creep rather than noticeable change in a few seasons." This effect would be irreversible. It would continue after mining ceases. And it would manifest as a gradual, potentially imperceptible change in wine character that, by the time it is identified, could not be remediated.

Notably, there are currently no ecological threshold standards for arsenic in New Zealand vineyards against which to assess accumulation risk. Santana's own Preliminary Site Investigation recommends that such thresholds be derived — but they have not been. The Soil Management Plan uses human health thresholds only, not ecological thresholds, as its performance criteria. The Panel is being asked to approve a project whose soil management regime does not yet have the scientific tools in place to determine whether it is functioning as intended for the most sensitive receptor: vineyard soil ecosystems.

4.4 Market Perception, Brand and Tourism Effects

Central Otago operates within a premium, place-based market where:

- Reputation is closely tied to environmental integrity
- Consumer perception directly influences value

There is a credible pathway for:

- Brand erosion
- Reduced willingness to pay
- Impacts on tourism

This is particularly significant in the context of Central Otago's positioning as a premium Pinot Noir region operating under a Geographical Indication. The value of that designation depends not only on measurable environmental outcomes, but on global perceptions of purity, authenticity, and landscape integrity. Tourism and economic evidence before the Panel confirms that landscape is a primary driver of both visitor behaviour and regional value, and that even perceived changes to environmental quality can result in material economic impacts.

In premium, place-based industries, perception is not secondary to value — it is a core driver of it. This is consistent with international wine expert evidence, which emphasises that fine wine markets respond to both environmental conditions and the narrative of place, and with tourism evidence highlighting the sensitivity of visitor behaviour to perceived changes in landscape quality. As Emma Jenkins MW, whose professional commentary on Central Otago spans many years, states: the situation here is one of "starkly asymmetric" risk. There is no upside for the wine community - "only irreparable and irreversible downsides." That asymmetry deserves, as she puts it, to be stated plainly.

Jancis Robinson OBE MW, who has followed Central Otago since the late 1980s and whose World Atlas of Wine has shaped global understanding of the region, makes a direct observation about where the economic benefits of this mine will flow: "Who would benefit most from this mine? Santana's Australian shareholders, of course." She also challenges the employment argument: "mines are not massive employers." Jasper Morris MW completes the contrast: the wine industry's beneficiaries are local and the profits stay in the region. These are not rhetorical observations - they go to the Panel's obligation to weigh regional and national benefit, and to consider not merely the scale of projected benefits but where they land.

4.5 Adequacy of Proposed Management and Monitoring

COWA's environmental review of Santana's management plans finds that the technical assessments are generally competent, but that several of the management plans have significant gaps that need to be addressed before any consent is issued.

Specifically, WWLA's review identifies the following material deficiencies:

- Arsenic compliance limits for surface water are set with reference to Rise and Shine Creek rather than Shepherds Creek, meaning the proposed limits do not reflect the actual receiving environment relevant to Bendigo vineyard water supplies. They should be revised downward to reflect Shepherds Creek baseline conditions and the direct hydraulic connection between that creek and the Bendigo Aquifer (see Section 4.2).
- The proposed real-time dust monitoring location is to be relocated from Lake Clearview, which is situated close to horticultural receptors and was used for baseline data collection, to Ardgour Terrace near mine administration. This removes the monitoring point that is most relevant for detecting whether dust is reaching vineyards. COWA requests that Lake Clearview monitoring be retained as a condition of consent, with additional monitoring near the boundary of the mine closest to horticultural receptors.
- Santana's Water Management Plan contains conflicting provisions as to whether pit water, which will carry elevated arsenic and sulphide concentrations, may be used for dust suppression. This internal inconsistency has not been resolved in the application and must be clarified, with a defined water quality standard specified if pit water use for dust suppression is to be permitted.
- Neither the Soil Management Plan nor the Mine Closure Plan contains the contingency procedures that would govern a response to an uncontrolled discharge, whether of dust, sediment, or water, during active mining or closure. Conditions of consent should require that contingency procedures, including response protocols, notification obligations, and remediation pathways, be defined before any site disturbance commences.
- The water treatment obligation post-closure, estimated at approximately 50 years for active treatment and several additional decades for passive treatment, significantly exceeds a standard discharge consent duration of 30–35 years. Conditions should require safeguards to ensure that consent can be renewed and that treatment standards can be upgraded to meet any more stringent future requirements, so that the system does not at any point operate without regulatory oversight.

This is particularly important in a region where certification systems, including organic and biodynamic production, require high levels of environmental assurance and transparency, and where the consequences of failure extend beyond compliance to market access and reputation.

4.6 Community Engagement and Process Limitations

COWA has participated in the project's Community Liaison Group (CLG), but has previously noted:

- Company control over governance and process
- No obligation to respond to feedback
- No formal link to decision-making
- Constraints on independent communication

Accordingly, the CLG should not be interpreted as evidence of effective consultation, community support or social licence.

5. Key Strategic Consideration for the Panel

The Panel is required to consider regional and national benefits.

COWA respectfully submits that:

- The existing wine and tourism economy is itself a significant and compounding regional benefit, and
- The proposal introduces risks that are long-term, cumulative, and in some cases irreversible

Economic evidence further indicates that the projected benefits of the proposal are likely overstated, while key costs, including impacts on existing industries and long-term environmental effects, are not fully accounted for. In assessing those projected benefits, the Panel should note that Santana's economic assessment was commissioned by Santana. It uses GDP as its primary metric, which measures gross value added. It does not show where after-tax profit flows. As an Australian-listed company, after-tax returns to equity investors will largely be repatriated offshore. The government revenue figure of approximately $1.8 billion cited in Santana's economic report includes corporate taxes, royalties, and PAYE — but the retained earnings flowing to Australian and institutional shareholders are not regional income.

This creates a fundamental time horizon mismatch:

- Mining benefits: concentrated over two decades
- Wine region value: built and realised over generations with many more to come. Jasper Morris MW observes that "the 40-year history [of Central Otago wine] should be seen as the first 40 years of potentially a very long run." The beneficiaries of that run are local, and the profits stay in the region.

Central Otago wine is a cumulative and intergenerational asset, grounded in terroir, protected through its Geographical Indication, and increasingly defined by organic and biodynamic production systems. Its value grows over time through vine age, environmental stewardship, and global reputation.

This contrasts with the finite and extractive nature of mining activity. The Panel is therefore required to consider not only the scale of potential benefits, but their duration, reversibility, and compatibility with an existing economic system that depends on long-term environmental integrity and consistent land use.

The Panel should also note that Santana's Mine Closure Plan is, by design, a living document to be updated every three years throughout the mine's life. Core decisions about post-closure environmental management — the very decisions that will determine whether soil and water contamination is ultimately managed — have not yet been made. The Panel is being asked to approve a project of 31+ years total operational life whose most consequential environmental management decisions remain deferred. That level of uncertainty is difficult to reconcile with the irreversible effects on the landscape and the wine industry that the evidence before the Panel describes.

6. Suggested Approach for Consideration

COWA has significant reservations as to whether the proposal is appropriate in this location. If any mining activity is to proceed, the following matters require careful consideration:

1. Location and proximity to vineyards
2. Stringent and enforceable dust controls, with real-time monitoring maintained at Lake Clearview for the duration of operations
3. Transparent, real-time sharing of all environmental monitoring data with affected stakeholders, including COWA

4. Arsenic compliance limits for surface water and groundwater revised to reflect the current near-zero baseline conditions in the Shepherds Creek catchment and the direct hydraulic connection to the Bendigo Aquifer, with a two-step response framework (review level and action level) providing early warning before the drinking water standard is approached
5. Robust groundwater and surface water protections, including a dedicated groundwater monitoring well at the base of Shepherds Creek where it enters the alluvial flats
6. Clarification of whether mine pit water may be used for dust suppression, with defined water quality standards if so permitted
7. Contingency procedures for uncontrolled discharges of dust, sediment, or water - defined and conditioned before any site disturbance commences
8. Long-term funding and accountability for post-closure water treatment, with conditions requiring the ability to re-consent treatment and upgrade standards for the duration of the water treatment obligation, however long that proves to be
9. Consideration of equity in water allocation and permit duration
10. Recognition of cumulative and intergenerational effects, including on regional brand, tourism, and the ongoing viability of organic and biodynamic certification systems

7. Conclusion

Central Otago is a globally recognised wine and tourism destination.

This submission is not about choosing one industry over another. It is about recognising that the existing wine and tourism economy is already a high-value, place-based system built on terroir, environmental integrity, and a globally recognised Geographical Indication, and long-term investment. Increasingly, it is also defined by organic and biodynamic production systems that depend on the health and stability of the surrounding environment.

The value of this system is cumulative and intergenerational. It is built over decades through vine maturity, investment, knowledge, and reputation, and is closely tied to both the reality and perception of a pristine landscape. This has required a substantial and sustained level of investment by those vineyards and businesses supporting the sector. To find this put at risk by the methods of gold mining proposed would create a credible risk of constraining the long-term development and potential of the sector.

The potential effects identified are not always immediate. Many are gradual, cumulative, and difficult to reverse. In a fine wine region, these effects extend beyond physical impacts to include certification, brand value, and market confidence.

The baseline environmental monitoring commissioned by COWA confirms that the Bendigo vineyard area currently holds essentially zero measurable arsenic in its water systems and soils within background range. That clean baseline is a fragile asset. Once compromised, whether through direct contamination or through the gradual displacement of soil biology that underpins wine character, it cannot be restored. François Millet's conclusion bears repeating to the Panel: “There is a total incompatibility of coexistence between viticulture and the mine.” That is not a statement of opposition to development in principle. It is the assessment of a 40-year practitioner at the highest levels of fine wine production, made with reference to this specific industry and this specific landscape.

Decisions made under the Fast Track process should therefore carefully weigh: **short-term, finite gains against long-term, compounding regional value**.

Once compromised, the environmental integrity and reputation of a fine wine and tourism region cannot readily be restored. The Panel is therefore required to consider not only whether the proposal can proceed, but whether it should proceed in a location that underpins an existing, intergenerational regional economy.

COWA remains committed to constructive engagement and to assisting the Panel with expert evidence and industry insight.

8. Supporting Expert Evidence

The following expert statements are provided in support of this submission. These individuals represent internationally recognised leaders in wine production, science, environmental assessment, and economics.

Together, their evidence highlights three consistent themes relevant to the Panel's consideration:

1. The dependence of fine wine regions on environmental integrity and land use compatibility
2. The economic significance of Central Otago's wine and tourism system
3. The long-term, cumulative nature of value in viticulture compared with finite extractive industries

TECHNICAL AND SCIENTIFIC EXPERTS

Rex Sunde
Background Rex Sunde is an experienced viticulture consultant with extensive expertise in vineyard systems, grape production, and site-specific management. He has worked across a range of New Zealand wine regions, advising on vineyard establishment, soil health, and production optimisation.
Relevance to Central Otago Provides technical assessment of vineyard-level risks associated with environmental change.
Key Points Raised Potential pathways for dust deposition onto grapes and vines Sensitivity of vineyard systems to contamination and environmental change Importance of maintaining soil and plant health for long-term production

Lauren Windross
Background Lauren Windross is an environmental scientist specialising in contaminated land, contaminant migration, and land-use impacts on natural systems.
Relevance to Central Otago Provides expert assessment of dust, soil and water systems relevant to viticulture and regional geology.
Key Points Raised Potential pathways exist to enable arsenic migration to groundwater and surface water.

Requirement for strong management processes during mining to prevent discharges to the surrounding environment. Requirement for robust monitoring and trigger/ compliance levels that are protective of water resources. Importance of long-term monitoring and risk management.

ECONOMIC EXPERT EVIDENCE

Professor Tim Hazledine
Background Professor Tim Hazledine is an Emeritus Professor of Economics at the University of Auckland, with extensive experience in applied and regional economics, including resource management and land-use issues. He has held academic positions internationally and has provided expert evidence in a range of regulatory and planning contexts.
Relevance to Central Otago Provides independent economic analysis of the Central Otago wine sector and the proposed project.
Key Points Raised The wine industry is a high-value, premium sector that enhances regional economic performance Strong interdependence between wine and tourism in the regional economy The industry contributes to "Brand Central" and broader national value Potential risks include impacts on productivity, investment, tourism, and export confidence The existing wine economy represents a significant and ongoing economic benefit

INTERNATIONAL WINE EXPERTS

Anne Krebiehl MW
Background Anne Krebiehl MW is a London-based wine writer and Master of Wine, contributing to leading international trade and consumer publications. She has written extensively on global wine regions, with a particular focus on Pinot Noir and emerging fine wine regions such as Central Otago. Her work explores the relationship between landscape, culture, and wine, and she is widely recognised for her expertise in articulating how environmental integrity and authenticity underpin the value and reputation of fine wine.
Relevance to Central Otago She has written extensively on Central Otago and its emergence as a leading New World Pinot Noir region.
Key Points Raised Wine derives its value from an authentic connection to land, place, and people Central Otago's reputation is built on perceptions of pristine environment and purity Industrial activity risks undermining both landscape and market positioning Fine wine regions depend on long-term environmental integrity

Aubert de Villaine
Background Aubert de Villaine is co-owner of Domaine de la Romanée-Conti, one of the world's most prestigious wine estates, and a globally respected figure in fine wine. He has played a central role in promoting the concept of

terroir and the protection of vineyard landscapes, including through leadership in the recognition of Burgundy's Climats as a UNESCO World Heritage Site. His perspective reflects decades of experience in sustaining the long-term reputation and integrity of one of the world's benchmark Pinot Noir regions.
Relevance to Central Otago Recognise Central Otago as a peer Pinot Noir region with shared values of terroir expression.
Key Points Raised Great wine regions are built over generations and require protection of vineyard land Central Otago's reputation is still developing and therefore vulnerable Land use decisions must prioritise long-term integrity Incompatible industrial activity risks undermining global standing

Cyprien Arlaud
Background Cyprien Arlaud is a Burgundian winegrower and head of Domaine Arlaud, as well as President of the association of the Climats of Burgundy, a UNESCO World Heritage-listed vineyard landscape. He is a leading advocate for the protection of terroir and the long-term stewardship of vineyard land. His work sits at the intersection of viticulture, heritage, and land-use planning, with a strong emphasis on preserving the environmental and cultural integrity that underpins globally recognised wine regions.
Relevance to Central Otago Recognise Central Otago as a peer Pinot Noir region with shared values of terroir expression.
Key Points Raised Great wine regions are built over generations and require protection of vineyard land Central Otago's reputation is still developing and therefore vulnerable Land use decisions must prioritise long-term integrity Incompatible industrial activity risks undermining global standing

Guillaume d'Angerville
Background Guillaume d'Angerville is a Burgundian winegrower and President of the International Wine Academy, an organisation comprising leading global figures in viticulture, science, and wine production. He is known for his focus on sustainability, biodiversity, and the advancement of high-quality viticulture.
Relevance to Central Otago Recognises Central Otago as a globally significant emerging fine wine region.
Key Points Raised Central Otago has strong international reputation and future potential Wine regions depend on environmental stewardship and long-term development Industrial activity risks undermining decades of progress

Emma Jenkins MW
Background Emma Jenkins MW is a Master of Wine and internationally recognised wine writer and commentator, with extensive experience assessing fine wine regions and global markets. She has followed the development of Central Otago over many years and is known for her analysis of how place, landscape, and narrative influence the value of wine.
Relevance to Central Otago Has closely followed the development of Central Otago as a premium Pinot Noir region.
Key Points Raised Fine wine markets trade on narrative of place, not commodity production Central Otago's reputation is still evolving and highly sensitive Environmental integrity is inseparable from economic value Wine value compounds over time, unlike finite industries

François Millet
Background François Millet is an internationally recognised viticultural and winemaking expert with over forty years of professional experience. From 1986 to 2019, he served as Chef de Cave and Technical Director at Domaine Comte Georges de Vogüé in Chambolle-Musigny, where he was responsible for vineyard management and winemaking across some of Burgundy's most prestigious and environmentally sensitive sites, including Musigny Grand Cru. Since 2016, he has operated François Millet et Fils, a small family winery focused on artisanal production and long-term land stewardship.
Relevance to Central Otago Mr Millet works as an international consultant to leading fine wine estates in France, California, Oregon, South Africa, and New Zealand, advising on viticulture, terroir expression, and sustainable land use.
Key Points Raised Fine wine production depends on the long-term integrity of soil, landscape, and environmental conditions High-value vineyard land requires careful stewardship and is sensitive to disturbance Reputation and economic value are built over decades but can be quickly undermined Land use decisions must prioritise long-term sustainability over short-term gains

Jancis Robinson OBE MW
Background Jancis Robinson OBE MW is one of the world's most influential wine writers and critics, with over five decades of experience and a global readership. She is Editor-in-Chief of JancisRobinson.com, writes a weekly column for the Financial Times, and is the author of seminal reference works including *The Oxford Companion to Wine* and *The World Atlas of Wine*. Her work has shaped global understanding of wine regions, particularly the importance of geography, landscape, and terroir in defining wine identity and value.
Relevance to Central Otago Has followed the region's development since its early stages.
Key Points Raised

Wine regions are inseparable from landscape and environmental quality Tourism and reputation depend on unspoiled environment Industrialisation risks long-term ecological and reputational damage

Jasper Morris MW
Background Jasper Morris MW is a leading authority on Burgundy and Pinot Noir, and the author of *Inside Burgundy*. With decades of experience as a wine merchant, critic, and educator, he has an international reputation for expertise in fine wine regions and their development over time.
Relevance to Central Otago Identifies Central Otago as a global reference point for Pinot Noir.
Key Points Raised Central Otago is a key ambassador for New Zealand wine globally Wine regions develop over long timeframes Mining is finite; wine value compounds over generations

Dr Jamie Goode
Background Dr Jamie Goode is a UK-based wine journalist, author, and communicator with a global audience, widely recognised for his expertise in wine science, terroir, and fine wine regions. He is the author of several influential wine books and the founder of WineAnorak.com, one of the world's leading independent wine platforms.
Relevance to Central Otago He has visited New Zealand regularly since 2008, with extensive experience in Central Otago, and is well regarded for his insights into how landscape, reputation, and place shape the perception and value of wine in international markets.
Key Points Raised Central Otago plays a critical role in New Zealand's global fine wine reputation The region is a premier destination for wine tourism and international trade attention Landscape beauty is fundamental to the region's image and visitor experience Industrial-scale mining poses a significant risk to reputation and future growth

Carolyn Murray
General Manager
On behalf of the Board of Directors
Central Otago Winegrowers Association