

# Memorandum

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Attention: Cheryl Low

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Company: Santana Minerals

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Date: 30 January 2026

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From: Rhys Girvan (Registered Landscape Architect)

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Message Ref: Response to ORC Landscape Questions

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Project No: BM240011

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This memorandum has been prepared in response to a Request for Further Information (RFI) received by Otago Regional Council (ORC) dated 16 December 2025 (ORC reference: RMFT25.007). Specifically, this memorandum responds to questions 1-4 set out in the letter prepared by Shay McDonald (ORC, Principal Consents Planner) and in response to additional specific commentary on the landscape "Peer Review" provided by Nigel Parker, Landscape Architect through which this RFI has been informed.

For completeness, question have been copied in full before responding.

## **Question 1.**

***It is the opinion of Mr Parker that the overall landscape effect of the proposal at the site level will be a high adverse effect (utilising the seven-point scale in Te Tangi a te Manu), which corresponds to significant adverse effects in typical RMA language, even after successful implementation of the Landscape and Ecological Rehabilitation Management Plan. Consequently, SLR recommend that these residual adverse effects be offset via approximately 65 hectares of revegetation at a suitable offsite location. Please discuss this recommendation, including any reasons for agreement or disagreement, with reference to sections 3.2.1 – 3.2.4 of Mr Parker's memorandum.***

In terms of scale, landscape effects have been assessed at the Site scale comprising the more immediate context of the Rise and Shine and Shepherds Creek catchments, and at a broader landscape scale noting a transition between the north and south Dunstan Mountains which form the broader identified Dunstan Mountains Outstanding Natural Landscape (ONL).

To assist with understanding the spatial extent of assessed landscape effects, a Site boundary encompassing the project has been delineated and referred to in the Graphic Supplement supporting the Landscape, Natural Character and Visual Effects Assessment (LNCEA) and as included in response to Question 4 of this RFI below. Based on this definition of what constitutes the 'Site', each component of the Project within the Site has been assessed during

each phase of the Project to understand the effects as summarised in Table 2 of the LNCEA (Boffa Miskell, 8 August 2025), and reproduced below.

Summary of Site Scale Landscape Effects						
	Startup (Year 0 - 3)		Mining activity (Year 3-11)		Closure (Year 11-30)	
	Level of Effect <sup>1</sup>	Nature of Effect <sup>2</sup>	Level of Effect	Nature of Effect	Level of Effect	Nature of Effect
<b>Site Scale: Project components</b>						
Rise and Shine Pit	MH	Adverse	H	Adverse	H	Adverse
Rise and Shine Underground Mine		Neutral	LM	Adverse	L	Adverse
Western Engineered Landform	MH	Adverse	M	Adverse	LM	Adverse
Come in Time Pit		Neutral	H	Adverse	LM	Adverse
SRX Pit/ELF and SRE Pit		Neutral	MH	Adverse	M	Adverse
Shepherds Engineered Landform	MH	Adverse	H	Adverse	LM	Adverse
Tailings Storage Facility	H	Adverse	MH	Adverse	L	Adverse
Haul Roads	M	Adverse	MH	Adverse	LM	Adverse
Plant Infrastructure	M	Adverse	MH	Adverse	LM	Adverse
Site Workers Camp	LM	Adverse	L	Adverse		Neutral
Quarries, Magazine Storage, and Emulsion Area	M	Adverse	M	Adverse	LM	Adverse
Diversion Channels	M	Adverse	LM	Adverse	LM	Adverse
Pest Exclusion Area	-	-	LM	Adverse		Neutral
Thomson Gorge Road Realignment	M	Adverse	LM	Adverse		Neutral

In identifying the overall degree of landscape effects at the landscape scale, I note the Peer Review concurs with finding that adverse effects are **moderate** during operation and **low-moderate** at closure when considered in the context of the broader Dunstan Mountains ONL<sup>3</sup>. At the more local 'Site' scale, it is acknowledged that adverse effects range from **low** to **high** throughout the duration of the project. This is consistent with Mr Parker's acknowledgement that assessing effects by individual elements is a necessary and appropriate approach given differing start times and progression rates<sup>4</sup>. In this respect the LNCEA intentionally assesses effects by component and project phase. In my opinion, this provides a clearer, more transparent picture of effects than what might otherwise be construed as an artificially combined rating at the Site scale, particularly where works are spatially divided by terrain and temporally

<sup>1</sup> Very Low: VL, Low: L, Low-Moderate: LM, Moderate: M, Moderate-High: MH, High: H, Very High: VH.

<sup>2</sup> Adverse, Neutral, Beneficial.

<sup>3</sup> Nigel Parker (1 December 2025), Landscape Architectural Review, Section 3.1.1

<sup>4</sup> Nigel Parker (1 December 2025), Landscape Architectural Review, Section 3.2.1

staged, and where the experience of landscape effects will occur differently depending on location and duration.

While it is possible to combine or average identified effects across what has been defined as the 'Site', this approach equally does not account for the variation of effects in each local area of the proposed development encompassing activity and disruption which will gradually shift across this identified spatial extent. With respect, I do not therefore agree that a single "overall" site-level rating (i.e., a summation/averaging of individual element ratings) is necessary or methodologically robust in this case. In essence, the nature of mining activity and surrounding native regeneration will also occur progressively during operation and will not happen everywhere all at once. While there will inevitably be some high (and therefore significant) landscape effects within the Site, the assessment is intended to provide a clear understanding of where such effects occur and as part of assessing the nature and degree of such effects in the context of the broader landscape.

In terms of quantifying the level of individual effects, I note the Peer Review refers to general agreement with the degree of effect assigned to each of the individual elements<sup>5</sup>. With respect to specific concerns raised in relation to Haul Roads, I note these have been specifically located to contain disturbance within the relative enclosure of Shepherds Creek and lower northern slopes of Battery Hill. This will also reduce the relative level of adverse effects consistent with that identified.

Regarding effects on associative landscape values and reinstating recreation access through Thomsons Saddle at closure in particular, I do not consider the nature of effect relates solely to freezing the experience of users at a specific point in time. Landscapes are inherently dynamic and remain subject to change. Nonetheless, historic associations maintaining a recognised historic access link through a natural low point along the Dunstan Mountains at Thomsons Saddle will remain and will continue to be managed in the context of enabling access to historic and expanded gold mining activity within which new heritage and recreational opportunities may also occur. In other respects, the associations and degradation associated with pastoral grazing will also be modified to ensure an increase in representative native ecosystems which may otherwise remain depleted.

Notwithstanding differences in opinion noted above, when addressing identified high adverse effects which remain in relation to the Rise and Shine (RAS) pit, the Peer Review suggests that an area of 65 ha. be planted and covenanted in Central Otago close to the Site to "offset" high adverse landscape effects. I disagree with an offsetting approach with respect to landscape effects. In landscape terms, I consider using planting as a singular outcome or proxy for landscape mitigation could also introduce unrelated landscape change elsewhere without a clear, values-based equivalence test responding to effects on landscape values.

This is the approach taken to managing adverse landscape effects seeking to avoid, remedy, or mitigate adverse effects where practicable. Through this approach, mining activity will become increasingly absorbed within a broader managed landscape that supports progressive regeneration and active native revegetation, with clear performance requirements set out in the Landscape and Ecology Rehabilitation and Management Plan (LERMP) and closure plans. The associated biodiversity offsetting / compensation quanta are set out in the Assessment of Ecological Effects: Terrestrial Ecology (Alliance Ecology) as part of the Substantive Application and include:

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<sup>5</sup> Nigel Parker (1 December 2025), Landscape Architectural Review, Section 3.2.1

- ~480 ha within the Direct Disturbance Footprint (DDF)
- 889 ha Mine Regeneration Zones
- 1,263 ha adjoining Ardgour Restoration Area
- ~67 ha predator-exclusion sanctuaries

Overall, while not advanced as “landscape offsetting” per se, the proposed LERMP delivers a materially greater quantum of native regeneration and revegetation than that recommended in the Peer Review and is expected to assist with assimilating the proposed mine within an improved nature conservation context. In landscape terms, these existing vegetation associations form a mosaic that currently favours plants that tolerate pastoral farming practices. In response to enabling mining activity, these are to be regenerated and enhanced with components of historic (‘pre-degradation’) ecosystems that can be sustained as new land use management practices that prioritise ecological outcomes alongside consideration of future risks of fire, drought and browse. As mined landforms are progressively rehabilitated, landscape outcomes are also ultimately beneficial and assist with reducing broader landscape effects in the context of the Dunstan Mountains ONL, as agreed.

**Question 2.**

***Please confirm how the colours of the exposed faces of pits, engineered landforms, and stockpiles have been determined, and whether these colours (as illustrated in the visual simulation reports B.19B) are accurate?***

The process of preparing visual simulations has entailed aligning an accurate digital 3d model of the proposed project elements with photographs of the Site to identify their spatial location and extent. On this basis, the extent of landform modification which has been simulated provides a credible understanding of the spatial extent of modification that is proposed. The colouration applied to areas of identified modification has subsequently drawn upon an understanding of the nature of underlying schist geology which will be encountered and otherwise evidenced by existing disturbance within and adjoining the Site as well as considerable previous experience assessing similar mining activity.

Nuances in the underlying geology alongside ongoing atmospheric variation will remain inherent as part of this landscape and influence what is ultimately observed. Nevertheless, colouration employed is considered representative of the anticipated raw appearance of the underlying rock and areas of exposed soil which are likely to be encountered and observed over the considerable viewing distances involved. On this basis the colours illustrated are considered an accurate representation of mining activity proposed through which the extent of visual effects can be assessed.

As noted in the simulations, changes which occur progressively during the proposed mine operation and within the surrounding landscape, including revegetation within mine regeneration zones, have not been simulated which will also influence the extent of visual change which will occur.

**Question 3.**

***Please clarify whether it is the intention of MGL to prepare and submit to Council for certification detailed plans for rehabilitation works within each landscape management unit. If MGL do not intend to submit detailed plans to Council, please explain why.***

The Landscape and Ecology Rehabilitation Plan (LERMP) has been acknowledged in the Peer Review as providing “*an appropriate performance specification outlining the intent of rehabilitation, revegetation and when this is anticipated to occur for the site*”<sup>6</sup>. This is accompanied by a series of detailed appendices in Part B which set out detailed actions for each identified landscape management unit and their anticipated outcomes. Given the ongoing nature and scale of rehabilitation envisioned, this process requires a process of landscape management subject to ongoing review including Council certification. These necessary performance standards directed via the LERMP have been carried through into the recommended conditions of consent C34 - C45 including a process of annual monitoring and compliance through which anticipated outcomes are assured.

Given the progressive nature of mining activity and surrounding native regeneration, the process of landscape and ecology rehabilitation must address both proposed mine elements and surrounding regeneration zones. This will occur throughout the mine operation and facilitates an inherent adaptive management process as necessary to ensure a trajectory of enduring long-term beneficial outcomes will occur. Any proposed amendments to the LERMP are to be provided to Council for certification (Condition C20).

**Question 4.**

***Please provide the modified and additional plans described in Section 3.2.8 of Mr Parker’s memorandum.***

Copies of the updated plans detailing the site boundary and outline of proposed elements overlaid upon an existing aerial are attached. This covers the following:

- The site boundary is added to the Landscape Mitigation and Closure Plans;
- A separate plan of the Existing Landscape was prepared, with the outline of proposed elements superimposed on the existing landscape.

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<sup>6</sup> Nigel Parker (1 December 2025) Landscape Architectural Review, Section 3.2.7.