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BENDIGO-OPHIR GOLD MINE CONSERVATION COVENANT REVOCATION MEMO LANDSCAPE EFFECTS

Prepared For:

The Central Otago District Council

Brown NZ Ltd
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1. Introduction

This report has been prepared for the Central Otago District Council (CODC). It addresses Minute 46 of the FTAA Panel, which asks for further evidential input on landscape matters, particularly in relation to Questions 18 and 19 found within the Panel's RFI-11. These focus on the following matters:

- a) The effects of MGL's proposed mine on the Bendigo Conservation Covenant (BCC) and whether revocation of part of the covenant area would give rise to effects on landscape values of regional, national, or international importance; and
- b) The nature and significance of landscape effects that would arise from the Revised Alignment of the Ardgour Rise road corridor.

I have reviewed the joint statement of David Norton, Ian Boothroyd and Rhys Girvan (12th August 2026), which responds to Question 18 of RFI 11, as well as Rhys Girvan's August 2026 assessment addressing the landscape effects of the revised Ardgour Rise alignment in response to Question 19. Taking these documents into account, I address the matters raised in RFI 11 in turn in the following sections.

2. Question 18 - Effects of Regional, National or International Importance

At paragraphs 16-24 of the Joint Statement addressing Question 18, Mr Girvan makes a number of observations:

- Para. 16: That the Dunstan Mountains are agreed by all parties to the Landscape JWS of the 18th, 27th and 28th of May, and the 8th June, as being an ONL at the district level.
- Para 17: However, the Otago Regional Council's 1998 study – *Otago's Natural Character, Landscape and Significant Natural Areas* – failed to identify the Dunstan Mountains as one of the 12 'outstanding landscapes of regional significance' identified at that time. Even so, Mr Girvan does not regard this as being 'determinative', insofar as the study was just a desktop exercise and it predated the important Modified Pigeon Bay Decision guidance on identification of ONLs.
- Para. 18: On the other hand, he notes that Ms Gilbert does regard the Dunstan Range as being of regional significance, taking into account the Physical, Associative and Perceptual criteria set out in Appendix 11 of the Proposed Otago Regional Policy Statement (2021) "*and her experience of Outstanding Natural Features / Landscape assessments at district and regional scales*".

Para.s 19 & 21: In the same JWS, Mr Girvan agreed that the Bendigo area comprises, *“a heritage landscape of national and regional significance”*, and that it includes land which is, *“connected to parts of the land proposed to be revoked from the Bendigo Conservation Covenant”*. The area’s values are endorsed by the NZ Geopreservation Inventory, which identifies the Bendigo Goldfield as being *“nationally significant”*, as well as by the Heritage JWS also mentioned in that paragraph.

Para.s 20 & 22: In addition, he asserts that, *“the connected Bendigo gold-mining heritage landscape has a direct spatial and associative relationship with the land subject to revocation”*, and he goes on to state that he accepts, *“that the revocation area contains important heritage fabric and forms part of the connected Bendigo gold-mining heritage landscape, contributing to its continuity, legibility and understanding”*. Although Mr Girvan does not believe that the revocation area should be regarded as a ‘separate landscape of regional or national significance’, he acknowledges that it is, *“an important component of the wider Bendigo gold-mining heritage landscape, which is recognised as having regional and national significance”*.

Para. 24: Even so, Mr Girvan concludes that he does, *“not consider that the land subject to revocation to constitute a separate landscape of regional, national or international significance. Beyond this, I acknowledge that a contributory component could still be sufficiently important that its alteration would compromise values expressed across a wider landscape”*.

Accepting that the proposed BCC revocation is fundamental to the implementation and operation of the proposed gold mine, a number of directly related issues need to be carefully examined before determining if the proposed revocation would give rise to regionally, nationally or internationally significant landscape effects:

- a) Are the values of the Dunstan Mountains solely defined by its current statutory status, i.e. as an ONL at the district level?
- b) What other physical or perceptual factors should be taken into account in evaluating the scale of effects generated by the proposed BCC revocation?
- c) Would the proposed revocation’s effects ‘spill over’ into the adjoining Bendigo Heritage Reserve and thereby erode the values of a ‘regionally and nationally important heritage landscape’?

I consider these matters in turn before summarising my response to RFI 11’s Question 18.

Values of Regional, National or International Significance:

It is important to note that all of the landscape architects involved in expert conferencing, aside from Mr Girvan, agreed that the Dunstan Mountains should be regarded as regionally significant, notwithstanding

the Otago Regional Council and BML's 1998 study. Although concern about that study could be fairly levelled at its desktop nature and the way in which the assessment criteria employed in such studies have evolved since that time, I consider that other factors also need to be taken into account.

These include changes to the Clutha - Mata Aō valley landscape over the last 20-odd years: like other parts of the Central Otago - Queenstown area, it has rapidly evolved from a rural environment that was largely dominated by sheep and beef runs into a complex landscape of dairy intensification, vineyards, cherry orchards, and lifestyle properties that are linked to burgeoning centres like Cromwell and Wanaka. Much of this diversified development is now concentrated on the valley floors and terraces, whereas the older style runs persist on the more elevated ranges that enclose them. Consequently, the landscape between Cromwell and Tarras isn't just notable for the linear expanse of Lake Dunstan, it is also marked by the increasingly obvious interplay between two dominant types of landscape: the complex matrix of increasingly intensive agriculture already described which occupies most of the valley floor around both the lake and the Clutha - Mata Aō River, and the much more open sequence of old runs – amid a patchwork of coarse grasses, matagouri, rosehip, herbfIELDS and tussock that extend up to the scree fields of the Dunstan and Pisa Ranges.

Consequently, the open slopes of both ranges, which structure the valley landscape around Lake Dunstan and, to a large extent, define it, have – in my opinion – become increasingly important precisely because of the counterpoint that they offer to the much more modified, cultural (human-made) landscape of the valley corridor and floor. The relative absence of buildings, structures and obvious human activity is therefore a defining feature of both ranges straddling the Dunstan valley, but more particularly, the Dunstan Mountains, which is almost entirely devoid of such elements at present.

This situation also means that both ranges are increasingly exposed to an ever-expanding local population, while State Highways 8, 8A and 6 are becoming increasingly important conduits, both to and from Central Otago for the regional and national communities, and visitors – national and international. These road corridors cast a lens on the array of landscapes just described. Strategically, therefore, the road corridors down both sides of the Clutha - Mata Aō are highly important, connecting both Queenstown and Wanaka with Christchurch, and Wanaka with Dunedin (via Cromwell). Although it would be a stretch, in my opinion, to regard the area around Bendigo as a gateway to Central Otago (a title that is more befitting of the Lindis Pass), there is no doubt in my mind that the landscape south-west of Tarras is important in terms of setting the scene for arrival at, and departure from, the main body of Central Otago and many of its core attractions – for local and international visitors alike. The visual continuity and cohesion of the Dunstan Range embellish its perceived naturalness and thus create an important frame for the wider valley and its key transport links.

In addition, the network of reserves and conservation areas around the mine site (shown overleaf) – including the Bendigo Historic and Scenic Reserves, as well as the Bendigo, Ardour, and Neinei li Kura Conservation Areas – all in very close proximity to the application site, strengthen this focus on the Bendigo area. Inevitably, the area's heritage values and recreational appeal of the area also enhance its

perceived and associative values. As such, the Bendigo area is a public destination of some significance for multiple reasons.

In looking, therefore, at the values of the Dunstan Range now – as opposed to through the lens of a desktop study some 28 years ago – it is clear that the context for such impressions has dramatically changed, just as Queenstown, Wanaka and (to a lesser degree) Cromwell have also been transformed during much the same period. As a result, I would contend that the ONL's scenic values and appeal have been enhanced through the retention of the range's expansive and coherent, 'high run' character, and the very absence of the kind of modification and development that is now such a feature of the Clutha - Mata Aō's valley floor and its terrace margins. Although many of those travelling along State Highways 8, 8A and 6 are doubtless oblivious to the sort of transitions and juxtaposition that I have just described, I am equally certain that their perceptions of the wider valley landscape are strongly shaped by them. For many locals, the relative freedom of both the Dunstan and the Pisa Ranges from overt signs of development and modification also clearly contributes to the sense of place and identity associated with the valley landscape, as a place to both live and work in. Indeed, the concept of a *Bendigo terroir* is perhaps the ultimate expression of such feelings.

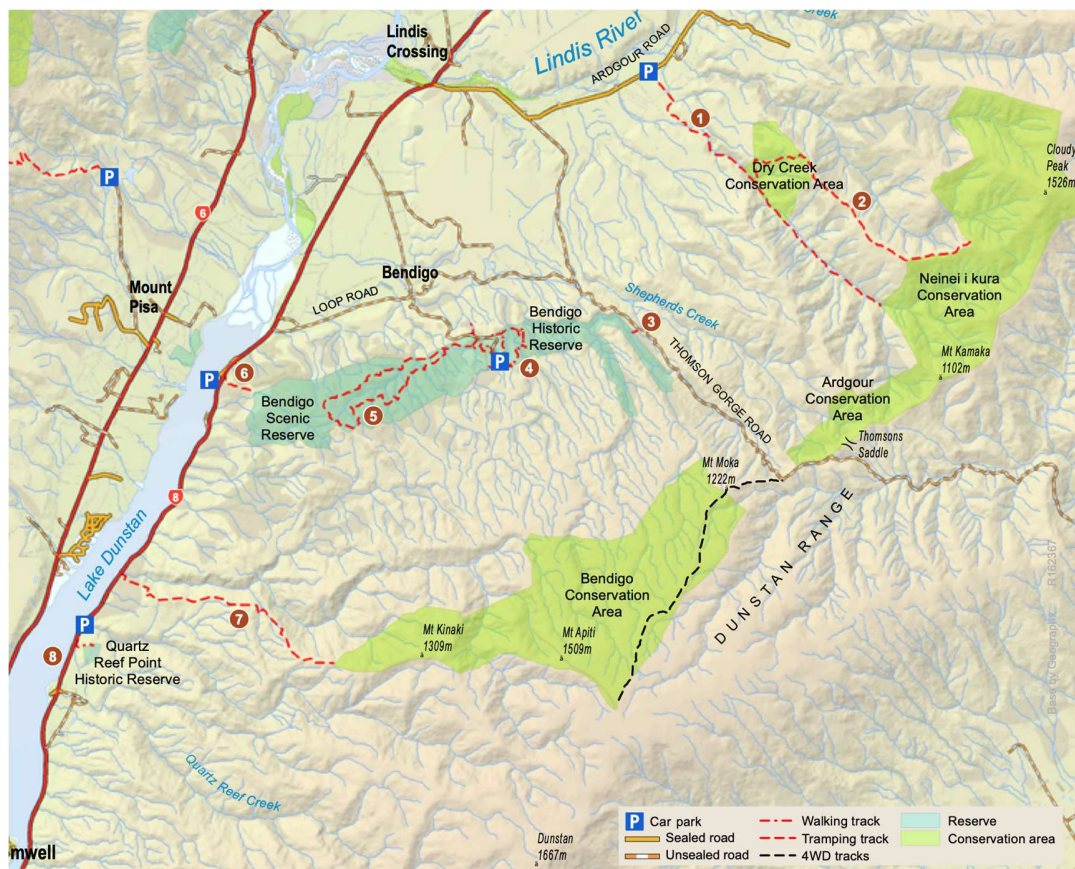
To sum up, I therefore consider that:

- a) The relatively unchanged nature of the Dunstan Range over the last 100 or so years is one of the ONL's greatest assets: it remains a rural, high country landscape that is still imbued with the feeling of being intact and of having a high degree of integrity;
- b) Its significance has been augmented by the extensive changes that have occurred within, and on the margins of, the Clutha - Mata Aō's valley floor – in a comparative sense;
- c) Exposure of the Dunstan Range and Bendigo catchment to State Highways 8, 6 and 8A both their sensitivity to change and landscape value, as the impressions obtained from these key roads help to create and embed perceptions of Central Otago's character and identity; and
- d) The Bendigo area is recognised for its combination of heritage and recreational values, which further contribute to the strategic importance of its location and its landscape value, overall.

At the same time, I also have to acknowledge that there is currently no system for recognising landscape values above the regional level. However, in looking at NZ as a whole, one might be tempted to say that just six or so regions clearly stand out in terms of their distinctive character and landscape values:

- The Bay of Islands
- The North Island's Volcanic Plateau and National Park
- The Mackenzie Basin
- Mt Cook – Aoraki
- The West Coast
- Central Otago

Of these key areas, Central Otago is arguably more diverse and more modified than most, even though much of the area's appeal, for locals and tourists alike, remains heavily reliant on its alpine (lakes, mountains and ski fields) signature. Yet, as indicated above, these qualities are rapidly eroding within many of the sub-region's glacial valleys and across its alluvial outwash areas and terraces. As a result, its ranges increasingly carry a disproportionate amount of the weight in relation to public perceptions of Central Otago's quintessential 'high run' / alpine landscapes. This does not mean that the Dunstan Mountains are more important than the likes of the Pisa and Raggedy Ranges, or other nearby mountain ranges, but it does mean that any significant changes to the Range could have an impact that echoes across more than just the Dunstan Mountains and Bendigo-Tarras area.



The heritage reserve, scenic reserve, and conservation areas in close proximity to the proposed mine site and BCC revocation area

Taking all of these factors into account (together with my experience in the course of undertaking 27 strategic landscape and natural character studies, stretching from the Far North District to the West Coast Region), it is my opinion that the Dunstan Range is regionally significant. I say this, not just because of its alignment with the Otago RPS's ONL criteria, but also because of its important interrelationship with the Clutha - Mata Aō valley floor and margins, the strategically important 'message' that the Range imparts to those using key highways to the tourist centres of Queenstown and Wanaka, and Bendigo's enduring significance as a destination for the regional community.

Other Landscape Factors That Need to be Considered:

In relation to the physical properties and characteristics of the Dunstan Mountains, I note that significant areas of disagreement remain between the ecological experts in relation to the values of the revocation area. I do not have the expertise to address such matters. However, I do need to make the point that, in relation to abiotic values and effects, the Rise and Shine Pit, WELF and even the smaller Come In Time Pit, would profoundly change the landform profile and characteristics of a central part of the Dunstan Mountains. In particular, the Rise And Shine Pit and WELF would create two (quite different) artificial landforms that are unable to revert to a natural state, and that will endure long after open-cast mining operations have ceased at Bendigo. The WELF would appear to bed more readily into the transitional mountain landforms near Battery Hill and the Ardgour Terrace, but the striated form of the Rise And Shine Pit faces and terraces would remain apparent, conceivably for many decades to come.

As is particularly (though not exclusively) demonstrated by BML's photo simulations for Viewpoints 1 (Thomson Gorge Road), 3 (Māori Point Road), 7 (Pukekowhai Drive), and 8 (SH6), this would also have a clearly discernible effect on the perceived landscape character and values of the Dunstan Mountains, although in saying this, it is important to note that it is very difficult to isolate the effects of the Rise And Shine Pit and WELF from other components of the proposed mine, including its ELF and topsoil stockpiles, and the Come In Time Pit, during the main period of open-cast mining and soon thereafter. Looking much further into the future, these areas of mining activity would become increasingly recessive, whereas the Rise And Shine Pit could well end up being the most obvious and enduring relic of the proposed mine.

Consequently, it is my opinion (as stated in my peer review report of March 2026) that the proposed mine would have a significant effect on the perceived value of the Dunstan Mountains ONL and a nearly significant level of effect on its biophysical values. In reaching these conclusions, I did not isolate the revocation area from the rest of the proposed mine site, but instead treated it as an integral part of the proposed mine. In my opinion, that is how it should continue to be regarded: it would contribute to effects that reach a moderate-high to high level for some receiving environments and across the site itself. Subject to further discussion with my fellow landscape architects in the Panel-directed conferencing sessions, I subsequently determined that the proposed mine's effects would be High, or 'significant', at the Dunstan Mountains ONL scale (Appendix B, Table 1 of the JWS, 8th June 2026). Again, I think it would be very difficult to separate the effects generated by the proposed operations within the revocation area from these findings, which reflect factors that include:

- a) The way in which both the BCC area and its proposed revocation area merge with the wider ONL and are integral components of it at present;
- b) The highly disruptive nature of the proposed mine, both within and next to the revocation area, and the obvious manner in which its landform modifications (especially) would disrupt the natural geomorphic structure and patterns of the Dunstan Mountains;

- c) The impact of the mine on the Dunstan Mountains' skyline and near-skyline slopes – including in the general vicinity of Mt Moka, Thomsons Saddle and Mt Kamaka, which are defining features of the central range and 'anchors' for the sequence of conservation areas already described; and
- d) The relatively wide range of receiving environments that would be exposed to the modification created by the proposed mine, both within and around the revocation area – for a period of time that would extend well beyond the cessation of open-cast operations.

Effects On The Goldfields Heritage Landscape:

As indicated above, Mr Girvan's August 2026 response to Question 18 acknowledges that the heritage landscape next to both the proposed mine site and revocation area is of national importance. It is also a significant attraction for local and some international visitors (of an indeterminate number). Even so, Mr Girvan appears to decide that as the revocation area does not constitute (para.24), *"a separate landscape of regional, national or international significance"*, and any effects on the BCC area would not reach the threshold of being regionally significant, let alone of national or international significance.

This implies that the goldfields heritage landscape would only be affected by activities and modification within the limits of DoC's historic reserve, which lies adjacent to, but outside the Bendigo-Ophir Mine site and revocation area. As a result, Mr Girvan appears to further suggest that the heritage landscape – which he recognises – would be isolated from the proposed mining activities within the neighbouring site, around and north of Thompson Gorge Road.

Moreover, in also stating that (para.20) that, *"a contributory component could still be sufficiently important that its alteration would compromise values expressed across a wider landscape"*, Mr Girvan appears to also suggest some uncertainty over the degree to which 'contributory components' might be affected by the proposal, and the extent to which such effects would alter the heritage landscape's values.

In relation to these matters, it is clear that the goldfields heritage landscape referred to by Mr Girvan is anchored by the Bendigo Quartz Reefs Historic Area, which correlates with the area of DoC's Bendigo Historic Reserve. Heritage NZ's online description of this area describes it as having *"historical significance as the preeminent quartz mining area in Otago, and as an area that tells the story of 1860s alluvial mining through to the Depression mining of the 1930s"* (<https://www.heritage.org.nz/list-details/9097/Bendigo-Quartz-Reefs-Historic-Area>).

Even so, in the Heritage JWS (28th May 2026), a much wider mosaic of heritage sites and areas is described as being present at Bendigo, including the BCC area, the Rise And Shine Workings, the Come In Time Workings, etc. At para.34 of the JWS, it is further stated that:

All experts agree that Rise and Shine Workings and Come In Time Workings are associated with the BCC area and Bendigo Quartz Reef Historic Area and therefore contribute to the values of those sites.

Four of the five participants in expert conferencing also agree at para.30 that both the Bendigo Quartz Reef Historic Area and the BCC area have ‘very high’ values, basing their evaluation of significance on a national scale (as opposed to on an international scale). Focusing more specifically on the heritage effects associated with revocation of part of the BCC, para. 61 of the Heritage JWS states all experts agree that the revocation is not consistent with the objective and conditions of the BCC, while para.62 goes on to state that they agree, *“the level of impact of the loss of heritage on the objective of the BCC is major”*.

I do not have the expertise to disagree with these excerpts and commentary in the Heritage JWS. Thus, from a landscape perspective it appears that the associative values attached to the goldfields heritage landscape are cast more widely than Mr Girvan infers. Moreover, most of the heritage experts involved in conferencing appear to agree that the BCC – presumably including the revocation area – retains heritage values of a ‘very high’ level at present. As such, these appear to match the values of the Bendigo Quartz Reefs Historic Area in terms of significance.

Although in addressing the effects of the revocation, the heritage experts appear to focus on effects that relate to the physical area of the BCC, it is equally clear from a landscape standpoint that they would be wider ranging. Thus even if one just focuses on the Bendigo Quartz Reefs Historic Area and DoC reserve, it is apparent that the presence of the proposed mine (including the revocation area) would be signalled by drilling, blasting, truck movements, rock crushing, etc – albeit to varying degrees. These activities, together with early morning and evening lighting, could be expected to cast a ‘spotlight’ on the presence of the proposed mine, and thus have an impact on public perception of the heritage reserve from a range of key sites and locations, including near Welshtown, Logantown, the Aurora Track, Blue Mines Road, and the partly restored CIT / Aurora Stamper Battery. Indeed, the Heritage JWS makes it clear that the issue of public access to the stamper battery – to replace the current accessway from Thompson Gorge Road – remains a matter of some contention.

Consequently, even though the Bendigo Historic Reserve defined by DoC clearly ends just east of Clearwater Creek (which the Rise and Shine Creek meets) and a ridge directly west of that waterway would limit visual engagement with both the proposed revocation area and wider mine site, the landscape setting and ‘frame’ for the goldfields heritage landscape actually extends well beyond the existing reserve boundary. Moreover, the activities, noises, and lighting associated with the industrial-scale operations within the revocation area would periodically, and at times quite frequently, disrupt the sort of tranquil, contemplative atmosphere that is normally associated with most historic reserves.

As a result, the proposed mine would have a direct impact on parts of the nationally important heritage landscape within the BCC that is addressed in the Heritage JWS. In addition, the proposed mine’s effects would inevitably ‘spill over’ into the historic reserve of the Bendigo Quartz Reefs Historic Area, eroding at least some of that area’s own, ‘nationally important’ heritage values.

Indeed, even though the proposed open-cast mining operations would have a quite limited lifespan, this does not obviate the impact that they would have on the heritage landscape features within the BCC, or

the impact that they would have on perception of the wider heritage landscape during that operational period and thereafter, especially for the many visitors to Bendigo's goldfields area.

Question 18 Conclusions:

As indicated above, the BCC area is an integral part of the Dunstan Mountains ONL, which in addition to having their own intrinsic value, contribute to public appreciation of the wider Central Otago landscape and the sub-region's goldfields heritage landscape. These landscapes also have significant conservation and recreational value, as is reflected in the virtual ring-fencing of both the revocation area and wider mine site by conservation areas focused on a series of local peaks: Mt Apiti, Mt Moka, Thomsons Saddle and Mt Kamaka. These make a strategically important contribution to the values of the wider Dunstan Mountains and, in turn, Central Otago as a whole, for the reasons already described.

At the same time, it is my opinion that the proposed mining activities within the revocation area would contribute, in a meaningful and inseparable fashion, to the proposed gold mine's effects. In this regard, it is impossible to separate the Rise and Shine Pit, the Come In Time Pit, the WELF, or even surrounding vehicle tracks and areas of general mine activity from the remainder of the open-cast activities and artificial / modified landforms currently proposed by MGL.

In addition:

- Some of the proposed modifications within the revocation area would have a long-term to permanent impact on the landforms and topography of the Dunstan Mountains, especially so within the Rise And Shine Pit site and nearby;
- Some of these changes would affect the skyline and near-skyline areas of the Dunstan Mountains ONL;
- In addition to affecting the Dunstan Mountains, the proposed mining would have an impact on the perceived character and values of the Bendigo area and the wider Clutha - Mata Aō valley;
- The proposed mine and activities within its revocation area would also affect the adjoining goldfields heritage landscape, which is agreed by all landscape architects involved in the FTAA process as being nationally important;
- Those same activities would be exposed to, and impact, a series of conservation areas that ring the mine site and have appreciable recreational value;
- The mine would be exposed to multiple viewpoints on three key highways – SH8, SH8A, and SH6 – that act as key conduits to and from Queenstown and Wanaka for the local community, NZ visitors and tourists; and

- The natural state and coherence of Central Otago's mountain ranges (including of the Dunstan Mountains) can only become more important over time as the area's river-glacial valleys become increasingly developed and modified: indeed, this counterpoint will become increasingly critical if Central Otago is to remain a national and internationally renowned destination.

These findings lead me to also conclude that the proposed revocation area would give rise to landscape effects that are of regional significance, although in relation to the Bendigo goldfields landscape and the associative dimension of landscape more specifically, they are likely to be of national significance.

Focusing just on the strategic importance of both SH8 and SH6 running either side of the Clutha - Mata Aō valley past Bendigo, I recognise that some might see the Range's contribution to the feeling of arrival in Central Otago as being nationally important. However, my assessment in this regard is tempered by the extent to which the BCC area and its revocation area are largely screened from SH8 – by the intervening Bend, Bendigo and Ardgour Terraces in particular.

3. Question 19 - Ardgour Rise's Effects

I have reviewed the additional assessment of the revised Ardgour Rise alignment, and its effects, undertaken by Rhys Girvan of BML and dated the 17th August 2026.

In addition to the points made by Mr Girvan, which I largely agree with, it is my assessment that the linear profile of the proposed road would be visually subordinated by the much larger landform transformations within the adjoining gold mine site. In effect, the proposed open-cast pits, ELF, WELF, and soil stockpiles would dominate views towards the site and the Dunstan Mountains around it. As a result, the realigned road corridor would become a relatively small-scale, conceivably quite subordinate, component of the highly modified landscape in and around the proposed mine. This would help to counterbalance the more extensive 'cut and spill' effects of the revised Ardgour Rise alignment.

Notwithstanding this, I agree with Mr Girvan's slight elevation of the road's effects to a moderate level. I consider that this recognises the increased effects of the revised road corridor *per se*, especially in relation to some of its more elevated, near-ridgeline alignment, but also the reality that those effects would remain quite secondary to those generated by activities and landform modification within the adjoining mine site.

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