BEFORE THE EXPERT PANEL APPOINTED UNDER THE FAST-TRACK APPROVALS ACT 2024

APPLICATION	**BENDIGO-OPHIR GOLD PROJECT FTAA 2507-1089**
APPLICANT	**MATAKANUI GOLD LIMITED**

BRIEF OF EVIDENCE OF NATALIE HAMPSON IN SUPPORT OF THE COMMENTS OF CENTRAL OTAGO DISTRICT COUNCIL

(ECONOMICS)

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savvy CONSULTING

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Introduction

1. My name is Natalie Dianne Hampson, I am an economic consultant, residing at Wanaka in the Queenstown Lakes District.

2. I have been engaged by the Central Otago District Council - a statutory participant who has been invited to comment on the proposal under s 53(2)(a) of the Fast-Track Approvals Act 2024 (**FTAA**):

Qualifications and Experience

3. I hold a Master of Science degree in Geography from the University of Auckland (first class honours). I was employed at McDermott Fairgray Limited in 2000, which subsequently reformed as Market Economics Limited in 2001. I worked there as an economic consultant through to October 2023, becoming a director in 2019. After leaving Market Economics I formed Savvy Consulting in November 2023. I am an associate member of the New Zealand Planning Institute and a member (and regional committee member) of the Resource Management Law Association.

4. I have worked in the field of economics for 25 years for commercial and public sector clients, with a particular (although not exclusive) focus on economic assessment within the framework of the Resource Management Act 1991 (**RMA**). Since 2001 I have specialised in studies relating to land use analysis, assessment of demand and markets, the form and function of urban economies and growth, policy analysis, and evaluation of economic outcomes and effects, including costs and benefits. This work has been nationwide.

5. I have considerable experience carrying out economic assessments within Queenstown Lakes District (**QLD**) over the last 20 plus years and have been a resident in the district for 11 years. My project work includes economic reports, peer reviews and expert evidence in relation to resource consents, plan changes and variations, district plan reviews, structure planning, covenant amendments, and housing and

business demand and capacity assessments required under the National Policy Statement on Urban Development.

6. I have also provided economic evidence in relation to applications in the QLD for approval under the Fast Track Covid-19 Recovery Act[1] and the FTAA (with the latter work being ongoing).[2] My work in the district has been for a range of private sector clients as well as for the Queenstown Lakes District Council.

7. My project experience in Central Otago District (**COD**) has been more limited. This includes economic evidence supporting submissions on the housing plan change (Cromwell), an application for residential zoning in Alexandra, an application for industrial zoning in Clyde (ongoing), supermarket consent application (Alexandra) and research to advise a company looking for industrial land investment. Some of my work for QLDC has required me to include economic analysis of COD alongside QLD.

8. Overall, I have a sound knowledge of the QLD and COD economy, economic growth pressures and development patterns. My work experience in the rest of New Zealand has a similar scope and depth as the work described above. I am very familiar with the purpose and decision framework of the FTAA (having been involved with 8 FTAA applications to date (excluding this one) and being a member of the expert panel for the Taranaki VTM application).

9. My expertise and experience specifically related to the proposed mining/quarrying application includes:

   (a) I am currently providing economic evidence in support of Graymont (NZ) Limited's Fast Track application to establish a new south-west pit at the Oparure Limestone Quarry in Waitomo District.

[1] The Silverlight Studios application.
[2] I have recently acted for invited commenters on the Ayrburn Screen Hub FTAA application and am currently acting for the applicants of the Mount Iron Junction Housing Scheme FTAA application.

(b) I provided peer review evidence of Greenbriar NZ's submission in relation to the proposed Gore District Plan and provisions that managed activities at their lignite coal mine in Waimumu.

(c) As noted above, I was on the Expert Panel that determined the Taranaki VTM Fast Track application to mine vanadium rich iron sand from the seabed off the coast from Taranaki.

Code of Conduct

10. Although this is not an Environment Court hearing I have read and agree to comply with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2023. This evidence is within my area of expertise, except where I state that I am relying on material produced by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Scope of Evidence

11. I have been asked by CODC to provide a peer review of the application's assessment of economic effects of the project (i.e. benefits and costs). Specifically, my evidence is framed around the following key questions:

(a) Are the applicant's quantified gross economic impacts of the project robustly estimated and described, including any limitations of modelling approaches and assumptions?

(b) Are the economic benefits of the project (quantified and qualified) appropriately identified by the applicant?

(c) Are there any material economic costs of the application and have these been adequately addressed in the application?

(d) How does the project align with existing Council strategies (that are economic in nature)?

12. In preparing this evidence, I have read and/or rely on the following application documents:

(a) Substantive application report – 31 October 2025 (Mitchell Daysh);

(b) Economic impacts of the Bendigo-Ophir Gold Project – October 2025 Update (Benje Patterson – People & Places); and

(c) Bendigo-Ophir Gold Project Updated Pre-Feasibility Study, 1 July 2025, Santana Minerals Limited.

13. CODC has also asked that I take into consideration the following Council documents as part of my review:

(a) Central Otago Economic Development Strategy 2025-2035

(b) Development of a District Vision & Wellbeing Framework for Central Otago – The Voice of the Communities of Central Otago, June 2024, Angus & Associates.

(c) Central Otago Persona Refresh, October 2021, Angus & Associates.

(d) Visitor Insights Programme – Market Perceptions: Central Otago, YE December 2024, Angus & Associates.

(e) A Destination Management Plan for Central Otago, August 2022

(f) Tarras Community Plan 2023, Presented by the Tarras Community.

Executive Summary

14. Key findings from my review of the application's Economic Impact Report and wider substantive application report are as follows.

15. I agree with the approach that has been taken to quantify direct operational GDP impacts. However, I have a several concerns with the robustness and reliability of quantified capital investment direct GDP, and indirect GDP and employment impacts. A lot of this stems from insufficient detail on input data (including financial data and the source of multipliers) used in the economic modelling. While the assumptions for quantifying induced employment are agreed with, the accuracy of

that employment figure is influenced by previous modelling steps and is therefore difficult to validate. Overall, I consider that direct economic impacts of the project are likely to be overstated and indirect impacts are likely to be materially understated. Allowing for some movement around and between these quantified impacts, and treating them as indicative, is therefore necessary.

16. Layered onto that, it is important to acknowledge that direct operational GDP (which is still likely to the largest component of the project's gross GDP impact) will be sensitive to gold prices over time. A sensitivity analysis around gold prices has not been provided.

17. Further, and appropriately identified in the Economic Impact Report, not all of the gross direct GDP impact assigned to the Otago Region will be felt in Otago Region. Wages and salaries of MGL employees is the most certain direct economic impact for the region. Added to this will be government contributions that are ultimately spent back in Otago, and any dividends paid to Otago region shareholders. While the project will sustain a significant amount of labour directly and indirectly over the life of the mine, the actual number of MGL employees is uncertain and more information is needed on what 'direct employment' constitutes in the context of the Economic Impact Report.

18. As with all input-output based multiplier analysis, there are limitations that need to be taken into account when interpreting modelled results (particularly supply constraints, potential for displacement effects and the likelihood of new versus sustained employment). While these are discussed in the Economic Impact Report, those same caveats and cautions are not carried over to the substantive application report. It is important to consider modelled indirect and induced impacts for new activities as an upper limit, but likely to be lower. Another key gap identified in my review is the absence of reporting cumulative economic impacts over the mine life in net present value terms.

19. Based on the information available in the PFS and Economic Impact Report and making allowances for some movement in economic impact results to account for the issues and concerns I have identified,

I conclude that the gross economic benefits of the project are likely to be significant for Inland Otago and the wider Otago Region. This is based on a combination of the indicative scale of direct and flow on economic activity that could be expected and anticipated employment outcomes. The project is a very large industrial activity that will employ a large and highly paid local workforce and that will spend a large amount of money in the regional economy (and beyond), in addition to other potential funding in the local area. It is not dissimilar to New Zealand's other large scale gold mines in that respect.

20. Economic costs or disbenefits of the project are only considered by the applicant to be loss of primary production on the mining site. I agree this will be a minimal loss of GDP and employment.

21. Housing market impacts are acknowledged but discounted. Taking account of the nature of large scale housing projects now coming on-line across Inland Otago, and because the operational workforce can be expected to be dispersed across a number of urban areas, I consider that adverse impact on the housing market from the operations of the mine will likely be minor and short-term. While initial construction workforce pressure may be more significant, I consider the proposed workers accommodation will reduce that impact to an acceptable level.

22. While there could be other economic costs or risks stemming from the project's environmental impacts that have not been identified or assessed by the applicant, there is not sufficient information before me to identify additional economic costs with any certainty at this point of time. This includes potential economic costs on the tourism sector of Central Otago District. In the interim, I have considered the processes through which the project could adversely affect tourist visitor counts, length of stay, tourism spending and tourism businesses, and based on my knowledge of the district (and its tourism offering), I currently consider that economic impacts on the tourism sector are likely to be only minor when assessed at the ward or district level.

23. Overall, notwithstanding a range of limitations in the economic effects assessment of the application, there are aspects that I agree with. I consider that the project is likely to deliver significant net regional economic benefits and therefore meets the purpose of the Act. Currently, there is not sufficient evidence to indicate that other adverse economic impacts of the project (i.e. those that are not monetised or quantified in employment terms) will be anything other than minor. Further information about the project's effects through the s 53 process may allow me to more robustly examine potential economic costs.

Are the applicant's quantified gross economic impacts of the project robustly estimated and described, including any limitations of modelling approaches and assumptions?

Data Sources

24. The Economic Impact Report relies on several data sources. The most significant reliance is on the Updated Pre-feasibility study (**PFS**) dated 1 July 2025. Other input data is sourced from Statistics NZ, and Infometrics. Some benchmarking of economic data from Macraes gold mine operated by Oceana Gold is also used. I discuss the use of Macraes data further below.

25. The PFS updated an earlier PFS published in November 2024 and the changes between the reports were wide-ranging. This included an increase in the size of the indicated resource, changes to the proposed processing plant (which in turn increases gold recovery), changes to the open pit mining operations (including duration, number of stages and average mining cost/tonne), changes to the underground mining operations (including a change in timing, duration and cost), an increase in the gold price per ounce, and inclusion of tax credits in the financial model.

26. These changes are expected to reflect continued research and knowledge of the site by MGL/Santana Minerals, more time to consider the proposed mining activities in increasing levels of detail, and changes in variable costs which are a snapshot at the time of reporting. The key take-away from the PFS update is that reported figures

represent the best estimate of what is planned for the site and how operations may play out, but should be considered indicative, still reliant on a range of assumptions and potentially still subject to change. Any further changes are likely to impact the results of the quantified economic impacts (if they too were updated).

27. The PFS contains estimates for total project capital investment and operational costs and assumptions around some aspects of direct staffing/resourcing requirements (i.e. the process plant labour, general and administration labour and owner's construction team labour). It does not provide estimates of employee counts for the physical mining activity. The PFS also contains the financial cash-flow model that projects revenue (export earnings) and profit from which royalties and tax contributions are calculated. This model shows the timing of pre-operational capital investment, and operational costs. The latter includes capital investment during the operational mine period (i.e. operational period capital investment is not specifically broken down by year but this information must have been made available for the Economic Impact Report based on the analysis in Table 2 of that report).

28. PFS's are required (by the ASX and NZX) to meet a range of reporting standards. This includes setting out the sources of cost estimates and assumptions around exchange rates and revenue factors applied in financial models. It is important to acknowledge that the cash-flow model assumes the same fixed gold price (and exchange rate) for the 13.8 year operational mine life, when in reality, there will be variation in these factors over time that cannot be easily predicted.

29. The projected revenue and therefore tax and royalty calculations set out in the PFS will be especially sensitive to the average gold price achieved each year (and relatively less, but still sensitive to variations in the exchange rate assumed). This needs to be taken into account when considering how such contributions to the Crown (which could be higher or lower and vary significantly each year) should be relied on in the Economic Impact Assessment and the wider application when describing project benefits. Neither report acknowledges potential for

economic impacts to change if input assumptions differ from those assumed in the PFS.

30. The operational costs and capital investment projections in the PFS (i.e. project costs) are not related to gold prices and will be less sensitive to price changes/market factors. On that basis, they are relatively more reliable over time (notwithstanding that they are indicative).

Economic Impact Approach

31. The Economic Impact Report indicates that it adopts a multiplier approach to estimate GDP and employment impacts attributable to project operation and capital investment (separately and combined) over time. I use the word "indicates" because the Report uses a mix of multipliers and derived ratios and it is unclear if all of the typical multipliers generated by a conventional input-output **(I-O**) table were available/used.

32. The key terms used in economic impact assessment are 'direct', 'indirect' and 'induced'. This provides a way of categorising expenditure and calculating the resulting impacts in GDP (or value added) and employment terms. Total economic impacts are typically the sum of direct, indirect and induced impacts.

33. The Economic Impact Report does not explicitly state the I-O table that it relies on for sector level multipliers (including the base year, region and whether the I-O table is for a single region, or is multi-regional and therefore captures transactions between regions). The author refers to Infometrics as the source of the multipliers and "value added ratios" and it appears that the multipliers are a mix or Otago Region and national multipliers. This aspect of the Report is vague and further information on the modelling framework is warranted as without this information, not all aspects of the impact modelling can be validated.[3]

[3] For example, I-O tables are rarely current and best practice requires that expenditure inputs are deflated before multipliers are applied. Similarly economic impacts should then be expressed in the dollars of the I-O year. I-O tables can have a different number of sectors. Understanding what sectors are available helps understand how accurate the multipliers might be for the proposed activity.

34. There are a number of well-known limitations to I-O based multiplier modelling, and I consider that the Economic Impact Report has identified most of these limitations at a high level, but not all (discussed further below). Where the limitations are identified by the author, an appropriate level of caution has been applied to the results. In general, those cautions/caveats set out in the Economic Impact Report are not always carried over to the substantive application report, which gives a false sense of the certainty of economic impacts for readers who do not also read the Economic Impact Report.

GDP Economic Impacts, Including Government Revenue Contributions

35. The Economic Impact Report places greatest emphasis on the project's **direct economic impacts**. This is considered appropriate, although indirect and induced impacts are expected, and have been quantified (although not the induced GDP impact, which is missing).

36. Direct operational GDP shown in Table 2 of the Economic Impact Report is not calculated using a direct GDP multiplier[4] but rather is calculated directly from the PFS cash-flow model for each year using EBITDA (essentially gross operating surplus after deducting expenses), operational wages and salaries paid directly by MGL and royalties which are treated as a tax. This accounts for the operational impact of the project directly on GDP and is a recognised direct GDP calculation method.[5] I agree with the approach and results of direct operational GDP based on the inputs and assumptions applied in the Economic Impact Report but reiterate that they subject to gold price fluctuations.

37. Ensuring a consistent approach to what is direct and indirect expenditure is important when carrying out economic impact assessment. The Economic Impact Report takes the approach of

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Typically, expenditure of a project will be matched to specific sectors for which multipliers are available and this 'matching' should be identified for validation. None of these aspects can be validated based on the information contained in the Economic Impact Report.

[4] I.e., one based on gross output.

[5] It is also likely to be more accurate than using a direct value added multiplier.

adding to the direct operational GDP impact the GDP impact of capital investment costs (shown as a separate column in Table 2).

38. Footnote 4 of the Economic Impact Report states that capital investment costs of $533 million across the mine's life (including the pre-production establishment stage) is split into wages and salaries directly paid by MGL for capitalised spending and residual capital expenditure for which a heavy and civil engineering construction sector value added ratio was applied to work out the value added (GDP) component of that residual capital spending. The split of that $533 million is important and is not reported. As a result the annual calculations underpinning the 'GDP from capital investment' column in Table 2 cannot be replicated or validated.

39. I have concerns around this addition to direct GDP. In keeping with the approach taken to direct operational GDP,[6] I consider that only the wages/salaries directly paid by MGL for capital investment should be included in the direct GDP impact.

40. The residual of capital expenditure is, from my reading of the approach, expected to represent payments to contractors and purchases of goods and services and page 10 of the Report supports this by describing "businesses being directly contracted to develop mining infrastructure and processing capacity for MGL". The GDP component of that expenditure with external businesses and contractors belongs in the indirect GDP impact and not the direct impact in my view.[7]

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[6] Which isolates the components that make up GDP that can be assigned directly to the business entity and excludes their expenses.

[7] There are two common approaches to economic impact modelling in my experience. One is from the viewpoint that looks at a business as part of the economy. In this approach, profit, wages and salaries and taxes paid are the direct contribution to GDP and all purchases with other businesses indirectly contribute GDP (through the portion of those businesses' profit, wages and salaries and taxes paid that is attributable to the spending by the business being studied). The other approach is from the viewpoint of the businesses (or project) being studied and looking up their supply chain. In this approach, the spending with other businesses is treated as the direct economic impact, and the purchases made by those businesses to meet that lift in demand is treated as the indirect economic impact. The second approach is therefore one step removed. The first approach works well when you have the necessary financial information to understand the performance of the business being studied (including total revenue). The second example works best when you are interested in the economic activity stimulated by a project but

41. Even if the non-MGL labour capital expenditure was assigned to indirect GDP impacts (and all was assumed to be spent within New Zealand and not include any imported products or services – which the PFS does not clarify and so is uncertain), I consider that assigning all of that expenditure to the heavy and civil engineering construction sector in Otago Region to be an over-simplification of the nature and location of that procurement spending as some is likely to cover mining contractors, some is likely to cover local civil and construction services/businesses and some is likely to cover specialist plant and equipment (which may not be sourced from Otago, and may include some imported goods). As such, non-MGL labour or residual capital investment is likely to be spread over several sectors of the economy, not just the one sector adopted in the Economic Impact Report. The consequence of this assumption is uncertain but I consider that the direct GDP from capital investment is over-stated (with this also contributing to the overstatement of the total direct GDP).

42. The Economic Impact Report then turns to the direct contributions that the project will make to **government revenue**. This comprises royalties paid to the crown, corporate taxes, PAYE and ACC payments. Appropriately, the Report identifies that these contributions to government revenue are – given the approach taken to direct operational GDP calculations[8] - captured as part of direct operational GDP impacts and are not additional.

43. Table 3 of the Report provides a breakdown of government revenue directly generated by the project. Only the cumulative total over 16 years is shown (NZ$1,820 million) and not the annual government contributions.[9] Based on the values in Table 3, I consider that Figure 3 in the Economic Impact Report contains an error/typo as the 'corporate taxes and royalties' component is stated as $1.8 billion even though

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there is not necessarily a business created at the end of that spending (for example, the economic impacts of zoning and developing residential land). **The key is not to blend the approaches** – something that I think the Economic Impact Report has done by bringing in all of capital investment costs as direct GDP.

[8] See previous footnote.

[9] Annual corporate tax and total royalties paid to the crown and others is annualised in AU$ in the PFS cash-flow model.

PAYE/ACC is separately identified. That top green box should read $1.6 billion based on Table 3 figures.

44. Figure 4 highlights that 32% of total direct GDP of $5.8 billion over 16 years, accrues to the government as revenue. Footnote 5 describes the approach of assigning direct GDP impacts shown in Table 2 of the Economic Impact Report to the location of the activity – being Inland Otago (also Otago Region). Notwithstanding that I consider that the that direct GDP of capital investment is overstated (and should be spread over direct and indirect GDP), I agree that it is best practice to assign direct GDP of a business entity to the location of that business.

45. As cautioned by the Economic Impact Report though, that 32% of direct GDP accruing to central government is essentially sheeted home to Wellington and then used by government and distributed according to government expenditure patterns. So, only a portion may ultimately enhance economic wellbeing in Inland Otago or Otago Region despite being 'assigned' to Inland Otago/Otago Region in accordance with economic reporting conventions.

46. **Indirect economic impacts** will arise from both the operation of the project and the proposed capital investment whereby MGL pays contractors and purchases goods and services from other businesses – locally or elsewhere in New Zealand. The substantive application report suggests that some procurement and labour may be from overseas[10] – a point that is not acknowledged or accounted for in the Economic Impact Report.[11]

47. Most businesses have a range of fairly standard operational expenses where they outsource legal, accounting, insurance, finance, power/gas, waste management, and telecommunications costs for example. In addition, businesses will have operational and capital costs specific to their industry.

[10] See for example page 208 of the Substantive Application.
[11] I.e., all references to PFS expenditure in the Economics Impact Report are treated as New Zealand spend even though the PFS is silent on the source of suppliers and specialist labour.

48. The PFS contains some detail on the scope of operational and capital investment costs,[12] but not to the extent that all of those costs can be assigned to an economic sector, or location of supplier. However, I would have expected that MGL could have provided the author of the Economic Impact Report with an indicative breakdown of (non-MGL labour) expenditure that, when combined with MGL labour costs, summed to the totals set out in the PFS and then potentially spread those costs over time. Such information does not appear to have been provided to Mr Patterson.

49. The next best option would have been for the author of the Economic Impact Report to calculate the operational and capital investment costs (excluding direct labour costs of MGL) and make some assumptions on how this is spread across economic sectors. The author took this approach for residual capital investment expenditure which they assigned wholly to the heavy and civil engineering and construction sector in Otago for example (albeit that they used that in direct GDP). The same could presumably have been done by subtracting operational wages and salaries from total operational costs. At a minimum, national I-O tables[13] also provide an average distribution of mining sector expenditure across economic sectors (inputs to production) which could have been applied to provide an indicative sector breakdown of indirect expenditure. This approach was also not used.

50. Instead, the Economic Impact Report uses data from the Macraes Mine in Otago Region to help estimate indirect economic impacts of the project. Publicly available data from Oceana Gold shows that for every $1 spent with “local suppliers”, $2.33 was spent on procurement in the rest of New Zealand and $0.83 was spent on imports. The relativity between local and rest of New Zealand suppliers was 30:70.

51. I note that these ratios/relativities were based on 2023 financial year data and very different ratios/relativities between these two measures

[12] This includes for example, the number and type of mine vehicles that will be required. Some other plant/equipment is also specified.
[13] I.e., use tables in national accounts.

applied in the 2024 financial year in that same data source as illustrated in Table 1 below. For example, the same ratio was 16:84 in 2024, and there was $5.24 spent in the rest of New Zealand for every $1 spend with local suppliers.

Table 1 – Distribution of Macraes Mine Supplier Spending 2023 and 2024 Financial Years (Source: Oceana Gold)

Macraes Gold Mine - Amount Spend with:	2023 Financial Year			2024 Financial Year		
	Total Supplier Spend Distribution	Local-National Share Only	National spend for every $1 of local spend	Total Supplier Spend Distribution	Local-National Share Only	National spend for every $1 of local spend
Local suppliers	24%	30%		13%	16%	
National suppliers	56%	70%	$ 2.33	68%	84%	$ 5.24
International suppliers	20%			19%		
Total	100%			100%		

Source: OceanGold. Virtua

52. Having considered the approach set out in Footnote 16 of the Economic Impact Report, I do not consider that indirect GDP calculations can be relied on. My reasoning is as follows:

(a) The status quo Infometrics indirect value add ratio to direct value added of 11.3% for Otago Region seems low, particularly when comparing the relativities in the national I-O table (2020) for the mining sector.

(b) The author compares an average of annual operational and capital expenditure for the project of $142 million with $230 million in total spend with suppliers at the Macraes mine in 2023 to scale down that 11.3% to just 7%. First, the Macraes data is stated as being in US$ and so the comparison is not like for like, which affects the scalar. Second, there is no explanation what 'local suppliers' means in the Macraes data. It is assumed to exclude wages and salaries of Oceana Gold staff and include contractors and procured goods and services that are local.[14] The Economic Impact Report compares that figure with an expenditure figure that appear to include MGL labour for the project. Third, it is not clear why the project would have a lower

[14] Based on expert evidence for the Waihi North Fast Track Application.

propensity to outsource goods and services to regional businesses just because it supposedly will have lower annual expenses than the Macraes mine. If anything, it would be more robust to assume that the project would have the same propensity for outsourcing (indirect expenditure) as the regional average for the mining sector as this likely reflects where relevant supplier businesses are based. As such, the scaling of the Otago ratio is not sufficiently justified.

(c) Applying an unusually small 7.0% indirect to value add ratio for Otago procurement to total direct GDP of (on average) $360 million) gives the $25.2 million in indirect valued added felt in Otago Region (as shown in Table 6 of the Report). I note there is no information on how much of this might accrue to Inland Otago businesses.[15] This regional indirect value added seems out of proportion with the likely procurement expenditure (operational and capital investment) on average each year once direct labour costs are excluded from projected costs in the PFS.

(d) To calculate the indirect value added impacts in the rest of New Zealand, the Economic Impact Report simply applies the $2.33 ratio from 2023 in the Macraes data (the ratio of spend with national suppliers relative to local suppliers) to that $25.2 million figure (Table 6). This ratio is highly unstable, as it was $5.24 in 2024 for Macraes and would therefore return a much higher rest of New Zealand indirect value added (and total New Zealand value added) result.

53. All of the above suggest little confidence can be had in the reliability of the indirect GDP results in the Economic Impact Report.

54. A standard I-O multiplier model framework would be able to inform you of what sectors indirectly benefit from increased demand from the project. The approach applied in the Economic Impact Report provides no such insight. While the PFS does not clearly distinguish how

[15] Mr Patterson has previously confirmed that his modelling (and/or data) does not allow for this level of detail.

operational and capital infrastructure costs are split between internal or outsourced costs, based on what information has been provided in the Economic Impact Report, the indirect GDP impacts seem underestimated, while the direct GDP impacts seem overstated.

55. This does not simply balance out (such that the sum of direct and indirect impact remains the same). This is because, caution is needed in assuming that that level of indirect economic activity can be achieved without capacity or labour constraints. The Economic Impact Report appropriately identifies this limitation with indirect GDP impacts being a "theoretical maximum" as increasing mining sector GDP by 55% across the Otago Region and by 1,565% in Inland Otago (based on Report figures) will place a lot of pressure (along with opportunity) on businesses supplying goods and services and I agree it will take further investment and time for some of those businesses (inclusive of potential labour increases – discussed below with regard to indirect employment impacts) to be achieved.

56. Even if calculated robustly, indirect GDP impacts will typically be less than modelled. If those businesses cannot increase their capacity to meet the additional demand placed on them by the project in the timeframes required, this reduces the indirect multiplier and will either drive up costs for MGL or reduce planned production or operational timing – both of which are likely to reduce direct GDP impacts. The Economic Impact Report appropriately acknowledges this risk/modelling limitation.

Employment Impacts

57. The Economic Impact Report sets out direct employment estimates by year for the project in Table 4. Employment is broken down by operational and capital investment related labour.

58. **Direct employment** is described as full time equivalents (**FTEs**). Direct operational employment is stated as being estimated from "manning data" underpinning the PFS and averages 331 FTES between years 1-14 of the mine. No further detail is provided to help understand what assumptions inform that direct employment. Direct

capital investment employment is derived using a GDP/FTE ratio for the Otago heavy and civil engineering and construction sector applied to total estimated capital investment direct GDP in Table 2. It averages 61 FTEs over the full 16 years of the mine but is as high as 458 FTEs in year -1.[16] As explained above, I consider that the non-MGL labour portion of direct capital investment GDP belongs in indirect GDP (and therefore indirect employment) and is unlikely to all fall neatly within that one economic sector.

59. Notwithstanding that, while the operational manning data relied on by the Economic Impact Report may not be published in the PFS, the PFS did contain direct MGL employment estimates for 'general and administration' of the mine, and the running of the 'processing plant'.[17] This indicated 97-106 jobs (assumed to be FTEs) directly employed by MGL (depending on whether 'owner's construction team' of 9 FTEs is included in operational employment or is attributed to capital investment employment).

60. Based on the direct employment quantified in Table 4 of the Economic Impact Report, this infers that the balance of operational labour (FTEs) required in each year could range from another 216-254 per annum on top of specified staff numbers,[18] or the balance of total operational and capital investment FTEs in each year could range from another 207-400 FTEs[19] on top of specified staff numbers. Those additional but unspecified staff counts will be in roles involved in the physical act of mining on site (i.e. shift workers using the heavy machinery), the development of capital works or the supply of goods or services to MGL. The actual mix of roles is unknown.

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[16] It is noted that the substantive application report contains a range of direct employment figures. These appear to be linked to earlier versions of the Economic Impact Assessment and have not been consistently updated. I have assumed that the employment figures in the October Economic Impact Assessment are the ones intended to be relied on. Again, the substantive application confuses, in my view, direct employment modelled in the Economic Impact Report with MGL direct staff counts, when this is not the case.

[17] See PFS Tables 19 and 20.

[18] Comparing 97 operational FTEs specified and the minimum and maximum of operational employment in years 1-14.

[19] Comparing 106 operational and capital FTEs specified and the minimum of operational employment and the maximum of total employment in years -2 to 14.

61. While the Economic Impact Report describes this as "direct employment" it does not go so far as to state that the employment is all MGL staff which is an important distinction. As stated above, the PFS did not separately identify operational and capital costs between internal labour and external procured goods and services or contractors (at least in terms of what information was published). Actual future employment by MGL therefore remains uncertain and is at least the 106 FTEs specified, and potentially much more, but is unlikely to be the full amount of modelled direct employment reported in Table 4 of the Economic Impact Report which averages 351 FTEs over the full mine life, but peaks at 506 FTEs.

62. It is possible, for example, that the direct employment from capital investment is in fact just the 9 staff in the MGL construction team specified in the PFS, with all other quantified capital investment employment just the labour estimated to be associated with contractors and outsourced goods and services. This is an area where additional information is needed.

63. Overall, I consider that the modelled "direct" employment figures shown in Table 4 of the Report will include a portion of contracted or procured services which I consider forms part of indirect employment and not direct employment which should be limited to MGL employees.

64. This uncertainty makes it difficult to understand what jobs may be new and what jobs may be existing in the economy or at least linked to existing businesses that may be local or non-local and that may or may not need to be 'on-site'. This in turn creates uncertainty for understanding housing pressure and the effectiveness of the proposed workers camp to mitigate housing pressure for the pre-production construction stage. This is discussed further below.

65. The biggest year of implied capital investment labour is year -1 with 458 FTEs estimated. As above, I consider this likely to be made up of direct MGL staff and sub-contracted (indirect) labour. Notwithstanding that split, more accurately dividing capital expenditure costs by the full range of productivities actually involved (such as mining, heavy and

civil engineering, metal product manufacturing, construction services and others), may bring this modelled annual labour count down.[20]

66. I agree with the Economic Impact Report that spreading capital costs over more time, would reduce the annual FTE count that has been modelled, however, any delays will have flow on effects for operations and will impact the cash-flow model and such alternative timing has not been assessed or reported to potential investors. Delays may or may not be acceptable to MGL and its investors and therefore cannot be relied on as a mitigating factor.

67. Accurately distinguishing direct and indirect employment is important as direct employment of a new activity represents net additional job opportunities in a district/region,[21] while calculated indirect employment impacts are heavily influenced by the limitations of I-O multiplier modelling. The Economic Report does not fully address this limitation. Employment multipliers (and productivity ratios) are a static relationship between output (turnover) of a sector and employment in that sector in a particular year. If output goes up (due to the new demand created by the project) it is automatically assumed that labour will correspondingly increase to meet that demand.

68. In reality, businesses supplying goods and services to the mine will respond to that demand in different ways (between sectors and within sectors). In short, increased output does not necessarily mean increased employment and only a portion of indirect (and induced) employment is likely to represent new job opportunities, hence it is a "theoretical maximum". However, even if indirect employment demand does not support new jobs, it may still lead to improved productivity or efficiency in those businesses (particularly if they did not have underutilised staff at the time) so there are still some economic benefits.

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[20] Or, depending on the actual sector mix, may increase the indicative labour count.
[21] Providing new job opportunities may still mean that workers leave an existing job to take up a job with MGL. However, assuming the exited job can still be filled, this is a net increase in jobs and workers.

69. The quantified **indirect employment** in the Economic Impact Report again relies on "insights from Infometrics", but the source and nature of that underlying data is not clear (i.e. it is not clear that it comes from an I-O table for Otago, specific to the mining sector). A ratio of indirect employment relative to direct employment is used (35.7%) and is again scaled down (to 22.0%) using the relative size of the project's spending against the Macraes mine spending, and the local:rest of New Zealand Macraes supplier ratio for 2023.

70. My concerns regarding the direct GDP impact likely including some indirect GDP impact and my concerns regarding the indirect GDP impact approach set above also apply here. Overall, I do not consider that the indirect employment impacts in the Economic Impact Report are robust or reliable. I think direct employment impacts are overstated and indirect employment impacts are understated due to both categorisation and computational errors.

71. **Induced employment** of the project reverts to what appears to be a national level multiplier, expressed as a ratio of induced employment to total direct and indirect employment of 33.9%. No scaling of this ratio is applied in this instance. This ratio, while not stated as being specific to the mining sector, is close to the equivalent ratio for the mining sector in the 2020 national I-O table and is therefore accepted as reliable. Although, I note that by applying this ratio to the sum of direct and indirect employment, any errors in those two figures would compound an error in induced employment. Induced employment is also a theoretical maximum and net additional induced employment is likely to be much less than modelled.

<u>Economic context</u>

72. The Economic Impact Report includes sections where the economic impacts of the project are shown in the wider economic context. The approach to these discussions is clear and useful for understanding the scale and significance of the project's modelled economic impacts (which I do not fully agree with) in economic terms.

73. Contextual assessment is mostly based on direct economic impacts (GDP and employment). While I have some concerns with what is captured in direct impacts, these impacts are more robust than modelled indirect impacts for reasons explained above. Even allowing for direct economic impacts to change somewhat from those reported, I consider that relative to the size of the Inland Otago and Otago Region economies, the direct economic impact of the project will be significant in absolute and percentage terms in an average operational year. I discuss this conclusion further below.

74. The Economic Impact Report acknowledges the potential challenges of significant recruitment for the mine in a relatively short space of time. I accept Mr Patterson's view that Inland Otago has demonstrated strong employment growth in recent years and that this bodes well for the project to attract the necessary staff/labour. I understand that pre-registration of interest in jobs at the mine has been positive. I consider it likely that the project may attract many workers away from other existing (but potentially lower paid) jobs in Inland Otago as well as attract new households to the area.

75. Irrespective of any transfers in the job market, the net increase in jobs will be the same, and the Economic Impact Report appropriately recognises that finding housing to match employment growth is a relevant issue and potential constraint for economic growth in Inland Otago (although I'd add that this is more so for lower paid jobs).[22] That is, even if an existing resident changes jobs to take up a role with MGL, the person theoretically replacing the job they exited will (if new to the district) have to secure a dwelling – so any pressure on housing is either direct, or transferred but has the same or similar outcome.

76. The Economic Impact Report indicatively estimates that to meet the additional housing demand generated for an <u>average</u> year of operation of the mine that a net increase of 218 – 351 dwellings above current

[22] In QLD, there is not a shortfall of higher value homes for new owners, only a shortfall of lower value and affordable dwellings to purchase or rent. I estimate that Cromwell exhibits similar patterns to Wanaka and Queenstown. Where new residents have secured high value jobs, it is likely that there will be a greater supply of dwellings available in the market.

build rates would be required to have a neutral impact on housing demand in Inland Otago. The lower figure assumes house sharing by some mine workers (i.e. flatting together) or conversely couples both getting a job at the mine. The higher figure assumes one mine worker per dwelling.

77. This approach adopts the "direct" employment figures as modelled and therefore treats all those FTEs as net additional jobs, all requiring housing. As discussed previously, I do not consider that the direct employment figures are robust, particularly if capital investment expenditure includes substantial procurement of goods and services (with some of those existing businesses (and their staff) already established in Inland Otago and some based elsewhere but placing no demand on Inland Otago housing).[23]

78. The most accurate basis for determining additional pressure on the housing market would be confirmation of likely actual direct employee counts of MGL/Santana Minerals that will be based in Inland Otago (and that are not already here), followed by estimates of (indirect) outsourced construction/infrastructure labour that will need to be brought to Inland Otago for the duration of their role. These numbers are currently uncertain.

79. For clarity, while I think that the count of workers associated with the project that will ultimately put pressure on housing supply in Inland Otago may be less than assumed in the Economic Impact Report, the project will still sustain a significant increase in new jobs (in a short time frame), and so pressure on housing demand is still a relevant effect.

80. Over the operational period, the project will cause a one-off shift in housing demand – that is, the effect is not ongoing. Assuming that the net additional housing supply required to meet the project's permanent staff accommodation needs can be delivered – and this could be

[23] The "manning" estimates for direct operational employment also cannot be validated from information available. It is possible that direct operational employment estimates also include the labour associated with procured goods and services and not just MGL employees.

spread over two years say - once delivered, the project would no-longer materially exacerbate housing demand issues in the area.

81. Having considered that the majority of the longer term operational workforce is expected to be spread across the various urban areas of Inland Otago, and in light of a number of recent proposals for large scale, medium density housing projects across Inland Otago that will enable more housing to be supplied faster than in the past, I consider that the housing demand impact during the operational period will be diffuse and any adverse minor economic impacts on the housing market will be short-lived.

82. However, the temporary pressure for housing may be more acute (indicatively in year -1) due to the pre-production construction workforce not already based in Inland Otago. This is material as there is less time for the market to respond to that near future demand. As stated earlier, it is possible that this figure is artificially high and could be lower and include more existing workers based in the two districts than net additional temporary workers implied by the modelling. Even so, the pressure for housing in that year (and carrying into year 1) could still be significant.

83. While the Economic Impact Assessment refers to Inland Otago's ability to accommodate influxes of seasonal (short term) workers, the risk is that the project places net additional demand on top of that already stretched seasonal housing supply. The demographics of those early mine construction workers may also differ from ski or horticultural workers, which may influence their willingness to accept living arrangements commonly associated with those other sectors.

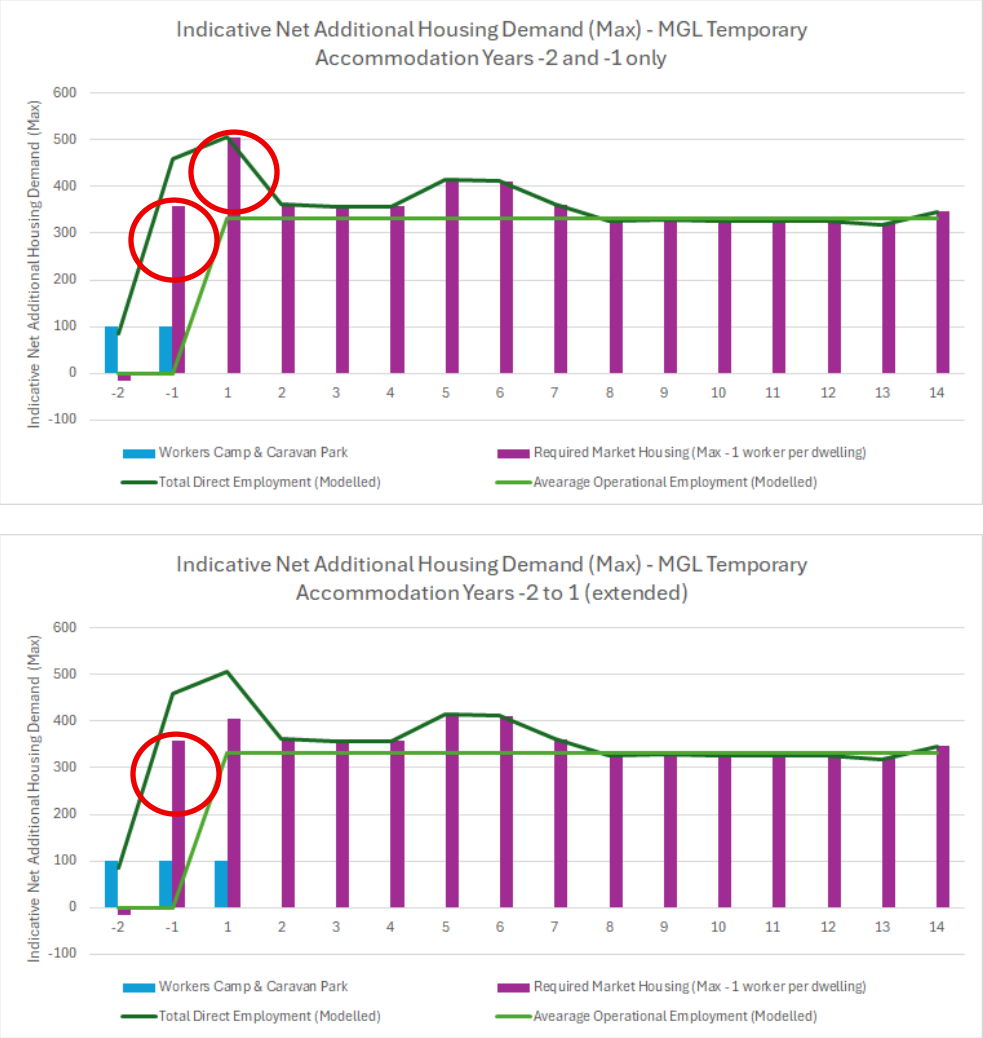
84. The Economic Impact Report makes no mention of the capacity of the temporary construction workers camp (and potential caravan park) proposed to help mitigate construction activity impacts on housing demand in Inland Otago. This is stated as having accommodation capacity for up to 80 workers and indicatively 20 additional workers if the caravan park is included – i.e. total capacity for 100 workers.

85. I consider this an important component of the project to manage acute pressure on the housing market in the initial years of construction and consider that the caravan park makes a material contribution to capacity and should be provided. The application states that the workers accommodation would only be required for up to 2 years and does not specify if that is years -2 and -1, or -1 and 1 (for example).

86. Figure 1 below compares the offsetting effect that the workers accommodation (inclusive of caravan park) could have on smoothing out acute market housing demand in the near future (if approved). In the absence of potentially more accurate employment figures actually linked to housing need, Figure 1 is based on the direct employment figures as reported. The top graph shows that workers accommodation could indicatively meet all demand in year -2 and materially assists in year -1, but there is still likely to be pressure on market housing in that year over and above the market's ability to lift the rate of construction in anticipation of operational housing demand – i.e. if half of the net lift is able to be delivered in year -1. The acute pressure continues into year 1 even if the market has achieved the full lift in net additional operational housing demand.[24] This is on the assumption that the workers accommodation is only retained for the two years suggested in the application.

[24] Note, the construction market is unlikely to respond to temporary housing demand as this could oversupply the market. Rather, it is more likely to respond to the projected operational housing demand.

Figure 1 – Indicative Market Housing Demand by Year Showing Offset Effect of Proposed Mine Worker Accommodation for 2 and Alternative 3 Year Duration



87. The second graph shows the mitigating effect of extending the workers accommodation for a third year (to year 1). This does not eliminate the potential pressure in year -1 but does reduce the potential residual demand pressure in year 1 to an extent that would (at face value) seem less impactful. On this basis, I would recommend that the workers accommodation (with caravan park) have the option of being made available for a third year (subject to actual demand and with that accommodation beginning in year -2).

88. Overall, I think that with an additional year of workers accommodation provided, this would ensure that acute housing demand pressure is largely mitigated, and that operational housing demand is likely to be

absorbed/met by the market in the short term across Inland Otago with only a minor adverse impact on the housing market in any one location.

Economic Impact Report Conclusions

89. The report summarises the direct, indirect and induced economic impacts and wider economic analysis results (namely productivity increase and above average wages and salaries for mine workers), describing GDP impacts as "large scale" and cumulative government revenue contributions over the life of the mine as "large".

90. Appropriately, the Report reinforces that the quantified economic impacts are contingent on upstream suppliers (many of which will be sought within Inland Otago)[25] being able to meet the demand stimulated by the project. Further, that increasing supply chain capacity (if not simply shifting effort away from other business as usual demand) could take time (i.e. potentially more time than allowed for in the PFS projections of production). If there are constraints in the market's ability to meet project demand for goods and services these may force more project demand offshore (i.e., imports or offshore labour) and if that were to occur, then the direct and flow on economic impacts will be somewhat less than quantified.

Overall comments on Economic Impact Assessment

91. I consider that the Economic Impact Report provides a relatively balanced perspective of the economic impacts that have been quantified and applies appropriate caveats around risks and consequences.

92. Throughout the Report, I consider that it remains unclear whether there is a pre-existing I-O multiplier framework being used (which is the expectation for an economic impact (multiplier) assessment). The report includes analysis of direct and indirect GDP and direct, indirect and induced employment but at times, seems to piece this together from a range of different datasets, not always coherently (particularly for indirect impacts).

[25] As alluded to in footnote 17 of the Economic Impact Report.

93. It is not always clear how input data on operational and capital investment has been used and what this constitutes. Rather than isolate procured goods and services costs from MGL's labour costs and using the procured component to inform indirect GDP and employment impacts, the approach to modelling indirect impacts appears largely independent of MGL expenditure data or inputs that were likely available from MGL. Overall, I consider that the relativities between direct and indirect impacts are not intuitive, with indirect impacts being under-stated.

94. It is not however possible to validate all aspects of the quantified impact modelling without comparable access to underlying data and more transparency of the Infometrics "insights" relied on.

95. I consider that there are a number of gaps in the Economic Impact Report as follows:

    (a) As the PFS is not provided as an application document (as far as I am aware), it is incumbent on the Economic Impact Report to appropriately convey any assumptions or limitations of the PFS when relying on it for inputs. The inclusion of a 10% contingency on project costs in the cash-flow model would be one caveat to state.

    (b) Further, the financial data in the PFS is taken as given but it represents only a single scenario of costs and revenue by year.[26] No sensitivity testing or analysis of gold prices/revenue and therefore implications for direct operational GDP and government contributions year on year and cumulatively have been explored. While changes in gold prices (and exchange rates) could be higher or lower in any given year, exploring the bottom plausible range is relevant given that the FTAA has a significance requirement to meet the purpose of the Act. Some analysis of gold price trends would have been expected to help

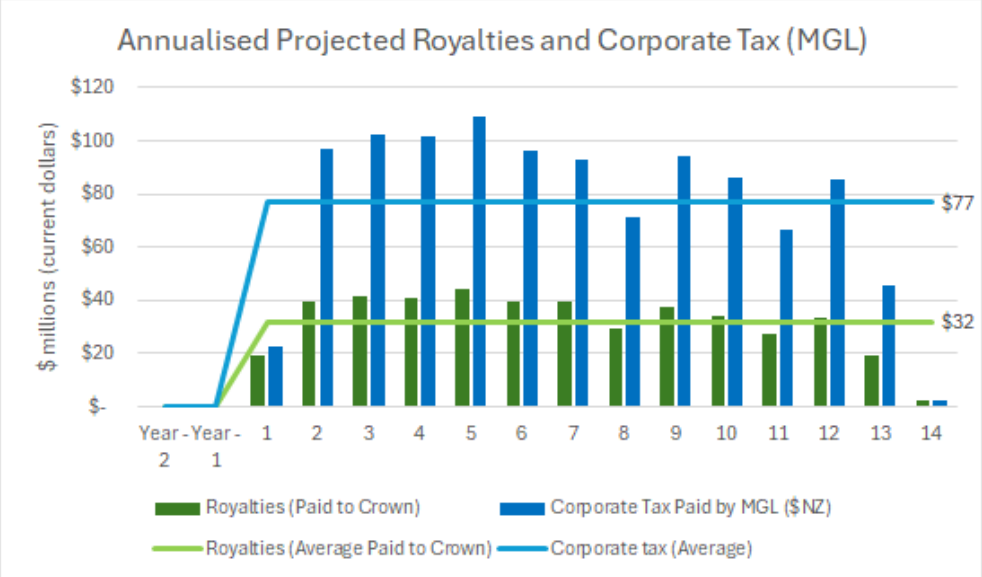
[26] The PFS did include a Base Case scenario based on lower average gold prices, but this has not been considered for economic modelling.

validate the PFS assumptions and the likelihood of modelled economic impacts being delivered.

(c) Government contributions are only reported as a total over the mine life. See for example Table 3 in the Economic Impact Report. Without examining the underlying PFS, annual contributions are not visible or described in the Economic Impact Report. I have graphed the following from the PFS – just two of the four components of government contribution quantified in total.[27] Figure 2 below shows, for example, that royalties paid by MGL range from $2 to $44 million per annum depending on the operational year. The average royalty paid by MGL to the crown is $32 million per annum. Corporate tax projected in the PFS (after applying tax credits) ranges from $2 to $109 million per annum depending on operational year. The average corporate tax paid by MGL to the crown is $77 million per annum. Combined, these two contributions range from $5 to $153 million per annum, averaging $109 million per annum over the operational period. This is relevant context to understand the economic significance of the project and would have been a useful addition to the Economic Impact Report.

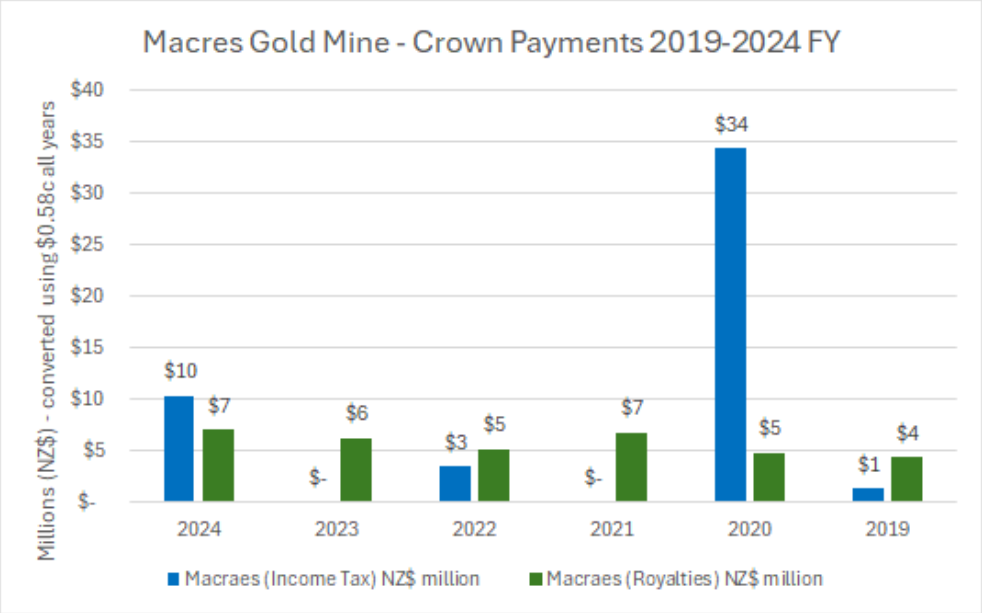
[27] I.e. I have not annualised corporate tax paid by third parties or PAYE/ACC contributions.

Figure 2 – Annual Government Contributions Projected by MGL (Corporate Tax and Royalties Paid to the Crown by MGL)



(d) As discussed above, royalty and tax contributions are sensitive to assumptions around gold price (and can also be influenced by unexpected operational and capital costs). It is useful to note, given the references to Macraes Mine which is said to have a similar output of recovered gold (albeit at a higher cost per tonne and therefore lower relative profit), the variability that can occur in corporate tax and royalty payments over time. Figure 3 below shows that Oceana Gold has paid royalties in the last six years that ranged between $4 and $7 million per annum and have paid corporate tax that ranged between $0 and $34 million per annum. These are significantly lower than in the PFS cash-flow model. While the finances of Macraes and the project are not necessarily directly comparable, it reinforces that the PFS/Economic Impact Report projections of government contributions are subject to a range of assumptions that must all hold true to be accurate. I consider that a cautious approach to the project's government contribution values is warranted.

Figure 3 – Example Crown Payments from Macraes Mine



(e) The contextual assessment in the Economic Impact Report focusses on annual average GDP and employment impacts which I consider is the most robust comparison in this instance. However, the Report includes cumulative impacts/contributions over the life of the mine and these are also relied on in the substantive application report. Best practice would have been to discount cumulative impacts to net present value (**NPV**) (with the Treasury's 8% discount rate for public commercial projects commonly adopted in recent FTAA applications).

(f) To show the impact of discounting to present values, Table 2 below shows the quoted cumulative totals for Direct GDP, royalties paid by MGL to the crown, and corporate tax paid by MGL. Alongside those is my calculation of the NPV of those same projected economic impacts. Total project direct GDP changes from $5.8 billion to $3.1 billion in present value terms. This includes (but is not limited to) the NPV of crown royalties ($237 million) and corporate tax ($562 million) for the life of the project.

Table 2 – Examples of NPV of Cumulative Project Economic Impacts Contained in the Economic Impact Report

	Report Source	Cumulative Total Mine Life ($ million)	NPV ($ million) 2026 Base Year, Year -2 is 2027, 8% Discount Rate
Direct GDP	Table 2	$ 5,755	$ 3,054
Royalties (Paid to Crown)	Table 3	$ 448	$ 237
Corporate Tax Paid by MGL ($NZ)	Table 3	$ 1,074	$ 562

Source: Economic Impact Report (Benje Patterson), Savvy Consulting

(g) I discuss the difference between economic impacts measured in the Economic Impact Report and economic benefits further below, but in terms of the (gross) economic impacts that have been reported, the Economic Impact Report does not explicitly draw conclusions on their "significance" – which would be expected for an FTAA application. It describes those economic impacts as large.

96. Despite the uncertainty around a number of aspects of the modelling that has been provided, based on the information that is disclosed, my experience and testing of alternative multipliers, and while applying appropriate caution around those reported numbers, **I do consider that the gross economic impacts of the project would be significant in the Inland Otago and Otago Region economic context**. That is, the increase in the size of the economy attributable to the establishment and operation of the mine, when measured annually and for the duration of the project, is highly likely to be significant.

97. Wherever actual direct employment lands, MGL is expected to be a significant employer of highly productive and high paid jobs, and these net additional job opportunities can be expected to help with a marginal lift in average household incomes in Inland Otago. Other gold mines operating in New Zealand show this to be the case. The project will also stimulate strong demand for local businesses – increasing their output and potentially sustaining *some* further indirect and induced employment growth.

98. Excluding government revenue contributions (which have been included in the regional GDP impacts based on the Economic Impact Report approach and therefore are not additive), I consider that direct, indirect and induced impacts across total New Zealand (including Otago Region) – while positive – are not, on their own, of significance at a national economic level.[28]

Are the regional and national economic benefits of the Project (quantified and qualified) appropriately identified by the applicant?

99. This section of my evidence considers the way in which economic benefits of the project have been described. It is not limited to the Economic Impact Report. This is because the substantive application report – while referring to the Economic Impact Report findings - also describes some additional economic effects of the project.

100. The substantive application repeats all the key quantified economic impacts and contextual metrics from the Economic Impact Report's key findings. However, it does not include the limitations and cautions around some of those figures contained in the Economic Impact Report and for that reason, I consider that the summary of economic benefits in the substantive application report needs to be read with care. The gaps in the Economic Impact Report (such as the lack of NPV figures etc discussed above) are also gaps in the summary of economic benefits in the substantive application report.

101. Some additional points from the substantive application report's description of project benefits are discussed below:

    (a) **Impacts vs Benefits**. While the subheadings in section 6.2.1 correctly use the term 'impacts' the substantive application report generally describes the results of the Economic Impact Report as economic 'benefits'. Economic benefits are typically associated with outcomes that improve economic wellbeing (at a community rather than individual level). GDP and employment

[28] I therefore disagree with the conclusions in the substantive application report that the project will have significant national economic benefits.

impacts quantified from multiplier analysis are not necessarily enhancements to economic wellbeing. Aspects of the quantified impacts that are more likely to result in wellbeing improvements include high paid jobs (as this contributes to higher standards of living), reductions in unemployment (if applicable – unemployment is low in Inland Otago), improved viability of local businesses, profits paid to New Zealand shareholders is a form of income (again, contributing to improved standard of living), and a large share (although not necessarily all) of government spending can be said to contribute to economic (and social) wellbeing. Where economic impacts may not contribute to economic wellbeing is when that spending (and the revenue derived from that spending) is simply to mitigate or offset externalities of the project (this may include the ecological funding, and the cost of the workers camp, the development of Ardgour Rise, other intersection upgrades, and site restoration/closure costs for example) that would not be necessary if the project did not go ahead. The portion of profits that go offshore also do not benefit New Zealanders. My advice is to treat modelled (gross) GDP impacts (which include the government contributions component) as largely (but not totally) gross economic benefits. While in pure economic terms, employment is treated as a cost on people's time (better spent doing other things), pragmatically, I consider that net additional job opportunities can be considered an economic benefit for communities.

(b) **Double counting economic impacts/benefits**: The substantive application report lists a number of outcomes of the project as if they are additive benefits when in reality they are just describing the same economic impacts from different perspectives. It is important to remember that based on the modelling approach applied, government contributions are a subset of the direct operational GDP impacts of the project. Further, foreign investment is the enabler of pre-production capital investment which is captured in capital investment GDP and employment

impacts. Mine revenue is the enabler of operational period GDP (including government contributions) and employment impacts and cannot be treated separately from those impacts. Statements like; the project will "Deliver significant contributions to the regional economy" is largely a duplication of "Generate a significant contribution to the GDP of Inland Otago".[29]

(c) **Significance**: It is noted that while the Economic Impact Report uses terms like "large" to describe economic impacts, the substantive application report describes those same economic impacts ("benefits") as significant, particularly with reference to GDP impacts. Elsewhere government contributions are stated as "substantial".[30] As discussed above, and notwithstanding some uncertainty around the quantified economic impacts, I agree that the gross economic impacts of the project can be described as significant for Inland Otago and the Otago Region. I further agree that when accounting for the portion of those impacts that are likely to translate into economic benefits (on economic wellbeing), the potential economic benefits of the project are also likely to be significant at the regional level.

(d) An 'outcome' of the project is stated as making an important contribution to the **government's goal to double the value of New Zealand's mineral exports** by 2035.[31] While true, I agree that this should be couched as an outcome and not a benefit per se. I consider that the benefit lies in the economic activity that generates those increased export earnings and that supports economic wellbeing for New Zealanders. These are the economic impacts that the Economic Impact Report is focussed on.

(e) The substantive application report includes a section on Existing Economic Benefits.[32] It also describes funding and sponsorship

[29] Substantive application report, page 278.
[30] Substantive application report, page 168
[31] Substantive application, page 14.
[32] Substantive application report, section 6.2.1.5.

that Santana Minerals Limited/MGL has delivered to the Central Otago community to date. Without minimising the economic benefits that this activity and funding have already generated, these are **sunk costs**.[33] They are not benefits attributable to the approval of the project. *Should* such economic support for the community continue if approval is granted (and the application indicates that MGL is "committed" to doing so), then that spending could be considered a future economic benefit of the project (and is additional to economic impacts quantified in the Economic Impact Report).

(f) Last, the substantive application identifies that the project will be a "**catalyst for infrastructure growth** regionally".[34] I understand this to refer to the bringing forward of planned electricity network infrastructure which may in turn unlock other network investment projects. To the extent that this contributes to a more resilient distribution network in the short-medium term (and greater capacity to support growth) that would not otherwise have occurred in that time period, I agree that this is an economic benefit, albeit a minor one relative to direct economic impacts.

102. Overall, I consider that the scope of economics impacts and/or benefits of the project have been appropriately identified. My review of how some of those economic impacts have been *quantified* still applies. Further, economic impacts/benefits need to be carefully interpreted (as the substantive application report has not sought to carry over the necessary cautions/caveats that are implicit in modelled economic results and also makes broad statements that economic impacts are the same as economic benefits when this is not always the case.

103. I consider that there are no key economic benefits missing from the application documents although the way in which the project diversifies the Inland Otago economy has not been emphasised and I think this warrants inclusion. The Inland Otago economy as a whole (although

[33] And have helped towards Santana Mineral's social licence to operate.
[34] Substantive application, page 130 and 281.

weighted towards the QLD economy) is highly dependent (and therefore vulnerable) to international and domestic tourism as an economic driver. In COD, tourism is an important sector, but one of several important economic sectors. While there is a small amount of mining activity contributing (to a very minor extent) to GDP in Inland Otago, the project will establish an industrial scale mining sector in the area. Having a new industry will improve the resilience of the Inland Otago economy when considered as a whole (particularly from global events that may impact tourism). Within just COD, the addition of the mining would further diversity and an already diversified economy (i.e. a more marginal diversification benefit applies when excluding QLD). However, this economic benefit of the project will only last for as long as the project is operational.

Are there any material economic costs of the application and have these been adequately addressed in the Application?

104. The Economic Impact Report addresses one economic cost, which is the opportunity cost of continuing to utilise the mine area for land-based primary production (sheep grazing). I agree with the calculations of annual GDP for the maximum 550 hectare disturbance area set out on page 8 of the Report. While the cumulative total of foregone farming GDP over the life of the mine is also stated at less than $0.5 million, it would also be best practice to show this in NPV terms (which would be lower again).

105. I agree that this identified economic cost is minimal and has a negligible offsetting effect on gross GDP impacts modelled in the Economic Impact Report, such that net economic impacts (and wider economic benefits) would still be significant. It is relevant that land based primary production may be able to return to the site once the mine site is remediated. That is, while the opportunity benefit of the project is not permanent, nor is the opportunity cost of displaced sheep farming.

106. I have provided a review of potential housing market related costs above and do not repeat that here. In summary, I think that the acute housing demand during the initial construction period can be largely mitigated (and may warrant retention of the workers camp for a third

year subject to continued demand) and I agree with Mr Patterson that the potential for the market to respond to additional housing demand (over and above otherwise expected growth) is likely, such that any economic costs of operations on the housing market may be dispersed across Inland Otago, minor and short-term. These minor costs cannot be reliably quantified or expressed in a comparable metric that would allow them to be deducted from monetised economic benefits of the project and therefore can be considered as a minor adverse impact for s 85 evaluation.

107. Tourism impacts are the only other economic cost considered potentially relevant to the project that is identified briefly in the substantive application in response to community engagement. This was not addressed in the Economic Impact Report. The substantive application report provides a very brief response to raised tourism industry impacts in section 5.8.7. I address tourism industry effects further below in the context of Council's economic and tourism strategies.

108. At this stage in the application process and based on my peer review of the application to date (and noting that substantial evidence is still to come from commenters which MGL will also respond to), I provisionally assess the economic costs and disbenefits of the project as likely to be minor. Where these are quantified and comparable (i.e. opportunity costs of sheep farming GDP), they cause only a minimal reduction to gross economic monetised benefits. Other potential minor but unquantified adverse economic impacts are not considered sufficiently significant to be out of proportion with the project's significant regional economic benefits.[35]

[35] I note that while unanticipated outcomes (including disasters such as tailings dam failure or aquifer contamination) would have economic costs, the probability of those outcomes occurring (over and above conditions of consent that will help manage risk) remain uncertain and so have not been considered for this evidence.

How does the project align with existing Council strategies (that are economic in nature)?

109. I have been supplied with several COD Council documents for consideration in this review of economic effects of the project. To clarify, these are not application related documents. They focus on community aspirations and economic development at a district level and the district's tourism market positioning. Another document is the Community Plan developed for Tarras in 2023. This section of my evidence provides a brief evaluation of the project relative to each document supplied, within the limits of my area of expertise. My evaluation does not extend beyond the scope of the documents with the exception of further consideration of potential tourism economic costs.

110. Importantly, this section is not a peer review of how the application has assessed effects (costs or benefits) on tourism in COD or effects on Tarras – as the application has not carried out any such assessment that can be reviewed. Nor is it the purpose of my evidence to supplement the application by providing a bottom-up assessment of tourism sector or Tarras effects for CODC. As stated, my focus below is simply an evaluation of the project against those existing reports.

<u>Central Otago Economic Development Strategy 2025-2035</u>

111. The focus of this strategy is on economic development as an enabler of economic and social wellbeing across the district, including improving the standard of living, while ensuring that economic development is not at the expense of environmental protection, social connection and cultural preservation. The Strategy identifies economic challenges and strengths of the district, highlights some recent economic changes and considers actions to support sustainable economic growth that are within Council's control, influence or community interest. Success of the strategy is anticipated to be measured by achieving industries that are resilient and innovative, communities that are thriving, infrastructure that is future-ready and relationships and regional collaborations that are strengthened. The

overarching strategic target is to increase the average COD wage income to reach the national average by 2035.

112. The following sets out how I consider that the project improves or moves towards the objectives and outcomes of the Economic Development Strategy:

(a) It will attract and retain skilled workers and their families to COD. It may assist in retaining young talent in the district.

(b) It will sustain a large number of new jobs for existing or new residents with higher than average incomes and will assist with raising the standard of living and affordability of those living in the district (i.e. an increased ability to pay). It will assist in lifting overall district workforce productivity and contributes to the target of increasing average wage incomes towards the national average.

(c) Additional workers (and their families) that choose to live in the district will increase demand for retail and service businesses (i.e., supporting commercial centres through induced economic impacts).

(d) The operational workforce of the mine is full-time permanent/annual positions which (for workers that are resident in the district) adds to the permanent workforce of the district, as opposed to seasonal labour.

(e) Mining is an industry that is not materially impacted by climate change (in the same way as horticulture or viticulture may be sensitive to a changing climate).

(f) It diversifies the economy in the district which increases resilience and options for employment.

(g) Through procurement of goods and services, it may help sustain and grow local businesses (i.e., those servicing mining

activities).[36] It may therefore directly and indirectly contribute to a thriving and growing economy.

(h) The presence of the mine may attract other new and complementary businesses to the district (with Cromwell being an efficient location for such businesses).

(i) It attracts an international corporation to the district, improving exposure and connectiveness.

(j) It is expected to support workforce development, scholarships and training opportunities. By working with local training providers/schools the project helps connect industry and education institutions.

(k) It may continue to support community events in COD that bring economic growth and foster community cohesion, thus sharing economic success and prosperity with the wider community.

(l) Proposed funding to DOC is stated as supporting historic heritage and environmental protection in the district.

113. The following sets out how I consider that the project exacerbates, challenges or moves away from the objectives and outcomes of the Economic Development Strategy:

(a) It creates a short term increase in demand for housing for workers (and their families). Some of this demand will be shared with QLD, and within COD is likely to be spread across a number of urban areas within commuting distance. This additional demand may drive up prices to buy/rent, decreasing relative affordability to a minor extent. I note that this effect will be a one-off wave of demand and will be short-term.

[36] The location of suppliers likely to service the construction and operation of the mine is uncertain. The Economic Impact Report only distinguished between Otago Region and rest of New Zealand procurement. Cromwell based industrial and service businesses will be efficiently located to service the mine relative to other urban areas in Inland Otago.

(b) The increase in resident (and worker) population may put additional pressure on social services including schools and healthcare in the district.

(c) The Project will have a finite end (when the gold resource is exhausted or it is no longer economically feasible to extract any more gold). This is indicated as a 13.8 year operational mine period but excludes years prior and immediately after for remediation. As such, it is not necessarily a long term industry for the district or a multi-generational industry with ongoing benefits for the district and future generations.

(d) Mining is not an activity that is benign or in harmony with the natural environment. The project is occurring in an area of COD that is an outstanding natural landscape and that has ecological value. *Other experts have provided a peer review of landscape, ecological, noise, vibration and light effects of the project. These effects are limited to a part of the district, with other parts unaffected.*

(e) The project creates changes to recreational access and public use of the mining site*. The significance and permanence of those changes is outside the scope of this evidence*. *These effects are limited to a part of the district, with other parts unaffected.*

(f) The project may result in the loss of some heritage sites/structures in this part of the district. *Refer CODC's heritage expert peer review*.

(g) The project *may* adversely affect tourism, including wine tourism, which is a key, high-value industry for the district economy. Landscapes, environmental quality, recreation activities and heritage sites are all contributors to COD's tourism appeal. *Tourism effects are discussed further below with regard to Council's tourism market research/management plan.*

114. It is noted that some of the adverse economic (although not necessarily landscape, ecology, heritage, noise, recreation etc) effects of the

project listed above would be the same for any large scale industrial business seeking to establish in the district. There is a natural tension between seeking economic growth (where this is linked to job growth and not just improvements in efficiency and productivity of existing businesses) and increased housing and social infrastructure demand that comes with population increase, for example.

115. Overall, my review of the latest Economic Development Strategy indicates that the project aligns with many aspects of the Strategy and is consistent with more aspects than not. There are aspects of the Strategy that the project does not engage with (i.e. is neutral). The biggest likely conflict is with the 'pillar' of fostering sustainable growth (i.e. driving economic growth while protecting the environment). The environmental effects (impacts and benefits) of the project are outside of my area of expertise and are addressed by other experts for CODC.

The Voice of the Communities of Central Otago, June 2024

116. The purpose of this document was to provide secondary and primary research[37] on COD community sentiment and aspirations (over the four wellbeing's of social, cultural, economic and environment) to help inform the Council's development of a 50-year vision and Wellbeing Framework for the district. It examined why people live in COD, perceptions of the key attributes of the district and townships, and visions for the future of the district.

117. It showed, for example, that Cromwell Ward residents were more likely to describe the district as changing/evolving, full of opportunity, thriving, vibrant, entrepreneurial, exciting, progressive and forward thinking and relatively less likely to describe the district as traditional in its values. At a district level, protecting and enhancing the natural environment was rated highly as important for wellbeing, and something where the community considers progress has been/is being made. To achieve future visions, the community collectively considered that greatest weight should be given to supporting economic and environmental wellbeing (around 30% each). That is, providing jobs,

[37] Primary research included community surveys and workshops.

and creating opportunities for business was equal to building an understanding and appreciation of the natural environment, funding conservation and encouraging tree planting efforts.

118. Having reviewed this document, I consider that the project is consistent with aspects of the community's perceptions of district attributes and its future aspirations, particularly factors contributing to economic wellbeing, but (subject to assessment and confirmation by other experts) is potentially counter to the protection and enhancement of the national environment which is equally important for district wellbeing. This tension is the same as that identified in the review of the latest Economic Development Strategy (re sustainable economic growth) discussed above.[38]

Central Otago Persona Refresh, October 2021 and Visitor Insights Programme – Market Perceptions: Central Otago, 2024

119. The first of these documents is an update on 2018 research on the target market for Central Otago tourism. The document is described as market research on the tourist 'consumer' perspective of COD as a travel destination. This information is then used to understand COD's challenges and opportunities for tourism sector growth and how best to meet tourism demand.

120. The research is not specific to Cromwell Ward where the project is based although Cromwell Ward is the focus of the district's wine industry which was one of several strong *associations* that tourists have for Central Otago as a tourism destination. The other tourist *perceptions* of Central Otago commonly mentioned are the landscape/scenery (wide open spaces), the dry/hot climate and seasons, the outdoors, cycling (e.g. Otago Rail Trail), and local fruit – all of which are associations that could apply to a number of locations across the district.

121. The second document is similar to the 2021 market research above, but a more current (2024) snapshot of visitor perceptions for Central

[38] My expectation is that this community voice research informed the Economic Development Strategy.

Otago as a whole. It reveals the same *associations* that tourists have for the district as the earlier research: scenery, wine, fruits. Activities associated with Central Otago are also the same: walking/hiking, cycling, wineries, sight-seeing, nature and history and heritage. It's possible that in the 2024 market research that 'natural environment' carried more weight with visitors than in the prior research.[39]

122. The 2024 research identified a reduction in Central Otago's market share of domestic day and overnight visitors since 2022, but an increase in the market share of Australian's visiting New Zealand. The report does not demonstrate if a decrease in market share is a reduction in visitor arrivals or visitor spending.

123. Based on both market research document, visiting wineries, cycling and walking/hiking (exploring) are three physical activities that are associated with visiting Central Otago. I consider that the project may have potential to directly impact such activities if approved, in and near the project area. How significant those localised effects may be is outside the scope of this evidence.[40] Whether such effects would, in future, change the activities that tourists *associate* with COD (as a whole) – i.e. if the research was updated – is unknown. However, I consider that those *activity associations* would not easily change even with the project approved.[41] Simply, the project will not impact or remove the ability for tourists to still go walking/hiking, biking or visiting wineries within the district.

124. Central Otago's gold rush (mining history) was the first thing identified when asked about the history of COD.[42] I consider that the establishment of a new, large scale gold mine in the district may be perceived by *some* visitors as aligning with/linking to the district's history as a gold mining area. I.e., some tourist may draw a connection

[39] This shift is not measurable with the level of information provided in the report. This comment is based only on the (subtle) shift in emphasis in the way results were reported.
[40] The application includes a technical report on recreation effects.
[41] This should not be confused with whether the project has economic effects on visitor spending or tourism business viability or employment. There is insufficient information at this stage to assess such effects.
[42] In the 2021 research.

between past gold mining and current gold mining (if approved). Irrespective of tourists' views on the gold mine, the project could strengthen tourist *awareness* of the district's gold mining heritage and increase that association.

125. While there is no mention of enabling guided tours within the project area, it is potentially relevant that gold mines can be tourist attractions. This form of tourism is known as 'mining tourism' or 'industrial heritage tourism' and is growing globally.[43] There are many examples of active and closed gold mine tours around the world. Both Macraes and Waihi gold mines offer visitor experiences, though they differ in format. Macraes offers self-guided visitor experiences through its Tour Hub, while Waihi offers a comprehensive guided tour experience through its Gold Discovery Centre. I raise this only to the extent that the project may provide opportunities to strengthen the district's tourism offering (although this would need to be considered against any potential reduction in localised tourism offering (sites, activities or experiences) discussed above (i.e., the net effect).

126. Wide open landscapes were appreciated by visitors, although quality of the natural environment was not a common/consistent perception of Central Otago in this market research, with visitors identifying farming and rabbit issues in the 2021 document. This suggests only a high-level consideration of natural environment values (as distinct from landscape values) by survey respondents (and potentially ranks the quality of the natural environment lower than local residents do).

127. Both of these market research documents relate to COD's tourism brand. They are not assessments of how tourism contributes to the district's economy.[44] In that context, the relevant question is whether the project will be detrimental to the district's tourism brand?

128. At this stage, I consider that answering that question would be speculative. It can only be determined through the eyes of tourists (or

[43] There is a tourist operation doing tours of the Clyde Dam in COD.
[44] I have not been provided with any documents by Council with that scope/purpose.

potential tourists) and tourism branding is something that can also be actively managed/shaped. In my view, the only certain way to answer it would be retrospectively,[45] after the mine was established (if approved). That is, Council would need to commission further market research to better understand whether the presence of the mine changed visitor perceptions and associations of Cromwell Ward or total Central Otago. Such future research could determine if any perceptible change was positive or negative, or whether it added or removed any associations tourists currently have for the district, or the relativities between those associations.

129. Importantly, a shift or change in tourism brand, perceptions or associations (if that was proven) may or may not translate to any economic impacts on the district's economy. For the project to have adverse impacts on the economy through tourism effects, this would require a reduction in tourist numbers and/or length of stay and spending (which could then flow-on to reductions in tourism related employment and business activity). To date, I have not read any evidence that confirms the nexus between the presence of the mine, its externalities, and tangible tourism outcomes.[46] Certainly, the application does not address this.

130. Provisionally, when considering the processes through which the project would need to affect tourism perceptions, travel behaviour, tourism spending and tourism dependent businesses in order to have an adverse impact on the tourism sector of the economy (i.e. an economic cost), I consider that any such impacts would likely be minor. I do not consider that the project will threaten the districts tourism sector and the jobs and businesses that rely on it. I may revisit this conclusion if further evidence comes to light through the s 53 process that would enable further analysis.

[45] I doubt that this research could be done meaningfully prior to the mine existing (as research respondents may be responding with an imperfect understanding of the project).
[46] I have avoided consideration of social and published media on these issues (i.e. information that sits outside the FTAA process).

A Destination Management Plan for Central Otago, August 2022

131. Tourism is recognised as important to the COD community and economy (something also highlighted in the latest Economic Development Strategy evaluated above). This document states that tourism plays a key role in the supporting the community but also places a burden on the community. The report presents a 10-Year Destination Management Plan for Central Otago, within the context of an intergenerational (50 year+) Destination Management Plan. It seeks to maximise the benefits of tourism while minimising the burdens it places on the natural environment and communities, while taking a long term view of challenges and opportunities.

132. Having read the report, I do not find any material intersection between the project and the Destination Management Plan that can be evaluated. I form this view on the basis that there is not sufficient evidence at this stage that the project (if approved) will change the role (or scale) of tourism in the economy, or the benefits or burdens of tourism that need to be managed.

Tarras Community Plan 2023

133. Tarras is a community with interest in the project, given its close proximity to the consent area. The following is not an assessment of the Tarras community's views of the project. It is only a review of a document that sets out the Tarras community's values as well as the direction and future vision that that community has for its settlement (as at 2023).

134. The report includes demographic statistics, the history of Tarras, a summary of existing community facilities and amenities, and a description of the sorts of businesses that make up the local economy. My review comments below are limited to economic and social aspirations of the community and the potential consequences of the project for those aspirations. While there may be other adverse impacts of the project on Tarras and its community, these are outside the scope of my evidence.

135. The project is was not a way that the community envisioned economic growth occurring in the Tarras settlement at the time (although the MGL mining permits were identified in the report). Nonetheless, I consider that any growth in Tarras attributable to the project (such as workers at the mine choosing to live in Tarras)[47] would result in only a marginal change in the social mix (demographics) of the community. A slightly larger and more diverse population is likely to support a more vibrant and connected community (improve social cohesion). Any mine works seeking to live in Tarras may move there with their families which may bring more young people into the community and support the viability of the local school. Such changes would appear consistent with the community's vision for Tarras which is emphasised as a welcoming community.

136. Should the project drive some population and housing growth in Tarras, and with reference to community aspirations set out in the Plan, this is also likely to:

    (a) stimulate (and help sustain) more commercial development in the village (including longer opening hours for existing businesses). Any increased pass-by traffic attributable to the project may also stimulate additional convenience spending in the settlement.

    (b) Increase rates revenue from Tarras. This could be directed to enhancing social and other infrastructure in the village by Council (with tennis courts, playground, community hall all mentioned).

137. For Tarras to capture any growth in demand for dwellings from new households attracted by the project's employment opportunities, there would first need to be housing capacity for that potential demand. The Community Plan does identify zoning changes to enable growth in appropriate locations as an action to be pursued with Council. The project might accelerate the need for housing capacity (and growth infrastructure) to be assessed for the Tarras settlement (if not done already by Council).

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[47] It is not possible to quantify or estimate this outcome but I consider that some household growth is likely to occur as a result of the project's job opportunities.

Dated 7 April 2026

Natalie Hampson