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OceanaGold New Zealand Limited

Macraes Phase Four

Social Impact Assessment

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Macraes Phase Four
Social Impact Assessment
OceanaGold New Zealand Limited

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ABBREVIATIONS

FTAA	Fast-track Approvals Act 2024
FTSF	Frasers Tailing Storage Facility
GDP	Gross Domestic Product
GPUG	Golden Point Underground Mine
IAIA	International Association for Impact Assessment
IM13	Innes Mills Stage 13
MCDT	Macraes Community Development Trust
MCI	Macraes Community Incorporated
MP4	Macraes Phase Four
MTI	Mixed Tailings Impoundment
MWMS	Mine Water Management System
MEEA	Murphys Ecological Enhancement Area
NZDep	New Zealand Index of Deprivation
OGNZL	OceanaGold New Zealand Limited
SA1	Statistica Area 1
SEIA	Socio-Economic Impact Assessment
SIA	Social Impact Assessment
SP10	Southern Pit Option 10 TSF
SP11	Southern Pit Option 11A TSF
TSF	Tailings Storage Facilities
WHO	World Health Organisation
WSP	WSP New Zealand Limited

EXECUTIVE SUMMARY

OceanaGold New Zealand Limited (OGNZL) proposes the Macraes Phase Four Project (MP4 or the Project) to extend the life of mining at the Macraes Operation until at least 2039. In the absence of MP4, mining operations are currently anticipated to cease in 2030. The project comprises extensions to existing mining activities and supporting infrastructure and is intended to maintain the economic and social benefits currently generated by the Macraes Operation.

The Social Impact Assessment (SIA) provides an assessment of the potential social impacts of MP4, with a focus on the community impacts. The overall intention of the SIA was to ensure that the negative impacts were identified, understood, and effectively avoided, remedied or mitigation, and that the potential benefits were identified. The social impacts have been evaluated using the International Association for Impact Assessment (IAIA) framework.

Key to the assessment process was the development of an understanding of the existing social environment through the collection and analysis of baseline data. Targeted engagement was undertaken and an online survey of existing suppliers to the Macraes Operation to provide data to support an evidence-based assessment. The assessment was also informed by a review of specialist technical studies, with a 'social lens' applied to the findings and relevant mitigation measures.

MP4 Assessment

The SIA identified both positive and negative social impacts associated with MP4. Overall, the assessment found that extending the life of the Macraes Operation would result in significant positive social impacts at a local regional and national level. The most significant positive social impacts are:

- Job security and sustained livelihoods - rated as being of extremely high positive significance. The continuation of the Macraes Operation will result in the continuation of direct and indirect employment, household income security and sustained livelihoods for employees, their families and households connected to the mining sector both locally and across Otago and New Zealand.
- Continued community stability – rated as being of high positive significance. As a result of sustained business activity and economic resilience, MP4 will contribute to population retention, service provision and community stability, supporting broader social wellbeing in the local study area and across Otago.
- Continued local community benefits – rated as being of extremely high positive significance within the local study area. MP4 will result in the continued retention of community facilities and services, emergency response capability and locally available specialist services that contribute to community wellbeing and resilience.

Potential adverse social impacts identified during operations relate primarily to continued business reliance on mining, changes in sense of place, changes in environmental amenity, and reduced wellbeing associated with concerns regarding environmental effects. Following consideration of mitigation measures and the findings of the specialist technical assessments, all adverse operational impacts were assessed as being of low significance.

The following measures are recommended to manage potential adverse impacts:

- Continuing OGNZL's procurement approach to facilitate the spread of local supplier benefits across local businesses, to reduce individual business dependency on the mine and support business diversity;
- Ongoing information sharing with local neighbours and the Macraes community about planned activities, potential environmental impacts, rehabilitation progress and proposed mitigation, to reduce uncertainty and manage expectations;
- Maintaining clear and accessible community channels including named points of contact and continuation of the existing OGNZL complaint registration and feedback process; and

- Providing clear, regular and plain-language communication to neighbours and the wider Macraes community on groundwater, springs and surface water monitoring, consent compliance, council oversight and how potential issues will be addressed.

Closure Assessment

The information required to support a comprehensive social closure assessment needs to be collected closer to the time of closure. A high-level assessment of mine closure was undertaken to understand the potential social impacts that may occur at the end of the mine life. The assessment identified the most significant adverse closure impacts as:

- Loss of direct employment, resulting from the cessation of mining activities and associated workforce reductions; and
- Reduced community stability, resulting from population decline, reduced business activity and changes to the social and economic foundations that currently support local communities.

The closure assessment also identified potential changes in sense of place and reduced wellbeing, together with positive effects associated with improved environmental quality and the completion of rehabilitation activities.

Recognising that the future social environment at the time of closure cannot be predicted with certainty, it is recommended that:

- A Closure Socio-Economic Impact Assessment (SEIA) be commissioned at least three years prior to closure to inform transition planning and identify measures to manage closure-related social impacts.

In conclusion, while some adverse social effects have been identified, these are generally of low significance and can be appropriately managed through the recommended mitigation measures. Overall, the assessment concludes that the positive social outcomes associated with extending the life of the Macraes Operation substantially outweigh the identified adverse social effects. The project will continue to support employment, household incomes, business activity and community stability, while postponing the more significant adverse social impacts associated with mine closure. Some of these benefits extend beyond the local study area and contribute to social wellbeing at regional and national levels.

1 INTRODUCTION

OceanaGold (New Zealand) Limited (OGNZL) currently undertakes open pit and underground gold mining operations at the Macraes Operation located at Golden Point Road, Macraes Flat, East Otago. As part of their ongoing operations, OGNZL continually review the remaining life of the Macraes Operation in light of updated knowledge of the gold resource and the economics of mining.

Reflecting recent exploration success and optimisation work, together with higher gold prices, the Macraes Phase Four Project (MP4 or the Project) seeks to extend the life of mining at the Macraes Operation until at least 2039. The project, which will enable ongoing gold production at a rate of approximately 130,000 ounces per annum, is identified as a Listed Project in Schedule 2 of the Fast-track Approvals Act 2024 (FTAA) as a project providing significant national or regional benefits.

To support the development of the substantive application for the project, OGNZL engaged WSP New Zealand Limited (WSP) to provide an assessment of the potential social effects of the MP4, and, to the extent required, identify any necessary management and operation measures to address any such effects.

1.1 PURPOSE AND SCOPE OF THE STUDY

The purpose of this Social Impact Assessment (SIA) was to identify and fully consider the potential positive and negative impacts of MP4 on the social environment within the local, regional and national context. The intention of the SIA was to ensure that the negative impacts are identified, understood, and avoided, remedied or mitigated, and that potential benefits of the project are acknowledged and enhanced where possible.

The scope of the SIA included:

- Development of an understanding of the social context associated with MP4, supported by the collection and analysis of baseline data.
- Targeted engagement with identified key informants to collect primary data to inform the understanding of the social context, and the identification and assessment of impacts.
- Review of relevant technical studies associated with MP4 through a 'social lens', and review of the outcomes of the consultation process undertaken by OGNZL.
- Evaluation of potential social impacts, and identification of appropriate mitigation measures.

The methodology used in the preparation of this assessment is outlined in **Section 3**. The SIA is part of a wider suite of technical reports informing the Substantive Application Report and, while there is some overlap with topics which are the focus of other technical reports, it examines these from a social perspective.

2 PROJECT DESCRIPTION

2.1 CURRENT OGNZL MACRAES OPERATIONS

OGNZL owns and operates the Macraes Operation at Macraes, approximately 30 km northwest of Palmerston in the Otago Region. The Macraes Operation is the largest gold mine in New Zealand and, since commissioning in 1990, has produced more than 6 million ounces of gold.

Macraes Flat is situated on an elevated plateau at approximately 500 m above sea level. The plateau is flanked by the Taieri Ridge to the northwest, Shag Valley and Horse Range to the east, and the coastal hills and extinct volcanic cones of Palmerston and Waikouaiti to the southeast. Macraes Road provides access to Macraes Flat and the Macraes Operation, connecting to State Highway 85 to the east and State Highway 87 (Middlemarch–Hyde Road) to the west.

The environment within and surrounding the Macraes Operation has been shaped by historic and current mining activities. **Figure 2–1** shows the arrangement of the major mine features at the Macraes Operation. In summary, the current components of the Macraes Operation include:

- Numerous open pits (both operational and non-operational);
- Two underground mines (Frasers, now closed, and Golden Point, which is actively mined);
- Waste rock stacks at various stages of operation and rehabilitation;
- A network of haul roads and general mine service tracks;
- A Processing Plant;
- Five tailings storage facilities (three inactive, one active but nearing capacity, and one under construction and currently receiving tailings);
- An extensive network of water management infrastructure, including diversion drains, silt ponds, sumps, pit lakes, and freshwater storage reservoirs;
- Two consented but not yet constructed water storage reservoirs (Camp Creek Dam and Coal Creek Dam); and
- Associated infrastructure supporting ongoing operations, including district roads, powerlines, workshops, offices, and associated water and amenity facilities.

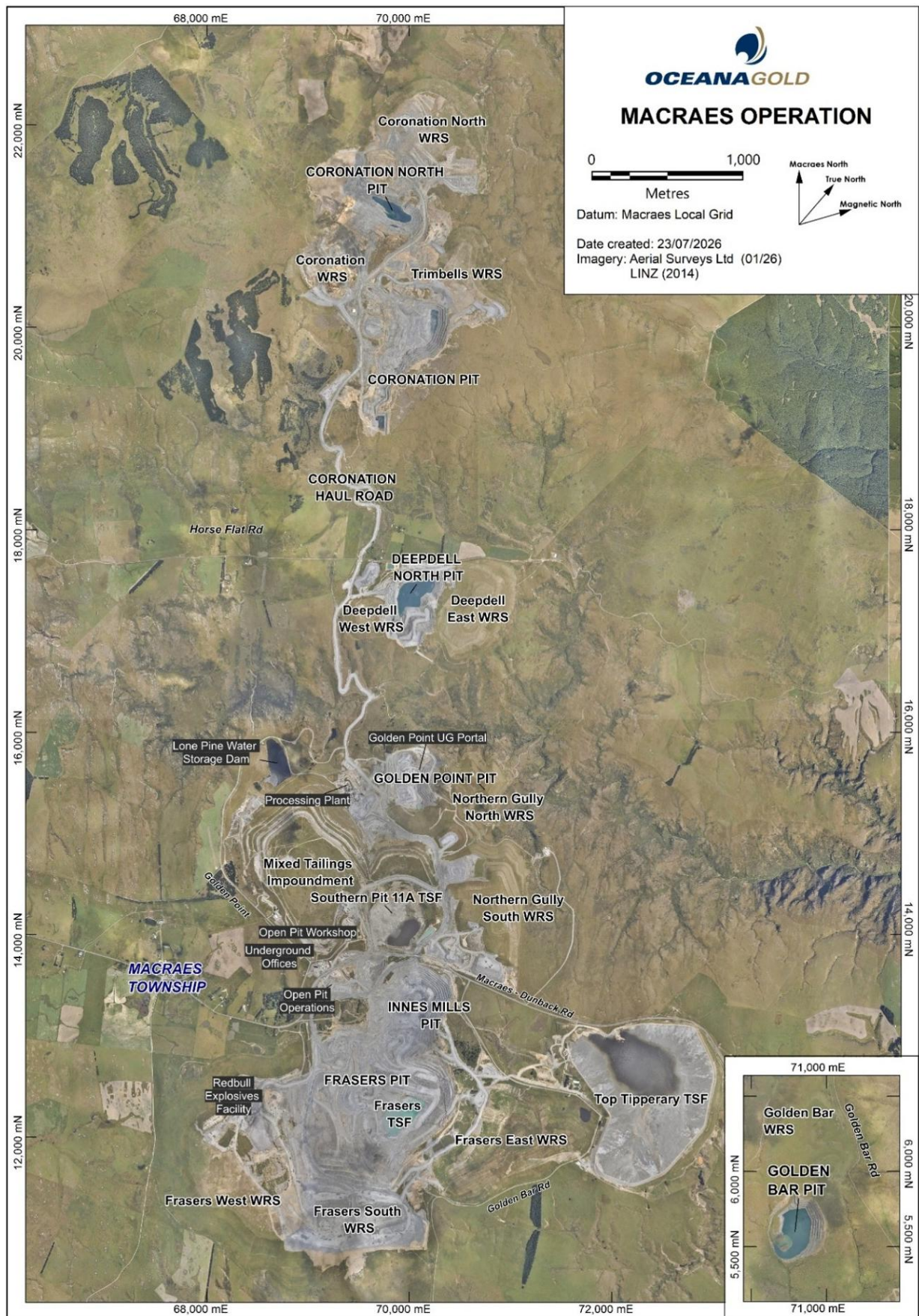


Figure 2–1: Existing site layout at the Macraes Operation (as of July 2026)

2.2 PROPOSED MP4 OVERVIEW

MP4 is made of the following proposed key activities:

- **Open pit extensions** at Coronation, Coronation North, Innes Mills, and Golden Bar.
- **Underground mine expansion** through further development of the Golden Point Underground mine (GPUG).
- **Tailings management**, including:
 - Construction of the Frasers Tailings Storage Facility (FTSF) Stage 3 to accommodate a total tailings storage of up to 153 Mt; and
 - Hydraulic mining and relocation of tailings from the Mixed Tailings Impoundment (MTI), Southern Pit Option 10 TSF (SP10), and Southern Pit Option 11A TSF (SP11) to FTSF.
- **Waste rock disposal**, including increased storage capacity within open pits and at existing waste rock stacks at Coronation, Coronation North, Innes Mills, Golden Bar, Golden Point, and Frasers.
- **Water management infrastructure and operations**, including:
 - Construction of Camp Creek and Coal Creek water storage dams for flow and water quality management;
 - Construction, operation and maintenance of a Water Treatment Plant; and
 - Ongoing operation and maintenance of the Mine Water Management System (MWMS).
- **Infrastructure and roading works**, including:
 - Realignment of Macraes Road in two stages; and
 - Relocation of the Open Pit Mining Workshop.
- **Ecological enhancements**, including establishment of:
 - Murphys Ecological Enhancement Area (MEEA) near Murphys Creek, including predator fencing, access tracks, and site facilities;
 - Mt Highlay restoration area;
 - Cranky Jims Link shrubland enhancement area;
 - Murphys Link tussock protection area; and
 - Additional compensation measures for residual ecological impacts.
- **Mine closure and rehabilitation activities**, including rehabilitation of mining landforms, creation of pit lakes, dry capping of tailings storage facilities, and revegetation in accordance with existing closure objectives.

An overview of the proposed activities which make up the Project is shown in **Figure 2–2**.

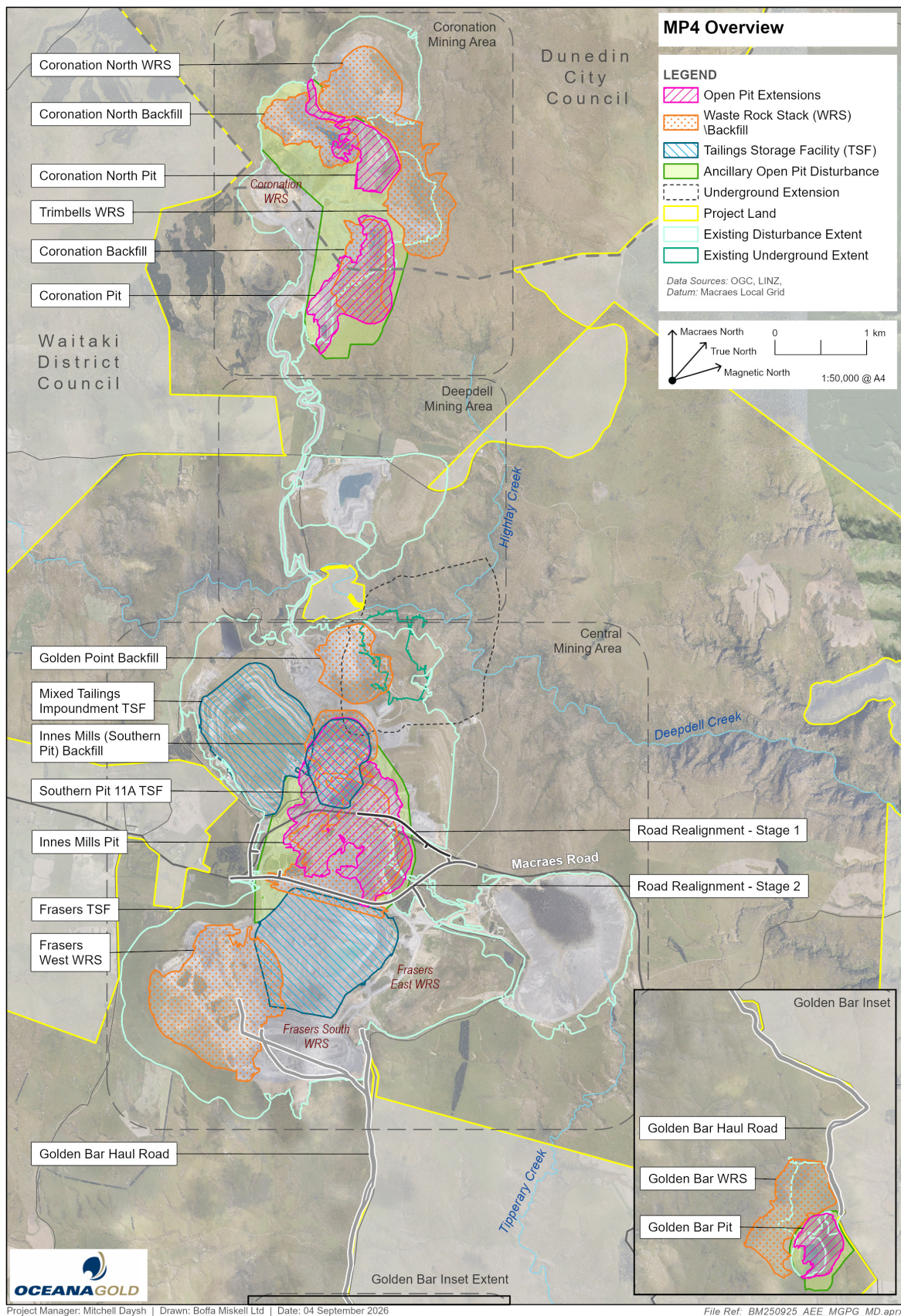


Figure 2–2: MP4 Overview Plan

2.3 SEQUENCING OF ACTIVITIES

The project is not being progressed in stages. Rather, all activities that comprise MP4 are included in the substantive application. Those activities are anticipated to occur across a period of 13 years, with OGNZL proposing to commence MP4 as soon as the necessary approvals are obtained.

The activities described herein are expected to be generally sequenced as follows:

- The continuation of Innes Mills Pit mining from Year 1 to Year 12;
- The continuation of Coronation Pit mining from Year 2 to Year 6;
- Relocation of tailings from Southern Pit TSF and MTI from Year 6 to Year 12 to facilitate mining of Innes Mills Stage 13 (IM13);
- The continuation of Golden Bar Pit mining mostly in Year 3 and in Year 7;
- The continuation of GPUG mining from Year 1 to Year 10;
- The continuation of Coronation North mining from Year 1 to Year 2 and then from Year 7 to Year 10;
- Associated replenishment of stockpiles throughout the MP4 mine life; and
- Full site rehabilitation to commence in Year 11 and be completed by approximately end of Year 13.

Mine planning is fluid at complex multi-pit operations such as the Macraes Operation. Precise timing of activities depends on a range of factors and operational requirements may facilitate changes to the sequencing of some activities.

Table 2.1 shows the anticipated sequencing of the proposed MP4 activities across the life of the project.

Table 2.1. Anticipated sequencing of MP4 activities

Pit	Stage	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13
Innes Mills	IM8	■												
	IM9	■	■											
	IM10	■	■											
	IM11		■	■	■	■	■							
	IM12		■	■	■	■	■	■	■	■	■	■	■	
	IM13			■	■	■	■	■	■	■	■	■	■	■
Coronation North	CN5	■	■	■										
	CN6							■	■	■	■	■		
Coronation	C06		■	■	■									
	C07			■	■	■	■							
	C08				■	■	■	■						
Golden Bar	GB2			■	■	■								
	GB3						■	■	■					
Underground	GPUG	■	■	■	■	■	■	■	■	■	■			
Stockpiles		■	■	■	■	■	■	■	■	■	■	■	■	■

2.4 WORKFORCE

The current workforce consists of approximately 760 employees, of which 70% hold mine operator roles (specific to mine production and maintenance), with the remaining 30% covering administration, business support, professional, management and supervisory roles.

MP4 represents an extension of the existing Macraes Operation, and as such does not require an additional workforce. Whilst there is potential that the project will require a small number of contractors for specific components of work, this is likely to be limited. MP4 will be delivered by the staff already employed to work at the Macraes Operations.

3 METHODOLOGY

3.1 ASSESSMENT FRAMEWORK

The methodology used for this SIA is based on an internationally recognised approach provided by the International Association for Impact Assessment (IAIA) in the SIA Guidance Document¹. This guidance document provides the following definition of SIA:

Social Impact Assessment includes the process of analysing, monitoring and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programmes, plans, projects) and any social change processes involved by those interventions.

The use of SIA to analyse, monitor and manage the social consequences of development provides a valuable tool to support decision making.

The IAIA SIA framework is well recognised in New Zealand and internationally, and it provides a sound and robust framework for the identification and assessment of social effects.

3.2 METHODOLOGY

The focus of the SIA was on the implications of MP4 beyond the site i.e. on the community and has therefore not assessed aspects relating to the internal operation of Macraes Operations (e.g. day-to-day mine operations, service providers).

The SIA was undertaken in two stages, namely (i) scoping, and (ii) impact assessment. The process of considering the issues and identifying and assessing impacts was an iterative one, with continued review and revision as preliminary understandings were validated and as mitigations were identified by the project team in response to key issues raised during community consultation.

3.2.1 SCOPING STAGE

The objective of the scoping stage was to clearly understand MP4 and the receiving environment to allow for the preliminary identification of social impacts. The following activities were undertaken during scoping:

- 1 Review of relevant documents and briefing sessions to gain an understanding of the scope of the project.
- 2 Collection and analysis of baseline data, primarily from Statistics NZ, to support the development of a social baseline of the study area (**Appendix A**).
- 3 A site visit on 21 January 2026 to gain a better understanding of the project, and the local context in which the existing mine is located. This supported the identification of potential impacts, and the definition of the SIA study area.
- 4 Definition of the SIA study area and preliminary identification of the stakeholder groups likely to be affected by the project.

- 5 Preliminary identification of potential social impacts, and early consideration of the data requirements to support the assessment of the likely social impacts.

The outcomes of the scoping stage were confirmation of the study area for the SIA, a preliminary identification of social impacts, stakeholder groups affected, and data requirements to support the impact assessment.

IMPACT IDENTIFICATION

The process of identifying social impacts is an iterative one. The scoping stage included the preliminary identification of social impact associated with MP4. As the SIA progressed from scoping into the assessment phase, the understanding of the potential social impacts was refined.

Social impacts were identified using the framework provided by the IAIA. The IAIA SIA Guidance document explains social impacts as changes to one or more of the following:

- **Way of life:** how people live, work, play and interact with one another on a daily basis
- **Culture:** shared beliefs, customs, values and language
- **Community:** cohesion, stability, character, services and facilities
- **Political systems:** extent to which people are able to participate in decisions that affect their lives, level of democracy, and resources provided for this purpose
- **Environment:** the quality of the air and water people use, the availability and quality of the food they eat, the level of hazard or risk, dust and noise they are exposed, the adequacy of sanitation, physical safety, and access to / control over resources
- **Health and wellbeing:** physical, mental, social and spiritual wellbeing
- **Personal and property rights:** whether people are economically affected, or personally disadvantaged including violation of civil rights
- **Fears and aspirations:** perceptions of safety, fears about the future of their community, aspirations for the future and future of their children

Not all the categories are relevant to all projects. When considering the applicability of the IAIA framework to the project, the following were identified as not relevant for the following reasons stated below:

- **Culture** – Māori cultural matters are excluded from the scope of the SIA as these will be addressed through iwi consultation, and any Cultural Impact Assessment/s prepared by the relevant iwi.
- **Political systems** – in the New Zealand context, the wider political system and ability to participate democratically in society is not a key concern.
- **Personal and property rights** – civil and property rights are not affected by MP4, and the potential impact on property values is excluded from the assessment. While it is acknowledged that the impact on property values may be a concern of the community, the clear case law guidance on the Resource Management Act 1991 that effects on property values is not a stand-alone effect to be taken into account in the assessment of the application, and it has been excluded from this assessment on that basis.

3.2.2 IMPACT ASSESSMENT STAGE

The objective of the impact assessment stage was to evaluate the potential social impacts of the project and, where relevant, identify mitigation and management measures. The following activities were undertaken:

- 1 Data collection (engagement) and analysis to support the assessment of impacts (bespoke and impact driven)
- 2 Review of key themes and outcomes of the engagement process
- 3 Review of relevant specialist studies
- 4 Description and evaluation of potential social impacts

5 Identification of mitigation and management measures

The impact assessment stage culminated in the preparation of the SIA report documenting the findings of the assessment and recommendations.

DATA COLLECTION

The primary objective of the SIA-led engagement undertaken was to gather primary data to confirm assumptions made in the scoping phase and to provide data to support the assessment of potential social impacts. It also aimed to understand local values and experiences, and to gather community and stakeholder views on how the project may affect them. This information helps ensure that any impact management measures are informed by local knowledge.

The engagement approach was to use methods suited to target specific stakeholder groups to source data on specific themes. Two engagement methods were employed during April 2026 to support the data requirements for the SIA:

Online Supplier Survey

An online survey targeting existing OGNZL suppliers was undertaken from 08 to 22 April 2026. The survey sought to understand how businesses supplying the Macraes Operations have changed over the past five years, how they expect to perform in the next five years, the impact of MP4 on them, and how dependent they are on mining activity.

Macraes suppliers were notified of the survey via email, which explained the purpose of the survey and provided an online link for completion. The survey achieved a response rate of approximately 30%, with 147 responses (of which 137 completed the entire survey) received from the 483 suppliers invited to participate. This is considered a strong response rate and provides a robust evidence base for understanding supplier perspectives. The survey captured response from a diverse range of businesses including local, regional, national and international suppliers (**Table 3.1**) across a variety of industry sectors.

Table 3.1. Business location of supplier survey respondents

Business location	Percentage
Local area (Dunedin, Oamaru, Palmerston, Waikouaiti, Macraes)	44%
Regional (outside the local area but within Otago Region)	8%
New Zealand (outside Otago Region)	34%
International	14%

Interviews

Key informant interviews were held with neighbouring residents, local community and business representatives from 09 – 21 April 2026 (**Table 3.2**). Key informants were identified through insights gathered during the scoping phase, discussions with OGNZL and with input from the Economic Specialist in respect of local business targets.

The purpose of the interviews was to obtain insights into the local community and local suppliers, the relationship between the community and Macraes Operation, and to obtain an improved understanding of the likely implications of MP4 and the mine's closure on the local community and local suppliers. Questions were designed to be semi-structured, to ensure a focus on the FTAA proposal whilst ensuring all relevant matters were raised and explored.

The SIA-led engagement provided an opportunity to obtain an improved understanding of the interests and perspectives of stakeholders in relation to MP4 and so provided valuable data to inform the assessment of potential social impacts.

Table 3.2. Key Informant Representatives Interviewed

Stakeholder Group	Representatives Interviewed
Neighbours	Four semi-structured interviews were undertaken with neighbouring residents located near the mine. The interviews sought to understand current impacts of mining activities, the relationship between the mine and the community, and perceived impacts associated with both MP4 and eventual mine closure.
Local community representatives	Four key informant interviews were undertaken with local community representatives, including those from Macraes Moonlight School, Stanley's Hotel, the Macraes Community Development Trust², and Macraes Community Incorporated³. These interviews also captured insight into the experiences of those closely affected by the mine, as most representatives live or work in close proximity. The interviews sought to understand their roles within the community, the current impacts of mining activities, the value of the mine to the local area, and perceived impacts associated with the MP4 expansion and eventual closure.
Local Business' Interviews	Five semi-structured interviews with key local businesses were undertaken. The aim of the interview was to capture the history of their association with the mine, the impact of current Macraes Operations on their business, what MP4 means for their business, and what mine closure will mean for them in the future.

A summary of the SIA engagement outcomes is provided in **Appendix B**.

REVIEW OF OGNZL-LED ENGAGEMENT OUTCOMES

The ongoing OGNZL engagement undertaken for MP4 provided a source of data to support the understanding of local community key issues and concerns. A review of the local community feedback received by OGNZL up to 31 July 2026 was undertaken and the key themes identified included:

- **Water and environmental management:** potential effects on water quality, water availability, wetlands, biodiversity, and environmental management measures.
- **Amenity effects:** concerns regarding noise, blasting, truck movements, and other operational effect on neighbouring properties and local amenity.
- **Mine rehabilitation and closure:** questions about closure planning, rehabilitation outcomes, future land uses, and the long-term management of mine landforms and infrastructure.
- **Land use and community outcomes:** interest in landscape change, the loss of productive farmland, and the potential for rehabilitation initiatives to create environmental, recreation and community benefits.

² Macraes Community Development Trust (MCDT) is a trust that was established to support activities that relate to the social, economic and cultural wellbeing of the Macraes Community, particularly after mining has ceased.

³ Macraes Community Incorporated (MCI) is a committee made up of representatives of the Macraes Community. The MCI meets with OGNZL regularly where they have an opportunity to express concerns, ask questions and discuss opportunities.

REVIEW OF SPECIALIST STUDIES

A range of specialist studies were undertaken to inform the Substantive Application Report. The following were identified to be of relevance to the SIA and the final draft reports reviewed with a “social lens” to inform the assessment of the social impacts of MP4:

- Economic Assessment (Eaqub & Eaqub, 2026)
- Integrated Transport Assessment (Stantec, 2026)
- Blast and Vibration Assessment (techNick, 2026)
- Landscape and Natural Character Effects Assessment (Boffa Miskell, 2026)
- Assessment of Environmental Noise Effects (Acoustic Engineering Services, 2026)
- Assessment of Environmental Effects – Lighting (LDP Limited, 2026)
- Air Quality Assessment (Tonkin & Taylor Ltd, 2026)

IMPACT ASSESSMENT

To evaluate the potential social impacts associated with MP4, impacts have been described and assessed according to the following:

- 1 The cause of the impact.
- 2 The stakeholder / stakeholder group to be impacted and any potential vulnerable groups, directly affected, and or indirectly affect people, and their ability to adapt to change.
- 3 Whether the impact is positive or negative.
- 4 The consequence of the impact, which is determined through consideration of the following:
 - Extent of the impact – whether the impact is limited to the site and surrounds, local area, region or whether it is likely to be experienced at national level.
 - Duration of the impact – whether the impact will be temporary (0-1 year), short term (1-5 years), medium term (5-15 years) or permanent (>15 years).
 - Magnitude of the impact – whether the impact will be on the wider community (many affected), the local community (moderate number) or directly affected owners, occupiers and users of properties (few affected).
- 5 The likelihood of the impact i.e. an estimation of the probability of the impact occurring, ranging from rare to almost certain.

The IAIA recommended risk assessment methodology, which considers the likelihood and consequence of an impact, was used to determine the overall significance of the impact (**Figure 3-1**).

Significance Rating (Likelihood / Consequence)

		Consequence Level				
		1	2	3	4	5
Likelihood Level	Descriptor	Insignificant	Minor	Moderate	Major	Catastrophic
A	Almost certain	A1	A2	A3	A4	A5
B	Likely	B1	B2	B3	B4	B5
C	Possible	C1	C2	C3	C4	C5
D	Unlikely	D1	D2	D3	D4	D5
E	Rare	E1	E2	E3	E4	E5

Risk Rating Low Moderate High Extremely High

Figure 3–1: Risk Assessment Framework (IAIA SIA Guideline, 2015).

Given MP4 provides for the continuation of existing mining operations, this assessment does not distinguish between a construction and operational phase. Any construction activities occur in parallel with mining operations and will not be out of character with routine operational activities. The SIA has identified and assessed the implications of MP4 by consideration of the operational phase and closure of Macraes Operation, these are defined as follows:

- **Operational phase** – refers to all activities associated with MP4 including establishment of infrastructure, operational activities including mine production, and ongoing and final rehabilitation in preparation of closure.
- **Closure** – refers to the point at which the mine is no longer operational, all rehabilitation activities have concluded and the site is closed.

Given the nature of mining and the scale of the Macraes Operation, the transition between the operational phase and closure will occur over several years. During this transition period operations will gradually wind up, and staff numbers will progressively reduce. The SIA takes this into account in the assessment of the potential impacts associated with the operational phase.

MITIGATION AND MANAGEMENT MEASURES

Where required, appropriate mitigation, avoidance and remedial strategies were identified for potential negative impacts. In addition, where appropriate, enhancement measures were identified to maximise potential positive impacts.

3.3 ASSUMPTIONS AND EXCLUSIONS

The following assumptions and exclusions apply to the scope of the SIA:

- The assessment is based on the project description and relevant information made available up to early August 2026.
- Economic impacts have been considered from a social perspective only, to better understand the social effect on local and regional businesses and communities.
- Cultural impacts affecting culture, land, water and air are not addressed in this SIA. OGNZL is consulting with iwi and a Cultural Values Assessment will be prepared independently of the SIA.

- Technical assessments have separately considered a range of specialist areas that are affected or require consideration in the context of MP4. These assessments have been carried out by the relevant technical specialist and their findings relied upon. Technical reports have been reviewed in this assessment from a social perspective only.
- MP4 includes the establishment of the Murphys Ecological Enhancement Area (MEEA) near Murphys Creek, a local recreational reserve. As the MEEA is primarily intended as an ecological enhancement initiative, it is assumed there will be no public access, community or recreational use of this area.
- Fears and aspirations held by the local community have been reported on but have not been assessed or assigned a significance rating. An assessment of fears and aspirations is challenging either due to a lack of data to support the assessment or the need to make a range of assumptions which leads to a highly subjective assessment of significance.
- A preliminary assessment of the potential social impacts of the closure of MP4 has been included in this SIA. With the closure of MP4 forecasted for at least 10 years in the future, it is anticipated that the social environment will be somewhat different to present day, and the information required to support a detailed assessment of the social implications of mine closure will need to be collected closer to the time of closure.

4 SOCIAL CONTEXT

4.1 SITE CONTEXT

The Macraes Operation is located within the town of Macraes, located within the Eastern Otago region, approximately 55km north of Dunedin. Macraes is situated on an elevated plateau, at approximately 500 m above sea level, that is isolated from the main state highways and towns of East Otago. Macraes Operation sits within the jurisdiction of the Otago Regional Council and Waitaki District Council, with the northern parts of the Operation sitting within Dunedin City Council jurisdiction.

With the exception of some areas of unformed road reserve that intersect the Project area, OGNZL is the sole owner of the land on which the proposed MP4 Project will be located. OGNZL leases some of that land to farmers and some of OGNZL's land is protected by ecological covenants.

Macraes village, which includes approximately 15 houses (9 of which are owned by OGNZL), a school, cemetery, and a historic hotel, is located immediately to the west of the Macraes Operation (approximately 1km from the closest point of the mine).

4.2 STUDY AREA

The study area associated with MP4 is shown in **Table 4.1**. There are various 'zones' of influence, with the majority of the potential social impacts likely to be experienced within the local study area, with broader social impacts occurring at a regional and national level.

The SIA has focussed primarily on the social impacts that are likely to be experienced in the local study area, with reference to the regional and national context where relevant.

Table 4.1. Study Area for the SIA

Context	Description
Local Study Area	The local area includes the full extent of the Dunedin City Council area, and the southern portion of the Waitaki District Council (Figure 4-1). The area stretches from Dunedin (south) to Oamaru (north) and extends inland to include the Macraes and Middelmarsh. The main urban areas and townships within the area include: — Dunedin — Oamaru — Palmerston — Waikouaiti — Macraes The local area is considered the employment and local economic catchment area. The vast majority (~85%) of the Macraes Operation workforce live within this area, and a large proportion of the local business activities and services that support mine operations are located with this area. The final determination of the local area boundary was informed by council boundaries and Statistical Area 1 (SA1) census data units.
Regional	'Regional' is defined by the Otago Regional Council boundary (Figure 4-2). The mine is strategically important in the regional context as it contributes to the economy and the wider community.
National	New Zealand.

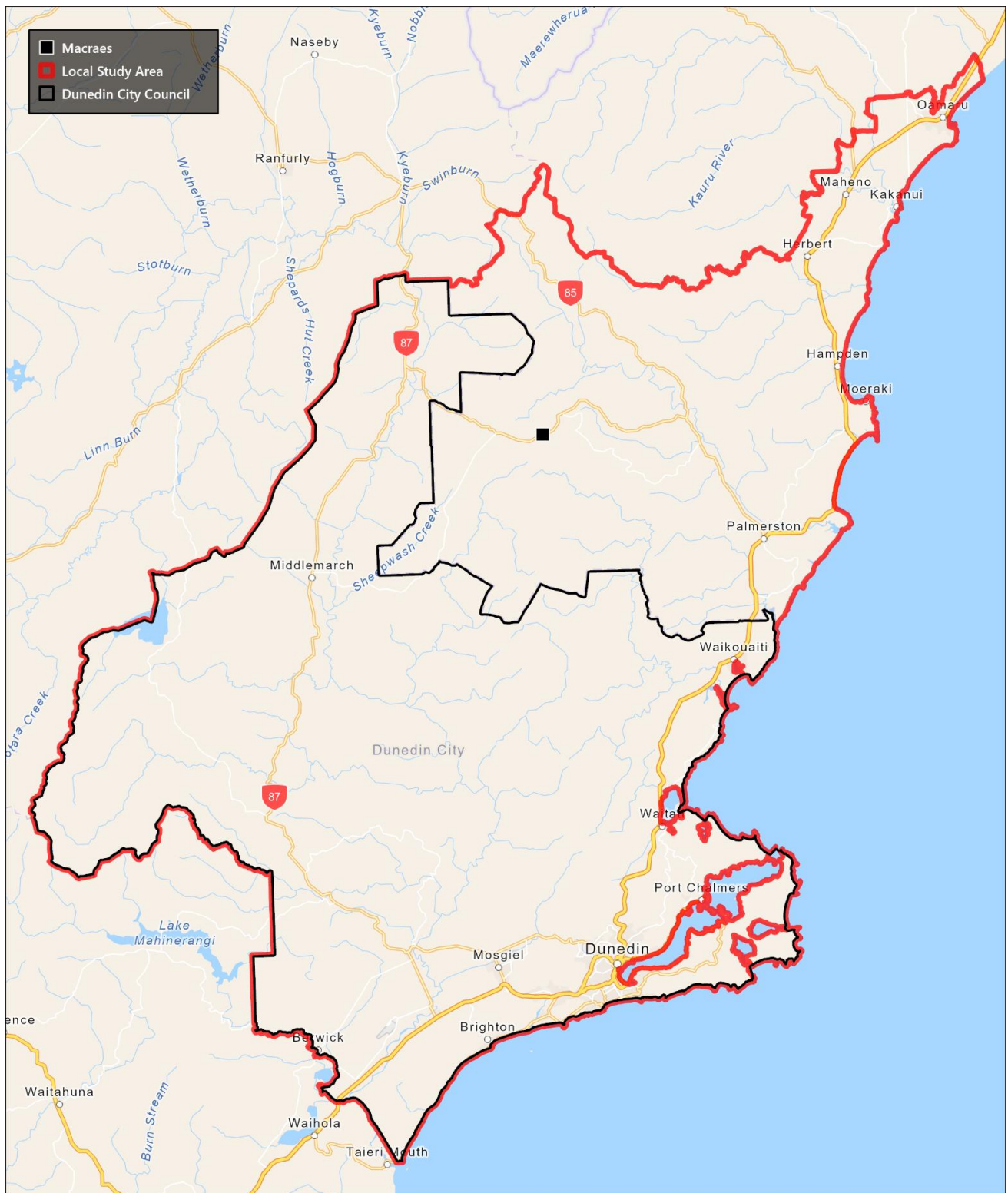


Figure 4–1: Local Study Area defined for the MP4 SIA

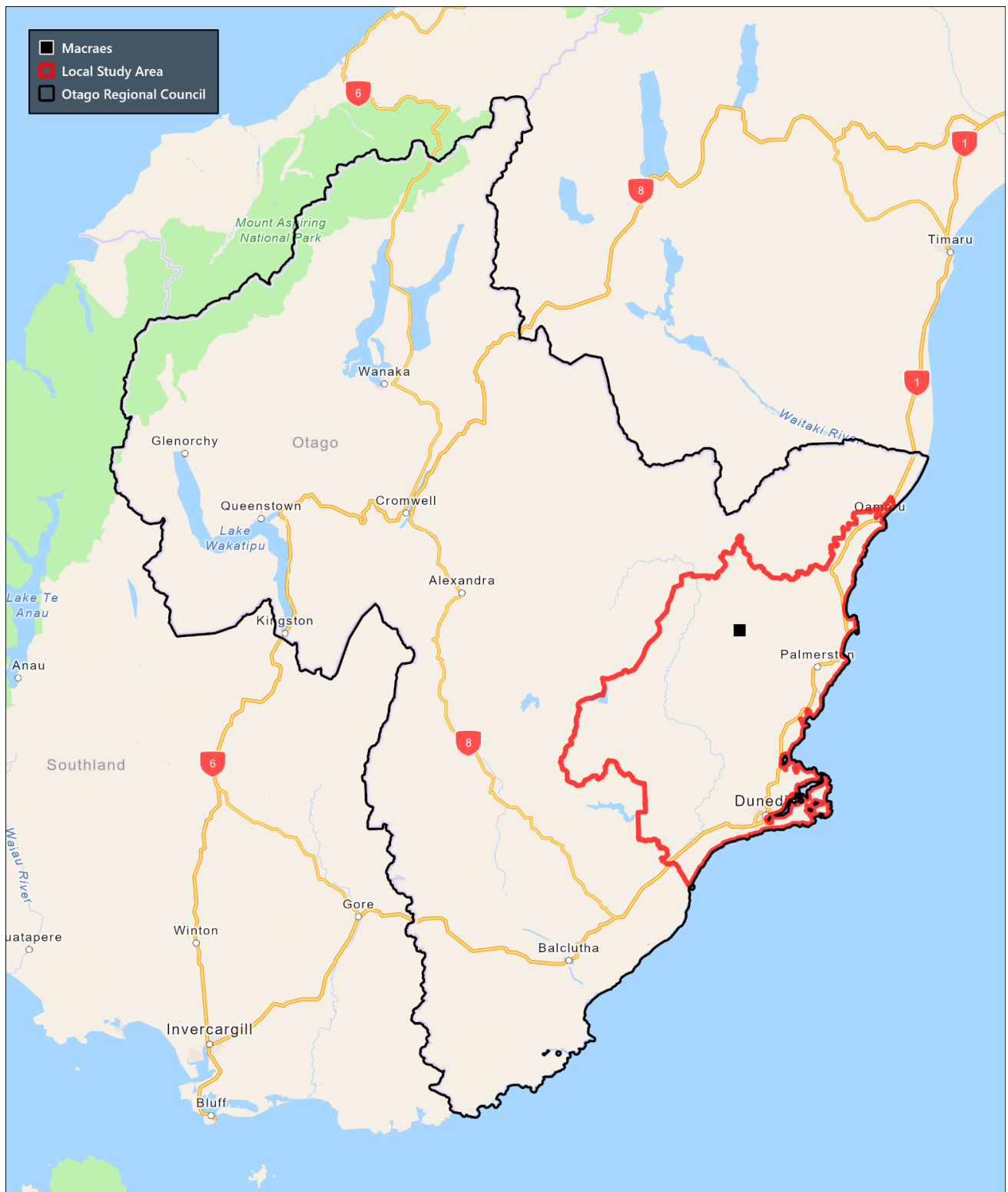


Figure 4-2: Regional Context – Otago Regional Council boundary

5 EXISTING SOCIAL ENVIRONMENT

Understanding the existing social environment including social characteristics, values and priorities of the community is critical to identifying and assessing the potential social impacts of MP4. This is referred to as the 'social baseline'. The baseline forms the basis from which potential impacts which may be reasonably perceived or experienced by different people within the area of social influence.

5.1 ALIGNMENT WITH OBJECTIVES AND POLICIES

MP4 has been reviewed against relevant national, regional, and district planning objectives and policies to assess its alignment with social, economic, and community wellbeing outcomes. **Appendix C** provides the full objectives and policies assessment. In summary, the relevant planning frameworks recognise Macraes Operation as a strategically significant mineral resource with social and economic value, and MP4 aligns with the planning objectives associated with community wellbeing, economic resilience, and responsible management of environmental effects.

5.2 REGIONAL CONTEXT

The regional context is defined by the Otago Regional Council boundary (**Figure 4–2**). This area covers a large and geographically diverse part of the lower South Island, including inland mountain basins, high country landscapes, major lakes, rural farming districts, and the coastal urban centre of Dunedin. The main urban centres include Dunedin, Queenstown, Wanaka, Oamaru, and Alexandra.

Primary production takes up around 70% of Otago's total land use ⁴. Primary production includes agricultural, horticultural, and viticultural land use. Agricultural land consists mostly of dry stock and dairy production with some horticulture and viticulture properties. Natural and conservation land use accounts for 23%, with urban, residential, commercial and industrial land use make up to around 2.5% of total regional land use.

The region's economy is strongly shaped by its landscape, with rural production and tourism acting as the main drivers of economic activity and export earnings, accounting for 9.8% (agriculture) and 19% (tourism) of regional exports in 2023. Smaller sectors such as construction, health services and education also contribute to the economic base.

Mining is another important industry, accounting for around 6.2% of regional exports in 2023, with the Macraes Operation making up most of this output^{Error! Bookmark not defined.}. Compared to other sectors, mining has a low employment rate, but relatively high export value compared to the other sectors.

Tourism, hospitality and accommodation businesses are concentrated in Queenstown Lakes and Central Otago, while Dunedin functions as the region's main commercial centre, home to major employers in education, health and other services. Agricultural businesses are distributed widely across the rural districts throughout Otago.

The key demographic statistics for the Otago Region (**Appendix A**) are summarized as follows:

- With a 2023 population of 240,894, the region has experienced population growth in line with national population growth, increasing by 7% between 2018 and 2023 and by 18.9% over the past ten years.
- In 2023, the region's population was predominantly of European ethnicity (76.1%), which is higher than the New Zealand average of 58.5%. Māori, Pacific Peoples, and Asian populations were all significantly

⁴ Otago Region Economic Profile for Land and Water Report 2023 - https://www.orc.govt.nz/media/14680/otago-economic-profile-for-water-and-land_v9-2.pdf
1-E0553.00

lower than the national averages, comprising approximately 9%, 3%, and 7.5% of the regional population respectively (compared with 15.4% Māori, 7.7% Pacific Peoples, and 14.9% Asian nationally).

- The New Zealand Index of Deprivation (NZDep) provides an area-based measure of socio-economic deprivation using a score of 1 to 10, where 10 presents the most deprived. In 2023, the mean deprivation index in the Otago region was 4.7, which is lower than the national score of 5.6.
- Construction, health care and social assistance, education and training, and retail trade are the top 4 industries in the region in terms of number of employees, with over a third of the population (42%) in the occupation of either manager or professional. The population has similar education levels to the national averages, and a lower mean annual income compared to the national average.
- Home ownership in the region is similar to the national average with both being approximately 55%. The mean years of residence in the region is 8.3 years, which is indicative of a relatively stable regional community.

The regional context demonstrates that Otago is a growing region with a stable population, skilled workforce, and diverse economic base. Within this broader regional economy, mining represents a strategically important industry that contributes to regional exports, employment, and business activity. Understanding these characteristics provides important context for the assessment, as it highlights both the region's capacity to absorb and adapt to change, and the ongoing social and economic value that continued mining activities provide to the Otago region.

5.3 LOCAL STUDY AREA CONTEXT

The local study area is defined to include the full extent of the Dunedin City Council area and the southern part of the Waitaki District, stretching from Dunedin in the south to Oamaru in the north and extending inland to include Macraes and Middlesmarch (**Figure 4-1**). The main townships within this area include Dunedin, Oamaru, Palmerston, Waikouaiti, and Macraes. The local study area serves as the core employment and economic catchment for the Macraes Operation, with around approximately 85% of the workforce and many supporting businesses based within it.

5.3.1 DEMOGRAPHICS

A review of the demographic profile of the local study area provides an understanding of the existing social environment. Baseline data collected (**Appendix A**) has been summarised below to provide some insights into the nature of the local study area:

- The local study area had a population count of 147,315 in 2023. This reflects a 7.8% increase over 10 years (2013).
- The local study area has a similar age distribution to the region, with approximately 40% being under 30 years old, and around 41% being between 30-64 years old.
- Similar to the region, the local study area population in 2023 was predominantly European (75.2%), which is higher than the New Zealand average of 58.5%. Māori, Pacific Peoples, and Asian populations were all lower than national averages, resulting in a less diverse ethnic composition locally compared to New Zealand.
- The local study area received a deprivation score of 5.4 in 2023, compared to the region's score of 4.7. This shows the local study area has moderate levels of deprivation and is slightly more deprived than the overall region based on the factors the New Zealand Index of Deprivation use (e.g., income, home ownership, employment, qualifications, family structure, housing, access to transport and communications).
- Educational attainment in the local study area is broadly comparable to regional and national levels, with similar proportions of people holding bachelor's degrees or higher.

- The mean annual income in the local study area (\$43,212) is lower than the regional mean (\$46,375) and national mean (\$48,767). This reflects lower overall earning levels despite comparable qualification profiles to national levels.
- Labour force participation in the local study area is lower than regional and national averages, with a smaller proportion of full-time workers and a higher proportion of people not in the labour force.
- Health care and social assistance, education and training, retail trade and construction are the top 4 industries in the local study area in terms of number of employees, which is the same as the region's top industries. However, health care and social assistance is the top industry in the local study area (13%), while construction is the top industry in the region (11.8%). This is likely due to Dunedin being included in the local study area which is home to major employers in education and health.
- Professional occupations make up a relatively high share of employment in the local study area (27.2%), comparable to national levels (26.8%), while managerial roles are less prevalent than in the region and across New Zealand (14.1% compared to 18.2%).
- Home ownership rates in the local study area are higher than both the regional and national averages (58% compared to 55%), and residents tend to live in the area slightly longer on average (9 years compared to 8.2 years), indicating a relatively stable and established population.

Overall, the demographic profile indicates that the local study area comprises stable and established communities with strong ties to the area, relatively moderate levels of socio-economic vulnerability, and a mix of larger urban centres and smaller rural settlements. While Dunedin provides a diverse economic and service base, smaller settlements such as Palmerston, Waikouaiti and Macraes are more sensitive to changes in major employment and economic drivers.

5.3.2 LOCAL BUSINESS PROFILE AND INSIGHTS

The business environment across the local study area reflects a mix of larger, more diverse economic centres (such as Dunedin and Oamaru) and smaller towns where businesses are closely tied to the local population and surrounding land uses (including Palmerston, Waikouaiti, and Macraes).

Interviews with local retail, hospitality, contracting, and engineering businesses indicate that, in smaller centres, businesses are more strongly connected to the presence of the Macraes Operation and the workforce it supports. Multiple businesses described the mine as a key reason for their location and ongoing viability. Businesses reported that mining-related activity supports employment, extended operating hours, and demand for local goods and services. Across the wider study area, contracting and engineering businesses have evolved alongside the mine while also servicing other sectors. Interviewees described substantial growth in staffing levels and business capacity over time, with mining-related work accounting for a significant proportion of overall activity. Businesses noted that this work has supported investment in staff, equipment, and technical capability, helping to strengthen the local service sector and its ability to operate across a range of industries.

5.3.3 COMMUNITY INFRASTRUCTURE

An overview of the community facilities and infrastructure within the local study area is provided below with key community facilities reflected on **Figure 5–1**.

- **Schools:** There is a primary school, Macraes Moonlight School, located in the Macraes township and multiple schools within the local study area, many of which are located within Dunedin. Oamaru also has several primary, intermediate, and high schools. The smaller towns within the local study area consist mainly of one primary school per town for local families. Palmerston is an exception, as it has East Otago High School, which is the closest high school to Macraes, serving families from nearby rural areas.
- **Health facilities:** Healthcare services within the local study area are primarily centred in Dunedin and Oamaru. Dunedin provides comprehensive hospital and specialist services, while Oamaru offers a

hospital with emergency, inpatient, and community care. Smaller towns such as Palmerston and Waikouaiti rely mainly on local GP services, though residents of some smaller towns, like Macraes, need to travel to access health facilities.

- **Recreational and reserve areas:** Recreation and reserve areas are widely available across the local study area. Dunedin has a wide range of parks, reserves, and natural areas for outdoor activities. Oamaru also has local parks, gardens, and coastal areas for recreation. Smaller towns like Waikouaiti and Palmerston have local reserves and beaches. Rural inland areas have fewer formal parks and instead rely more on natural open spaces and travelling to nearby towns for recreation.
- **Community services:** Community services include libraries, social facilities, community centres, community and town halls, and government services. These services are concentrated in the larger centres being Dunedin and Oamaru, with only a few located in the smaller towns.

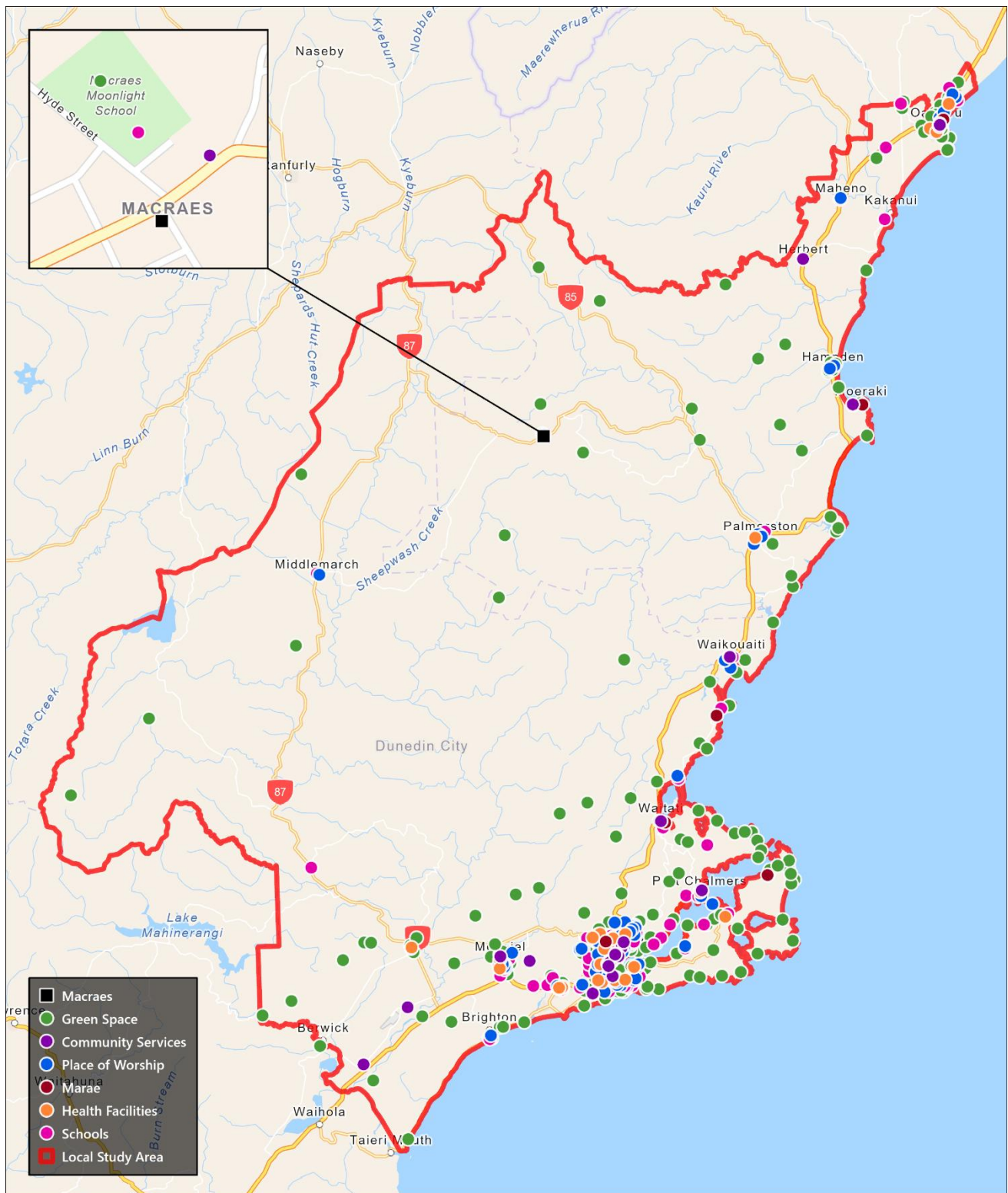


Figure 5–1: Community facilities within the local study area

5.4 COMMUNITIES WITHIN THE LOCAL STUDY AREA

The sections below describe the existing social environment of the communities within the local study area. These communities include Dunedin, Oamaru, Palmerston, Waikouaiti and Macraes (**Figure 5–2**). To provide context on proximity, Macraes is approximately 30-minute drive from Palmerston, 40 minutes from Waikouaiti, and 1 hour 15 minutes from both Oamaru and Dunedin.

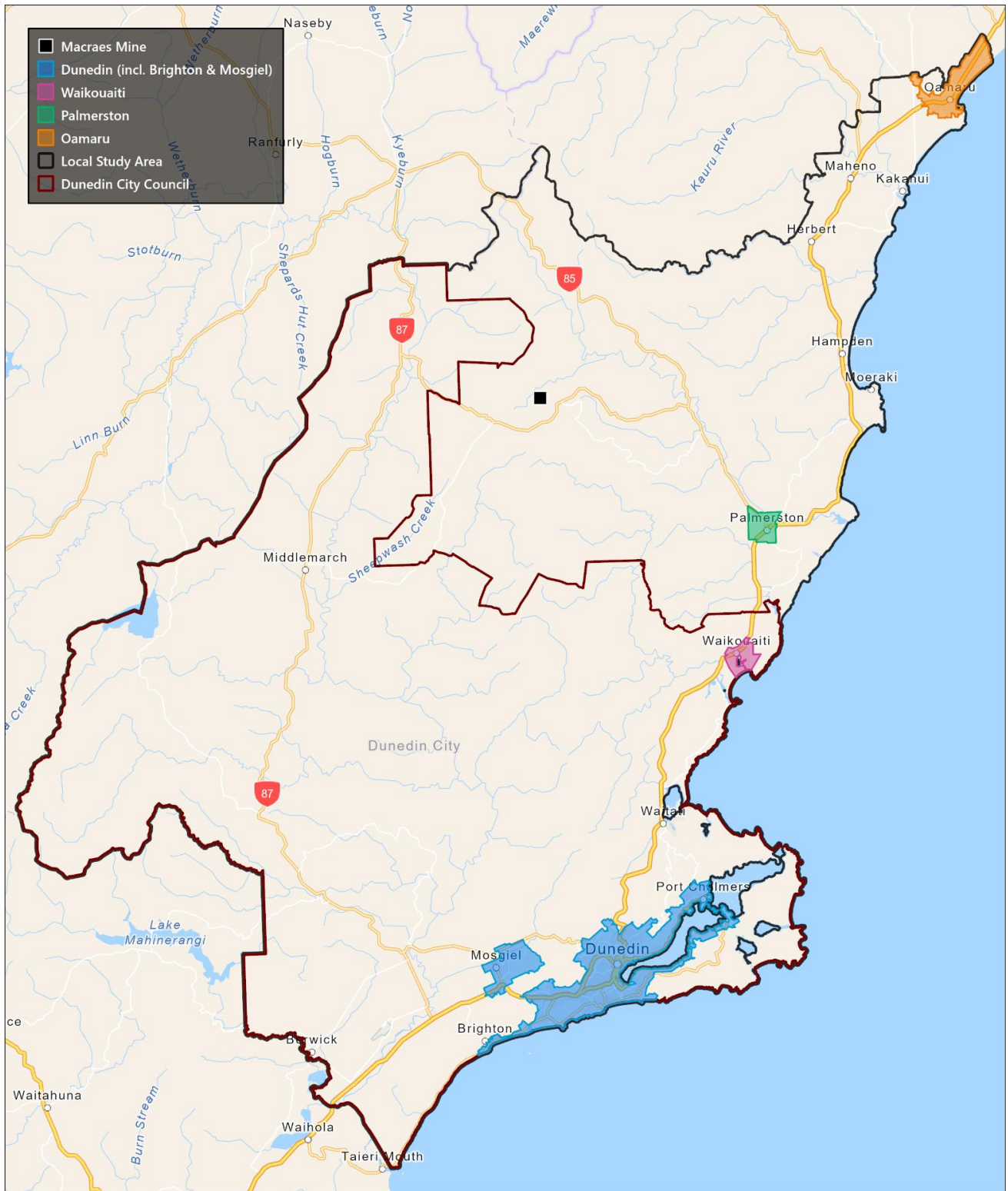


Figure 5–2: Main towns within the local study area

5.4.1 DUNEDIN

Dunedin is the main urban centre within the local study area, located on the coast and forming the southernmost city in the area (**Figure 5–2**). With a population of 116,916 in 2023, it accounts for nearly 80% of the local study area’s total population (147,315), and functions as the key hub for services, jobs, and education.

The city has a broad and relatively stable economy, with a strong focus on health care, education, and professional services, reflecting the presence of major institutions such as the University of Otago and associated health facilities. A wide range of businesses are also located in the city, including those that support regional industries such as mining, reinforcing its function as a key service centre. A low percentage of the Dunedin population works directly in the mining sector (0.5%).

Dunedin also provides a wide range of services and facilities that support nearby towns and rural communities. Many people travel to the city for work, education, and access to higher-level services, contributing to its role as the main centre for the wider area.

5.4.2 OAMARU

Oamaru is the northernmost settlement in the local study area (**Figure 5-2**) and the largest town in the Waitaki District, functioning as the district's primary service, employment, and community centre, supporting surrounding rural areas. This role is reflected in the concentration of community infrastructure and services in the town (Figure 5-2). In 2023, Oamaru had a population of approximately 13,662 people.

Oamaru's economy is strongly influenced by agriculture and food processing, with manufacturing the dominant employment sector (24.6%) and relatively low employment in mining (1.2%). This corresponds with Oamaru having the highest proportion of labourers (20.6%) in the local study area. The Alliance Group meat processing plant at Pukeuri is critical to local employment and economic stability⁵.

The census data indicates people in Oamaru have a higher level of neighbourhood-level socioeconomic deprivation and lower formal qualification attainment than the local study area and Otago region. Despite this, Oamaru has a stable population with a mean length of residence of 9.1 years, and a strong sense of identity shaped by its historic built environment and heritage values, which provide attraction to tourists.

5.4.3 PALMERSTON

Palmerston is a small rural town in East Otago, located around 50 km north of Dunedin, with a population of approximately 888 (2023). It functions as a local service centre for surrounding farming communities and benefits from its position on State Highways 1 and 85, with pass-through traffic supporting local businesses. The town is described as safe, stable, and community-oriented, with an older population (informed by interview insights). It also has relatively higher deprivation (mean NZDep 6.8) and a higher proportion of residents with no formal qualifications (26.7%), indicating some underlying vulnerability.

Palmerston has a modest but important range of social infrastructure, including shops and a supermarket, a health centre, primary school and high school (serving a wide rural catchment), and volunteer fire brigade services.

Mining is a key part of Palmerston's economy, with 17.0% of the workforce employed in mining and 30.2% in machinery, driving, and labouring roles. Interview insights highlight that many local families are connected to mining, with the sector supporting population levels, school rolls, local services and local spending⁶.

5.4.4 WAIKOUAITI

Waikouaiti is a small coastal township located approximately 45 km north of Dunedin, with a population of around 1,257 (2023). Situated on State Highway 1, it functions as a local service and residential centre for surrounding coastal and rural communities within the wider Waikouaiti Coast area (e.g., Waitati, Karitāne, Warrington). The town is characterised by a stable but ageing population, with 32% of residents aged 65 and over and 43% not in the labour force. Its strong sense of place is reinforced by high home ownership (75%) and long average residency (10 years).

⁵ https://www.buildingbetter.nz/wp-content/uploads/2023/08/Mackay_et_al_2018_planning_for_regeneration_Oamaru_LPR.pdf

⁶ <https://www.odt.co.nz/regions/north-otago/palmerston-community-thriving-mine>
1-E0553.00

Waikouaiti has an established network of local social infrastructure, including local shops, Waikouaiti Primary School, a health centre, golf course, a volunteer fire brigade, and community support services led by organisations such as POWA (Progress of Waikouaiti Area), who operate initiatives such as a local food bank.

Like Palmerston, the mine has a strong influence in Waikouaiti with 9% of the workforce employed in mining. Interview insights noted that many families in Waikouaiti are connected to the mine.

5.4.5 MACRAES

Macraes is a very small and highly rural settlement in inland East Otago, located approximately 55 km north of Dunedin. It functions primarily as a farming and mining community, with Macraes Gold Mine having been established adjacent to the town. The permanent population is small (approximately 141 in 2023⁷), reflecting its function as a specialised settlement rather than a typical town. The area is characterised by an open, quiet and remote landscape, with both historic and modern gold mining sitting alongside long-established farming activity.

Social infrastructure is minimal but highly important to community life. Macraes Moonlight School is a key facility, with a very small roll (around 12–20 students), and functions as a central community hub in an otherwise dispersed settlement. Stanley's Hotel, a historic pub established in the 1880s, is the only commercial hospitality venue and continues to operate as a bar, accommodation provider, and social meeting place. There is also the Macraes Pavilion and other small community facilities. These places form the core of social life, with interview insights reinforcing that the school and pub act as the two primary centres of community activity. Interview insights also confirmed OGNZL supports and maintains these community facilities.

Macraes' character is strongly shaped by mining activity. Interview insights indicate that most permanent residents are either involved in farming or mining, with limited alternative reasons to live in the area. The settlement also accommodates a more transient workforce, with mine workers often staying locally in caravans or the hotel during shift rotations. Interviews highlight a high level of reliance on mining, with views that the settlement may not exist in its current form without it, while also noting the presence of many mining-related families connected to the school and wider community. At the same time, the area is valued for its quiet, isolated, and tranquil environment, and functions as a niche visitor destination, with its historic mining landscape and rural setting attracting tourism (informed by interview insights).

There are two existing Macraes community structures in place, that were established by OGNZL following commitments made during the original mining consent process:

- Macraes Community Incorporated (MCI): is a committee made up of representatives of the Macraes Community. MCI meets with OGNZL every second month. This formal meeting provides them an opportunity to express community concerns, ask questions and discuss opportunities and challenges facing both parties. It also gives a chance for OGNZL to provide an operational and business update.
- Macraes Community Development Trust (MCDT): was established in 2014 to support post-closure outcomes and maintenance of community assets. The initial sum is currently invested. The trusts' purpose is geographic and community specific and seeks to benefit residents of the Macraes area specifically. Although established in anticipation of closure, the Trust has continued operating as closure has been deferred through subsequent consent extensions. Whilst the primary role of the Trust is to support sustainability of the community post-closure, the Trust supports the community with financial support including for maintenance works to the hotel and other community assets and funding of a second teacher at the local school.

6 MP4 ASSESSMENT

6.1 OVERVIEW

The potential social impacts associated with MP4 that have been identified are described and assessed in this section. The IAIA recommended risk assessment methodology has been used to identify the overall significance of the impacts. A detailed assessment matrix is included in **Appendix D**.

6.2 WAY OF LIFE

6.2.1 *JOB SECURITY AND SUSTAINED LIVELIHOODS*

The continuation of the Macraes Operation beyond 2030 will result in job security for the existing workforce for an extended period. This continued employment will result in sustained livelihoods for those directly employed, and their families and dependents. This will result in maintaining the quality of life currently experienced by employees and their dependents, the majority of whom live within the local study area. In addition to the direct jobs that will be retained, MP4 will result in secondary job security to those employed by businesses that provide goods and services to the Macraes Operation, as well as indirect employment stability in other sectors associated with a sustained local economy.

The Economic Assessment (Eaqub & Eaqub, 2026) identified MP4 as an important contributor to employment security and sustained livelihoods, retaining approximately 760 direct jobs and supporting an estimated 2,600 jobs nationally through supply chain and induced economic effects. The assessment notes that Macraes Operation provides stable, highly paid employment, with average annual earnings exceeding \$100,000, approximately 40% higher than the Otago regional average. With around 85% of employees residing within the local study area, the continuation of mining operations will help maintain household incomes and sustain livelihoods.

Business representatives responding to the online supplier survey emphasized that MP4 will enable the retention of current staff and investment into skills development and training. Survey respondents commented that continued mine operations provided well paid direct jobs that support households, and underpinned population retention in surrounding towns with the associated sustained local spending supporting secondary employment.

During the interviews held with neighbours and community representatives, the role that the mine plays in direct employment in the local study area was highlighted by several key informants as significant. One interviewee noted that mine related employment was characterised by higher-than-average pay (compared with traditional farming roles), and multiple interviewees noted that some local residents had worked for the mine at some point, indicating that mining has been a key source of relatively well-paid employment relied on by many in the local area.

Impact statement

Continued job security and sustained livelihoods during the operational phase of the MP4 is a positive impact directly affecting 760 existing OGNZL staff and their families for a medium-term period. With approximately 85% of OGNZL staff living within the local study area, the impact will be experienced primarily at a local level, while also extending to regional and national levels through supply chain, contractor and induced employment effects. Given MP4 will extend the life of the mine for at least 10 years, the duration of the impact is considered medium term. The magnitude of the impact is considered high, given many people will be affected within the wider community. The overall consequence of the impact is evaluated as moderate, and should MP4 be approved, the likelihood of the impact occurring is almost certain. The potential for job security and

sustained livelihoods occurring as a result of MP4 is therefore rated as being of **extremely high (positive) significance**.

Mitigation

None required.

6.3 COMMUNITY

6.3.1 CONTINUED COMMUNITY STABILITY

Sustained business activity and economic stability contribute to the social wellbeing of communities by supporting employment, household incomes, business confidence and the continued provision of local goods and services. In rural communities, the presence of a large and stable employer can help sustain population levels, support local spending, and strengthen the resilience of businesses that rely on ongoing economic activity. The Macraes Operation supports a broad network of suppliers, contractors and service providers that contribute to the economic stability of communities within the local study area and across Otago.

The Economic Assessment (Eaqub & Eaquib, 2026) estimates that MP4 will generate approximately \$3.1 billion in expenditure within New Zealand over the life of the project, including around \$1.0 billion within the Otago region, while contributing between \$2.4 billion and \$3.1 billion to national Gross Domestic Product (GDP). The assessment identifies the mine as a significant contributor to the Otago economy and notes that a substantial proportion of project expenditure and associated economic activity occurs within the region.

By extending mining operations beyond the current life of mine, the project will provide ongoing demand for goods and services, supporting local businesses, strengthening supply chains, and contributing to economic resilience within surrounding communities. The continuation of mining activity is therefore expected to help sustain local employment, business viability and household incomes. This will support population retention, local service provision and community stability, while providing ongoing economic benefits at regional and national levels.

The business survey undertaken by existing Macraes Operation suppliers provided insights into the anticipated impact of the MP4 on local, regional and national businesses:

- The vast majority (81%) of businesses have been operating for more than 10 years which is an indication of long-term economic stability.
- A large proportion of the survey respondents (71% of all businesses, and 78% of local businesses) stated that MP4 would have a positive effect on their business resulting in benefits centred on business continuity and certainty.
- Sustaining or potentially expanding employment, maintaining sales, and supporting planning and investment were cited as some of the benefits of extending the life of the mine.
- If there was an increased demand for goods and services to support the mine, 47% of businesses stated they would invest and increase staffing levels, and 39% indicated they would refocus their activities on mine-related demand.
- 90% of survey respondents stated that their business would benefit from MP4 and the extended life of mine.
- Respondents consistently highlighted that MP4 would provide long term certainty allowing suppliers to retain current staff, maintain business stability and enable long-term planning and investment.
- Ongoing mining operations were viewed as important for keeping businesses viable, supporting local supply chains and sustaining regional activity.
- Many respondents highlighted the importance of the mine in retaining people in the region, supporting local towns, and underpinning community wellbeing.

Several of the neighbours and community representatives interviewed highlighted the substantial economic benefit that the mine provides to local and regional businesses. The mine is considered valuable to the economic and social stability within the smaller urban centres in the local study area, in particular Palmerston and Waikouaiti, where mine-related employment and business expenditure contribute to local spending, support community services and help retain residents.

Key local business informants were interviewed to obtain an understanding of business establishment and growth in relation to the Macraes Operation, and what MP4 means for their business. The local businesses interviewed differed in terms of size and scale, and the extent to which the Macraes Operation contributes to their business' revenue ranged from approximately 10% to more than 80%. From these interviews it was evident that current mining operations are a key contributor to business stability in the local area and continuation of mining will provide certainty and stability for local businesses. Four of the five local businesses interviewed stated that they would be able to respond to an increased demand for services from the mine, if required. One local business representative described the mine as *a key driver of the local economy, benefiting a wider range of businesses and services*, and that mining activity has *supported the establishment and viability of local engineering, contracting, transport and services businesses*. Based on the benefits already experienced due to the existing mining operations, local business informants noted the following local economic benefits of MP4 which are summarized under themes below:

- **Sustained demand for local suppliers and contractors:** MP4 is expected to maintain demand for locally based services, supporting ongoing turnover and variability.
- **Business certainty and stability:** Continued mining activity provides confidence to local businesses to maintain operations, staffing levels and incremental investment, providing some level of insulation to other market factors, therefore reducing economic instability in the local study area.
- **Employment retention and income security:** The expansion supports stable jobs (directly and indirectly), including well-paid roles, helping to retain workers and households in the local study area and contributing to a stable and sustainable community.
- **Flow on support for the wider local economy and the community:** Ongoing mining activity underpins spending in local towns, contributing to service availability and business diversity. The mine supports the presence of specialized skills, equipment and services which benefit businesses and residents in the local study, reducing the reliance on external providers.

Impact statement

MP4 will contribute to continued community stability by maintaining demand for goods and services, providing ongoing business certainty and supporting local employment and household incomes. This continued economic stability will benefit both businesses and communities within the local study area, while also generating broader regional and national economic benefits. Given MP4 will extend the life of the mine for at least 10 years, the duration of the impact is considered medium term. The magnitude of the impact is considered high as many will be positively affected by the sustained local, regional and national economic benefits delivered by the project. The consequence of the impact, which requires consideration of extent, duration and magnitude, is assessed to be moderate. Given the impact is considered likely the overall significance of the impact has been rated as being of **high (positive) significance**.

Mitigation

None required.

6.3.2 CONTINUED LOCAL COMMUNITY BENEFITS

The presence of the Macraes Operation supports key community infrastructure in Macraes and results in a range of community benefits in the local study area. These benefits include the mine's support of Stanleys Hotel and Macraes Moonlight School; access to emergency response services; road and infrastructure

maintenance; and the availability of a wide range of services to communities within the local study area. MP4, which seeks to extend the life of the mine, will result in the continuation of these benefits described below.

Macraes Community Development Trust, whilst established to support to the community post-closure, the trust provides ongoing financial support to the community. This fund has provided benefit to the community by responding to specific needs and maintenance requirements, contributing to maintaining the quality and functioning of the community.

Stanley's Hotel, owned by OGNZL, has a long history dating back to the 1880's. The hotel provides accommodation; however, the bar and restaurant generate a large proportion of the hotel's revenue. Mine workers and contractors form the largest customer group (approximately 60%), with local residents and tourists making up the remainder of the customer base.

The mine has a strong influence on the hotel's operation and viability, with trade from mine workers allowing the hotel to remain affordable for locals. One key informant interviewed stated that *"if it wasn't for the mine, the hotel would cease to exist"*. The presence of the mine provides a consistent customer base which supports stable operations, and as a result, maintains a key community asset for local residents. The hotel is a regular meeting place for Macraes residents and provides part time work for several local residents. The hotel has been described as a central community venue and the primary social outlet, particularly given the lack of sports or social clubs in the village. The hotel supports community wellbeing, providing an informal space which facilitates social connection and where residents are supported.

Macraes Moonlight School, established in the 1860's, provides education for Year 0-8. The school roll, which is currently 12 students, fluctuates depending on local demand and has been as high as 26 students in recent years. The students come from Macraes Village and surrounding rural areas, and the school community represents a mixture of farming and mining families. The school has two teachers, one of which is supported through funding from the mine and the community. According to the school representative interviewed, MP4 will support the continued operation of the school by ensuring student enrolment, financial viability and staffing levels are maintained.

The school functions as a community hub, with the school representative interviewed stating that *"the school is the core of the community,"* and that *"the community rally around"* when the school needs help. The school contributes significantly to the local identity and community, particularly with farming families as multiple generations have attended the school, with former parents continuing to support the school long after their children have moved on.

Emergency response services are available locally to the Macraes community, through access to the mine's emergency response team. In the event of an emergency, the community can contact this team and receive immediate medical and/ or emergency support. From accounts received, it appears this facility is well used and valued by the community. Both community representatives and neighbours interviewed highlighted this as a significant community asset, described by one neighbour as *"an awesome facility for the community"* due to the rapid response times and availability in quite a rural, remote area.

Infrastructure maintenance was raised during interviews with community representatives. Several interviewees identified that maintenance of infrastructure is a positive effect of the current Macraes Operation. It was noted that the mine provides practical assistance (equipment and labour) that helped maintain community assets, that without this support would be costly to the community.

Locally available services enabled by the presence of the mine was a key theme that emerged during interviews with local business representatives. The Macraes Operation has enabled a range of specialised engineering, mechanical, contracting and equipment services to establish and remain viable locally. Interviewees noted that these businesses support not only the mine but also farmers, rural landowners, and other local businesses, reducing the need to source services and equipment from larger centres such as Dunedin. Interviewees noted that this improves service availability, reduces costs and travel requirements, and helps retain specialist skills, equipment and workforce capacity within the local area. MP4 will allow

residents and businesses in the local study area to continue to have access to these services locally, with several interviewees noting that mine-driven demand helps maintain service availability and, in some cases, enables businesses to offer more competitive pricing to the wider community.

Impact statement

Continued mining operations as a result of MP4 will maintain valued community services and infrastructure in Macraes and continue the provision of locally available specialist services benefitting the community in the local study area. Given MP4 will extend the life of the mine for at least 10 years, the duration of the impact is considered medium term. The magnitude of the impact is considered moderate, given the value the benefits bring to Macraes village and the number of people that will benefit from locally available services in the local study area. The overall consequence of the impact is evaluated as moderate, and should MP4 be approved, the likelihood of the impact occurring is almost certain. Continued locally available services as a result of MP4 is therefore rated as being of **extremely high (positive) significance**.

Mitigation

None required.

6.3.3 CONTINUED BUSINESS RELIANCE ON MINING

There are a wide range of local, regional, national and international businesses that supply goods and services to the Macraes Operation. Most relevant to businesses in the local study area, the proposed MP4 project may perpetuate economic dependency and postpone the diversity required to insulate businesses from the eventual closure of the mine. If there is a high dependency on mining, the closure of the mine will create challenges for the diversification of the local economy and employment retention. The extent to which local businesses are reliant on mining related activities informs the level of resilience they have to change and the potential overall impact on local community stability.

Based on the supplier survey outcomes, across all businesses, the average percentage of revenue that is linked to Macraes Operation is 18.1%, while for local businesses, the average percentage of revenue linked to the mine is higher at 29.6%. Respondents to the business survey were asked about the resiliency of their business to a slowdown in mining operations and mine closure (**Figure 6–1**). The data collected confirms that local business suppliers have a higher dependency on mining operations than other suppliers with 26% entirely dependent on Macraes Operation, compared with 14% across all existing suppliers. Regarding resilience, a large proportion of businesses (52% of local businesses, and 48% of all businesses) have indicated they could diversify if needed, and 37% of all businesses and 22% of local businesses are not dependent on mining and would be largely unaffected by a slowdown or closure of mining. The representative data set indicates a high level of resilience and business diversity currently.

Business survey respondents were asked to indicate their level of agreement with a series of statements. The responses provided some insights into the extent to which Macraes suppliers are prepared for mine closure (**Figure 6–2**). Whilst most respondents (60%) agreed or strongly agreed with the statement “the business is well prepared for the eventual closure of the mine”, 63% of business representatives also stated they would benefit from more time to plan for mine closure. MP4, if approved, will extend the life of the mine for at least 10 years, providing additional time for business continuity planning.

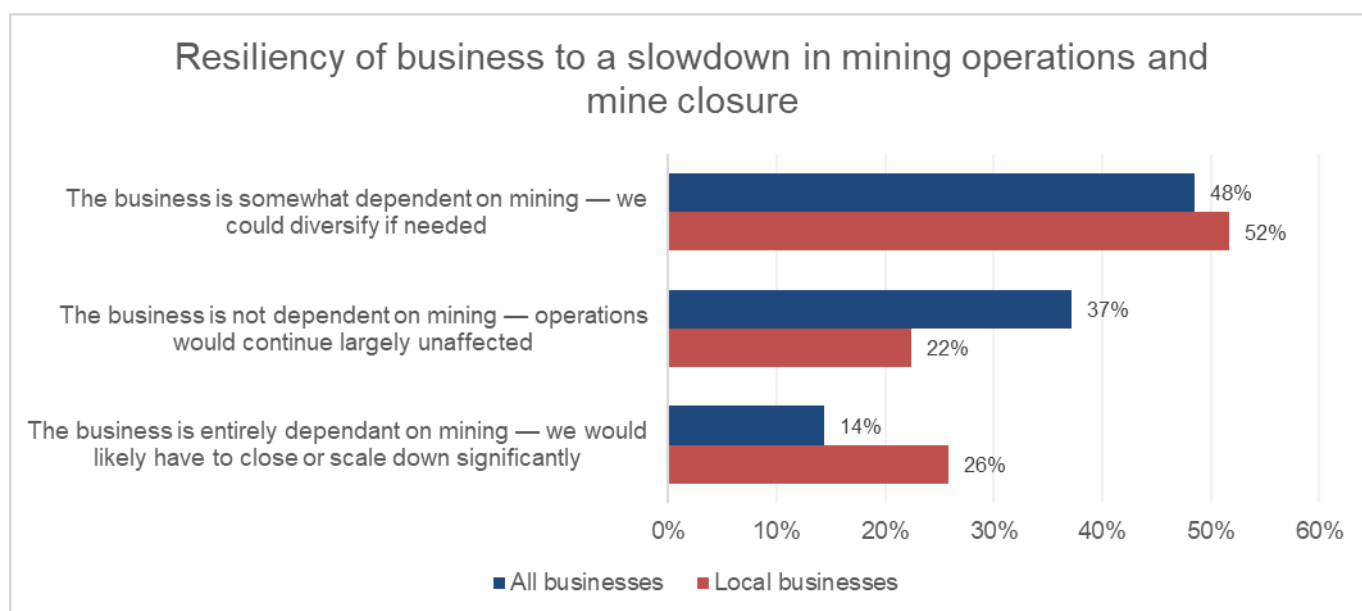


Figure 6–1: Insights regarding resilience of businesses

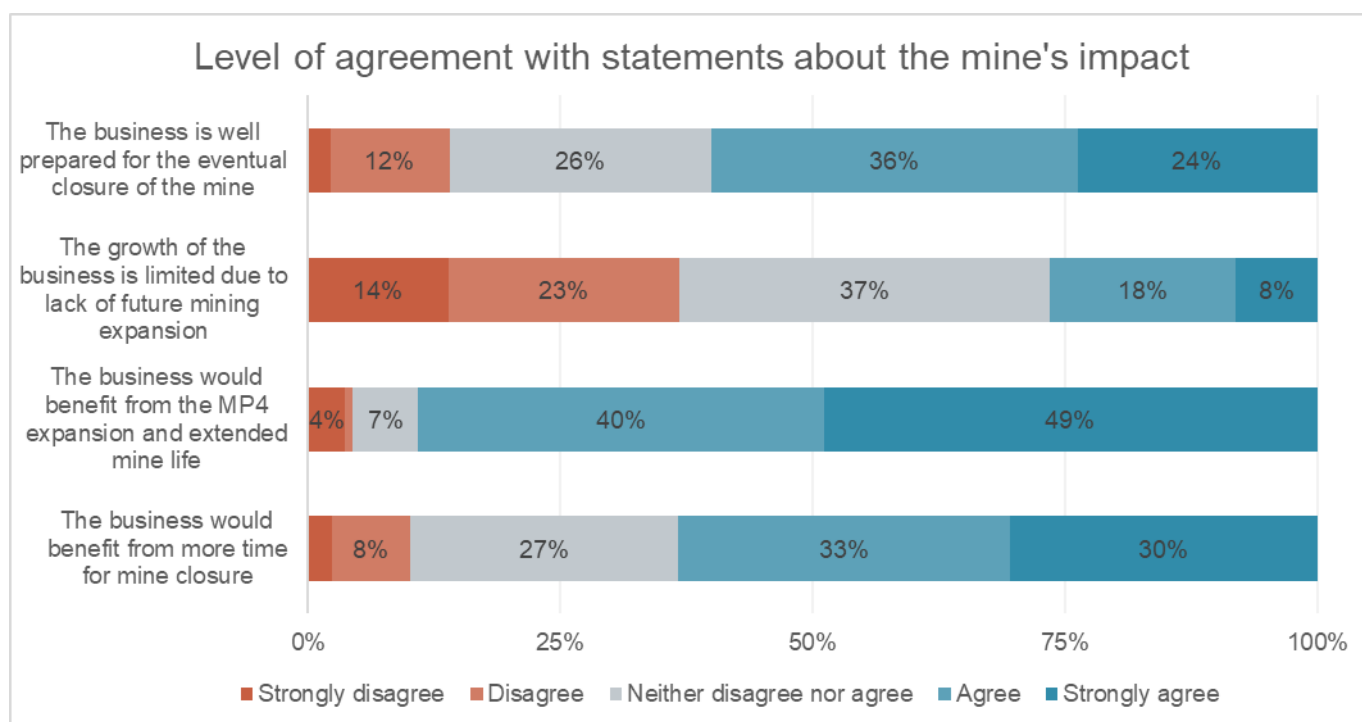


Figure 6–2: Business resilience and preparedness for closure

OGNZL has a wide range suppliers that provide the goods and services required to support the Macraes Operation. Based on the representative sample of data collected from suppliers, the average full-time equivalent staff employed by all businesses is 216, and 37 for local businesses. Across all businesses, 45% have 10 or fewer employees, while 16% have over 100 employees. This indicates that a large proportion of the mine's suppliers are small businesses, confirming that OGNZL's procurement approach allows supplier benefits to be spread widely which contributes to reducing dependency on the mine.

From the key informant interviews held with local businesses representatives, it was evident that the businesses varied widely in respect of reliance of the mine, diversification and level of resilience. Some businesses remain highly dependent on mining activity, with limited diversification and strong exposure to closure risks. Others have used the mine as a platform for growth and diversification, developing capabilities

and entering new sectors that provide resilience. Interviews highlighted the varied vulnerability of local businesses; and whilst most businesses are likely to be largely resilient, there will be some for which MP4 represents a postponement of diversity and resilience.

Impact statement

MP4 will provide stability for the existing suppliers of goods and services to the Macraes Operations. It is unlikely that the project will result in deepening reliance on the mine, given mine related revenue is distributed across a large number of businesses, with a large proportion of spend on smaller businesses. There is a good level of resilience across local businesses, however there are some businesses that are less diverse and require more time to plan for mine closure. The impact of continued business reliance on mining would occur over a medium-term duration, and the magnitude of this impact is considered low given that the impact would be experienced by only a few businesses. The overall consequence of the impact has been assessed as minor, and the likelihood is possible. Overall, the potential for MP4 to represent a continued postponement of local business resilience and diversity has been assessed to be of **moderate significance**.

It is recommended that OGNZL's procurement approach should continue to seek to spread local supplier benefits as widely as possible to reduce individual business dependencies on the mine and encourage diversity. In addition, it is recommended that communication between OGNZL and the business community within the local study area occurs to ensure open and transparent communication to inform business continuity planning. It is recommended that this communication covers aspects of reliance and resilience, provide businesses with up-to-date information relating to mining operations and to provide times lines associated with changes in business needs. The implementation of these recommended mitigation measures, the overall significance is assessed to be of **low significance**.

Mitigation

- OGNZL's procurement approach to continue to facilitate the spread of local supplier benefits across local businesses to reduce mine dependency
- Information sharing with the local business community to inform continuity planning.

6.3.4 CHANGE IN SENSE OF PLACE

In the context of this SIA, sense of place refers to an individual or community relationship with their local environment i.e. the social and natural character of the environment within which people experience their everyday life. Sense of place is a term that often refers to the unique identify of an area or the connection to a place that is highly valued by those that live there.

There is the potential that the operational phase of MP4 could have a negative impact on the sense of place and character of the local area that residents value. This is most relevant to those living within or close to Macraes village and mining related activity.

Macraes has a long association with mining, beginning with gold rush activity in the mid-1860s. More recently, large-scale modern mining commenced with the establishment of the Macraes Operation in 1990, over 35 years ago. As a result, many residents have direct or indirect links to the mine, and mining remains a defining part of the community's identity.

Those interviewed were asked what they value about living and/or working in the local area. For neighbouring landowners in the Macraes area, two key themes emerged. Firstly, they value the rural lifestyle with a strong emphasis being placed on tranquillity, low population density, and natural landscape; and secondly, many have strong personal and generational connections to place, with farms held for decades with land being valued due to family connection. For these reasons, place attachment is considered deep and identity-driven, rather than being purely about lifestyle.

Neighbouring landowners and community representatives consistently referenced strong social connections and informal support networks. Some key respondents described the community as safe and stable, where

people look out for each other's wellbeing. It was evident from the engagement undertaken that residents value the autonomy and self-sufficiency of living in the Macraes area (particularly the farmers) combined with a supportive local network which provides a sense of belonging.

Impact statement

Given current mining operations have been part of the Macraes identity for more than 35 years, the potential for a change in the sense of place due to MP4 is considered negligible. Whilst mining is part of the landscape, the community has a strong place-based identity that is not connected to the mine, and there is no evidence to suggest that this would be affected by a continuation of mining. Applying the assessment methodology, the consequence of the impact is insignificant and the likelihood is rare, resulting in an overall rating of **low significance**.

Mitigation

None required.

6.4 CHANGE IN THE QUALITY OF THE ENVIRONMENT

As a result of MP4, local residents may experience changes to the amenity and quality of their surrounding environment. The potential social implications of amenity-related effects, including changes associated with traffic, noise, vibration and blasting, lighting, air quality, and visual amenity are considered in this section.

Specialist technical assessments have been undertaken to assess potential environmental effects on local residents and the surrounding community. High-level summaries of the key findings from the relevant assessments are provided below, alongside feedback from engagement undertaken with local residents and community members which identified existing concerns and anticipated effects associated with MP4.

This information is presented under the relevant topic headings below. An overall impact statement is then provided to assess the social implications of changes to environmental amenity, together with proposed mitigation and management measures.

6.4.1 TRAFFIC

Traffic Assessment Summary – Impacts of MP4 on traffic and the existing transport environment were considered by the Integrated Transport Assessment (Stantec, 2026). The assessment concluded that MP4 will not result in additional traffic demand in the area as there is no increase in staff or production, and the proposed road realignments will also not result in adverse safety or efficiency effects. On this basis, the effects of MP4 on the existing transport environment are assessed as negligible and are not considered further in this SIA.

6.4.2 NOISE

Noise Assessment Summary – The Noise Assessment (Acoustic Engineering Services, 2026) found that most residential properties surrounding MP4 will experience low noise effects with predicted night-time noise levels at the majority of dwellings nearby are at or below the applicable standard of 40 dB L_{Aeq} (15 min). Noise from hydraulic mining, drilling, the relocated open pit workshop and most surface-level works is predicted to be very low at these locations. For these properties, no property-specific mitigation is required beyond standard operational noise management.

Higher noise levels are predicted at a small number of locations closest to haulage routes and waste rock activities. Most of these properties are owned by OGNZL, however, some privately owned properties and non-residential sites are predicted to experience exceedances of the applicable night-time noise standard:

- At 1726 Macraes Road and 2 Hill Street (Receivers 6 and 7), which are privately owned non-residential properties, there is a potential for noise levels of 41 to 43 dB L_{Aeq} (15 min) during some period of the project.

This is still consistent with the World Health Organisation (WHO) and NZS6802:2008 recommendations to allow occupants to sleep with windows open for ventilation. These predictions are based on reasonable worst-case operational scenarios and are not expected to occur continuously. Based on this, it is expected that noise effects would be no more than minor.

- At 406 Horse Flat Road (Receiver 20), intermittent night-time noise levels of between 44 to 46 dB $L_{Aeq}(15 \text{ min})$ may occur during some years of the project due to ore haulage. Mitigation at this property relies on haulage management and timing, supported by previously implemented dwelling upgrades, with no additional physical mitigation required. OGNZL has an existing agreement for previous consents with the property owner that, provided noise levels are limited to 50 dB $L_{Aeq}(15 \text{ min})$ or less, Affected Party Approval will be provided. We understand that an extension of this agreement to cover MP4 is being sought.
- At 1668 Macraes Road (Receiver 1), noise levels of 43 to 45 dB $L_{Aeq}(15 \text{ min})$, may occur during some years of the project. To manage these effects, the assessment recommends the construction of a noise bund on adjacent OGNZL-owned land and restricting specific surface-level earthworks at the Frasers West Waste Rock Stack and Innes Mills Backfill Stage 1 areas to daytime hours. OGNZL has an existing agreement with the property owner allowing noise levels of up to 45 dB L_{Aeq} and the assessment concludes that this limit can be achieved with the proposed mitigation measures in place.
- With these measures in place, the assessment concludes that noise from MP4 will generally be appropriate.

Engagement Summary - Noise effects were discussed by all neighbours and most community representatives interviewed. Three neighbours described noise in the earlier phases of Macraes Operation as significant, particularly at night, affecting sleep and household amenity. These same neighbours noted that either the mining related activity causing the noise has now ceased, or mitigation measures have substantially reduced impacts e.g., glazing windows and that current noise levels are generally acceptable.

All neighbours interviewed noted that noise is not a major day-to-day concern currently. Looking ahead, some neighbours and one community representative expressed concern that the proposed expansion could increase noise, particularly through increased truck movements and mining activity closer to residences. One neighbour was concerned that the proposed mining activity near their property would change the quiet, rural nature of the area.

6.4.3 VIBRATION AND BLASTING

Vibration/Blasting Assessment Summary - The Blasting Vibration and Airblast Assessment (techNick, 2026) concludes that MP4 is expected to result in no more than minor effects on nearby residences. The closest dwelling to proposed open pit blasting activities is located at least 900 metres from blasting, with most other residences located considerably further away. Predicted vibration levels at all residences are well below the applicable human comfort limit when conservative 'Reduced' or 'Mini' blast designs are used, while airblast levels are predicted to remain below 115 dBL at residential receivers. Blasting will continue to be managed according to the existing consent framework, conservative blast design, and ongoing monitoring, allowing blast designs to be adjusted where necessary to ensure compliance with vibration and airblast limits.

Engagement Summary - Blasting and vibration effects were not identified as a significant concern by any interviewees. Occasional blast events were noted; however, these were generally described as having minimal effect on daily activities. No specific concerns were raised regarding vibration impacts, property damage, or disruption associated with blasting activities.

6.4.4 LIGHTING

Lighting Assessment Summary - The Lighting Assessment (LDP Limited, 2026) concludes that the lighting associated with MP4 will result in very limited additional night-time lighting effects, largely consistent with the existing mining environment. Only a small number of rural residences and a low volume of night-time road users have any potential visibility of operational mine lighting, with most views screened by topography and

vegetation, and much of the lighting occurring within open pits and lower-lying work areas. The relocation of the Open Pit Workshop will remove an existing source of visible lighting from Macraes township, resulting in a net improvement for the most affected residences. With lighting designed to be low intensity, directed downward, and managed through proposed consent conditions, effects on residential amenity, wellbeing and road safety are assessed as low or negligible,.

Engagement Summary - No specific issues or concerns were raised in relation to lighting effects from the mine during the interviews.

6.4.5 AIR QUALITY

Air Quality Assessment Summary - The Air Quality Assessment (Tonkin & Taylor Ltd, 2026) concludes that dust from mining activities and emissions from the processing plant can be managed to ensure that adverse effects on sensitive receptors and the surrounding environment will be negligible. Sensitive receptors, including residences, community facilities and the school, are generally located away from mining activities, and strong, dry wind conditions capable of transporting dust towards these locations occur infrequently. Monitoring data demonstrate generally good compliance with consent limits, a downward trend in dust levels since 2022, and no dust complaints since 2020. Potential effects associated with PM₁₀, PM_{2.5}, respirable crystalline silica, arsenic and processing plant emissions are assessed as negligible or well below health-based assessment criteria. With the continued implementation of existing dust management and monitoring measures, overall air quality effects are assessed as negligible.

Engagement Summary - Dust from mining activity was generally regarded as a familiar and long-term feature of the environment. For some neighbours, dust was not a major day-to-day concern due to long exposure and expectations associated with living near a mine. However, one community representative raised concern about dust during dry conditions, particularly from truck movements on unsealed or grey rock surfaces. They noted occasions where it would cover windows of Macraes residents or dust clouds would extend nearly to Palmerston. This person raised concerns about increased dust emissions if the proposed expansion proceeds, especially near new or reopened pits.

6.4.6 VISUAL AMENITY

Visual Amenity Assessment Summary – The Landscape and Natural Character Effects Assessment (Boffa Miskell, 2026) assessed landscape, visual amenity and natural character effects associated with MP4. In terms of landscape effects, although mining landforms increase in scale, they remain largely within existing mining areas and do not introduce new mining landforms into the landscape. Progressive rehabilitation, landform shaping, revegetation and ecological enhancement initiatives are integrated throughout the project and closure phases, reducing the visibility and prominence of mining landforms over time. Landscape effects are assessed as low to low-moderate.

In terms of visual effects, views of the mine occur within an established mining context and are frequently filtered by distance, landform and vegetation. Progressive rehabilitation, retention of visual screening, revegetation of disturbed areas and lighting controls help to reduce visual effects during operations. Visual effects are generally assessed as low to low-moderate. An exception applies to the Golden Bar Mining Area, where adverse visual effects on local road users along Golden Bar Road are assessed as moderate during operations, reducing following rehabilitation.

In terms of natural character effects, operational effects occur primarily within already modified catchments where mining activities, water management infrastructure and stream diversions are required. Natural character effects are moderated through watercourse reinstatement, riparian planting, ecological restoration and enhancement measures, including restoration of headwater environments and habitat improvement initiatives. Natural character effects are assessed as low to low-moderate during operations and reduce over time as rehabilitation and enhancement measures become established.

Overall, the visual amenity, landscape and natural character effects associated with MP4 are predominantly low to low-moderate, which corresponds to minor effects. The exception is the moderate visual effects on local road users along Golden Bar Road during operations, which corresponds to more than minor effects (Boffa Miskell, 2026). Following rehabilitation, revegetation, watercourse restoration and ecological enhancement, the overall level of adverse effects is expected to reduce over time.

Engagement Summary - Visual change and landscape modification were consistently identified as noticeable effects of mining. Some neighbours described being able to see pits or mining infrastructure on the skyline but were not personally bothered by this. Others emphasised that the scale of land disturbance, including pit expansion and waste rock stacks, had significantly altered the landscape and was considered a negative aspect of mining.

Concerns were raised about cumulative landscape change over time, higher waste rock stacks, and the perception that rehabilitation is not keeping pace with ongoing disturbance. One community representative expressed concern about the lack of clear information regarding the final landform and appearance of the site following expansion and closure.

6.4.7 IMPACT STATEMENT FOR CHANGE IN THE QUALITY OF THE ENVIRONMENT

The potential impact of MP4 on people's quality of the environment will be experienced primarily by those living within close proximity to the mine site. During the operational phase, these impacts will occur over the medium term, for the duration of MP4. The magnitude of impacts is considered low because only a small number of residences are located near the mine, and the consequence is assessed as minor, with impacts considered unlikely given the specialist mitigation measures proposed. Overall, the impact of the change to people's quality of the environment is assessed as being of **low significance**. Engagement undertaken through interviews indicates that while communities further away tend to experience more of the broader benefits associated with the mine, those living in the Macraes area deal with the direct environmental impacts. Local neighbours and community representatives raised concerns primarily about noise, dust, increased waste rock stack heights, and whether rehabilitation is keeping pace with ongoing disturbance. Ongoing information sharing, together with clear avenues for raising issues and receiving feedback, has the potential to help address and alleviate these concerns.

6.4.8 MITIGATION

The mitigation identified within the environmental specialist assessments are supported. Mitigation recommended to address the social effects associated with the potential change in quality of the environment as a result of environmental effects include:

- Ongoing information sharing with local neighbours and the Macraes community about planned activities, potential environmental impacts, and the mitigation proposed, to reduce uncertainty and manage expectations. This information should be provided to people upon request where available.
- Maintain clear and accessible communication channels, including named points of contact and continuation of the existing OGNZL complaint registration and feedback process.
- Continued clear communication about rehabilitation progress and outcomes, including where rehabilitation has occurred, how it is keeping pace with disturbance, and what the final landform will look like at closure.

6.5 WELLBEING

6.5.1 REDUCED WELLBEING

Wellbeing includes positive emotions (i.e. contentment and happiness), satisfaction with life, fulfilment and positive functioning, and the absence of negative emotions such as depression and anxiety.

The proposed MP4 project has the potential to impact on the wellbeing of individuals as a result of:

- Reduced anxiety – this includes potential reduced anxiety (improved wellbeing) due to improved certainty associated with job security, business consistency and community stability.
- Increased anxiety (reduced wellbeing) regarding the continuation of mining and the potential effects of this on their way of life.
- Change in the quality of the environment – changes in amenity associated with the environment in which people live, particularly relating to aspects such as location and lifestyle that people value. Amenity affects such as increased noise, vibration, lighting, traffic and visual effects (assessed in **Section 6.4**) have the potential to impact on individuals' overall health and wellbeing.

From the neighbour and community representative interviews, the emphasis placed on the rural amenity and absence of urban pressures indicates that these are likely to be fundamental to individual wellbeing and quality of life. During interviews with neighbours there were no significant concerns raised regarding MP4 or continued mining at Macraes Operations. There were some references made to amenity related impacts such as noise and dust; however, these were described as having been historical and or mitigated over time. Whilst there seemed little anxiety associated with the project specifically, there were a few informants that noted that they didn't know much about MP4. It is noted that the OGNZL-led engagement was in its early stages when the interviews were held, and subsequent meetings with neighbours and community representative would have provided an improved understanding of MP4 and its implications. From a local business perspective, extending the Macraes Operation provides greater certainty of ongoing demand for services, supporting business stability and likely reducing anxiety (improved wellbeing).

Impact statement

Reduced wellbeing due to a change in the quality of the environment is likely to be limited to those living in close proximity to the proposed mining operations (site and surrounds) due to amenity related affects. The duration of the impact is medium term, and the magnitude is considered to be low given there would be only a few affected. In consideration of the extent, duration and magnitude of the anticipated impact, the consequence has been evaluated as minor. Given the likelihood of the impact is unlikely, overall the impact has been assessed as being of **low significance**.

Mitigation

- Ongoing information sharing with local neighbours and the Macraes community about planned activities, potential environmental impacts, and the mitigation proposed, to reduce uncertainty and manage expectations. This information should be provided to people upon request, where available.
- Maintain clear and accessible communication channels, including named points of contact and continuation of the existing OGNZL complaint registration and feedback process.

6.6 FEARS AND ASPIRATIONS

Fears and aspirations under the IAIA framework include perceptions of safety, fears about the future of the community, and aspirations for the future and future generations. The fears, perceptions and aspirations raised by the local community regarding MP4 have been identified. These are acknowledged in the sections below and mitigation has been identified to reduce uncertainty and monitor misconceptions

6.6.1 MINE REHABILITATION

Concerns were raised about the pace and quality of rehabilitation during active mining, with interviewees noting that rehabilitation is not keeping up with excavation, resulting in an expanding area of disturbed land. This contributed to uncertainty about whether consent conditions are being consistently met. Some interviewees pointed to physical issues in partially rehabilitated areas, including ground cracking, slips, and degraded access roads, and questioned whether land is being restored to a standard suitable for productive

future use, such as farming. Visual impacts were also highlighted, with rehabilitation described as acceptable from public viewpoints but poorer beyond visible edges, characterised by one interviewee as “window dressing.” These concerns were compounded by low confidence in monitoring and oversight, including council enforcement, and doubts that rehabilitation outcomes would improve under future or expanded mining operations.

Mitigation

- Clear communication about rehabilitation progress and outcomes, including where rehabilitation has occurred, how it is keeping pace with disturbance and meeting consent conditions, and what the final landform will look like at closure.

6.6.2 IMPACT ON WATER

Most of the neighbouring landowners interviewed expressed concern about the mine’s current impacts on water and groundwater, with uncertainty about whether MP4 would continue, worsen, or introduce new impacts on water.

Concerns relate to both water quantity and water quality, with uncertainty about how ongoing and future excavation may affect springs, groundwater systems, and stock water supplies. Some noted that springs which historically remained reliable now dry up at times, creating unease about the potential influence of mine water pumping. Others expressed strong concern about the condition of surface water, particularly runoff from waste rock dumps, and the implications this may have for stock health and downstream environments. These issues are compounded by broader uncertainty about groundwater behaviour and declining bore performance, as well as mistrust in explanations provided by the mine to date and lack of confidence that monitoring and oversight are sufficient. Together, these factors contribute to an ongoing fear that cumulative and long-term water impacts may not be fully understood or effectively managed as the expansion proceeds.

Mitigation

- Provide clear, regular communication to neighbours and the wider community on groundwater, springs, and surface water monitoring, using plain-language summaries of what is being monitored, what is changing (if anything), and how this compares with consent requirements.
- Increase transparency around water-related consent compliance and council oversight, including how monitoring results are reviewed and how potential exceedances or issues are addressed and enforced.
- Maintain clear and accessible communication channels, including named points of contact and continuation of the existing OGNZL complaint registration and feedback process.

6.6.3 IMPACT OF TRAFFIC

Two neighbours expressed concern about potential traffic and access changes associated with MP4. There is a fear that Golden Bar Road could become a primary access route (OGNZL has confirmed that this will not be the case), increasing traffic through farming land, and that access restrictions during blasting periods could disrupt movement if not appropriately managed. The Integrated Transport Assessment (Stantec, 2026) concluded that the effects of MP4 on the existing transport environment are assessed as negligible.

6.6.4 PERCEIVED EFFECTS ON PROPERTY VALUE

Concern about potential effects on land value and future development potential was raised by one neighbouring landowners during engagement process, particularly in relation to the proposed re-mining of the Golden Bar Pit area. The landowner was concerned that mining closer to properties in this area could adversely affect property values and limit future land development options. This concern was linked to increased noise, closer proximity to mining activity, potential changes in amenity, and ongoing uncertainty, which could make properties harder to sell or less attractive to future buyers.

It is acknowledged that perceived effects on property value may be a matter of concern for residents. However, effects on property values are excluded from this SIA. Under the Resource Management Act 1991, such effects may only be relevant where they arise from actual or potential effects on the environment, such as noise, dust, vibration, visual amenity and other amenity related effects which have been assessed in Section 6.4.

6.6.5 FUTURE ASPIRATIONS FOR MACRAES

The continuation of mining as a result of MP4 was described by multiple interviewees as a positive outcome for the future of the local area, particularly in terms of maintaining community stability, services, and population. Mining was widely accepted as part of the area's future, with neighbours and community representatives noting it has long been part of the landscape and continues to support people living in Macraes and surrounding rural areas. As one interviewee explained, *"The people that live in the houses here [Macraes] are here because of the mine... you wouldn't live here otherwise,"* highlighting its role in sustaining the local community. Continued mining was also seen as supporting key infrastructure, such as the local school, and delaying the social and economic impacts associated with closure.

At the same time, future aspirations reflect an underlying expectation that farming will remain a core and enduring activity in the area. Many residents have strong multi-generational connections to farming.

6.7 ASSESSMENT SUMMARY

The potential social impacts associated with the operational phase of MP4 have been identified and assessed using the methodology outlined in Section 3. A detailed impact assessment matrix has been prepared (**Appendix E**), a summary of which is provided below in **Table 6.1**.

Table 6.1. Assessment Summary

IAIA Criteria	Impact	Positive / Negative	Significance (post mitigation, where relevant)
Way of life	Job security and sustained livelihoods	Positive	Extremely High
Community	Continued community stability	Positive	High
	Continued local community benefits	Positive	Extremely High
	Continued business reliance on mining	Negative	Low
	Change in sense of place	Negative	Low
Environment	Change in the quality of the environment	Negative	Low
Wellbeing	Reduced wellbeing	Negative	Low

7 PRELIMINARY CLOSURE ASSESSMENT

In the absence of an approved extension of mining operations (i.e. MP4), the current Macraes Operation is expected to close in 2030. Mine closure has the potential to result in social impacts. MP4 will extend the life of mining at Macraes, and in turn the time until these closure impacts are experienced.

An assessment of potential social impacts associated with mine closure requires a clear understanding of the social context in which closure would occur, supported by relevant data to ensure the assessment is evidence-based. Given MP4 is forecast to extend the life of the Macraes Operation by a least 10 years, it is anticipated that the social environment will be somewhat different to present day. A detailed assessment of the social implications of mine closure will require that data be collected closer to the time of closure.

A preliminary assessment of potential social closure impacts has been undertaken, based on our current understanding of the social environment. This assessment focuses on the closure of MP4 which, in the absence of any further approved extensions to mining operations, is expected to mark the end of mining at Macraes Operation. There are a multitude of factors that could influence the timing of mine closure which cannot be estimated at this stage; however, this preliminary assessment provides some insights on the likely social impacts.

7.1 WAY OF LIFE

7.1.1 LOSS OF DIRECT EMPLOYMENT

The cessation of Macraes Operations, following completion of MP4, will result in the loss of employment for those directly employed by OGNZL. The MP4 workforce consists of approximately 760 employees, of which 70% are engaged in mine production and maintenance roles, and the remaining 30% are associated with administration, business support, professional, management and supervisory functions. Workforce numbers are expected to decline progressively over a one to one-to-two-year period leading up to closure as mine production slows down.

Loss of employment reduces an individual's capability to generate income and financially support themselves and their dependents. This has the potential to affect the ability of households to maintain their existing standard of living. For most employees, the likely response to a loss of employment will be to seek alternative employment, either within the local area, or in other regions, depending on the availability of opportunities that match their skill set and experience. Many employees at Macraes possess specialised technical, trade, operational and professional skills that are transferable and likely to remain in demand within the mining sector and other industries. This may enhance the resilience of some workers and households by improving their ability to secure alternative employment following closure. Some employees may undertake additional training to support a change in career, whilst those approaching retirement age may choose to exit the workforce. Individual responses will vary depending on personal circumstances, including age, financial commitments, household factors and skills set.

Impact statement

The closure of Macraes Operation, in the absence of an approved further extension of mining, will result in the loss of direct employment for the Macraes workforce. The majority (~85%) of the positions that will be disestablished are held by people living within the local study area. The loss of direct employment will impact employees, their families and others they support, through the loss of a primary source of household income. Whilst many employees possess transferable skills that support the transition to alternative employment, the closure would nevertheless result in the permanent loss of a substantial number of jobs. Given the number of

people affected and the importance of employment to individual and household wellbeing, the magnitude of the impact is considered major. The likelihood of the impact occurring on closure is almost certain, as closure would result in the cessation of employment associated with Macraes Operation. On this basis, the loss of direct employment is therefore considered to be of **extremely high (negative) significance**.

7.2 COMMUNITY

7.2.1 *REDUCED LOCAL COMMUNITY STABILITY*

The closure of Macraes Operation is likely to result in an outflux of many of the mine workers and their families from the local study area as they relocate for work related opportunities. Change in population due to the movement of people out of the local area will result in reduced local spending, affecting viability of local businesses, services, and community facilities. This may in turn reduce the availability of goods, services and social opportunities contributing to a change in community cohesion and stability.

Mine closure has the potential to decrease local business activity as the local economy changes. Some businesses are likely to experience an impact on revenue due to a reduction in the provision of goods and services to the mine and the local community. The extent to which businesses are resilient to mine closure will determine the level of effect on the stability of the community.

Interviews held with neighbouring landowners and Macraes Village community representatives highlighted that closure of the mine would threaten the viability of the school and Stanley's hotel, both identified as core community facilities. The loss of these facilities represents a significant weakening of social cohesion, community identity and informal support networks.

The Macraes Community Development Trust was explicitly established to support the community post-closure, but the funding is finite and cannot sustain the community indefinitely. Divergent views were shared regarding the long-term stability and adaptability of the Macraes community, with some stakeholders emphasising the risk of a significant decline, whilst others emphasised the resilience of the local farming community to adapt to a post-closure environment.

Beyond the immediate impact on Macraes Village, there was strong consensus that the closure of Macraes Operation would lead to the out-migration of mine workers and their families resulting in a decline in the population within the local study area. It was identified by several neighbours and community representatives that surrounding towns, Palmerston in particular, would likely experience a major decline as many mine workers and their families are based there.

The out-migration of families may reduce the number of school-aged children in the local area, which may result in a decline in school rolls (and potential school closures) and reduced participation in extra-curricular activities. Population decline may affect membership of sports teams, volunteer organisations, community committees and social groups potentially reducing the range of activities available and weakening social networks that support social wellbeing. In small rural communities, where participation by a relatively small number of households is often important to sustaining local organisations, the departure of families may have wider effects on community cohesion, identity and resilience.

Interviews held with local businesses, neighbours and community representatives consistently identified the mine as a critical driver of economic stability, underpinning employment, population retention, and service provision within the local study area. Neighbours and community representatives emphasised that mine closure would result in significant job losses, reduced incomes, and reduced economic activity, leading to a decline in community vibrancy. Local business representatives noted that closure is expected to result in a contraction in local business activity, with significant risks relating to population decline, reduced local services and loss of economic resilience. Overall, closure is anticipated to weaken the economic foundation that supports local community cohesion and stability.

A large proportion of the respondents to the online supplier survey identified direct revenue loss as an impact of closure, with most firms stating the closure would likely trigger downsizing, or in some cases business closure, particularly for businesses that exist to primarily service the mine. Many respondents noted that the loss would extend beyond their own operations, reducing activity right across the regional supply chain. Closure is expected to weaken community stability given it is anticipated that there will be a loss of local jobs and less business activity within local towns.

The completion of MP4, and subsequent closure of the mine, is likely to result in changes in the population due to the outflux of people and changes to the economy within the local study area. This has the potential to result in a decline in community stability and cohesion in the small urban areas within the study area. This period of instability, likely to occur whilst the local economy and community adjust, will be dependent on the level of business and community resilience in the local study area.

Impact statement

The completion of MP4, in the absence of an approved further extension of mining, has the potential to reduce local community stability within Macraes township and the towns within the local study area as a result of population and local economic changes. The duration of the impact is likely to be short term (1-5 years) as communities will, over a period of time, adjust to the change in the social environment. The consequence of reduced community stability is high given many people will be affected, and the effect is likely to occur. Overall, reduced community stability has been rated to be of **high (negative) significance**.

7.2.2 CHANGE IN SENSE OF PLACE

The closure of mining has the potential to result in a change in the sense of place and character of the local area. This is most relevant to those living within Macraes village or close to the mining related activity.

Whilst Macraes has a long history of mining, the community has a strong place based identity that goes beyond the mine (**Section 6.3.4**). Interviews with local residents confirmed the value placed on the rural lifestyle and the strong personal and generational connections to place. The character of the environment experienced by people is not likely to change as a result of mine closure.

The social cohesion and the facilities that support this (school and hotel) may be affected for a period of time whilst the community adjusts to change. Given the deep connection to place that exists, the local community is likely to be resilient to change and will find ways to stay connected and retain a supportive local network that supports social wellbeing.

Impact Statement

The closure of the Macraes Operation has the potential to change the community's connection with their local environment. The duration of this impact is likely to be permanent, and the magnitude of the impact is considered low as it is expected that only a few people are likely to be affected by a change in sense of place. With consideration of the extent, duration and magnitude of the impact, the consequence is minor. Given the Macraes community has strong attachment to place and is likely to be resilient to change, it is anticipated that the potential for a change in sense of place due to mine closure is considered unlikely. Overall, the potential change in sense of place as a result of mine closure is rated as **low (negative) significance**.

7.3 ENVIRONMENT

7.3.1 IMPROVED QUALITY OF THE ENVIRONMENT

The completion of MP4, and subsequent closure of the mine, will result in the cessation of mine related activity at the site. Traffic, noise, blast and vibration, air quality, and lighting associated with the mine operations will cease to occur. The completion of rehabilitation of exposed areas will result in improved visual

and landscape outcomes, and ecological restoration and enhancement measures support an improved quality of the environment.

The Landscape and Natural Character Effects Assessment (Boffa Miskell, 2026) found that closure effects on landscape, visual amenity and natural character are overall very low to low because mining activity ceases and comprehensive rehabilitation is completed. At closure, open pits form pit lakes and waste rock stacks and tailings facilities are reshaped and revegetated to integrate with the surrounding rural landscape, providing long-term stability consistent with rural land use. Visual effects reduce substantially as machinery, earthworks and operational lighting are removed, leaving only static, rehabilitated landforms, while riparian planting, watercourse restoration and ecological enhancement measures support improved environmental quality.

Impact Statement

Following closure of the Macraes Operation, those living in close proximity to the mining operations are likely to experience an improvement in the quality of environment in which they live. The duration of this impact is permanent, and the magnitude is considered low given few would be affected, resulting in a consequence rating of minor. As the likelihood of the impact is possible, the overall significance has been rated to be of **moderate (positive) significance**.

7.4 WELLBEING

7.4.1 REDUCED WELLBEING

The closure of the Macraes Operation has the potential to cause stress and anxiety due to the uncertainty associated with a significant change in the local economic and social environment.

Those individuals that are directly affected by a loss of employment may experience a loss of routine, sense of purpose and identity, as well as the stress associated with loss of income and the pressure to secure new employment. Reduced business activity and the potential loss of local economic stability is likely to result in reduced wellbeing for many within the local study area. Business owners and employees of businesses that rely on revenue from the mine may experience stress and anxiety regarding the future of the business and their employment. The outflux of population, resulting in a reduced community cohesion and stability, has the potential to result in reduced wellbeing within members of the affected communities.

Whilst those interviewed did not make explicit reference to stress and anxiety relating to mine closure, there was evidence of underlying psychosocial stressors relating to economic uncertainty, and uncertainty about community viability, anticipated population loss and service decline. These factors may be drivers of reduced wellbeing within communities facing a period of uncertainty.

Impact Statement

The closure of the Macraes mining operations has the potential to affect the wellbeing of those living within the local study area. Given there will be adequate warning associated with the closure, it is assumed employees and business owners will have time to consider their options and make decisions to prepare for the changes. It is therefore assumed that reduced wellbeing as a result of loss of employment and economic instability will be experienced by a low number of people. Some community members may experience reduced wellbeing as a result of the stress and uncertainty associated with a change in community cohesion and stability. The duration of the impact is considered short term (1-5 years) as it is anticipated that communities in the local study area will adapt and stabilise in the absence of mining. Given the impact is local, short term and that the number of people affected by stress and anxiety is likely to be few, the overall consequence of the impact is rated at minor, and the likelihood of the impact occurring is possible. Overall, reduced wellbeing as a result of mine closure is rated to be of **moderate (negative) significance**.

7.5 FEARS AND ASPIRATIONS

Fears and aspirations under the IAIA framework include perceptions of safety, fears about the future of the community, and aspirations for the future and future generations.

In the context of this SIA, the fears and perceptions raised about mine closure are discussed below.

7.5.1 *POST MINING ENVIRONMENTAL LEGACY*

Long-term concerns were raised about the condition of the landscape following closure and what the community may be left with. Interviewees expressed anxiety about “inheriting problems” on former mine land, including unresolved land stability issues and the potential for being left with “massive holes in the ground” and large waste rock piles. There was scepticism about whether rehabilitation outcomes would be genuine, stable, or enduring over time.

Mitigation

- OGNZL to provide assurance regarding post-closure outcomes, including how risks associated with former mine land will be managed and how responsibility for unresolved issues will be addressed, to reduce anxiety about “inheriting problems.”

7.5.2 *POST MINING LAND USE CONSTRAINTS*

Long-term covenants were raised as a fear associated with MP4 by local neighbours. Concerns were expressed that land subject to ongoing consent conditions and covenants may be permanently removed from productive farming use, making remaining landholdings more difficult to manage and reducing overall farm viability. There is also concern that covenanted and fenced areas associated with the mine can create unintended environmental issues, including attracting wild pigs and weeds that then spread onto neighbouring farmland. These factors contribute to concern about the long-term usability of land following mining, with uncertainty about whether land can be returned to a condition that supports farming and the potential for ongoing land management challenges post-closure.

Mitigation

- OGNZL to provide transparency around long-term land outcomes, including how covenanted areas will be maintained post-closure and how they will integrate with surrounding farming land uses.

7.5.3 *POST MINING ASPIRATIONS*

Community aspirations for the future of Macraes post-mining reflect a general expectation that the area would revert to its rural character, with farming continuing as the primary land use, as reflected in statements that the area would “go back to primarily farming” and “would just go back to being a farming community... which it already is. It’s just got a mine beside it.” Many neighbours expressed a strong attachment to the land and an intention to remain, with one neighbour noting they would “continue farming and remain on the land” regardless of closure outcomes. At the same time, interviewees recognised that the mine forms an integral part of the community and continues to support its viability, as reflected in the absence of any strong desire among participants for closure in the near term.

Overall, while farming is widely seen as the long-term foundation of the area, there is no single agreed future vision, and some community representatives noted that post-mining outcomes would need to be shaped through ongoing consultation with the community.

7.6 CLOSURE ASSESSMENT SUMMARY

A summary of the preliminary assessment of potential closure impacts associated with MP4 is provided in **Table 7.1**. Should MP4 not proceed, and there is no further expansion proposed for the Macraes Operation, the social implications of closure would be experienced sooner than anticipated.

Table 7.1. Summary of Preliminary Closure Assessment

IAIA Criteria	Potential Impacts	Positive / Negative	Preliminary Assessment
Way of life	Loss of direct employment	Negative	Extremely High
Community	Reduced local community stability	Negative	High
	Change in sense of place	Negative	Low
Environment	Improved quality of the environment	Positive	Moderate
Wellbeing	Reduced wellbeing	Negative	Moderate

7.7 SOCIAL CLOSURE MITIGATION

Social closure planning should commence well in advance of the closure of the Macraes Operations. This will ensure that the potential social closure impacts are well understood and that there is an opportunity to manage and mitigate these impacts as far as possible.

It is recommended that OGNZL commission a Closure Socio-Economic Impact Assessment (SEIA) three years prior to closure. This assessment, informed by relevant data collection, may include consideration of the following:

- Level of dependency of services and businesses on the mine
- Closure business scenarios and population modelling to predict changes and determine what initiatives may be available to support these changes
- Establishment of a community consultation committee with representation of community and key stakeholders to inform planning for closure transition.
- Social investment opportunities to support closure

It is important that a range of stakeholders including Council (Otago Regional Council, Waitaki District Council, Dunedin City Council), key stakeholders, and the community are involved in social closure planning, with engagement a central component of the Closure SEIA. This will ensure transparency, alignment of closure outcomes with community aspirations, and allow the implications of closure to inform local Council and OGNZL decision making.

8 CONCLUSION

MP4 has the potential to result in both positive and negative social impacts. The impacts have been assessed using an internationally recognised framework, and the significance of the impacts has been evaluated before mitigation and post mitigation.

Overall, the assessment found that extending the life of the Macraes Operation would result in significant positive social impacts at a local regional and national level. The most significant positive social impacts are:

- **Job security and sustained livelihoods** - rated as being of extremely high positive significance. The continuation of the Macraes Operation will support result in the continuation of direct and indirect employment, household income security and sustained livelihoods for employees, their families and households connected to the mining sector both locally and across Otago and New Zealand.
- **Continued community stability** – rated as being of high positive significance. As a result of sustained business activity an economic resilience, MP4 will contribute to population retention, service provision and community stability, supporting broader social wellbeing in the local study area and across Otago.
- **Continued local community benefits** – rated as being of extremely high positive significance within the local study area. MP4 will result in the continued retention of community facilities and services, emergency response capability and locally available specialist services that contribute to community wellbeing and resilience.

Potential adverse social impacts identified during operations relate primarily to continued business reliance on mining, changes in sense of place, changes in environmental amenity, and reduced wellbeing associated with concerns regarding environmental effects. Following consideration of mitigation measures and the findings of the specialist technical assessments, all adverse operational impacts were assessed as being of low significance.

The recommendations identified by the relevant technical studies are supported. Social mitigation measures have been identified to ensure the potential social impacts are appropriately avoided, remedied or mitigated. These are:

- Continuing OGNZL's procurement approach to facilitate the spread of local supplier benefits across local businesses, to reduce individual business dependency on the mine and support business diversity;
- Ongoing information sharing with local neighbours and the Macraes community about planned activities, potential environmental impacts, rehabilitation progress and proposed mitigation, to reduce uncertainty and manage expectations;
- Maintaining clear and accessible community channels including named points of contact and continuation of the existing OGNZL complaint registration and feedback process;
- Providing clear, regular and plain-language communication to neighbours and the wider Macraes community on groundwater, springs and surface water monitoring, consent compliance, council oversight and how potential issues will be addressed; and

MP4 will extend the life of the Macraes Operation, postponing the negative social effects associated with mine closure. A preliminary social closure assessment has been undertaken, which identified the most significant adverse impacts as loss of direct employment and reduced local community stability which were rated to be of extremely high and high significance respectively.

Recognising that the future social environment at the time of closure cannot be predicted with certainty, it is recommended that:

- A Closure Socio-Economic Impact Assessment (SEIA) be commissioned at least three years prior to closure to inform transition planning and identify measures to manage closure-related social impacts.

Overall, MP4 is expected to generate significant positive social effects by extending employment, supporting business activity, maintaining household incomes, and sustaining local community stability for at least a further 10 years. While the project will also extend the period of reliance on mining activity, the mitigation, monitoring and closure planning measures identified in this SIA provide a framework to manage potential adverse effects during operations and support a well-planned transition at the end of the mine life.

APPENDIX A: CENSUS BASELINE DATA

Macraes Mine Baseline Data

Table 1. Population (Stats NZ, 2013, 2018, 2023c)

Population	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
2013 population count	136,677	109,653	1,122	888	12,276	202,572	4,241,955
2018 population count	143,703	114,990	1,188	945	13,065	225,147	4,699,740
2023 population count	147,315	116,916	1,257	1,059	13,662	240,894	4,994,010
2013–18 population change (%)	5.1%	4.9%	5.9%	6.4%	6.4%	11.1%	10.8%
2018–23 population change (%)	2.5%	1.7%	5.8%	12.1%	4.6%	7.0%	6.3%
2013–23 population change (%)	7.8%	6.6%	12.0%	19.3%	11.3%	18.9%	17.7%

Table 2. Age group (Stats NZ, 2023c)

Age group	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Under 15 years	15.0%	14.5%	15.4%	16.5%	16.9%	15.7%	18.8%
15–29 years	25.2%	28.2%	9.4%	14.0%	16.1%	22.2%	19.4%
30–64 years	41.4%	40.3%	43.5%	44.2%	41.3%	44.4%	45.3%
65 years and over	18.4%	16.9%	31.7%	25.4%	25.7%	17.7%	16.6%

Table 3. Gender (Stats NZ, 2023c)

Gender	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Male / Tāne	48.1%	47.6%	47.7%	50.6%	48.6%	49.2%	49.3%
Female / Wahine	51.3%	51.7%	52.0%	48.6%	51.2%	50.3%	50.3%
Another gender	0.6%	0.7%	0.2%	0.8%	0.2%	0.5%	0.4%

Table 4. Ethnicity (Stats NZ, 2023c)

Ethnicity	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
European	75.2%	74.1%	80.4%	77.6%	74.6%	76.1%	58.5%
Māori	9.4%	9.5%	11.3%	13.3%	8.9%	8.9%	15.4%
Pacific Peoples	3.8%	3.7%	1.9%	2.5%	7.7%	3.1%	7.7%
Asian	7.9%	8.8%	3.3%	1.5%	6.2%	7.6%	14.9%
Middle Eastern/Latin American/African	1.4%	1.6%	0.2%	1.2%	0.5%	1.9%	1.6%
Other Ethnicity	2.3%	2.3%	2.9%	3.9%	2.0%	2.4%	1.9%

Table 5. NZDep2023 (University of Otago, 2023)

NZDep2023	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Mean NZDep2023	5.4	5.5	5.8	6.8	6.7	4.7	5.6

Table 6. Qualification, % of people 15 years and over (Stats NZ, 2023d)

Qualification	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
No qualification	14.7%	13.2%	20.0%	26.7%	24.8%	13.9%	15.1%
Level 1 certificate	9.7%	8.8%	12.9%	14.4%	14.2%	9.8%	9.9%
Level 2 certificate	8.8%	8.3%	11.7%	10.3%	11.1%	9.1%	9.4%
Level 3 certificate	17.8%	19.9%	7.7%	11.3%	9.7%	14.7%	12.2%
Level 4 certificate	8.8%	8.2%	12.9%	11.3%	10.1%	9.4%	8.5%
Level 5 diploma	4.0%	3.8%	4.0%	3.8%	4.5%	4.6%	4.9%

Level 6 diploma	4.0%	3.8%	5.4%	4.8%	4.4%	4.6%	4.6%
Bachelor's degree and Level 7 qualification	14.2%	15.1%	10.3%	6.2%	8.6%	14.4%	14.9%
Post-graduate and honours degrees	6.1%	6.4%	4.6%	3.8%	3.2%	6.2%	5.9%
Master's degree	4.1%	4.4%	2.6%	1.4%	1.8%	3.8%	4.2%
Doctorate degree	2.4%	2.6%	1.1%	0.3%	0.3%	1.7%	1.0%
Overseas secondary school qualification	3.4%	3.5%	3.4%	2.1%	4.0%	4.5%	5.6%
Not elsewhere included	2.0%	1.8%	3.4%	3.8%	3.3%	3.3%	3.9%

Table 7. Personal annual income (Stats NZ, 2023d)

Personal income	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Mean annual income	\$43,212	\$42,649	\$43,817	\$43,390	\$42,114	\$46,375	\$48,767
Mean median annual income	\$36,647	\$36,423	\$32,426	\$32,085	\$33,920	\$40,799	\$43,505

Table 8. Labour force status, % of working age population (Stats NZ, 2023d)

Labour force status	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Employed full-time	44.5%	43.9%	42.1%	43.1%	44.3%	49.9%	51.2%
Employed part-time	15.8%	16.0%	13.1%	15.3%	12.8%	15.3%	13.5%
Unemployed	3.0%	3.3%	1.7%	2.0%	1.9%	2.4%	3.0%
Not in the labour force	36.7%	36.8%	43.2%	39.7%	40.9%	32.4%	32.4%

Table 9. Industry, % of workers (Stats NZ, 2023d)

Industry	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Agriculture, Forestry and Fishing	3.0%	1.2%	5.6%	8.2%	3.4%	6.8%	5.1%
Mining	0.9%	0.5%	9.2%	17.0%	1.2%	0.7%	0.2%
Manufacturing	7.6%	6.0%	8.7%	5.3%	24.6%	7.1%	9.1%
Electricity, Gas, Water and Waste Services	1.6%	1.6%	0.5%	2.9%	2.5%	1.3%	0.9%
Construction	9.1%	8.8%	11.3%	11.7%	8.8%	11.8%	10.2%
Wholesale Trade	4.3%	4.3%	3.6%	3.5%	5.1%	3.8%	5.1%
Retail Trade	9.3%	9.7%	3.6%	6.4%	10.9%	9.2%	8.8%
Accommodation and Food Services	7.1%	7.6%	4.1%	5.8%	6.3%	8.7%	6.0%
Transport, Postal and Warehousing	3.5%	3.5%	7.2%	4.1%	2.7%	3.6%	4.1%
Information Media and Telecommunications	1.1%	1.3%	0.0%	1.2%	0.3%	1.0%	1.5%
Financial and Insurance Services	1.7%	1.9%	0.5%	0.0%	1.0%	1.6%	3.0%
Rental, Hiring and Real Estate Services	1.8%	1.7%	1.0%	0.0%	1.8%	2.4%	2.5%
Professional, Scientific and Technical Services	7.4%	7.8%	7.7%	2.9%	3.7%	7.8%	9.9%
Administrative and Support Services	3.1%	3.3%	3.1%	4.7%	2.3%	3.7%	3.9%
Public Administration and Safety	6.9%	7.3%	6.7%	3.5%	4.4%	5.5%	7.0%
Education and Training	12.5%	13.5%	7.2%	7.0%	6.7%	9.2%	7.7%
Health Care and Social Assistance	13.0%	13.8%	10.3%	8.2%	9.7%	9.8%	9.5%
Arts and Recreation Services	2.1%	2.2%	1.5%	1.2%	1.2%	2.4%	1.7%
Other Services	4.0%	4.0%	8.2%	6.4%	3.2%	4.0%	4.0%

Table 10. Occupation, % of workers (Stats NZ, 2023d)

Occupation	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Managers	14.1%	13.0%	16.4%	10.1%	12.8%	18.2%	18.3%
Professionals	27.2%	28.9%	19.0%	16.6%	16.2%	23.7%	26.8%
Technicians and Trades Workers	12.9%	12.6%	13.8%	21.3%	15.0%	14.0%	12.5%
Community and Personal Service Workers	11.3%	12.0%	8.7%	7.7%	9.2%	10.2%	9.0%
Clerical and Administrative Workers	10.7%	10.9%	13.8%	8.3%	10.5%	9.8%	10.8%
Sales Workers	8.6%	8.9%	6.2%	5.9%	8.8%	8.2%	7.7%
Machinery Operators and Drivers	5.3%	5.0%	10.3%	15.4%	7.0%	5.4%	5.9%
Labourers	10.0%	8.7%	11.8%	14.8%	20.6%	10.5%	9.0%

Table 11. Change in occupation, 2018-2023 (Stats NZ, 2018, 2023d)

Change in occupation (2018-23)	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Managers	6.1%	5.5%	6.7%	6.3%	11.6%	10.8%	8.9%
Professionals	17.0%	15.5%	5.7%	100.0%	34.4%	26.4%	25.3%
Technicians and Trades Workers	10.0%	8.1%	42.1%	63.6%	16.5%	14.9%	11.1%
Community and Personal Service Workers	2.8%	5.0%	-5.6%	-27.8%	-9.5%	2.9%	1.4%
Clerical and Administrative Workers	3.2%	0.6%	50.0%	0.0%	18.8%	7.4%	6.2%
Sales Workers	-11.4%	-10.3%	-7.7%	-28.6%	-20.1%	-8.6%	-9.4%
Machinery Operators and Drivers	5.2%	6.6%	0.0%	13.0%	3.4%	7.0%	4.2%
Labourers	-12.6%	-14.1%	-25.8%	0.0%	-4.9%	-13.5%	-14.8%

Table 12. Dwelling status (Stats NZ, 2023a)

Dwelling status	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Occupied Dwelling	75.8%	76.6%	61.5%	87.3%	85.4%	71.9%	79.1%
Unoccupied Dwelling	11.6%	11.2%	16.7%	5.9%	7.0%	13.5%	9.9%
Residents Away	5.9%	5.9%	7.9%	2.9%	3.4%	6.4%	5.0%
Empty Dwelling	5.7%	5.3%	7.1%	2.9%	3.5%	7.1%	4.9%
Dwelling Under Construction	1.0%	1.1%	6.7%	1.0%	0.7%	1.1%	1.2%

Table 13. Home ownership (Stats NZ, 2023b)

Home ownership	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Dwelling owned or partly owned	58.4%	56.3%	74.5%	71.8%	63.4%	55.8%	55.0%
Dwelling not owned and not held in a family trust	30.7%	33.6%	14.6%	19.9%	26.6%	30.9%	34.0%
Dwelling held in a family trust	10.8%	10.1%	10.9%	8.3%	10.0%	13.3%	11.1%

Table 14. Years of residence (Stats NZ, 2023b)

Years of residence	Local Study Area	Dunedin	Waikouaiti	Palmerston	Oamaru	Otago Region	New Zealand
Mean years of residence	9.0	8.7	10.1	8.7	9.1	8.3	8.2

Table 15. Mining industry employee count and GDP (Figure NZ, 2024a, 2024b)

Statistic	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Employee count	5,700	5,100	5,100	5,100	5,200	5,500	5,500	5,600	5,900	6,300
GDP (NZD millions)	3,585	2,381	2,489	2,842	2,998	2,889	2,344	2,537	3,293	3,112

Figure 1. Map showing community facilities within the local study area

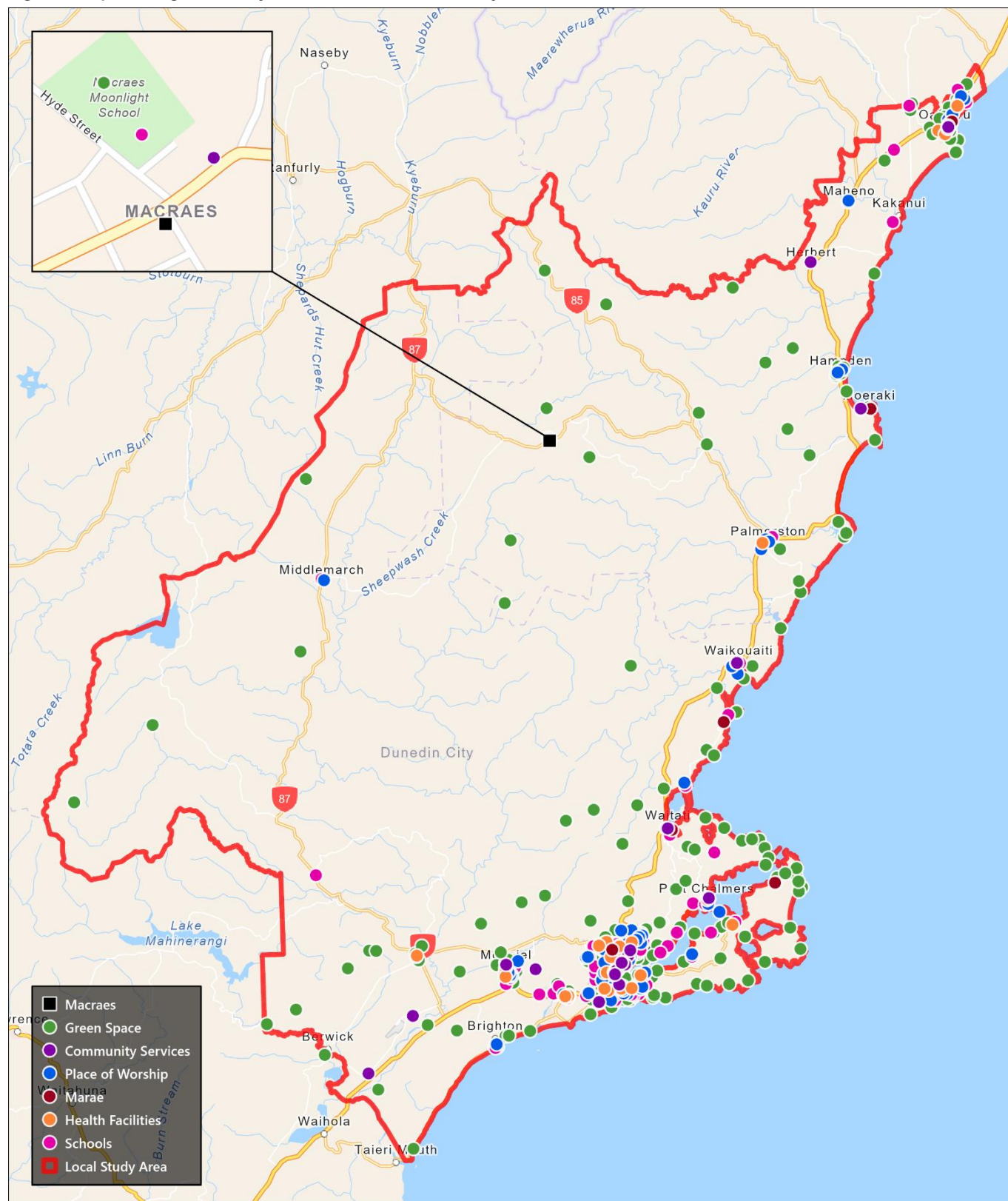
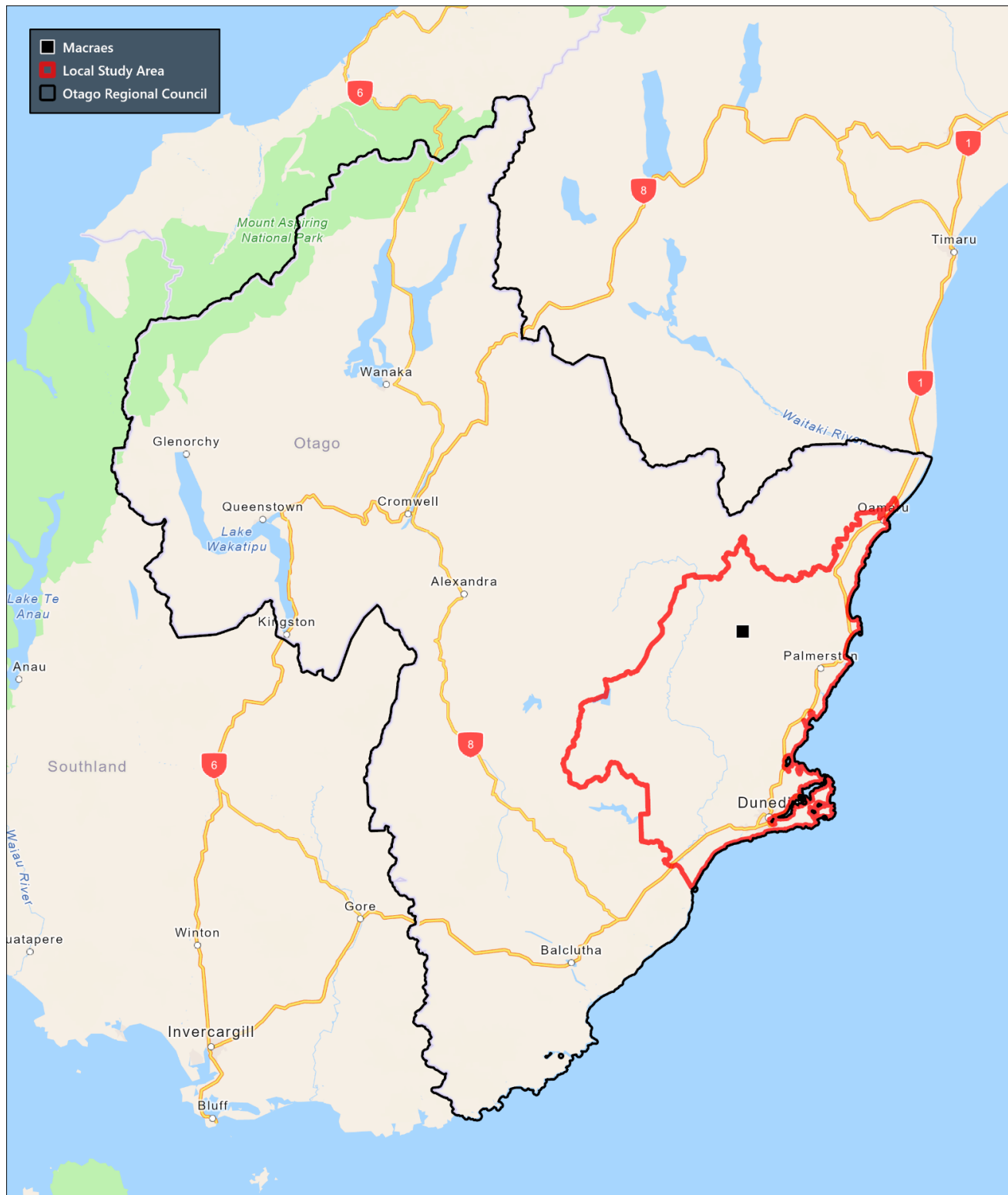


Figure 3. Map showing baseline data areas (local study area and Otago Regional Council)



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APPENDIX B: SIA ENGAGEMENT OUTCOMES

Macraes Mine Supplier Survey Results

From: Daniel Cooper, Researcher (Social & Behavioural Science)

Date: 15 May 2026

Survey results

The Macraes Mine Supplier Survey ran as an online survey from 08–22 April 2026, and had a total of 147 respondents, of which 137 completed the entire survey (the remaining 10 provided a partial response).

Figure 1 shows the category respondents felt their business was best described as. Manufacturing; professional, scientific, and technical services; wholesale trade; and construction together made up 45% of all the responding businesses.

A further 38% selected ‘other services’ and described their business, which largely covered trade-focused businesses, including a strong concentration of engineering and maintenance services, alongside suppliers of industrial equipment, machinery, parts, and consumables. Specialist services such as scaffolding, labour hire, cleaning, waste management, recycling, and ecological restoration were also represented.

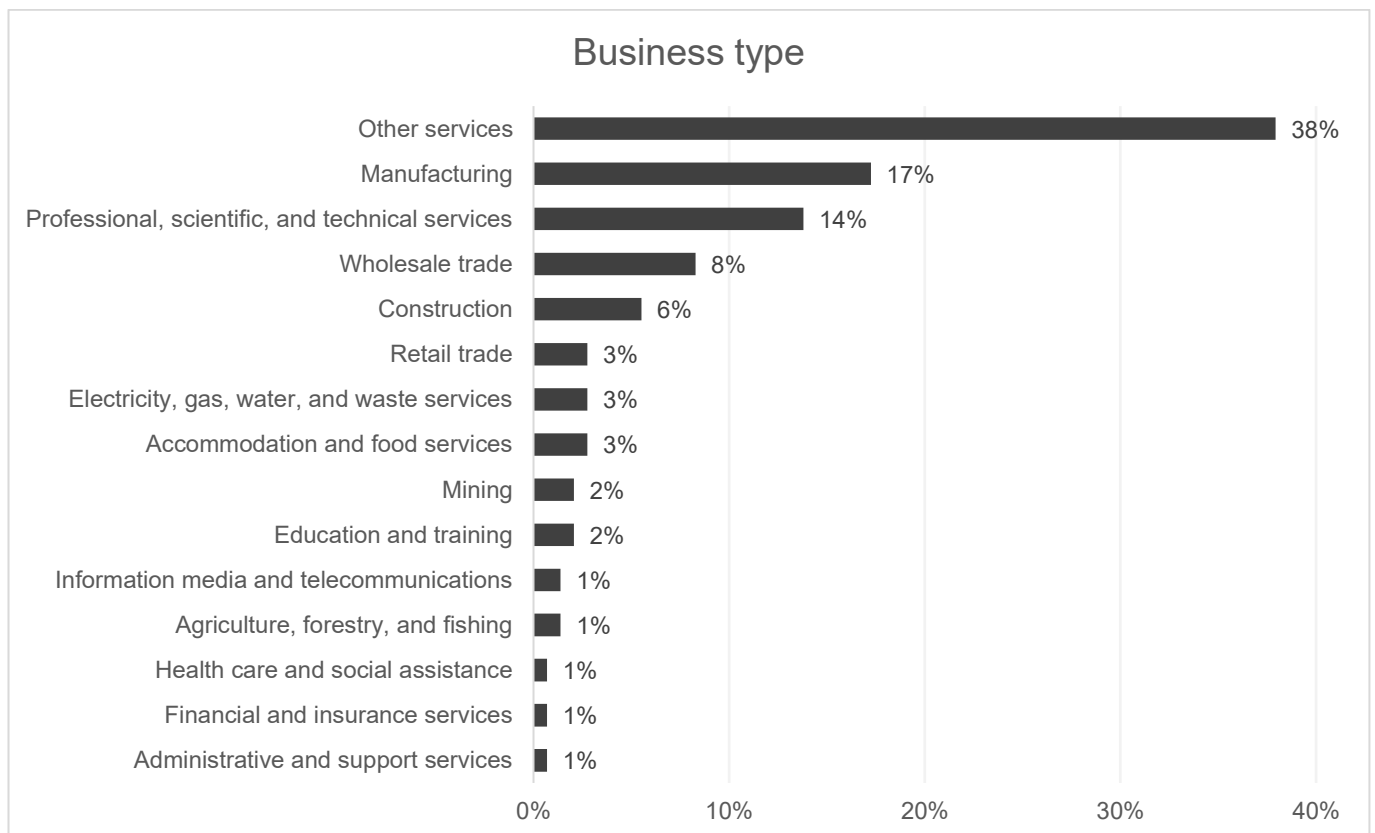


Figure 1. Business type

When asked where their business is primarily based (Figure 2), 44% identified the local area (Figure 3), which includes the urban areas of Dunedin, Oamaru, Palmerston, Waikouaiti, and Macraes.

A further 42% identified a location elsewhere in New Zealand (8% within the Otago Region and 34% outside the region). Just 14% of respondents said that they are from a business that is based internationally.

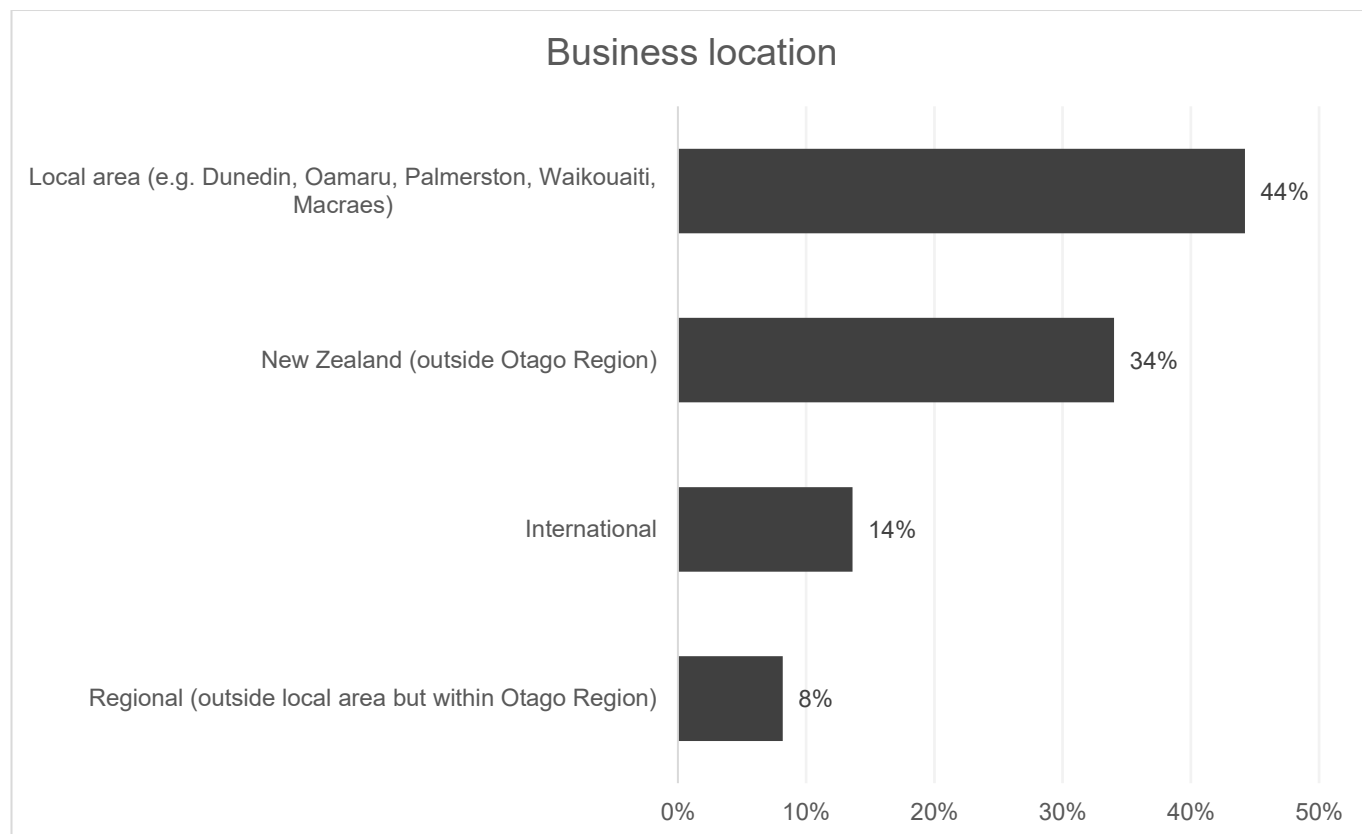


Figure 2. Business location

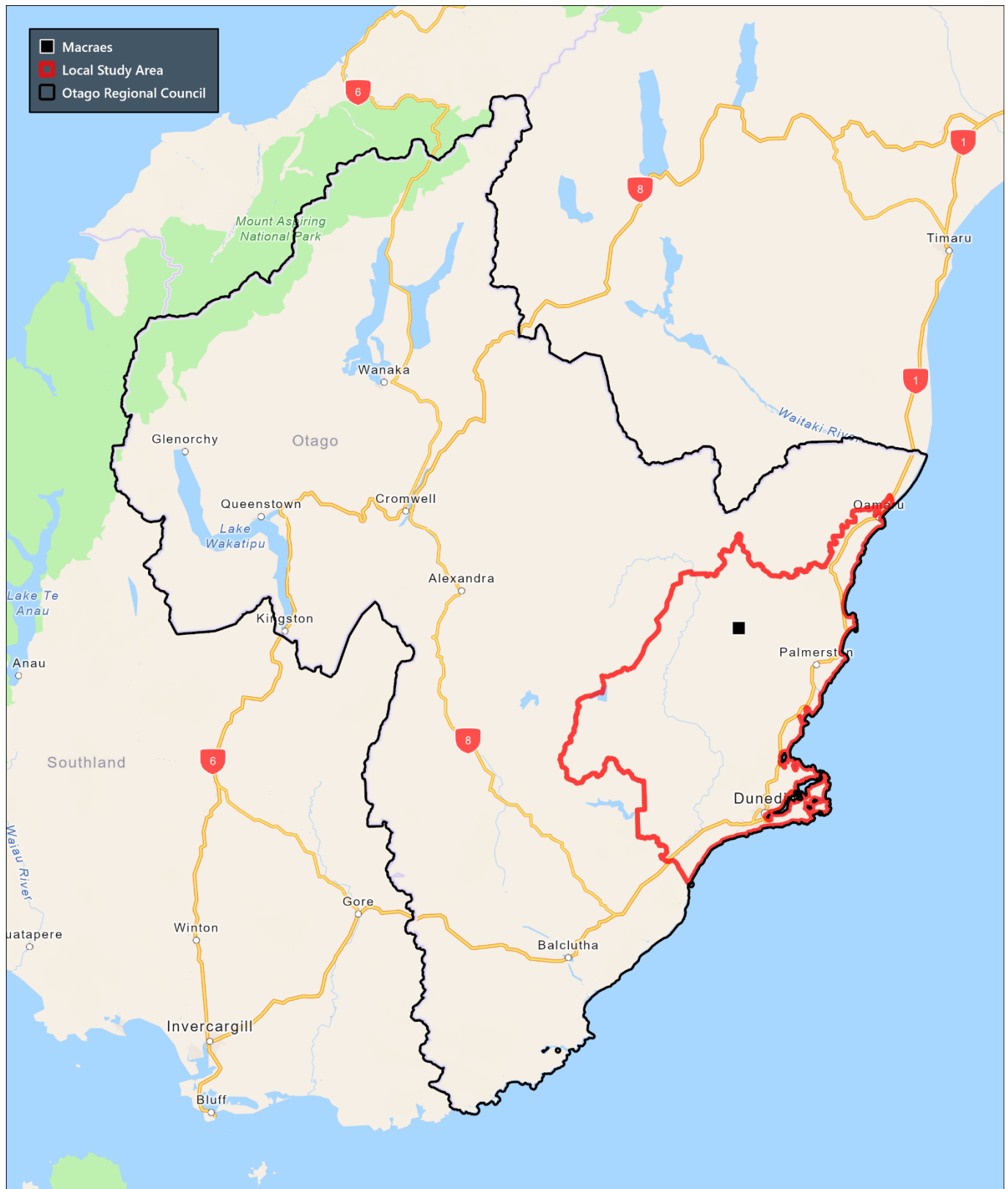


Figure 3. Map of the Local Study Area, Otago Region, and Macraes Mine

The vast majority (81%) of businesses servicing Macraes Mine are established and have been operating for more than 10 years (Figure 4). Only a handful are new businesses.

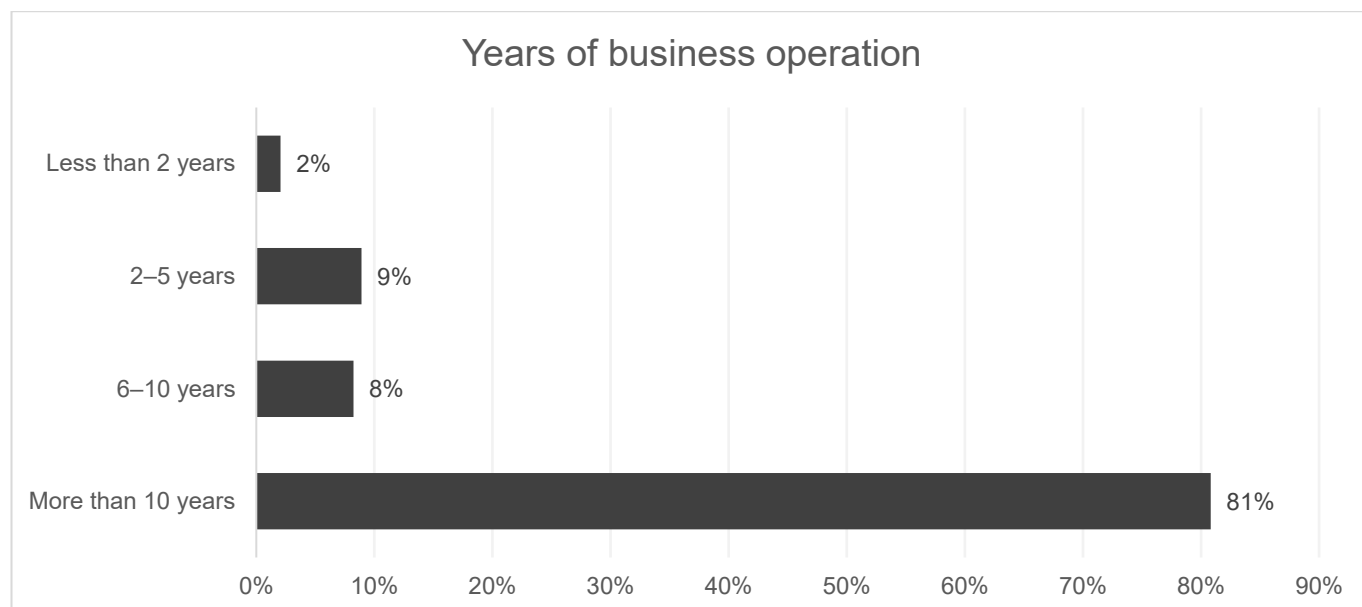


Figure 4. Years of business operation

When asked about their business's connection to and reliance on Macraes Mine (Figure 5), across all businesses, the majority (60%) said that the mine either contributed to the growth of the business or that the business grew significantly because of the mine, and an additional 6% said that the business started because of the mine. The remaining 35% said that the mine has not been a major contributor.

For local businesses, the picture is different, with a greater proportion reliant on the mine's operation. A combined total of 70% of local businesses said mine either contributed to the growth of the business or that the business grew significantly because of the mine, with a further 12% stating that the business started because of the mine. Only 18% of local businesses stated that the mine has not been a major factor.

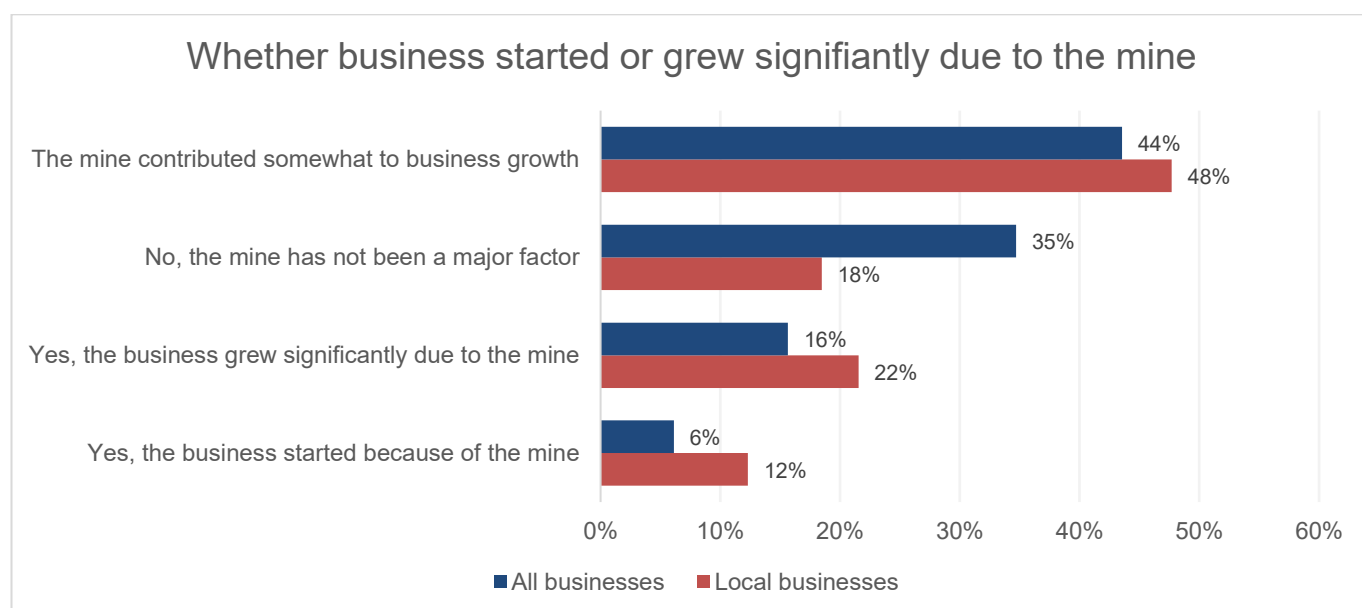


Figure 5. Whether business started or grew significantly due to the mine

Across all businesses, the average percentage of revenue that is linked to Macraes Mine is **18.1%**, while for local businesses, the average percentage of revenue linked to the mine is higher at **29.6%**.

The average FTE (full-time equivalent staff) employed by all businesses is **216**, and **37** for local businesses. Across all businesses, 45% have 10 or fewer employees, while 16% have over 100 employees.

When asked if there are any factors currently limiting their business (Figure 6), 40% said there are none, while 25% identified access to labour and 24% identified orders or sales.

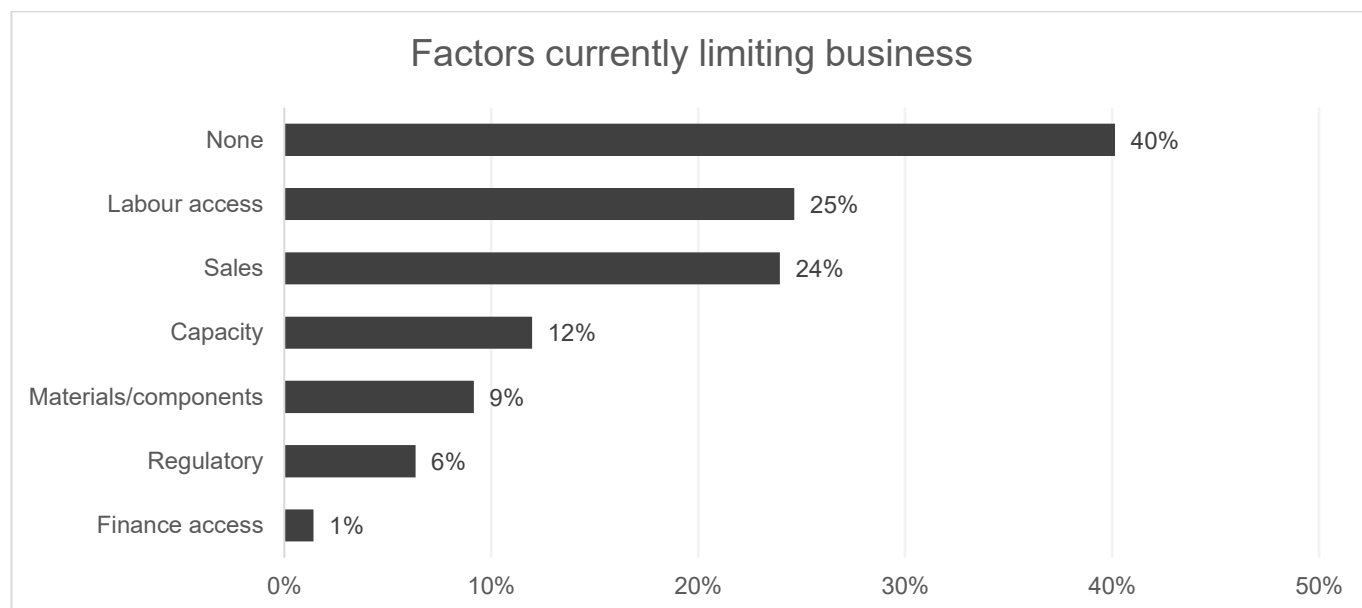


Figure 6. Factors currently limiting business

Figure 7 illustrates how businesses have expanded, maintained, or downsized over the past five years. Across all businesses, most have expanded (57%), and only a handful have downsized (6%). For local businesses, fewer have expanded (50%), while more have maintained size with little or no investment (30%, compared to 20% for all businesses).

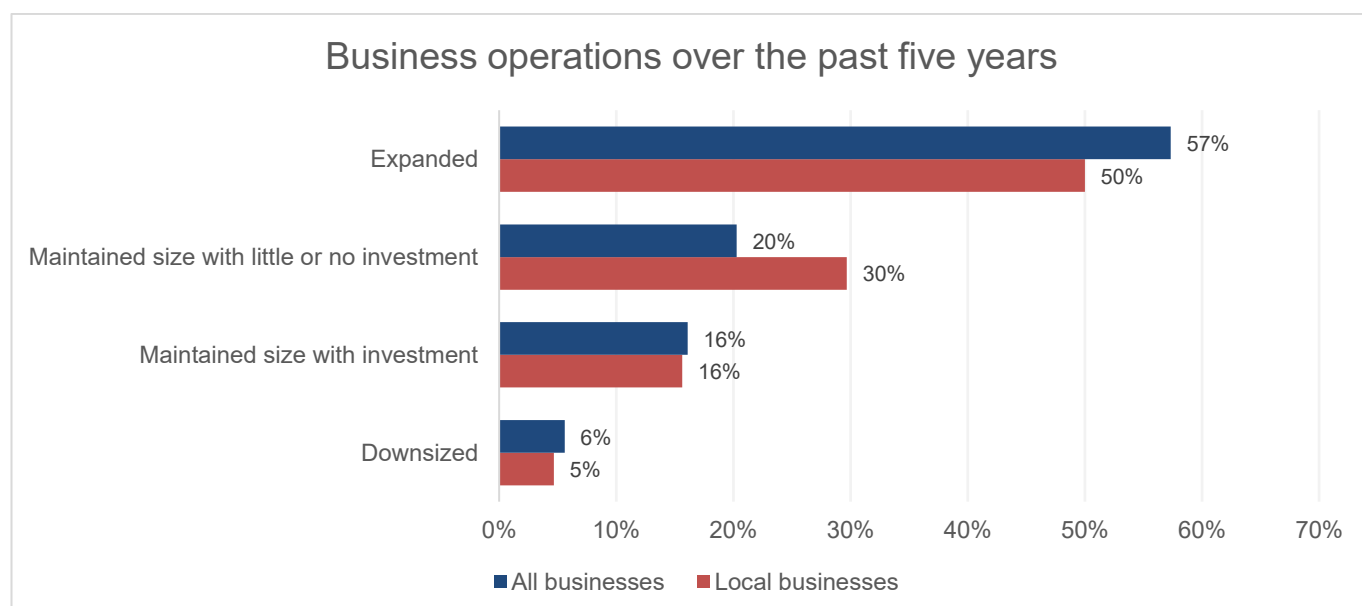


Figure 7. Business operations over the past five years

Business plans for the next five years are shown in Figure 8. Almost all plan to expand (67%) or maintain size (29%), with only a few planning to sell or downsize. For local businesses specifically, fewer plan to expand (59%), but more plan to maintain size (39%).

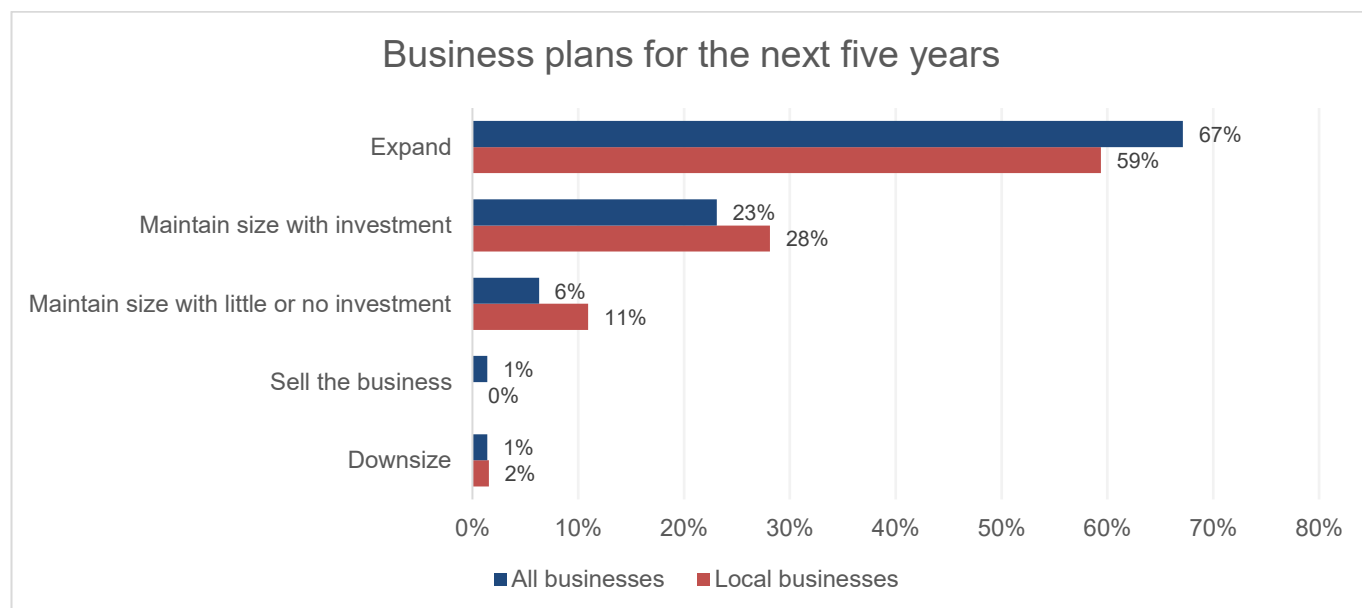


Figure 8. Business plans for the next five years

If the proposed MP4 expansion is approved, 45% of all businesses and 44% of local businesses say that it will have a moderate positive effect on their business (Figure 9). Local businesses are even more enthusiastic about the effect of MP4, with 34% stating that it will have a major positive effect with significant growth opportunities, compared to 26% across all businesses.

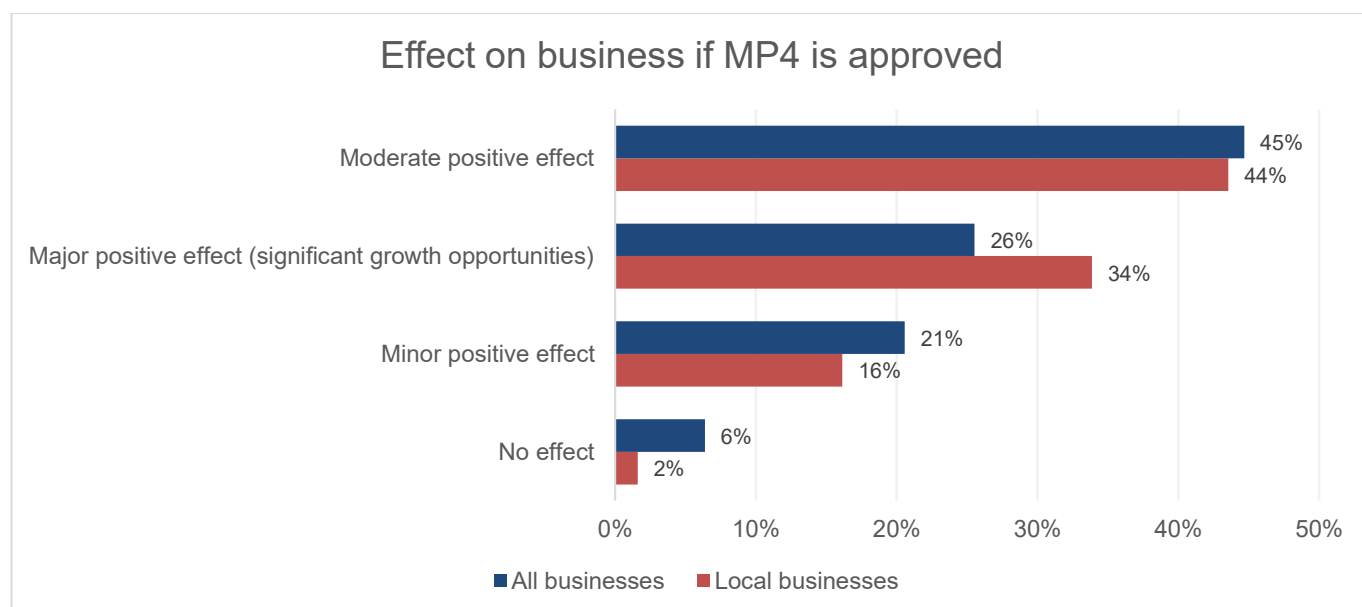


Figure 9. Effect on business if MP4 is approved

Expanding on the above, respondents generally expect a positive but mostly modest impact from the proposed extension, with benefits centred on business continuity and certainty. Many noted that extending the life of the mine would help sustain or expand local employment, maintain sales, and

support planning and investment. Growth opportunities would largely depend on the scale of the expansion.

If there was an increased demand for goods and services to support the mine, most business would respond accordingly, with 47% investing and increasing staffing levels, and 39% refocusing their activity on mine-related demand (Figure 10).

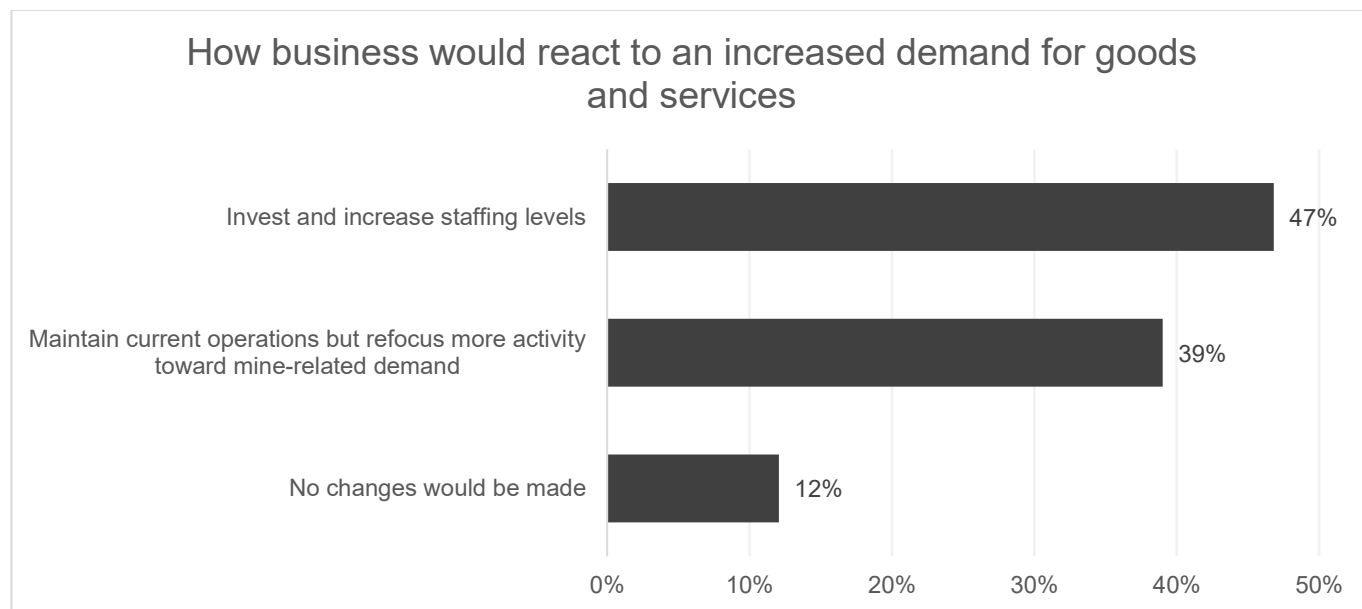


Figure 10. How business would react to an increased demand for goods and services

Figure 11 shows that if staff numbers increased, most businesses (52%) would hire from the local area, and a further 47% would hire from elsewhere in New Zealand (20% from the Otago Region and the 27% from outside the region).

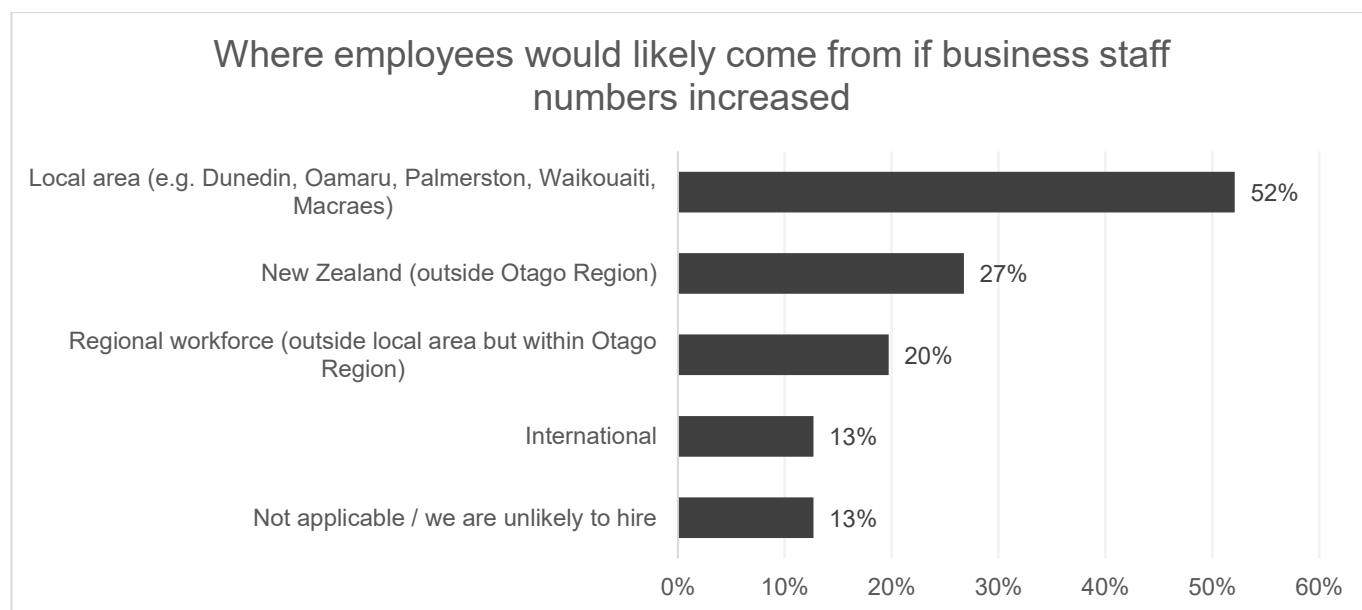


Figure 11. Where employees would likely come from if business staff numbers increased

When asked about the resiliency of their business to a slowdown in mining operations and mine closure (Figure 12), 48% of all businesses say that their business is somewhat dependant on mining but could diversify if needed. A further 37% say that their business is not dependant on mining and would continue largely unaffected. However, 14% are entirely dependent on mining, and would likely have to close or scale down significantly.

For local businesses specifically, their reliance on the mine is more pronounced, with 26% stating that they are entirely dependent on mining (+12 percentage points compared to all businesses). Only 22% of local businesses stated that their businesses is not dependent on mining (-15 percentage points compared to all businesses).

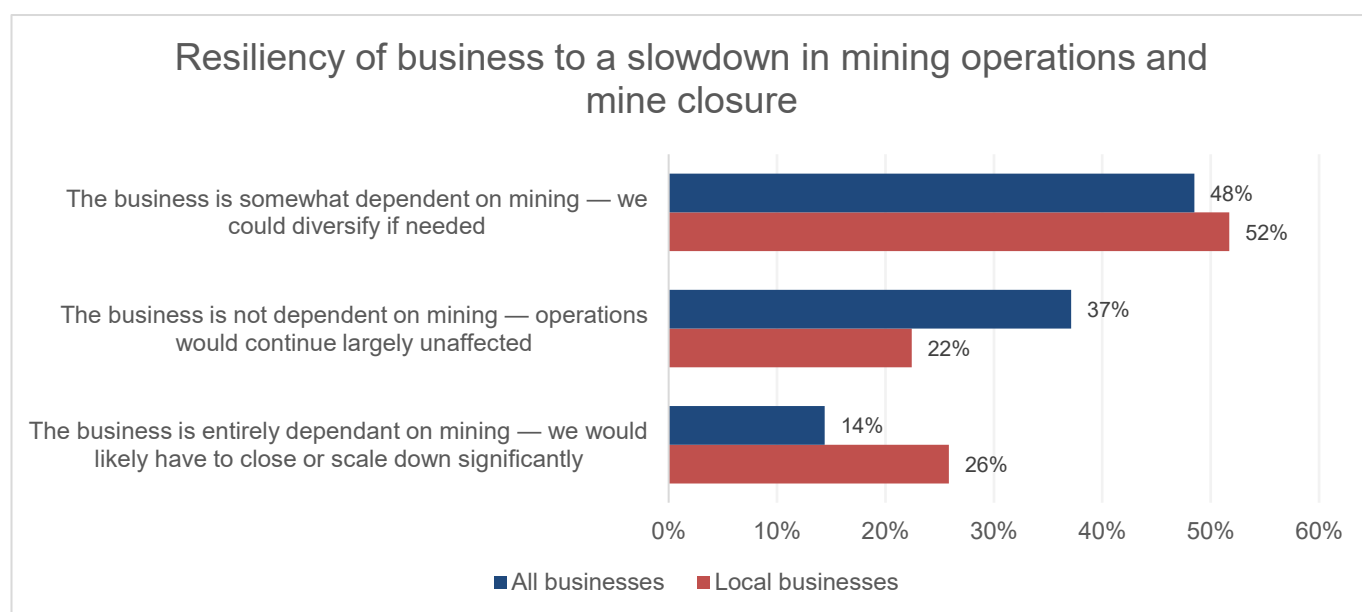


Figure 12. Resiliency of business to a slowdown in mining operations and mine closure

Figure 13 shows the level of agreement with statements about the mine’s impact on their business, across all businesses. The vast majority (89%) agree that they would benefit from the proposed MP4 expansion, and the majority (63%) agree that they would benefit from more time before the mine is closed. However, 60% also agree that the business is well prepared for the eventual closure of the mine, and just 26% agree that their business’s growth is limited due to a lack of future mining expansion (while 37% disagree).

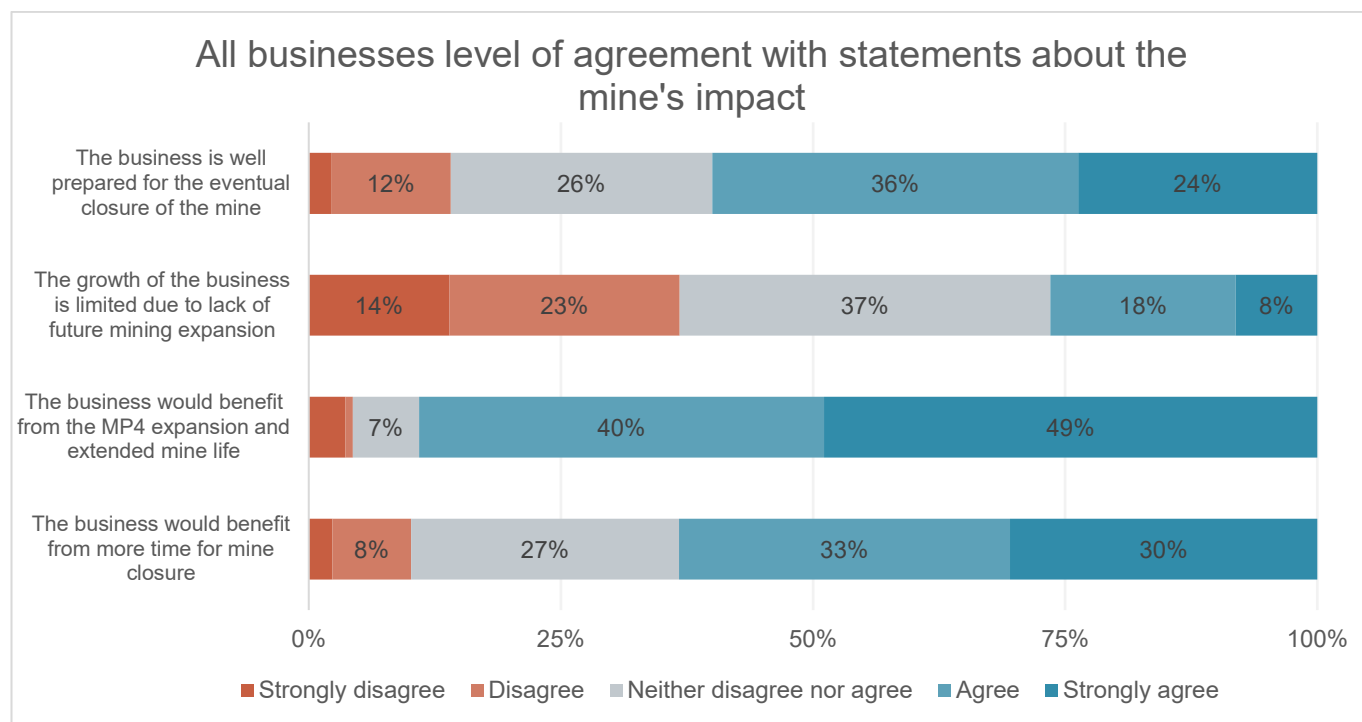


Figure 13. All businesses level of agreement with statements about the mine's impact

For local businesses specifically (Figure 14), the picture is similar. Slightly more agree that the growth of their business is limited due to a lack of future mining expansion (32%, +6 points compared to all businesses) and fewer agree that their business is well prepared for the eventual closure of the mine (45%, -15 points compared to all businesses). There is also stronger agreement that the business would benefit from the MP4 expansion (59% strongly agree, compared to 49% for all businesses).

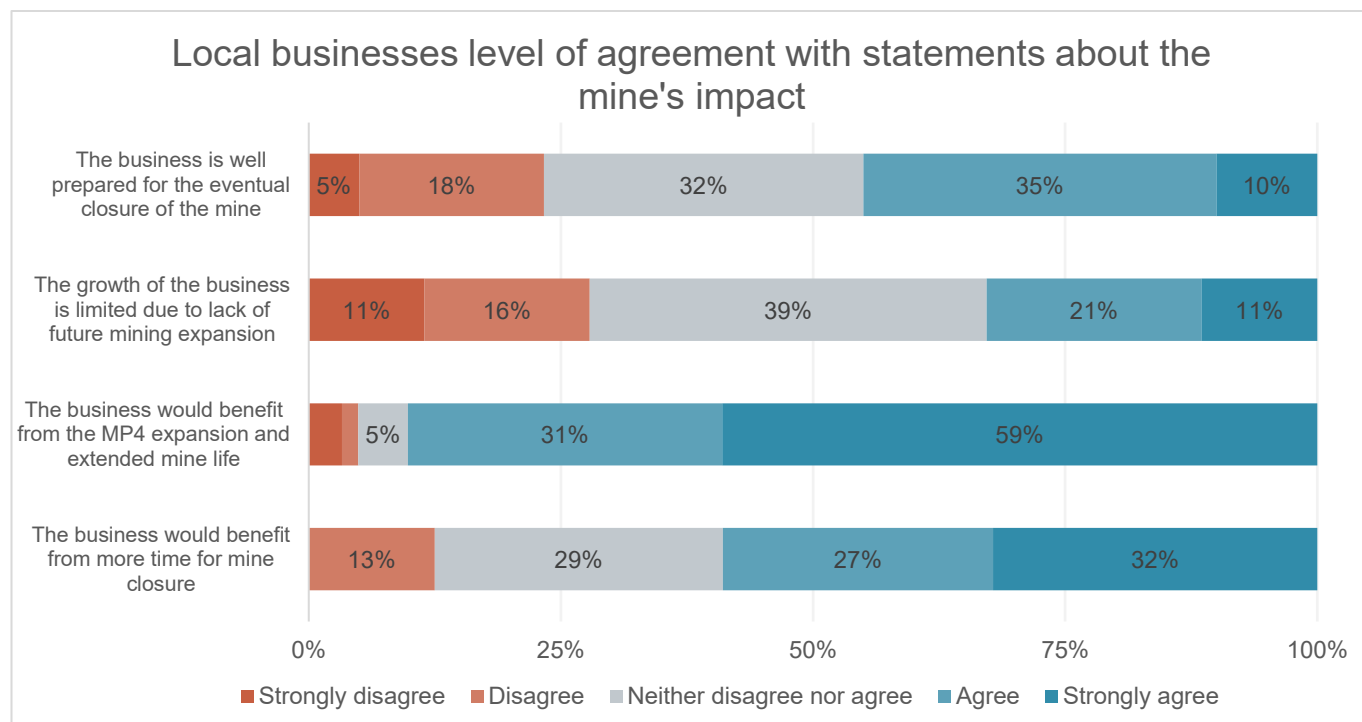


Figure 14. All businesses level of agreement with statements about the mine's impact

Open-ended questions

When asked **what effects the proposed MP4 expansion will have on their business**, respondents consistently anticipated that it would have a predominantly positive impact, primarily through continued or increased revenue, workload certainty, and growth opportunities. Many highlighted the importance of the expansion in maintaining existing income streams (often a material share of revenue), enabling long-term planning, asset investment, and business expansion locally, and, in some cases, internationally. The expansion is widely seen as supporting employment security, allowing firms to retain current staff, recruit additional personnel, and invest in training and specialist skills.

“It would have a strongly positive effect as I expect that current staffing levels would increase, creating opportunities and growth for our business.”

Another recurring theme was confidence and stability. Ongoing operations at Macraes were viewed as important for keeping businesses viable, supporting local supply chains, and sustaining regional economic activity, including indirect benefits to housing, logistics, and community services. While some respondents anticipated little change to their current level of involvement, the expansion was widely seen as providing certainty of work, supporting incremental growth than a step-change transformation.

“Job security in regional areas... has a huge positive impact for all. This consistent income flows into local businesses that support rural/regional living.”

In terms of the **effects of the MP4 expansion on the local economy**, responses overwhelmingly indicate that they expect it to have a positive impact, with employment and stability emerging as the dominant themes. Many respondents emphasised the mine’s role as a major regional employer, providing secure, well-paid jobs that support households and underpin population retention in surrounding towns. This stability

was seen as particularly important in regional and rural areas, helping insulate communities from volatility in other sectors such as farming. Ongoing employment was also consistently linked to increased local spending, supporting hospitality, accommodation, retail, transport, logistics, trades, and other professional services.

The flow-on and multiplier effects of continued operations were also highlighted. Respondents indicated benefits to local suppliers, contractors, ports, engineering, energy, and service industries, alongside reinvestment in community facilities. The expansion was essentially seen as maintaining confidence in the local economy. While a small number of respondents were unsure or expected conditions to remain broadly unchanged regardless of the outcome, the overall sentiment is that the MP4 expansion would be a significant contributor to continued regional economic resilience.

When asked **how they feel about the MP4 expansion overall**, sentiment is highly positive and strongly supportive. Respondents consistently expressed optimism, enthusiasm, and confidence that the expansion would be beneficial for the region, local communities, and the wider New Zealand economy. Many highlighted the importance of the mine in retaining people in the region, supporting local towns, and underpinning community wellbeing. While a very small number expressed neutrality or noted the importance of environmental safeguards, the dominant view was one of clear support.

“Very positive, protects jobs, keeps the region alive. Supports other businesses and enables growth and investment.”

If **Macraes mine were to close**, the effects would be predominantly negative for these businesses. A large proportion of respondents identified direct revenue loss, with several businesses stating specific losses ranging from 9–30% that could occur as a result. For the firms most directly affected, closure would likely trigger downsizing, staff lay-offs, reduced training and investment, or, in some cases, full closure of local operations, particularly for businesses who exist primarily (or solely) to service the mine. Many noted the loss would extend beyond their own operations to local contractors, logistics providers, manufacturers, and service suppliers, reducing activity right across the regional supply chain.

“It would be an immediate loss of a long-term steady income for our business and potentially cost jobs if that revenue couldn’t be replaced.”

The wider regional and indirect effects were also discussed. Even amongst respondents expecting a minor or manageable direct impact, second-order effects such as job losses and reduced local spending could have flow-on effects for the wider economy. It could also lead to a loss of skills, technical capability, innovation opportunities, and

long-standing working relationships, as well as reduced confidence to invest or expand in the region. While some larger or more diversified firms indicated they could adapt over time by refocusing on other customers or markets, the overall picture is that mine closure would have a material economic effect on businesses.

Summary - Key Informant Interviews

Type of Informant	Key Informant/s	Summary of Engagement
Close proximity Neighbours to Macraes Mine / MP4	Neighbour 1	- Existing mining operations have resulted in noise and water-related effects, with past night-time noise previously affecting amenity and some concern about springs drying up. Noise impacts are currently reduced as mining near Coronation North has reduced. - Views the proposed MP4 expansion as a continuation of previous mining activity, with limited overall concern based on past experience with the mine. - Anticipates impacts at Coronation North, including increased truck noise and loss of leased grazing land, but see's these as a continuation of previous experiences. - Does not expect the expansion to significantly affect day-to-day farming operations beyond known effects. - Expects mine closure to have little direct personal impact, aside from some uncertainty about land condition if mine land were returned. - Considers closure likely to have significant adverse effects on nearby communities, particularly Palmerston, including risks to the school, pub, and local economy.
	Neighbour 2	- Existing mining operations have resulted in ongoing concerns related to rehabilitation of mined land and water quality. Noise and dust were described as not being a major concern. - Concerned about further waste rock stack height increases and pit expansion, particularly due to perceived lag in rehabilitation relative to new disturbance. - Expresses frustration that previously rehabilitated areas may be reworked. - Does not expect substantial local benefits from the MP4 expansion, aside from continued regional employment and business activity. - Believes mine closure would have adverse effects on the local village, including reduced school viability, decline of the pub, and loss of families from the area. - Expects closure impacts to be more significant at a regional level, particularly for Palmerston and Waikouaiti, due to employment dependence. - Describes the mine as economically valuable to surrounding towns, while noting that local residents bear most amenity effects with fewer direct benefits.

Type of Informant	Key Informant/s	Summary of Engagement
	Neighbour 3	- Does not experience significant adverse effects from current mining operations, with noise, dust, and traffic described as minor or manageable. - Expresses no objection to the MP4 expansion and does not anticipate negative effects on daily life. - Supports the expansion. Believes it is a way to maintain employment and economic stability, viewing it as logical given existing infrastructure. - Considers potential land purchase or infrastructure changes (e.g. road realignment, power lines) to be manageable and acceptable. - Believes mine closure would cause the area to decline economically, particularly through job losses and reduced activity in Palmerston. - Acknowledges some personal benefits of closure, such as increased quietness, but sees these as outweighed by wider negative effects. - Views the mine as connected to the community through employment, economic flow-on effects, and support for services and facilities. Believes community benefits from the mine are often unseen by community but would diminish if mine closed.
	Neighbour 4	- States that current mining operations do not materially affect him at present, with past noise accepted as part of the existing environment when they purchased the property. - Raises significant concerns about the MP4 expansion due to its closer proximity to his property compared with current operations. - Identifies potential adverse effects including noise (including night-time operations), increased traffic, and effects on property value and saleability. - Expresses concern about stock water availability, noting reliance on water sources near the proposed Golden Bar Pit. - Emphasises that concerns relate to direct property and operational impacts, rather than opposition to mining in principle. - Considers that mine closure would cause short-term disruption but believes the wider community would adapt over time. - Views the mine as providing economic benefits, but not as the sole foundation of the community, noting the ongoing role of farming families. Also concerned that post-closure land use may shift towards forestry rather than farming.

Type of Informant	Key Informant/s	Summary of Engagement
Community Representatives	Macraes Moonlight School	■ Mining is viewed as fundamental to community sustainability, supporting population retention, family employment, and essential services in a remote rural area. ■ The school is a core community anchor, alongside the hotel, providing social cohesion, identity, and intergenerational continuity. ■ The relationship with the mine is positive and ongoing, with financial support enabling staffing levels beyond standard government funding. ■ Current mining operations have minimal adverse effects on the school, with noise, traffic, and environmental impacts generally regarded as minor or manageable. ■ The proposed MP4 expansion is expected to have positive effects, particularly through maintaining enrolment stability, staffing, and school viability. ■ Mining families are recognised as transient, but nevertheless critical to maintaining a viable school roll. ■ Mine closure is anticipated to result in family out-migration, declining enrolments, reduced staffing, and broader community contraction, despite strong local attachment and resilience.
	Stanley's Hotel	■ The mine has a strong positive economic impact on the community, underpinning employment, business viability, infrastructure upkeep, and regional financial stability. ■ Mine activity enables the Stanley Hotel to operate as the primary social and community hub, supporting social connection and informal wellbeing support in the absence of other local facilities. ■ The community–mine relationship is generally positive, with the mine viewed as part of the community, though trust and communication depend heavily on staff continuity. ■ Operational challenges include noise complaints, loss of farmland, empty mine-owned housing, and land-use tension between mining, farming, and forestry. ■ The proposed MP4 expansion is strongly supported, with no anticipated adverse community effects and clear benefits for employment, school viability, and local services. ■ The mine supports affordability and accessibility by enabling the hotel to keep prices low for local residents. ■ Mine closure is expected to have severe negative impacts, including population decline, loss of the school, reduced services, and long-term threats to community viability.

Type of Informant	Key Informant/s	Summary of Engagement
	Macraes Community Incorporated (MCI)	■ Mining has provided substantial economic and social benefits, including employment, school support, emergency response capability, and support for local businesses. ■ MCI acts as the formal representative voice of the community, facilitating information exchange and raising concerns with the mine. ■ The relationship with the mine is functional but mixed, affected by staff turnover, trust issues, and perceived inconsistency in follow-through on commitments. ■ Key concerns with current operations include dust, noise, water uncertainty, long-term land covenants, and dissatisfaction with rehabilitation quality and oversight. ■ Confidence in regulatory monitoring and enforcement is limited, with concerns about council reliance on mining-related revenue. ■ The proposed MP4 expansion raises concerns about increased dust and noise, disruption of rehabilitated land, and lack of clarity on final landform outcomes. ■ Mine closure is expected to result in a shift back to a smaller farming-based community, with impacts on the school, community activity, and loss of mine-related emergency services, but not viewed as catastrophic.
	Macraes Community Development Trust	■ The mine is considered essential to the existence and current functioning of the Macraes community. ■ The Trust plays a central role in sustaining community assets, including the school and hotel, with significant financial and operational support from the mine. ■ The relationship between the Trust and the mine is described as exceptionally strong, with regular communication and ongoing assistance. ■ Current mining operations deliver predominantly positive community outcomes, particularly population retention, service viability, and infrastructure maintenance. ■ Landscape modification was identified as the primary adverse effect of mining, with other impacts considered minimal. ■ The proposed MP4 expansion is supported, with no additional community-level adverse effects identified. ■ Mine closure is expected to create long-term challenges for service and infrastructure provision, with Trust resources able to support transition only temporarily.
Local Businesses	Business A	■ Large engineering firm (~100+ staff) with 30–60% of work linked to the mine (depending on mine operation scheduling). Opened after mine began. ■ Mine has driven growth, diversification, and resilience during downturns. Mine is their largest customer.

Type of Informant	Key Informant/s	Summary of Engagement
		■ MP4/continuation supports continued growth, stable workloads, and employment opportunities. Allows for income-boosting opportunities for workers too. ■ Business can scale workforce (including casual staff) to meet demand. ■ Closure would remove a reliable core workload, requiring new markets. ■ Business likely to remain viable due to diversification, though growth may slow. ■ Potential loss of local specialist services and stable employment/income opportunities.
	Business B	■ Initially established for the mine which used to be the bulk of their work. Now diversified with ~10% of work linked to mining after contracts changed / ceased. This period of diversification was described as very challenging. ■ Business has shifted focus to civil and energy projects (e.g. wind and solar). ■ MP4 / expansion viewed with uncertainty about impact on their business, with no reliance on securing future mine work. ■ Business strategy is not dependent on the mine going forward. ■ Closure expected to have minimal direct impact on operations. ■ Likely to relocate away from Palmerston if the mine closes. ■ Interviewee expects limited wider community impact, with Palmerston remaining stable due to its elderly demographic, surrounding agricultural economy, and state highway thoroughfare.
	Business C	■ Mine is a main driver of business viability, influencing extended hours, increased product range, and lower pricing through higher purchasing volumes. ■ Strong direct (catering, supply) and indirect (worker spending, visitor flows) links to the mine. ■ Growth and staffing (~27 staff) supported by consistent demand from mining activity. ■ MP4 / continuation provides certainty and confidence for ongoing operation and incremental investment. ■ Business can adapt to changes in mine demand (hours, staffing, services). ■ Closure is the largest risk, likely requiring reduced staff, hours, and product range. ■ Closure expected to lead to population decline, reduced spending, and loss of local services. ■ Described Palmerston as safe, stable, and community-oriented, characteristics the interviewees believe could be undermined by major employment loss if mine closes.

Type of Informant	Key Informant/s	Summary of Engagement
	Business D	■ Family-run business (~16–18 staff) with ~80% of work tied to the mine. ■ Mine has driven growth in staff, equipment, and shift to seven-day operations. ■ Mine supports local availability of equipment and specialist services, reducing costs and travel requirements for farmers and residents. ■ MP4/continuation would maintain current workload, with no major growth planned. ■ Closure would result in loss of primary workload, with only short-term rehabilitation work. ■ Business would downscale to a smaller, family-based operation. ■ Closure likely to cause reduced services, more competition for work, and population loss in smaller towns.
	Business E	■ Longstanding business (began prior to the mine) that has grown from 20 to ~60–70 staff, with 30–40% of work linked to mining. Multiple workshops. ■ Mine has supported diversification into specialised engineering sectors (e.g., gas, hydraulic etc). ■ MP4/continuation supports ongoing demand, employment, and business stability. ■ Diversified workload provides some resilience to changes in mining activity. ■ Closure could lead to around a 40% reduction in workload and staff downsizing. ■ Flow-on impacts expected for external contractors and supply chain businesses that their business supports. ■ Mine seen as a key stabilising influence on the regional economy and community.

APPENDIX C: REVIEW OF RELEVANT PLANNING OBJECTIVES AND POLICIES

Macraes Mine Expansion - High Level Review of Regional and District Plans and Strategies: Alignment of the Macrae's Mine Expansion with Social, Community, and Economic Aspirations

Overview

A review of the Otago Regional Policy Statement (RPS), the Proposed and Operative Waitaki District Plans, the Dunedin City 2GP, and current national direction confirms strong and consistent policy support for the ongoing operation and expansion of mining activities within the established Macraes mining area. Collectively, these documents recognise the significant economic, social, and community wellbeing benefits associated with mineral extraction, while requiring responsible management of environmental effects.

The mine expansion aligns well with this strategic intent.

Regional Planning Alignment

The Otago RPS establishes a regional direction that emphasises sustainable resource use, community wellbeing, and a resilient regional economy. Key provisions (IM-03, UFD-P7, ECO-04) recognise:

- The importance of regionally significant industries in supporting social and economic wellbeing.
- The appropriateness of mining and associated activities within rural areas.
- The role of natural and physical resource use in maintaining community prosperity.

The Macraes expansion continues the operation of a major regional industry within an appropriate rural setting. It contributes significantly to employment, economic activity, and community wellbeing, directly aligning with RPS outcomes.

District Planning Alignment

Operative Waitaki District Plan

The operative plan similarly recognises the importance of mineral resources and includes a dedicated Mining Zone at Macraes (Objective 6; Policies 6.1–6.5). The plan emphasises:

- Supporting access to mineral resources.
- Providing for existing mining operations at their current scale and intensity.
- Managing adverse effects on rural amenity.

The proposed expansion is consistent with longstanding district expectations for Macraes as a major extractive industry hub.

Proposed Waitaki District Plan (PWDP) – Exemptions Version

The PWDP (Exemptions Version) formally recognises Macraes as a Special Purpose Zone – Macraes Mining, signalling strong strategic support for ongoing operations. The PWDP is currently partially operative and has not completed the appeals stage. Objectives and policies (SPZMM-O1, SPZMM-P2, SPZMM-P4) identify:

- The social, cultural, and economic benefits of accessing significant mineral resources.
- The intention to provide for future mining in appropriate locations.
- The need to manage effects and ensure robust rehabilitation planning.

The expansion proceeds within an explicitly anticipated and purpose-built planning framework, with clear alignment to enabling policies.

Dunedin City 2GP

The 2GP identifies mining as an appropriate rural activity and supports expansion of existing rural industries where effects are managed.

The small portion of the mine within Dunedin aligns with rural zone intent and contributes to rural community wellbeing.

National Direction

Recent national reforms (2025–2026) have strengthened support for mineral extraction through:

- More enabling pathways across NPS-IB, NPS-HPL, and NPS-FM.
- Clearer recognition of regional and national economic benefits.
- Removal of restrictive gateway tests and improved consent pathways.

The Macraes expansion sits comfortably within this trend toward greater national recognition of the economic importance of mineral resources.

Overall Conclusion

Across the full planning hierarchy, the policy framework recognises Macraes as a strategically significant mineral resource with enduring value to local communities, the regional economy, and New Zealand's broader development needs. The mine expansion:

- Aligns strongly with regional and district aspirations for economic resilience, community wellbeing, and rural productivity.
- Continues within an established mining zone specifically identified and planned for this purpose.
- Meets national expectations for enabling mineral extraction while responsibly managing environmental effects.

Overall, the Macraes mine expansion is well aligned with the social, community, and economic aspirations of the relevant regional, district, and national planning frameworks.

APPENDIX D: ASSESSMENT MATRIX

Social Impact Assessment Matrix

MP4 Assessment

IMPACT	PHASE	PRE-MITIGATION						POST-MITIGATION					
		EXTENT	DURATION	MAGNITUDE	CONSEQUENCE	LIKELIHOOD	SIGNIFICANCE	EXTENT	DURATION	MAGNITUDE	CONSEQUENCE	LIKELIHOOD	SIGNIFICANCE
Job security and sustained livelihoods	Operational	Local (and regional and national)	Medium-term	High (many affected)	Moderate	Almost certain	Extremely High (positive)	N/A					
Continued community stability	Operational	Local and Regional	Medium-term	High (many affected)	Moderate	Likely	High (positive)	N/A					
Continued local community benefits	Operational	Site and surrounds, and Local	Medium term	Medium (moderate number affected)	Moderate	Almost certain	Extremely High (positive)	N/A					
Continued business reliance on mining	Operational	Local	Medium-term	Low (few affected)	Minor	Possible	Moderate (negative)	Local	Medium-term	Low (few affected)	Minor	Unlikely	Low (negative)
Change in sense of place	Operational	Site and surrounds	Medium-term	Low (few affected)	Insignificant	Rare	Low (negative)	N/A					
Change in the quality of the environment	Operational	Site and surrounds	Medium-term	Low (few affected)	Minor	Unlikely	Low (negative)	Site and surrounds	Medium-term	Low (few affected)	Minor	Unlikely	Low (negative)
Reduced wellbeing	Operational	Site and surrounds	Medium-term	Low (few affected)	Minor	Unlikely	Low (negative)	Site and surrounds	Medium-term	Low (few affected)	Minor	Rare	Low (negative)

Preliminary Closure Assessment

IMPACT	PHASE	PRE-MITIGATION					
		EXTENT	DURATION	MAGNITUDE	CONSEQUENCE	LIKELIHOOD	SIGNIFICANCE
Loss of direct employment	Closure	Local	Permanent	High (many affected)	Major	Almost certain	Extremely High (negative)
Reduced community stability	Closure	Local	Short-term	Medium (moderate number affected)	Moderate	Likely	High (negative)
Change in sense of place	Closure	Site and surrounds	Permanent	Low (few affected)	Minor	Unlikely	Low (negative)
Improved quality of the environment	Closure	Site and surrounds	Permanent	Low (few affected)	Minor	Possible	Moderate (positive)
Reduced wellbeing	Closure	Local	Short-term	Low to Medium (few -moderate number affected)	Minor	Possible	Moderate (negative)