

MACH Energy

Mount Pleasant Operation

A JOINT VENTURE WITH
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Japan Coal Development Australia



Appendix N

Social Impact Assessment



MACH Energy



Mount Pleasant Optimisation Project

Social Impact Assessment

December 2020



Prepared by

Just Add Lime Ltd

Quality Information

Project Director	Julie Boucher
Project Manager	Rachel Maas
Prepared by	Rachel Maas
Checked and Approved by	Julie Boucher

Review History

Revision		Date	Prepared by	Reviewed
1	Draft for client review	11 Sept 2000	R Maas	J Boucher
2	Final for release	14 December 2020	R Maas	J Boucher



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Executive Summary

Purpose of the SIA

This Social Impact Assessment (SIA) Report has been prepared to meet the requirements of Section 4 of the DPIE's *Social impact assessment guideline for State Significant mining, petroleum production and extractive industry development (September 2017)* (the SIA Guideline). Building on the Scoping SIA, the SIA Report focuses on Section 4 of the SIA Guideline (preparing the SIA component of the Environmental Impact Statement [EIS]).

The Project

MACH¹ is seeking approval from the New South Wales Government for the Mount Pleasant Optimisation Project (the Project). The Project proposes to extend the life of the Mount Pleasant Operation from 2026 to 2048 and increase the amount of run-of-mine (ROM) coal from 10.5 million tonnes per annum to 21 million tonnes per annum. The Project would remain inside the existing mining leases (MLs) associated with the Mount Pleasant Operation.

Social Baseline Study

Taking a “whole of Project approach” and the current impacts of the Mount Pleasant Operation, the Project's social area of influence includes a geographic area from Murrundi to the north, Cassilis to the west, and follows the New England Highway to Newcastle.

People within the Muswellbrook Shire Council Local Government Area (LGA) and more specifically near neighbours, people living in Kayuga and the western side of Muswellbrook experience the greatest impacts.

The Social Baseline Study includes a description of these areas and quantitative and qualitative descriptions for potential social impacts. Potential social impacts of the current Mount Pleasant Operation and other regional mining operations include:

- Impacts on employment opportunities (positive)
- Impacts on housing (positive and negative)
- Impacts on how people move around particularly on the New England Highway between Singleton, Muswellbrook and the Mount Pleasant Operation
- Impacts on health and wellbeing, with a focus on stress, uncertainty, solastalgia² and eritalgia³
- Impacts on community services and facilities (positive and negative)

¹ The unincorporated Mount Pleasant Joint Venture between MACH Energy (95 per cent [%] owner) and J.C.D. Australia Pty Ltd (5% owner). Throughout this report, MACH Mount Pleasant Operations Pty Ltd and the unincorporated Mount Pleasant Joint Venture will be referred to as MACH.

² A form of mental or existential distress caused by environmental change.

³ The loss of an anticipated future.



- Impacts on the quality of the living environment (focus on amenity (environmental) and visual impacts)
- A mix of positive and negative socio-economic impacts (depending on the stakeholder)
- A mix of positive and negative cultural impacts (depending on the stakeholder)
- Impacts on families and communities (with a focus on community division based on support or opposition to coal mining) and
- Distributive equity impacts – with some people experiencing benefits while others are experiencing the cost of mining.

Social impacts are being experienced differentially, with people within the same geographical area experiencing both positive and negative impacts at the same time. For example, for near neighbours, and people living in Kayuga and Muswellbrook:

- People who directly benefit from working at or supplying goods and services to the Mount Pleasant Operation may also experience negative social impacts such as a decrease in the quality of their living environment.
- People who do not benefit from working at or supplying goods and services are experiencing a decrease in the quality of their living environment but may also experience indirect benefits, e.g. through funding for community organisations (if they are involved in the community organisation that has received funding).

Social impacts are experienced cumulatively from the Mount Pleasant Operation (e.g. impacts on employment, quality of the living environment and health and wellbeing), with other mines in the area (e.g. Bengalla Mine and Mt Arthur Coal Mine), with natural disasters (such as drought, flooding and bush fire threats) and with COVID-19.

Potential Social Impacts of the Project

Two scenarios have been assessed, the Project proceeding and the Project not proceeding.

Project proceeding

Potential social impacts of the Project proceeding have been identified as a continuation of the differential social impacts currently being experienced from the Mount Pleasant Operation. The general trend of negative social impacts being experienced by people in close geographical proximity to the current operation and positive social impacts over the same and a wider geographical area would continue.

Building on the current MACH management strategies, there is an opportunity to:

- Increase local benefits through:
 - Continuing strategies to encourage workers to live locally (i.e. in the Muswellbrook, Upper Hunter or Singleton Shire Council LGAs)
 - Continuing strategies to employ, train and upskill people from the local area who are unemployed and
 - Continuing to contribute to the Upper Hunter long term transition from coal mining and power generation.



- Decrease local costs or experiences of negative social impacts by:
 - Continuing to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review management strategies that are reasonable and feasible and
 - Supporting the agricultural industry e.g. supporting the continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.
- Continue to deliver positive social impacts for Aboriginal people with connections to the land and waters on which the Project is located by supporting on-country land management (such as cool burns) and involvement in rehabilitation programs.
- Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.
- Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region and participate/advocate for developing and implementing industry-wide management strategies for impacts, for example on air quality and housing.

Social impacts from the Project will continue to be experienced cumulatively from the Mount Pleasant Operation (e.g. impacts on employment, quality of the living environment and health and wellbeing), with other mines in the area (e.g. Bengalla Mine and Mt Arthur Coal Mine), closure of the Liddell and Bayswater Power Stations, other large infrastructure projects undertaken in the future (e.g. Singleton and Muswellbrook Bypasses), natural disasters and COVID 19.

Project not proceeding

If the Project does not proceed, the Mount Pleasant Operation will cease to operate in 2026. Similar to if the Project proceeds, differential impacts will be experienced. The following impacts are likely to be experienced if the Project does not proceed:

- Loss of direct and indirect employment
- Impacts on housing (positive and negative)
- Impacts on how people move around particularly on the New England Highway between Singleton, Muswellbrook and the Mount Pleasant Operation
- Positive impacts on health and wellbeing for those people who are currently experiencing a negative impact, however negative impacts for those people who lose their jobs and people who are experiencing benefits from the Mount Pleasant Operation or loss of livelihoods as a result of the Project not proceeding
- Impact on community services and facilities (positive and negative)
- Increase in the quality of the living environment
- A mix of positive and negative socio-economic impacts
- A mix of positive and negative cultural impacts
- Impacts on families and community (with a focus on community division based on support or opposition to coal mining) and

- Distributive equity impacts – with some people benefiting and others experiencing the cost of cessation of mining.

Social impacts from the closure of the Mount Pleasant Operation will be experienced cumulatively with impacts from other mines in the area, (e.g. Bengalla Mine and Mt Arthur Coal Mine), closure of the Liddell and Bayswater Power Stations, other large infrastructure projects undertaken in the future (e.g. Singleton and Muswellbrook Bypasses), natural disasters and COVID 19.

If the Project does not proceed, Mount Pleasant Operation would continue to operate under the approved Development Consent DA 92/97 until 2026 and continue to apply required management strategies (including requirements for mine closure and rehabilitation).



1 Introduction

1.1 The Proposed Project

MACH⁴ is proposing further development of the existing approved Mount Pleasant Operation to extend the life of the mine. The proposed Mount Pleasant Optimisation Project (the Project) includes the following development:

- Increased open cut extraction within Mount Pleasant Operation Mining Leases (MLs) by mining of additional coal reserves, including lower coal seams in North Pit
- A staged increase in extraction, handling and processing of run-of-mine (ROM) coal up to 21 million tonnes per annum (Mtpa) (i.e. progressive increase in ROM coal mining rate from 10.5 Mtpa over the Project life)
- Staged upgrades to the existing Coal Handling and Preparation Plant (CHPP) and coal handling infrastructure to facilitate the handling and processing of additional coal
- Rail transport of up to approximately 17 Mtpa of product coal to domestic and export customers
- Upgrades to workshops, electricity distribution and other ancillary infrastructure
- Existing infrastructure relocations to facilitate mining extensions (e.g. local roads, powerlines and water pipelines)
- Construction and operation of new water management and water storage infrastructure in support of the mine
- Additional reject dewatering facilities to allow co-disposal of fine rejects with waste rock as part of ROM waste rock operations
- Development of an integrated waste rock emplacement landform that incorporates geomorphic drainage design principles for hydrological stability, and varying topographic relief to be more natural in exterior appearance
- Construction and operation of new ancillary infrastructure in support of mining
- Extension to the time limit on mining operations to 22 December 2048
- An average operational workforce of approximately 600 people, with a peak of approximately 830 people
- Ongoing exploration activities and
- Other associated infrastructure, plant, equipment and activities.

⁴ The unincorporated Mount Pleasant Joint Venture between MACH Energy (95 per cent [%] owner) and J.C.D. Australia Pty Ltd (5% owner). Throughout this report, MACH Mount Pleasant Operations Pty Ltd and the unincorporated Mount Pleasant Joint Venture will be referred to as MACH.



1.2 Background

This Social Impact Assessment (SIA) report has been undertaken to meet the requirements of the New South Wales (NSW) Department of Planning, Infrastructure and Environment's (DPIE) *Social impact assessment guideline for State Significant mining, petroleum production and extractive industry development* (DPE 2017) (the SIA Guideline). The SIA has focused on Section 4 of the SIA Guideline and specifically the Social Baseline Study (Appendix C1), predicting and analysing social impacts (Appendix C2), evaluating social impacts (Appendix C3), developing responses to social impacts (Appendix C4) and developing a monitoring and management framework (Appendix C5).

The Mount Pleasant Operation Development Consent DA 92/97 was granted on 22 December 1999. The Mount Pleasant Operation was also approved under the Commonwealth *Environment Protection and Biodiversity Conservation Act, 1999* (EPBC Act) in 2012 (EPBC 2011/5795).

MACH acquired the Mount Pleasant Operation from Coal and Allied Operations Pty Ltd (Coal & Allied) on 4 August 2016. MACH commenced construction activities at the Mount Pleasant Operation in November 2016 and commenced mining operations in October 2017, in accordance with Development Consent DA 92/97 and EPBC 2011/5795.

MACH Mount Pleasant Operations Pty Ltd now manages the Mount Pleasant Operation as agent for and on behalf of the unincorporated Mount Pleasant Joint Venture between MACH Energy (95 per cent [%] owner) and J.C.D. Australia Pty Ltd (5% owner).

The approved Mount Pleasant Operation includes the construction and operation of an open cut coal mine and associated rail spur and product coal loading infrastructure located approximately three kilometres (km) north-west of Muswellbrook in the Upper Hunter Valley of NSW.

The mine is approved to produce up to 10.5 Mtpa of ROM coal. Up to approximately 9 trains per day with thermal coal products from the Mount Pleasant Operation transported by rail to the Port of Newcastle for onwards overseas export, or distribution to domestic customers for use in electricity generation.

A more detailed history of the mine is included in Section 2 of the Environmental Impact Statement (EIS).

1.3 Purpose

The SIA Report has been developed to meet the requirements of Section 4 of the DPIE's SIA Guideline and the requirements of the Secretary's Environmental Assessment Requirements (SEARs).

Section 4 of the SIA Guideline describes the four core objectives that should be met during the SIA component of the EIS:

1. The extent and nature of potential social impacts are predicted and analysed using accepted social science methods against existing social baseline conditions.
2. The SIA component of the EIS effectively draws attention to and focuses on, the potential social impacts that are assessed as being significant.
3. Potential social impacts, particularly those evaluated as significant, have an appropriate, justified response, and residual social impacts are identified and explained.
4. Appropriate arrangements are proposed to monitor and manage mitigation and enhancement measures and residual social impacts over the life of the project, including unforeseen issues.

For the SIA Report, the following definition of SIA, as provided in the SIA Guideline, has been adopted:

Social impact assessment (SIA) is the process of identifying, predicting, evaluating and developing responses to the social impacts of a proposed State significant resource project, as part of the overall EIA of that project. (SIA Guideline p. 1)

The SEARs set out the following requirements:

Including a detailed assessment of the potential social impacts of the development that builds on the findings of the Social Impact Assessment Scoping Report, in accordance with the Social impact assessment guideline for State significant mining, petroleum production and extractive industry development 2017, paying particular consideration to:

- how the development might affect people's way of life, community, access to and use of infrastructure, services and facilities, culture, health and wellbeing, surroundings, personal and property rights, decision-making systems, and fears and aspirations;

- the principles in Section 1.3 of the guideline; and

- the review questions in Appendix D of the guideline.

The SEARs also requires a detailed assessment of the cumulative impacts of the development, in combination with other existing and approved mining projects in the locality.

1.4 Structure of the Report

The structure of this SIA Report is outlined below:

1. Introduction – provides an overview of the Project, the background and purpose of the SIA
2. Methodology – an overview of the SIA methodology and definition of social impacts
3. The Project – a description of the Project, including its location and a comparison with the existing Mount Pleasant Operation
4. Existing social environment – an overview of the existing social environment
5. Social Baseline Study – an overview of the social area of influence and a description of impacts currently experienced from the Mount Pleasant Operation)
6. Project proceeds – a summary of likely social impacts and provisional Social Impact Management Plan (SIMP) if the Project proceeds
7. Project does not proceed - a summary of likely social impacts if the Project does not proceed
8. Conclusion.

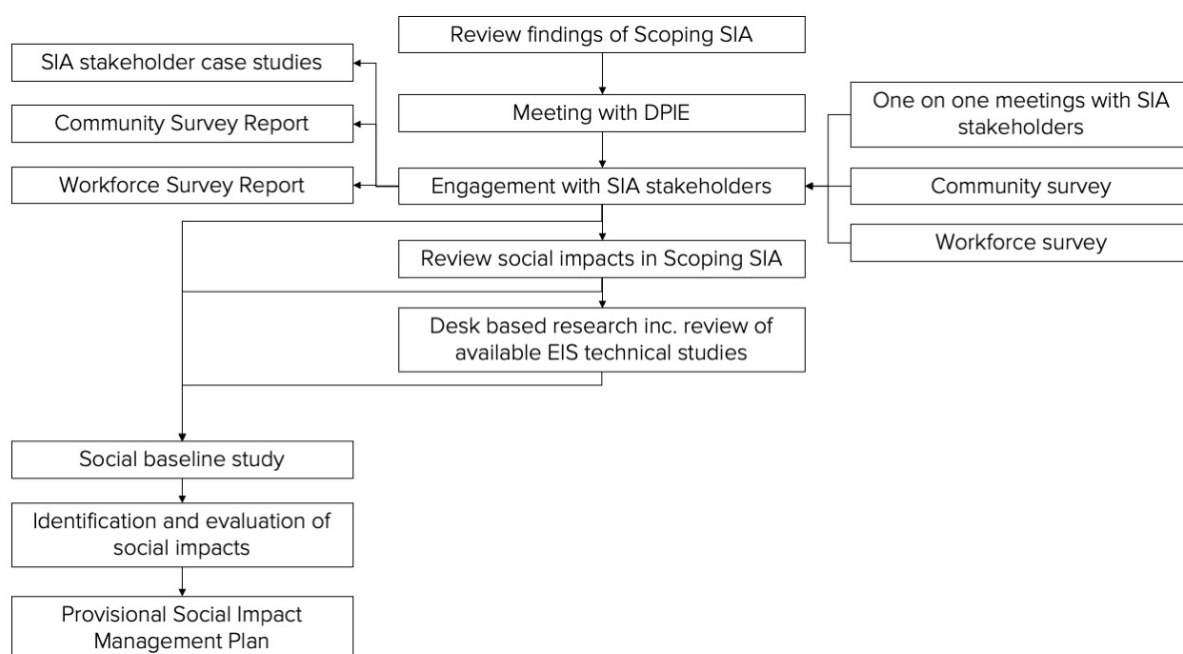
Data supporting the findings of the SIA Report is provided in the referenced Appendices.

2 Methodology

2.1 SIA Methodology

The SIA methodology continues the research that was undertaken as part of the preparation of the SIA Scoping Report. The process undertaken to complete the SIA is shown in Figure 1 and further detail is provided in Appendix C.

Figure 1: Summary of the SIA Methodology



Limitations to the SIA can be found in Appendix C. Assumptions are highlighted throughout the relevant appendices of the SIA.

2.2 Definition of social impacts

This report adopts the definition of a social impact set by the SIA Guideline (p. 5):

A social impact is a consequence experienced by people due to changes associated with a State Significant Resource Project.

The SIA has retained the categories of social impacts identified in the Scoping SIA:

- Way of life – including:
 - How people live, for example, how they get around and access to adequate housing
 - How people work, for example, access to adequate employment



- How people play, for example, access to recreational activities and
 - How people interact with one another on a daily basis.
- Health and wellbeing – including physical and mental health, including psycho-social impacts such as solastalgia (a form of mental or existential distress caused by environmental change) and eritalgia (loss of an anticipated future).
- Services and facilities – access to and use of infrastructure, services and facilities, whether provided by local, state or federal governments, or by for-profit organisations or volunteer groups.
- Quality of the living environment (surroundings) – including access to and use of ecosystem services, public safety and security, access to and use of the natural and built environment, and its aesthetics value and/or amenity.
- Socio-economic impacts – including standard of living, level of affluence, economic prosperity and resilience, property values, employment, replacement costs of environmental functions and economic dependency.
- Cultural impacts – including shared beliefs, customs, values and stories, and connections to land, places and buildings (including Aboriginal culture and connection to country).
- Family and community impacts – including its composition, cohesion, character, how it functions and sense of place.
- Personal and property rights – including whether economic livelihoods are affected, and whether people experience personal disadvantage or have their civil liberties affected.
- Decision making systems – particularly the extent to which people can have a say in decisions that affect their lives, and have access to a complaint, remedy and grievance mechanism.
- Equity impacts – distribution of impacts across the community and between generations (intergenerational impacts).
- Gender impacts – distribution of impacts across men and women.
- Fears and aspirations – related to one or a combination of the above, or about the future of people's communities.

3 The Project

3.1 Project description

The Project aims to optimise the existing Mount Pleasant Operation. It is within the Mount Pleasant Operation boundary that is generally defined by existing MLs (ML 1713, ML 1750, ML 1709, ML 1645, ML 1708 and ML 1808).

The Mount Pleasant Operation is located in a significant mining region of the Sydney Basin that includes a wide range of existing operational coal mines and a number of proposed coal mining projects. The Mount Pleasant Operation MLs are wholly within the Muswellbrook Shire Council Local Government Area (LGA).

The Hunter River and associated alluvial farmlands are located east of the mine, while the land to the west is generally dominated by agricultural grazing land. The Mount Pleasant Operation is surrounded by small to medium sized farm holdings to the east and larger agricultural properties to the north and west.

The town of Muswellbrook is to the east, the villages of Kayuga⁵ is to the northeast, Aberdeen to the north and Denman to the south-west (refer to (Figure 2). Surrounding mines are Dartbrook Mine to the north, Bengalla Mine to the south, Mt Arthur Coal Mine to the south-east and Mangoola Coal to the west.

Regional or local roads surrounding and/or crossing the Mount Pleasant MLs, include Wybong, Kayuga, Dorset and Castlerock Roads and the New England Highway is located 3 km to the east.

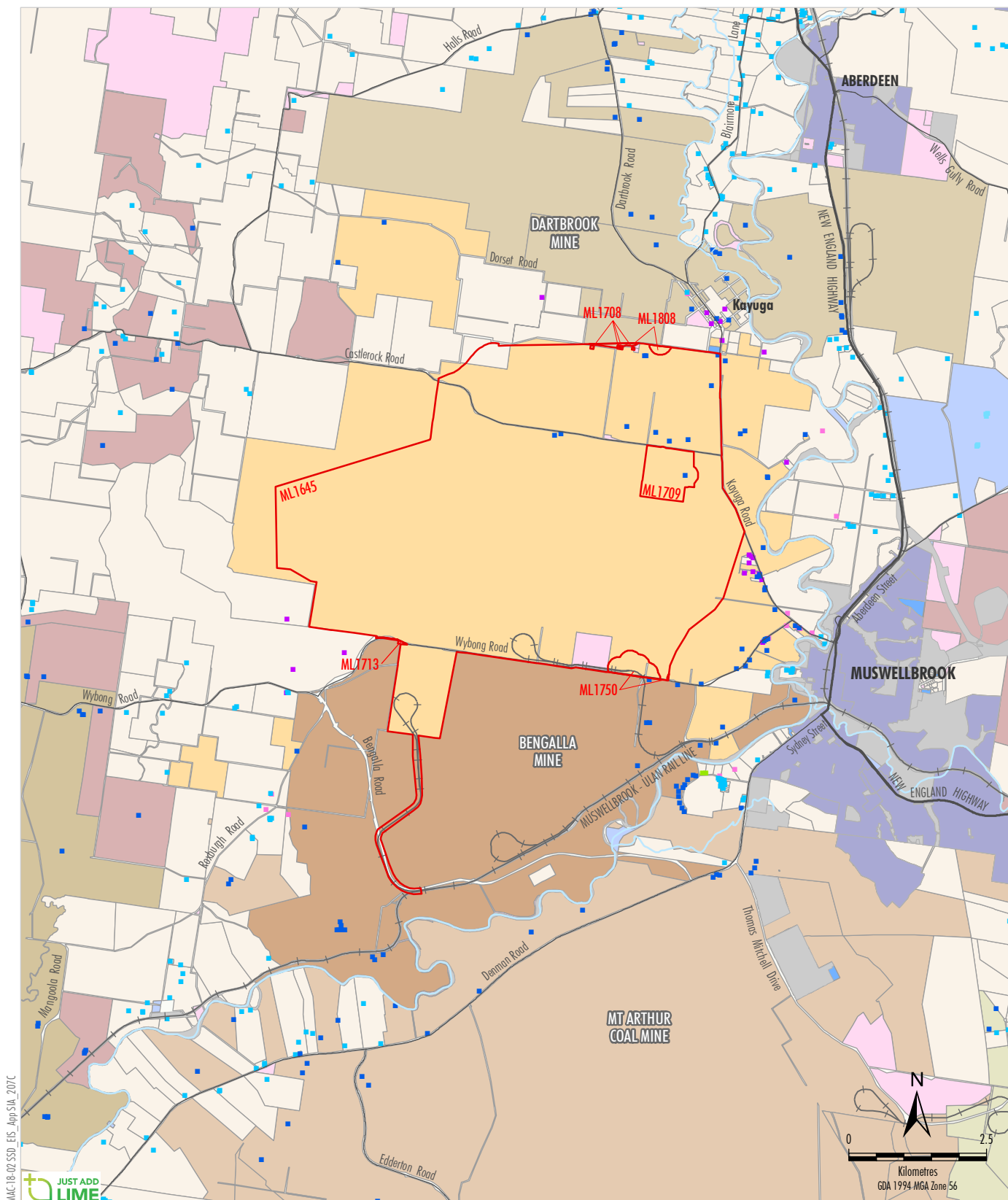
MACH largely owns the freehold land within the MLs and owns a significant portion of the surrounding freehold land (Figure 2), which is either:

- Leased back to the previous owners or other local farmers
- Rented out through real estate agents in Muswellbrook and
- Used to house MACH staff and/or contractors.

The Project would continue to be an open cut coal mine. Coal would continue to be extracted using the truck and excavator method, and in the future, a dragline may be considered.

The general arrangement of the approved Mount Pleasant Operation is shown in Figure 3.

⁵ Kayuga is known locally as a village although it is not defined as a 'village' under the Muswellbrook Shire Council Local Environment Plan.



LEGEND

- Mining Lease Boundary (Mount Pleasant Operation)
- Mount Pleasant-controlled
- Bengalla-controlled
- Dartbrook-controlled
- Mangoola-controlled
- Muswellbrook Coal-controlled
- Mt Arthur-controlled
- Other Mining/Resource-controlled
- Crown
- The State of NSW
- Muswellbrook Shire Council
- Upper Hunter Shire Council
- Privately-owned Land
- Muswellbrook and Upper Hunter LEP Zones B2, B5, R1, R5
- Muswellbrook and Upper Hunter LEP Zones IN1, SP2, RE1, RE2, W1

- Mine-owned Dwelling
- Privately-owned Residence - MPO Acquisition on Request
- Privately-owned Residence - MPO Mitigation on Request
- Privately-owned Residence - MPO Mitigation/Acquisition on Request *
- Other Privately-owned Residence

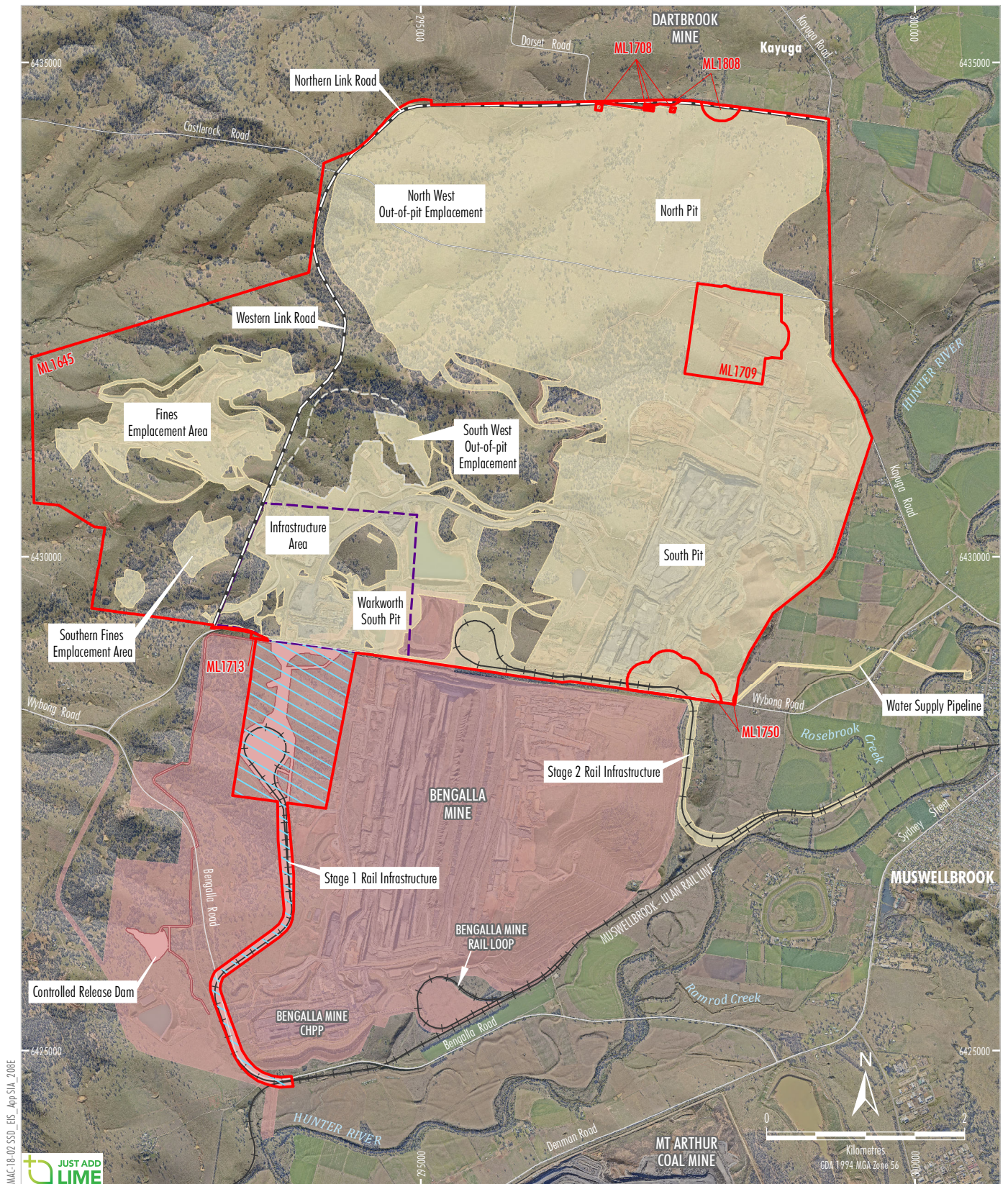
* MPO Mitigation on Request - rail noise. MPO is only required to acquire and/or install air quality mitigation measures at this property if acquisition and/or mitigation is not reasonably achievable under a separate approval for the Bengalla Mine.

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MOUNT PLEASANT OPTIMISATION PROJECT

Land Ownership Overview

Figure 2



LEGEND

- Mining Lease Boundary (Mount Pleasant Operation)
- Approximate Extent of Existing/Approved Surface Development (DA92/97) ¹
- Area Relinquished for Overburden Emplacement and Major Infrastructure
- Infrastructure Area Envelope
- Northern and Western Link Road
- Infrastructure to be removed under the Terms of Condition 37, Schedule 3 (DA92/97)
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Existing/Approved Mount Pleasant Operation Infrastructure within Bengalla Mine Approved Disturbance Boundary (SSD-5170) ¹

NOTE

1. Excludes some incidental Project components such as water management infrastructure, access tracks, topsoil stockpiles, power supply, temporary offices, other ancillary works and construction disturbance.

Source: MACH Energy (2020); NSW Spatial Services (2020); Department of Planning and Environment (2016)
Orthophoto: MACH Energy (July 2020)

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MOUNT PLEASANT OPTIMISATION PROJECT
General Arrangement of the
Approved Mount Pleasant Operation

Figure 3

The Project would also include continuation of the following elements:

- Aboriginal Community Development Fund (ACDF) or a similar Aboriginal development organisation that is active in the community
- Community Consultative Committee (CCC)
- Management of Biodiversity Offsets
- Aboriginal Heritage Conservation and
- Community contributions.

Further information about each of these elements is included in Appendix E.

3.2 Comparison of the Mount Pleasant Operation and the Project

Table 1 provides a comparison of the existing Mount Pleasant Operation and the proposed Project.

Table 1: Comparison of the existing Mount Pleasant Operation and the Project

Component	Approved Mount Pleasant Operation DA 92/97	Project
Mine Life	Originally 21 years from the date of grant of Development Consent DA 92/97 (i.e. 22 December 2020). Extended to 22 December 2026 (Modification 3).	Until 22 December 2048 (i.e. extension of 22 years, allowing for 31 years of mining operations overall).
Mining Method	Open cut mining method incorporating truck and excavator and dragline operations (dragline not envisaged prior to 2026).	Unchanged. Use of dragline subject to feasibility studies.
ROM Coal Production	ROM coal production at a rate of up to 10.5 Mtpa.	ROM coal production at a rate of up to 21 Mtpa.
Waste Rock Production	Waste rock removal at a rate of up to approximately 53 million bank cubic metres (Mbcm) per annum.	Waste rock removal at a rate of up to approximately 89 Mbcm per annum.
Waste Emplacements	Waste rock emplaced both in-pit, and in out-of-pit emplacement areas.	Unchanged. Relinquishment of the North West Out-of-Pit Emplacement area.
Coal Beneficiation	Beneficiation of ROM coal in the on-site CHPP.	Unchanged. Staged upgrades to the CHPP to allow the handling and processing of additional ROM coal.
Coal Loading	Reclaim from product coal stockpiles with coal valves and reclaim conveyors, and loading to trains via a train load-out conveyor and load-out bin.	Unchanged
Coal Transport	Coal transported along the Muswellbrook-Ulan Rail Line and then the Main Northern Railway to the Port of Newcastle for export, or to domestic customers.	Unchanged.

Component	Approved Mount Pleasant Operation DA 92/97	Project
	An average of three, and a maximum of nine, laden trains per day leaving the mine.	An average of 6.5, and a maximum of 10, laden trains at peak coal production.
Coal Rejects	Coarse rejects are placed within mined out voids and out-of-pit emplacements, and used to build walls of the Fines Emplacement Area. Fine rejects are stored in the Fines Emplacement Area.	As approved, plus fine reject dewatering infrastructure would also be installed on new Coal Processing Plant modules so dewatered fine rejects can be co-disposed with coarse rejects.
Water Supply and Disposal	Water requirements are met from pit groundwater inflows, catchment runoff and make-up water from the Hunter River and the Bengalla or Dartbrook Mines. Surplus water would be discharged into the Hunter River (or its tributaries) in compliance with the Hunter River Salinity Trading Scheme (HRSTS) and Environment Protection Licence (EPL) 20850.	Unchanged.
Approximate Disturbance Area	Approximately 2,800 hectares (ha) of surface development, exclusive of some incidental components such as water management infrastructure.	Unchanged.
Final Landform and Land Use	A final landform that incorporates macro-relief and micro-relief concepts so it does not look “engineered” when viewed from Muswellbrook, and avoids major engineered drop structures where practical. One final void would remain if mining was to cease in 2026. The full 21-year mine life indicative final landform includes two final voids associated with the North Pit and South Pit open cuts and a smaller third final void located between the two larger final voids.	Development of an integrated waste rock emplacement landform that incorporates geomorphic drainage design principles for hydrological stability, and varying topographic relief to be more natural in exterior appearance. One final void would remain.
	Rehabilitation with a mixture of pasture and forest, with increased revegetation with native tree species on the eastern face of the final landform.	Unchanged.
Hours of Operation	Operations are approved to be undertaken 24 hours per day, seven days per week.	Unchanged.
Operational Workforce	Average operational workforce throughout the life of the mine of approximately 330 people, and an estimated peak of approximately 380 ⁶ people.	An average workforce of approximately 600 people, with a peak of approximately 830 full time equivalent operational personnel (including MACH staff and on-site contractor personnel).
Construction Workforce	Construction workforce is expected to peak at approximately 350 people.	Construction workforce may have short-term peaks of up to 500 people.

⁶ As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA.

4 Existing social environment

4.1 History of coal mining in the Upper Hunter

Coal has been mined in the Upper Hunter since the early 1900s. Originally coal was mined using underground methods and villages were established at the pitheads. As the coal reserves were depleted in the Newcastle and Lower Hunter regions, the mines and associated workforces moved north into the Upper Hunter.

In the early 1980s, mines transitioned from State-owned to private owned (usually foreign-owned) and coal became an international export as well as a source of domestic power. The 1990s saw the transition from underground to open cut coal mines in the Upper Hunter, as the coal reserves were identified closer to the surface. It also saw the transition from eight to 12-hour shifts. In 1998, the Bengalla Mine was the first of the large-scale open cut coal mines to the west of Muswellbrook, followed by the expansion of the existing Mt Arthur Coal Mine.

The Mount Pleasant Operation was previously owned by Coal & Allied. In the late 1990s and early 2010s, Coal & Allied gained approval under State and Commonwealth legislation. During this time, they purchased the majority of properties within the MLs. MACH acquired the Mount Pleasant Operation in 2016 and began construction, with mining operations beginning in 2017.

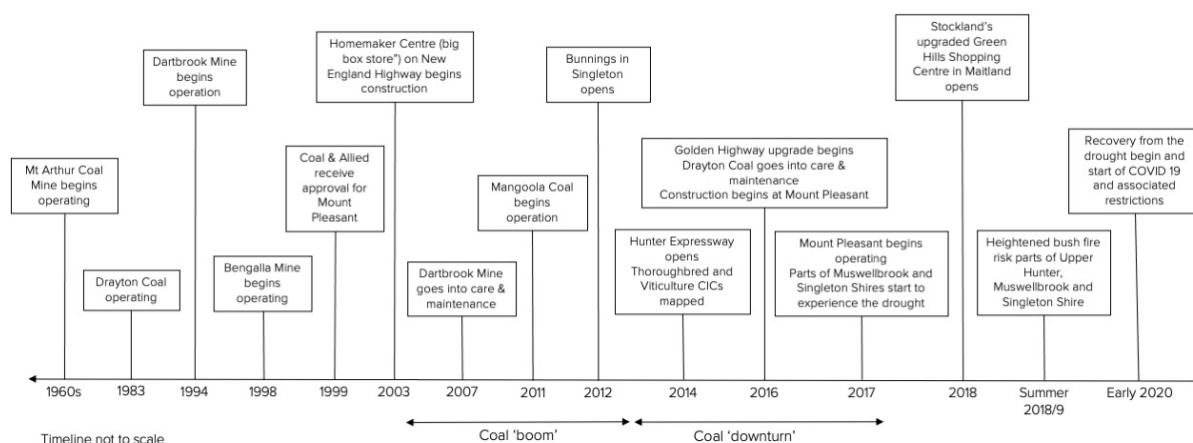
4.2 Surrounding social environment

The Mount Pleasant Operation is surrounded by a privately and MACH owned properties. People who live close (even if sold to MACH) have generally resided in the area for a long time and have strong social connections in the area. Properties purchased by MACH have generally retained their existing land use.

Rural communities surrounding the Mount Pleasant Operation are the Dorset Road community, Blairmore Lane and residents living at Kayuga, the Collins Lane community, residents of Muswellbrook who live on the floodplain of the Hunter River, the Racecourse Road community, Wybong community and the Castlerock community.

Towns and villages in proximity to the Mount Pleasant Operation are Muswellbrook (approximately 3km), Aberdeen (approximately 5km), Scone (approximately 17km), Denman (approximately 18km) and Singleton (approximately 50km). Each town and village has its own unique history and character. Besides mining, other influences on the residents of these towns are drought, major road developments and development of retail services in the Lower Hunter. Other influences are shown on a timescale in Figure 4.

Figure 4: Timescale of significant and local regional events



Muswellbrook is a town in transition. In the late 1990s to the early 2010s, the coal industry was the dominant industry which employed a significant number of people. With the coal downturn in 2012/2013, workers who were laid off and their families left the town leaving a gap in the housing market which was filled by people on low incomes. Since then, the coal industry has continued to have an impact on Muswellbrook through employment opportunities, local procurement and community support programs but has also impacted the town environmentally with residents experiencing dust, noise, lighting and blasting impacts from open cut mining.

Industries competing with the coal industry for land and/or skilled labour are agriculture, thoroughbred and viticulture industries. There is a pre-existing social tension between the different industries in the area which could intensify as the landscape becomes more contested.

Based on feedback from SIA stakeholders, the Muswellbrook Shire Council Community Strategic Plan and the draft Muswellbrook Shire Council Local Strategic Planning Statement, economic diversification is the greatest challenge for the future of Muswellbrook Shire Council LGA and the Upper Hunter region.

5 Social Baseline Study

5.1 Introduction

The Social Baseline Study has two parts:

- A description of the Project's social area of influence (refer to Appendix M for details) and
- Quantitative and qualitative descriptions of indicators relevant to each potential social impact (refer to Appendix N for details).

5.2 Social area of influence

The Project's social area of influence has been identified based on a 'whole of project' approach. This includes the mine site, workforce, transport of coal via rail to Newcastle, the Biodiversity Offset Areas and the Aboriginal Heritage Conservation Area associated with the approved Mount Pleasant Operation.

5.2.1 Different social groups likely to be affected

Based on an understanding of the Project, SIA engagement (Scoping SIA and SIA Case Studies, SIA Community Survey and Workforce Survey), an understanding of the social impacts currently being experienced and desktop research, the social groups most likely to be affected by the Project are:

- Near neighbours.
- Surrounding rural communities:
 - Dorset Road community
 - Blairmore Lane
 - Collins Lane community
 - residents of Muswellbrook who live in the flood plain of the Hunter River
 - the Racecourse Road community
 - Wybong community and
 - Castlerock community.
- Aboriginal people who have a connection to the land and waters within and connected to Mount Pleasant Operation and associated organisations (such as Wonnarua Nation Aboriginal Corporation and Wanaruah Local Aboriginal Land Council).
- Surrounding villages and towns:
 - Kayuga⁷
 - Muswellbrook
 - Denman

⁷ Kayuga is known locally as a village although it is not defined as a 'village' under the Muswellbrook Shire Council Local Environment Plan.

- Aberdeen
- Scone
- Singleton and
- Merriwa.
- Local Governments:
 - Muswellbrook Shire Council
 - Upper Hunter Shire Council and
 - Singleton Council.
- Community services providers:
 - Health and wellbeing including medical and mental health
 - Schools and childcare
 - Emergency services (police, fire and ambulance, Rural Fire Service and State Emergency Service) and
 - voluntary based community groups (e.g. Land Care and sporting groups).
- Agricultural industry.
- MACH workforce (including contractors) and their families.
- MACH suppliers and their associated workforces and families.
- Other business and industries (e.g. hospitality and retail) in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs.

5.2.2 Places of social value or importance

This section identifies and describes the built and natural features located on or near the Project site or the surrounding region that have been identified as having social value or importance by SIA stakeholders either in the Scoping SIA or the SIA, refer to Table 2.

Table 2: Socially significant built and natural features

Feature	Significance	For who
The Hunter River and its tributaries e.g. Sandy Creek catchment	Culturally significant for Aboriginal people who have a connection to the land and waters of the Hunter River and its tributaries. As a water source. As a place to camp.	People in the Upper, Central and Lower Hunter Valley. The Hunter River supplies water (once treated) to Muswellbrook, Denman and Sandy Hollow (Muswellbrook Shire Council 2015b). For homes/businesses who rely on water licences to pump from the Hunter River (e.g. irrigation). Homeless people who camp along the river.
Castlerock Road	The unique views of the Upper Hunter Valley, being able to see Scone to the	People who have a connection to the landscape impacted by the mine.

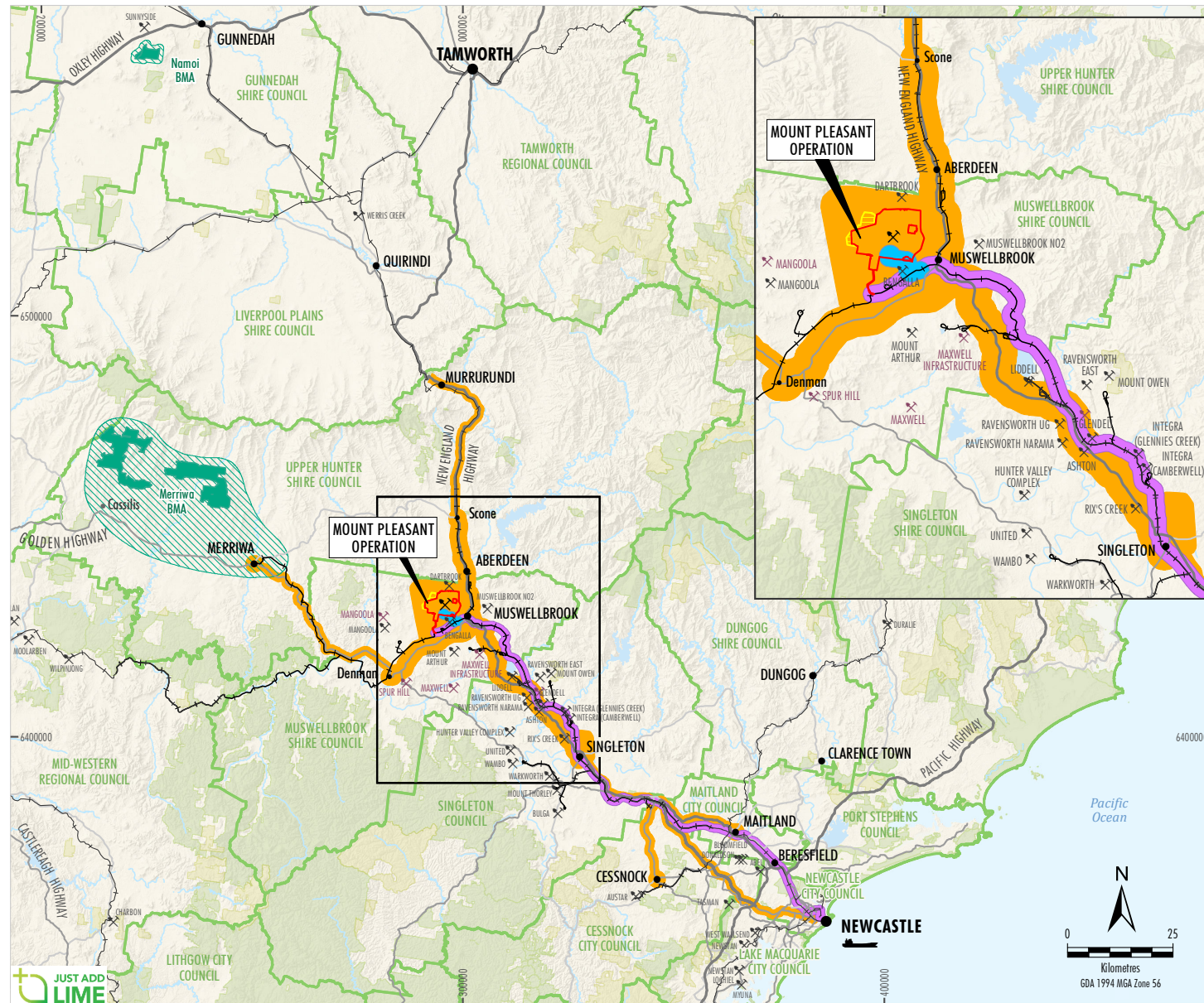
Feature	Significance	For who
	north, Aberdeen to north/east and Muswellbrook to the south east.	
Remaining homesteads on or surrounding the ML	Historical context for where people grew up - either themselves, their family or friends.	People who grew up in the area and understand the social and historical context and significance of the properties.
Main Street of Muswellbrook (Bridge Street / New England Highway)	The main street is the 'social barometer' for a rural town. Traditionally it is the place where people go shopping and socialise.	For the residents of Muswellbrook and surrounding areas, this is an indicator of the town's economic health.
Childcare centres in Muswellbrook	Young children are considered vulnerable and the centres allow parent/s to be employed outside the home.	Families, particularly when two incomes are required or a single parent who has to work.
Primary schools in Muswellbrook	Children are considered vulnerable. Educational opportunities.	Families from Muswellbrook.
High schools in Muswellbrook	Youth are considered vulnerable. Educational opportunities.	Families from Muswellbrook and surrounding areas.
TAFE in Muswellbrook	Educational opportunities.	Students who attend the TAFE and their families.
Aged Care facilities	Older people are considered vulnerable.	Residents and their families.
Areas with a higher proportion of lower income households	People with lower incomes are considered to be more vulnerable.	Residents on Collins Lane, Wollombi Road and the floodplains in Muswellbrook.
Muswellbrook Racecourse and training area on Racecourse Road	Location of country races and social events such as the Melbourne Cup. Known area for training racehorses in the area.	People who attend the races or social events at the racecourse. Trainers, jockeys and other workers associated with horse racing.
Muswellbrook Showground	Place for local and regional events (e.g. Upper Hunter Regional Show and Upper Hunter Christmas Spectacular). Free camping with toilet/shower facilities.	People who organise and attend local events. Travellers and homeless people who camp and wash.
Local, regional and federal road network	Provides access to other regional and urban areas for social networks, goods and services.	People who have access to private vehicles.
Rail line	Provides access to other regional and urban areas for social networks, goods and services.	People who do not have access to private vehicles or who prefer to travel by train.
Thoroughbred and Viticulture Critical Industry Clusters	Areas of concentrations of highly productive industries within a region that are related to each other, contribute to the identity of that region and provide significant employment opportunities (DPIE 2018).	Owners, employees, contractors and suppliers to the thoroughbred and viticulture industries.

5.2.3 Geographical Social Area of Influence

The social area of influence (from a geographical perspective) has been defined as the areas shown in Figure 5. The social area of influence has been determined by considering:

- Current Mount Pleasant Operation and the proposed Project that includes:
 - Mine site and associated workforce
 - Rail (transport of coal from site to port)
 - Biodiversity Offset Areas and associated lessees and their families and
 - Aboriginal Heritage Conservation Area.
- Information contained in Stakeholder Case Studies.
- Properties identified for acquisition on request and mitigation on request for previous Modifications (see Figure 2).
- Noise and dust predictions for Modification 3 (MACH, 2017).
- Known workforce data (as of March 2020) and findings of the Workforce Survey.

The Project would have a differential distribution of social impacts (positive and/or negative) on a geographical area from Murrurundi in the north, to Newcastle in the south-east and Merriwa in the west.



- LEGEND**
- Mining Operation
 - Proposed Mining Operation (Application Lodged)
 - Highway (Federal)
 - Principal Road (State)
 - Secondary Road (Local Council)
 - Railway
 - Major River
 - Local Government Area
 - State Forest
 - National Parks and Wildlife Estate
 - Mining Lease Boundary (Mount Pleasant)
 - Biodiversity Offset Area
 - Aboriginal Heritage Conservation Area
 - Social Area of Influence - Mine Site
 - Social Area of Influence - Railway Corridor (ARTC)
 - Social Area of Influence - Approved Railway Corridor (MACH Energy)
 - Social Area of Influence - Biodiversity Offset Area

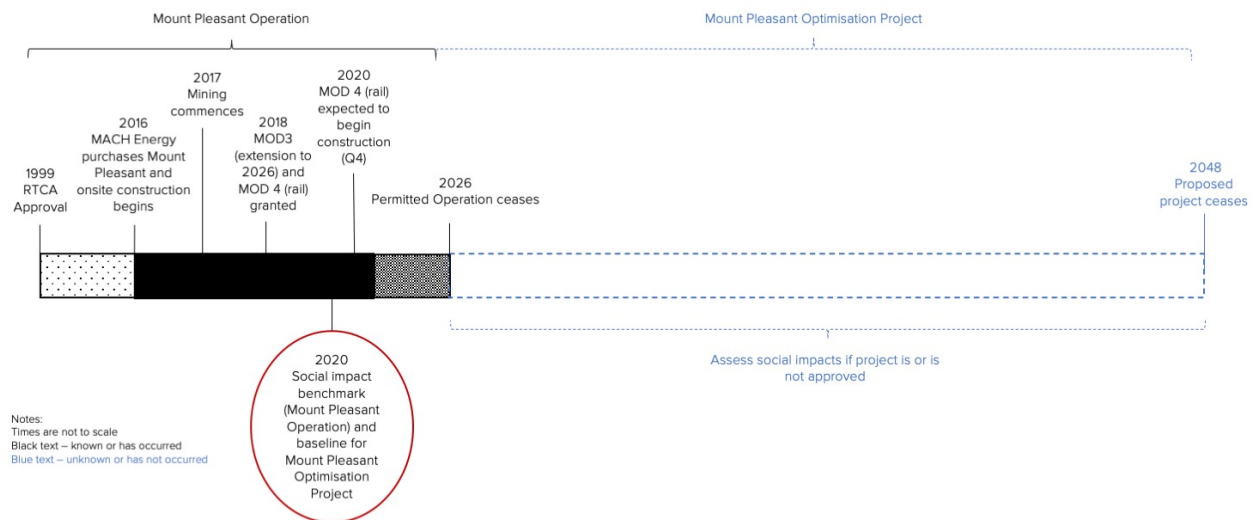
Source: MACH Energy (2020); NSW Spatial Services (2020)

MACH Energy
MOUNT PLEASANT OPTIMISATION PROJECT
Geographical Social Area of Influence

5.3 Indicators for social impacts

The scope and content in this section of the Social Baseline Study are tailored to the social area of influence for the current Mount Pleasant Operation (as shown in Figure 6), which will inform the social impacts of the Project.

Figure 6: Context of the assessment of social impacts of the Mount Pleasant Operation



The choice of indicators for each social impact was based on stakeholder engagement, known available data and where possible, the ability for data collection to potentially be repeated in a timely and cost effective way.

Data for the social baseline was collected from the following sources:

- SIA Scoping Stakeholder Case studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided) and
- Professional experience of the SIA practitioner.

This section is a summary of the impacts currently experienced from the Mount Pleasant Operation, Appendices M and N contain baseline data and a full description.

5.3.1 Impacts on way of life – employment

In March 2020, there were 380⁸ people working at the Mount Pleasant Operation plus additional flow-on employment for suppliers. When comparing average weekly earning between those who work in non-mining industries, people who work in the mining industry are paid more. This is consistent with feedback from SIA stakeholders about the two-tiered economy of the Upper Hunter, between those who work at the mines and those who do not.

MACH has a Local Supplier Strategy. Under this Strategy, it purchases a growing list of goods and services within the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs. This local purchasing supports local businesses to employ more staff, contributing to indirect employment. Indirect employment includes companies who employ graduates of the ACDF funded Gundi Program.

5.3.2 Impacts on way of life – housing

The housing market in the Upper Hunter region is currently on a slow upward turn after the downturn associated with the cessation of the previous “coal boom”. This slow upturn means there would be increasing pressure placed on affordable housing in the private rental market and social housing in Muswellbrook, Upper Hunter and Singleton Shire Council LGAs. It is suggested, given the similarities of data from 2011 to 2020, that the number of rental and purchase households experiencing housing stress would be similar.

Workforce residential data provided by MACH and results of the Workforce Survey show a proportion of the workforce and their families living in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs on a permanent and temporary basis. Members of the workforce who live in these areas either own home outright, or are paying off a mortgage, or renting. Based on this, the Mount Pleasant Operation workforce is influencing the housing market. However, the level of influence the Mount Pleasant Operation workforce is having on the housing market is difficult to determine, and beyond the scope of this SIA due to the cumulative influences such as other mines and power stations also having similar policies that encourage workers and their families to live locally.

5.3.3 Impacts on way of life – how people get around

The workforce for the Mount Pleasant Operation is contributing to increased traffic on local and regional roads, for example on Bengalla and Wybong Roads and proportionally to existing congestion in the New England Highway between Muswellbrook and Singleton, especially during the start and end of shifts. Near neighbours reported noise impacts associated with traffic to and from the site.

5.3.4 Impacts on way of life – recreation

Race days at the Muswellbrook Race Club, NAIDOC Week Celebrations and the biannual Cultural Spectacular are three of the highlights of recreation in Muswellbrook mentioned by SIA stakeholders. The Mount Pleasant Operation may be adding to the challenges to the Muswellbrook Race Club to attract patrons to local races. Whereas, funding from the Mount Pleasant Operation currently supports the NAIDOC Week Celebrations and biannual Cultural Festival.

⁸ As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA

5.3.5 Impacts on health and wellbeing

The physical health impacts of coal mining in the Upper Hunter is a contested topic and the Human Health Assessment for the EIS provides further details on potential health impacts of the Project. Health and wellbeing were raised during SIA stakeholder engagement and indicators were identified based on the feedback. The five health and wellbeing impacts raised were:

- Physical health – asthma due to dust impacts
- Mental health – stress, uncertainty, solastalgia and eritalgia
- Health and wellbeing benefits of being employed
- Health and wellbeing impacts of working on rosters and 12 hour shifts and
- Road safety.

At a regional level, there have been changes in the health indicators selected, however it is unknown how the Mount Pleasant Operation is contributing to this. There is a level of complexity to the environmental issues contributing to the health of people in the Upper Hunter. The Upper Hunter Mining Dialogue is currently assessing long-term trends of air quality.

Based on feedback received as part of the SIA, the Mount Pleasant Operation is impacting on people's mental health, with some stakeholders self-identifying higher levels of stress. Notes from meetings with stakeholders who participated in the Scoping SIA and the SIA were reviewed against key components of solastalgia and a description of eritalgia. Examples of SIA stakeholders potentially experiencing solastalgia and eritalgia were identified. Workers self-identified positive mental health impacts associated with being able to support and provide for their families.

Road crash data and data where fatigue was identified as a contributing factor is provided for Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, however, it is unknown what proportion of the road crash data can be attributed to Mount Pleasant related traffic.

5.3.6 Impacts on community services and facilities

The Mount Pleasant Workforce and their families live in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs and beyond. They are part of their communities and access a range of services including medical, educational, child care, ambulance, and police services. They also support community based organisations. There is a reported demand for child care and mental health services in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, however, SIA stakeholders did not directly link this demand to the Mount Pleasant Operation workforce and their families. How the Mount Pleasant Workforce and their families have influenced supply and demand, and data trends since 2016 (the start of construction) and since 2017 (starting of mine operations) is unknown due to the complexity of the social environment and cumulative nature of impacts with other mining companies.

MACH has provided a number of contributions under the Voluntary Planning Agreement negotiated between Coal & Allied and Muswellbrook Shire Council, part of which have been allocated to development/improvement of community facilities.

5.3.7 Impacts on the quality of the living environment

How people experience the environmental impacts of the Mount Pleasant Operation is dependent on:

- Their location – the closer someone lives to the Mount Pleasant Operation, the increased impact on the quality of their living environment and
- Relationship to the Mount Pleasant Operation – those who benefit from the Mount Pleasant Operation (employment or as a supplier) are more likely to express less negative or positive impacts on the quality of their living environment.

5.3.8 Socio-economic impacts

The Mount Pleasant Operation causes differential socio-economic impacts. Those people located closest to the Mount Pleasant Operation experience time costs associated with extra work such as increased internal and external cleaning due to dust, which takes away from other things they may wish to be doing. A cost of employing people from the local labour market is contributing to the competition for skilled workers. SIA stakeholders described the challenges of other businesses and organisations to attract and retain skilled workers because the Mount Pleasant Operation and other mines in the area can offer higher remuneration.

The agricultural industry also experiences costs associated with loss of agricultural land, loss of employment opportunities, loss of people with agricultural skills and experience and increased competition for water licences from Mount Pleasant and other mines in the area.

Many people financially benefit from the Mount Pleasant Operation, either through direct employment, contracts or indirect employment effects. The Mount Pleasant Operation's financial impact is beyond the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, although there is a concerted effort by MACH to maximise the proportion of its expenditure in these three LGAs as much as practical.

5.3.9 Cultural impacts

The Mount Pleasant Operation impacts on the culture for those people who have a connection to the land and waters associated with the mining lease area, both Aboriginal culture and agricultural culture. Impacts on Aboriginal culture are reliant on the individual's perspective on mining and what it means for their relationship to the land and waters. Mount Pleasant Operation's impact on the agricultural industry can be seen in the change of land use from agricultural land to mining and the change in industries in which people work, with a decrease in agriculture and an increase in mining. Mount Pleasant Operation is part of the cumulative mining industry impact on Aboriginal and agricultural culture, with impacts also experienced from Dartbrook Mine, Mt Arthur Coal Mine, Mangoola Coal and Bengalla Mine, and other projects in the Upper Hunter.

5.3.10 Impacts on family and community

The Mount Pleasant Operation has contributed to the loss of rural communities due to properties being acquired and people who lived on them moving out of the area. This impact has largely been experienced before MACH purchasing the Mount Pleasant Operation, however, there have been subsequent additional losses due to voluntary noise and air related acquisitions upon request. The impact is also cumulative with other mines in the area acquiring properties such as Dartbrook Mine, Bengalla Mine and Mangoola Coal.

The Mount Pleasant Operation has contributed to or reinforced, the tensions between those people in the local community who support or oppose mining. This can be seen in who has participated in the SIA Community Survey and their comments.

Rosters and 12-hour shifts⁹ continue to influence how workers interact with their families and how they participate in the community in which they live and work (which may be different locations).

5.3.11 Equity impacts

Based on an analysis of information provided by SIA stakeholders in the Scoping SIA and the SIA, the Community Survey and Workforce Survey data, how people are impacted is based on where they live and their relationship to the Mount Pleasant Operation (employment or supplier).

People who live closest to the Mount Pleasant Operation are more likely to experience negative social impacts. People who have a relationship with the Mount Pleasant Operation, either through employment, as a supplier or service industry tend to receive the benefits.

Based on the Community Survey (analysis in Appendix N), impacts with the largest inequity (or spread of responses) were in the areas of employment, the economy, community cohesion, the living environment and visual amenity. For those people who completed the Community Survey, a generational difference was found, with a trend of younger people identifying positive impacts while older people identified negative impacts.

5.3.12 Cumulative impacts

Within the Mount Pleasant Operation and the Project

At the moment, people are experiencing multiple impacts from the Mount Pleasant Operation at the same time. Near neighbours, residents of surrounding rural communities and some residents of Muswellbrook are experiencing noise, dust, lighting and blasting impacts. These impacts from mining would be experienced concurrently with the construction of key infrastructure such as the approved Stage 2 rail spur and loop (which was approved under the Rail Modification [Mod 4]) while the State Significant Development (SSD) Application is proceeding. Cumulative impacts of the Mount Pleasant Operation with the Project have been identified and are detailed in Appendices O, P, Q and R.

Other mines, power stations and large projects

Liddell Power Station is planned to close in 2023 and the site would be undergoing rehabilitation. Based on current approvals and applications, other coal mines in the area would be operating based on approval status as set out in Figure 7. Cumulative impacts of other mining operations have been identified. For conservatism, it has been assumed that the Singleton Bypass and the Muswellbrook Bypass have not been constructed (e.g. congestion effects would continue in Singleton).

Natural disasters – droughts, bush fires and flooding

Cumulative impacts are also experienced with natural disasters, such as droughts, bushfires and flooding. These natural disasters have occurred in the past and are expected to occur in the future, however, it is unknown when they will occur.

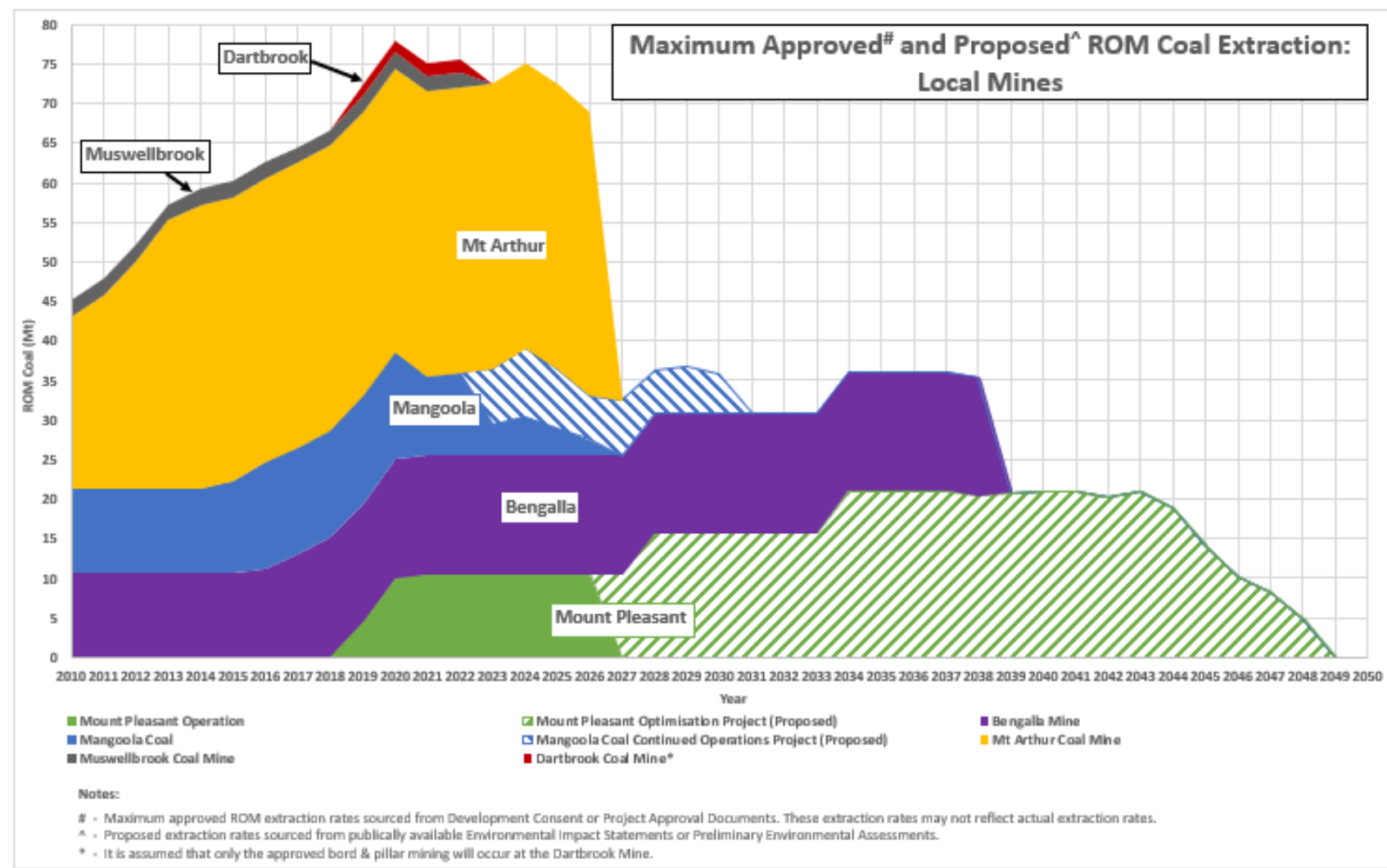
⁹ Coal mines began operating using 12 hour shifts in the mid 1990s.

COVID-19

SIA stakeholders described the immediate impacts of COVID 19, including how the mining industry¹⁰ in the Upper Hunter continued to operate during restrictions. However, the longer-term impacts of COVID 19, any future restrictions and how these accumulate with the impacts of the Mount Pleasant Operation are unknown.

¹⁰ Including the Mount Pleasant Operation.

Figure 7: Other operating coal mines in proximity to the Mount Pleasant Operation

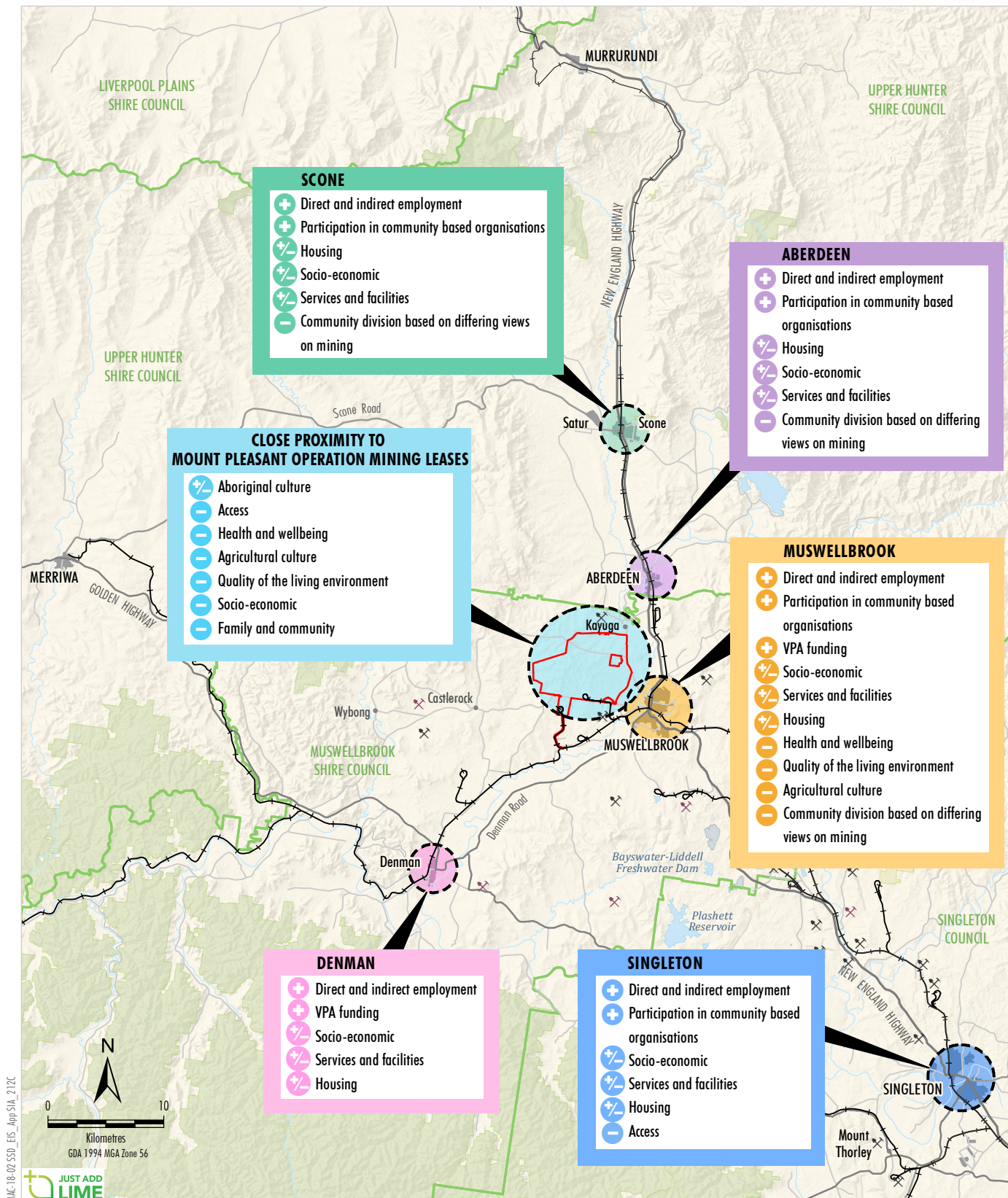


5.4 Significant social impacts

Social risk/opportunity ratings were assigned to each of the identified social impacts based on the assessed significance (gravity, extent, vulnerability and remediability/opportunity) and likelihood¹¹, also taking into account the existing management strategies at the Mount Pleasant Operation. The ratings were assigned to allow for prioritisation of the identified social impacts for management. It should be noted that ranking a social impact as high or extreme indicates that due consideration should be given to opportunities to apply mitigation (for negative impacts) or enhancement measures (for positive impacts). Further details regarding the methodology undertaken for this SIA is included in Appendix S.

The key social impacts that were assessed as the highest priority (all negative and positive impacts with a high or extreme risk rating) in the local area are mapped by location in Figure 8. Existing negative impacts are largely experienced in closer proximity to the Mount Pleasant Operation, whereas positive impacts occur more broadly across the Upper Hunter region.

¹¹ Methodology to prioritise social impacts is provided in Appendix S



MACHEnergy
MOUNT PLEASANT OPTIMISATION PROJECT
Geographic Impacts
- Current Mount Pleasant Operation

Figure 8

5.5 Management and monitoring plan

Although the Development Consent DA 92/97 does not require MACH to develop or implement a Social Impact Management Plan (SIMP), MACH implements mitigation strategies to reduce the existing social impacts.

These include community engagement under MACH's various community engagement mechanisms and strategies (CCC, complaints management, quarterly newsletter, website and MACH's internal Community Engagement Plan and Environmental Management Framework), ACDF, VPA, and implementation of the approved Mount Pleasant Operation site-wide environmental management plans.

Some of the management measures suggested in the 'if the Project proceeds' scenario (Appendix Q) may have some application to the existing Mount Pleasant Operation. These include:

- Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop ways of engagement that suits them and develop management measures that are reasonable and feasible.
- Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. air quality and housing), participate/advocate for developing and implementing management strategies for material impacts from an industry perspective.
- Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land.
- Review of human resource data to clarify impacts on the housing market.

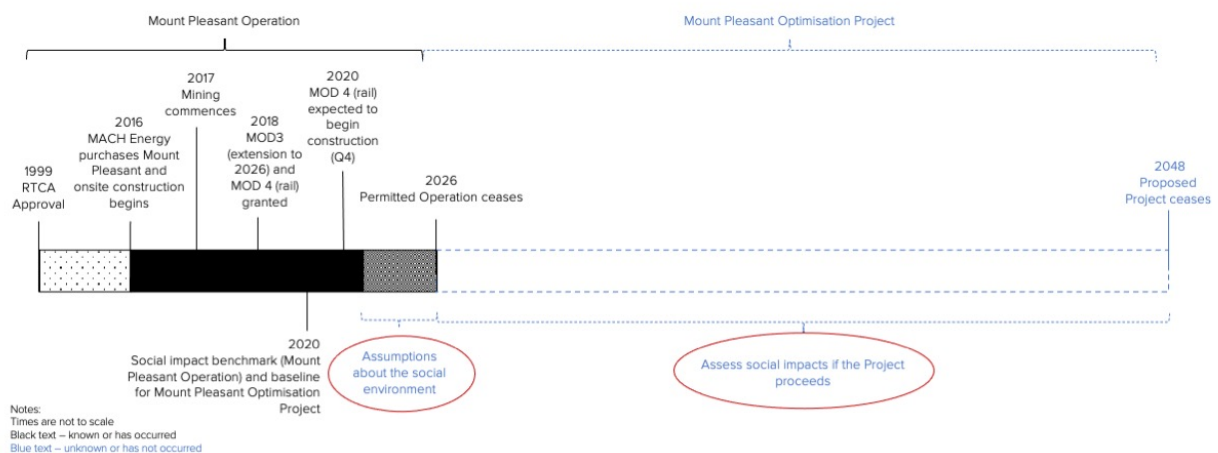
The monitoring strategies suggested in the 'if the Project proceeds' scenario (Appendix Q) could also be applied to minimise/enhance and monitor the existing social impacts of the Mount Pleasant Operation.

6 Project proceeds

6.1 Introduction

The context for the identification and evaluation of social impacts in the “Project proceeds” scenario is shown in Figure 9.

Figure 9: Context of the assessment of social impacts of the “Project proceeds” scenario



A summary of the potential social impacts (positive and negative) during the operation of the Project is provided below with a full explanation and assessment of the impacts provided in Appendix Q. Identification of social impacts during large construction phases of the Project and post closure, including a summary of the proposed management and monitoring strategies are also provided in Appendix Q.

Potential social impacts of the Mount Pleasant Operation incorporating the Project are based on data from the following sources:

- SIA Scoping Stakeholder Case studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided) and
- Professional experience of the SIA practitioner.

At the time the Project proceeds, the social environment will be expected to be different from when the Social Baseline Study was undertaken. This difference is likely due to the uncertainty associated with:

- COVID-19
- The impacts of Liddell Power Station closure and
- Unknown future of other mines and major projects in the area.

It is also unknown what conditions may be placed on the Project if it is approved. To address this uncertainty, and enable the prediction of social impacts and their evaluation, some assumptions have been made and they are outlined in Appendix Q.

It should be noted that if any of these assumptions change or if the social baseline changes, then the impacts may or may not occur or may occur at a different level of consequence. It is for this reason, it recommended that if the Project proceeds, a Social Impact Management Plan (SIMP) is developed within 12 to 18 months of Project determination. A Provisional SIMP is summarised in Section 6.15 and provided in Appendix Q.

6.2 Impacts on way of life – employment

Based on current modelling of employment opportunities, there would be an increase in the number of direct jobs provided over the life of the Project. The benefits of employment would be experienced where the workforce live, which based on the current workforce, would be spread across the Hunter Region (including Muswellbrook, Scone, Aberdeen, Singleton, Merriwa, Cessnock, Newcastle), wider NSW and other states. Many of the benefits of employment would be subject to the contracting arrangements between MACH and the companies undertaking mining services (currently Thiess) and running the CHPP (currently Sedgman).

If the Project proceeds, there would be continued positive impacts associated with the continuation of MACH's Local Supplier Strategy. The Local Supplier Strategy would continue to support local businesses to employ more staff, contributing to indirect employment.

6.3 Impacts on way of life – housing

Potential impacts on housing would depend on where the workforce and their families decide to live. At the moment the workforce lives across the Hunter Region (including Muswellbrook, Scone, Aberdeen, Singleton, Merriwa, Cessnock, Newcastle), wider NSW and other states.

Where there is relative employment security for the MACH employees, employees or contractors working for Thiess and Sedgman have less security given contracting arrangements. For example, Thiess is on a five-year contract, their employees may be more or less inclined to move to the local area (Muswellbrook, Upper Hunter or Singleton) given a perceived lack of job security.

Based on the results of the Workforce Survey, of which about half of the Mount Pleasant Operation workforce completed (and without asking who their employer was), 74% of the workforce who lived in their permanent home while at work either owned or were paying off a mortgage, 25% were renting and 1% had another type of tenure. Of those who lived in a different place to their permanent home, 67% were renting in their temporary home, 13% lived in a house they owned or were paying off a mortgage on and the remainder were living with friends or family. Some workers made comments in the Workforce Survey that if the Project proceeded, they had the intention of relocating to Muswellbrook or the surrounding area.

If the Project proceeds, there would be a change in the demand for housing, however, what this change would be is dependent on where the workforce and their families choose to live. If there is an increase in the demand for housing, the impact would be twofold:

- For low income households, the impact could be that their ability to access the private rental market could be made more difficult and

- For homeowners and investors, the impact could be an increase in property value/price.

6.4 Impacts on way of life – access

The impact on road access around the Mount Pleasant Operation has been categorised into three road corridors:

- Between Muswellbrook and Singleton (i.e. primarily the New England Highway)
- Bengalla and Wybong Roads and
- Mount Pleasant Operation Access Road.

Based on the results of the Road Transport Assessment, the number of vehicles associated with the Project is expected to increase. This increase in the number of vehicles may continue to cause frustration and certain people may continue to change their travel times to avoid the peaks in traffic on shift changes. Near neighbours who share access to the Mount Pleasant Access Road expect to experience an increase in the number of vehicles and associated road noise (based on their experience of current noise levels).

6.5 Impacts on way of life – recreational activities

Based on the feedback from SIA stakeholders, the three main recreational activities likely to experience impacts are:

- Continued impacts on the Muswellbrook Race Club due to visual impacts and division in the potential membership base
- Continued NAIDOC Week Celebrations or similar celebrations funded by the ACDF or a similar Aboriginal community development organisation that is active in the community, and MACH and
- Continued biennial Cultural Spectacular or a similar event funded by the ACDF or a similar Aboriginal community development organisation that is active in the community.

The visual impacts on the Muswellbrook Race Club are expected to progressively decrease as the overburden on the eastern side of Project is completed (including rehabilitation), however, the division in the potential membership base would be a more long-term impact.

Both the NAIDOC Week Celebrations and biennial Cultural Spectacular are currently able to continue due to funding commitments by the ACDF and MACH.

6.6 Impacts on health and wellbeing

This section of the SIA does not replace the work undertaken in the Human Health Assessment for the EIS.

Health and wellbeing is a contentious issue for people living in the Upper Hunter Valley.

SIA stakeholders raised their personal experiences of health impacts during the SIA engagement process, experiences of friends and family, and health impacts associated with coal mining in the media. Some people who participated in the SIA Community Survey raised their concerns about health impacts when a direct question about health was not asked. As social impacts are considered to be “something

that is experienced or felt, in a perceptual or corporeal sense at the level of an individual, social unit (family/household/collectively) or community/society” (Vanclay *et al* 2015), then perceptions of health impacts are social impacts.

Impacts relating to health and wellbeing are expected to continue if the Project proceeds. These include (but are not limited to):

- Physical health
- Mental health including stress, solastalgia and eritalgia
- For people working at the Mount Pleasant Operation this could include:
 - Health and wellbeing benefits of employment
 - Health and wellbeing impacts of working rosters and 12 hour shifts and
- Potential increase in the risk of vehicle accidents due to fatigue.

6.7 Impacts on community services and facilities

Given a proportion of the existing workforce is living in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs and the likelihood that it will continue and may increase if the Project proceeds, there are likely to be an increase in the demand placed on the following community services and facilities if additional workers and their families relocated to the area:

- Medical
- Education and child care
- Ambulance
- Rural Fire Service
- Police and
- Community based organisations.

The level of demand placed on community services and facilities would be dependent on where the additional workforce and their families live and their own unique situations. This is reflected in feedback from SIA stakeholders. The impact would also depend on the type and level of service provided at the time and any existing constraints or scope to absorb the demand.

Based on future workforce assumptions (refer to Appendix Q), the population impacts of the Project are expected to be low, however, this may change given there is a high level of uncertainty due to the time lag between the social baseline and expected construction timeframes and increases in the workforce over the life of the Project.

If there is an unplanned change in demand that is not well managed, community services and facilities would be negatively impacted. This negative impact would also be experienced by people who use or rely on the facilities or services. Whereas planned and well managed demand may be an opportunity to increase the number and type of community services offered to the whole community.

If the Project proceeds, Muswellbrook Shire Council would continue to receive funding from MACH through a Project Voluntary Planning Agreement.

6.8 Impacts on the quality of the living environment

The Mount Pleasant Operation is currently impacting on the quality of the living environment for near neighbours, people living in rural communities in proximity to the mine site (e.g. Kayuga, communities along Dorset Road and Blairmore Lane). Although the mine is being staged to manage environmental impacts such as air quality impacts (dust) and noise, people expect these impacts to continue.

The visual impact of the overburden on the eastern and northern side of the mining leases has and would continue to impact the quality of people's living environment, particularly for those people who experienced the landscape prior to construction. Although the visual impacts are expected to progressively decrease due to landform works and progressive rehabilitation, the changes to the landscape will be permanent.

Similar to how people currently experience changes to the quality of their living environment, future changes would be dependent on:

- location – the closer someone lives to the Mount Pleasant Operation, the increased impact on the quality of their living environment due to environmental impacts, including visual impacts and
- relationship to the Mount Pleasant Operation – people who benefit from the Mount Pleasant Operation (employment or as a supplier) are less likely to express negative impacts on the quality of their living environment and more likely to express positive impacts associated with employment and economic effects.

6.9 Socio-economic impacts

If the Project was to proceed, it would continue to cause differential socio-economic impacts. Those people located closest to the Mount Pleasant Operation experience time costs associated with extra work such as increased internal and external cleaning due to dust, which takes away from other things they may wish to be doing. A cost of employing people from the local labour market is contributing to the competition for skilled workers. SIA stakeholders described the challenges of other businesses and organisation to attract and retain skilled workers because the Mount Pleasant Operation and other mines in the area can offer higher remuneration.

The agricultural industry would also continue to experience costs associated with loss of agricultural land, loss of employment opportunities, loss of people with agricultural skills and experience and increased competition for water licences from Mount Pleasant and other mines in the area (which are related to the transition from an agricultural area to a mining area).

Many people financially benefit from the Mount Pleasant Operation, either through direct employment, contracts or indirect employment effects. The Mount Pleasant Operation's financial impact is beyond the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, although there is a concerted effort by MACH to maximise the proportion of its expenditure in these three LGAs as much as practical.

6.10 Cultural impacts

The Project is expected to continue to impact on the culture of those people who have a connection to the land and waters associated with the mining lease area, including both Aboriginal culture and

agricultural culture. Mount Pleasant Operation would continue to be part of the cumulative mining industry's impact on Aboriginal and agricultural cultural, with impacts also experienced from Dartbrook Mine, Mt Arthur Coal Mine, Mangoola Coal and Bengalla Mine, and other projects in the Upper Hunter.

6.10.1 Impacts on Aboriginal culture

Based on engagement with the Wanaruah Local Aboriginal Land Council and Wonnarua Nation Aboriginal Corporation, there would be both negative and positive impacts on Aboriginal culture.

There would be negative impacts through the permanent change to the land due to mining and construction of the overburden and *"... the destruction of songlines, loss of lore that is held in the soil, the trees and the plants of the area, loss of identity due to inability to connect to significant tracts of land and understand and practice culture"* (Appendix H).

The positive impacts arise from the continued opportunity to practice Aboriginal culture and land management activities at the Mount Pleasant Operation, such as undertaking cultural burns on country. There is also the opportunity to participate in rehabilitation and "healing the land".

The ACDF funds organisations and projects that promote education, economic development, cultural development and health for Aboriginal people in the region. The ACDF, or a similar Aboriginal community development organisation that is active in the community, would continue if the Project proceeds.

6.10.2 Impacts on agricultural culture

Impacts on agricultural culture are expected to continue. Impacts on the agricultural community surrounding the mine site would continue to be negative with a decrease in the proportion of people working in the agriculture sector compared to the increase in mining, the loss of rural communities and the loss of the built environment that is significant to local agricultural people. There would continue to be opportunities for neighbouring landholders to lease land not required for mining. There are positive impacts on agricultural culture located on and near the Biodiversity Offsets (to the west of the mine site).

6.11 Impacts on family and community

Families and communities within the local area would continue to experience impacts if the Project proceeds, these include:

- Loss of rural communities
- Continuation of tensions between those people who are supportive and those who object to coal mining and
- Change in family structures for those who take up employment (if not previously worked roster/12-hour shifts).

Working rosters and 12-hour shifts¹² will continue to influence how workers interact with their families and how they participate in the community in which they live and work (which may be different locations).

¹² Coal mines began operating using 12 hour shifts in the mid 1990s.

6.12 Equity

Based on an analysis of information provided by SIA stakeholders in the Scoping SIA and the SIA, the SIA Community Survey and the Workforce Survey, how people are impacted is based on where they live and their relationship to the Mount Pleasant Operation (employment, supplier or service industries).

People who live closest to the mine site are expected to experience a continuation of negative social impacts or costs. People who have a relationship with the Mount Pleasant Operation, either through employment or as a supplier are expected to continue to tend to receive the benefits and they are located in Muswellbrook, Aberdeen, Scone, Denman, McCully's Gap, Jerry's Plains, Singleton and beyond.

Based on the SIA Community Survey, impacts with the largest inequity (or spread of responses), if the Project were to proceed were employment, the economy, community cohesion and the living environment.

For those people who completed the SIA Community Survey, there was a trend of younger people experiencing positive impacts while older people were experiencing negative impacts.

6.13 Cumulative impacts

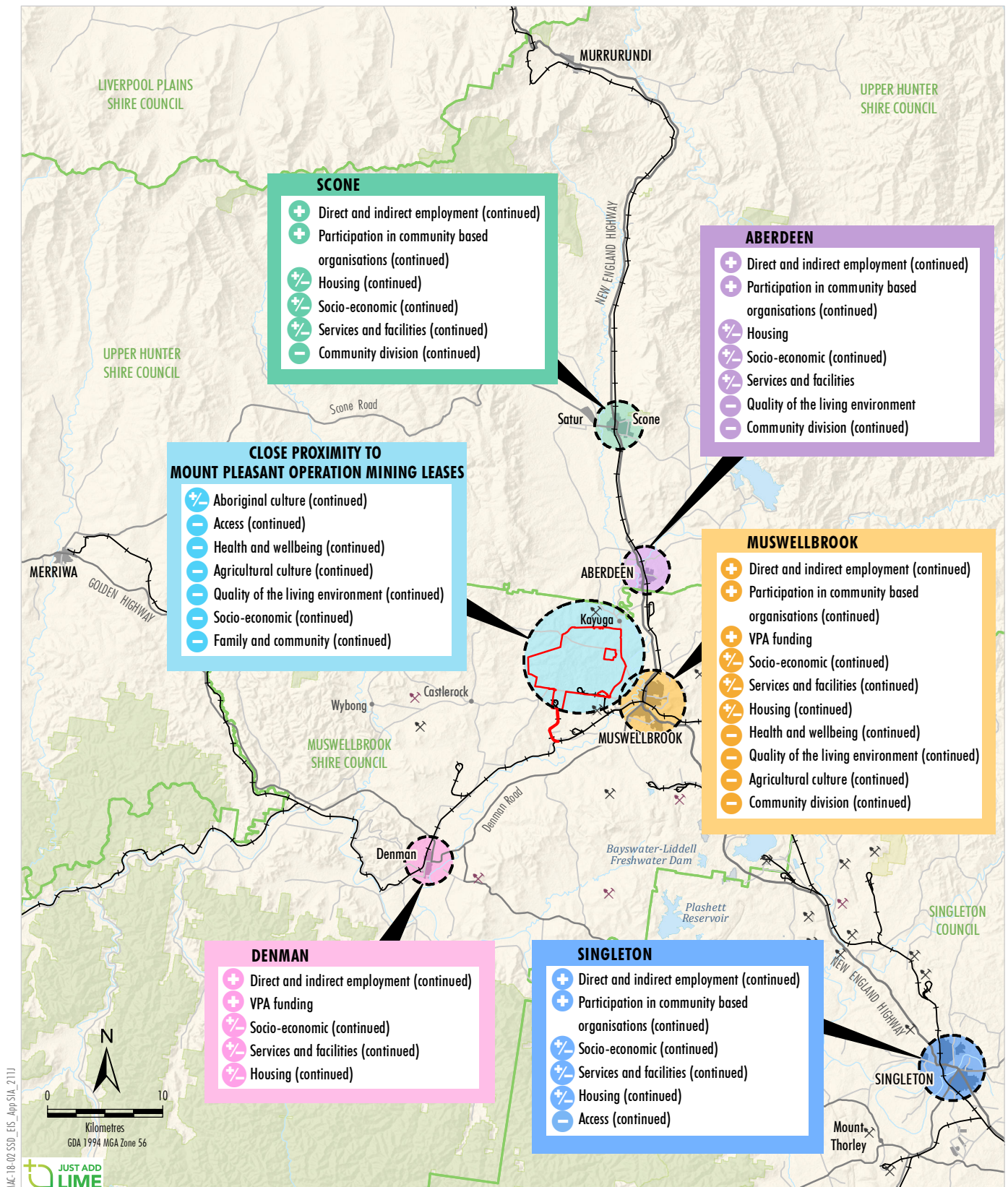
Cumulative impacts would continue to be experienced within and across the Project (e.g. economic and environmental impacts), with other mines and large projects in the region, with natural disasters and COVID-19.

6.14 Significant social impacts

Social risk/opportunity ratings were assigned to each of the identified social impacts based on the assessed significance (gravity, extent, vulnerability and remediability/opportunity) and likelihood¹³, also taking into account the existing management strategies at the Mount Pleasant Operation. The ratings were assigned to allow for prioritisation of the identified social impacts for management. It should be noted that ranking a social impact as high or extreme indicates that due consideration should be given to opportunities to apply mitigation (for negative impacts) or enhancement measures (for positive impacts). Further details regarding the methodology undertaken for this SIA is included in Appendix S.

Social impacts that were assessed as the highest priority (all negative and positive impacts with a high or extreme risk rating) in the local area are mapped by location in Figure 8. If the Project proceeds, it is expected that negative impacts will continue to be experienced in closer proximity to the Mount Pleasant Operation, whereas positive impacts will continue to occur more broadly across the Upper Hunter region.

¹³ Methodology to prioritise social impacts is provided in Appendix S



6.15 Provisional Social Impact Management Plan

Consistent with other examples of contemporary approvals of major mining projects in NSW, it is anticipated that a SIMP would be required within 12 to 18 months following Project determination. The SIMP would be the mechanism to review the social baseline and document management strategies that are reasonable and feasible.

6.15.1 Management Plans

Building on the assessment of potential social impacts if the Project proceeds, a provisional SIMP has been suggested (details in Appendix Q) with the following strategies built on the existing approaches MACH has already developed to manage impacts:

- Community and Stakeholder Engagement Strategy
- Workforce Management Strategy
- Housing and Accommodation Strategy
- Local Business Procurement Strategy and
- Community Health and Wellbeing Strategy.

Key opportunities in the above management strategies are:

- Increase local benefits (positive impacts) through:
 - Working with the main contractors on site (i.e. main services and coal processing) to identify ways to prioritise local employment (existing population) and develop strategies for people to relocate to MSC and UHSC LGAs.
 - Include local residential workforce as a Key Performance Indicator (KPI) in procurement processes for main contractors with associated management, monitoring and reporting.
 - Provide information regarding the Project workforce and the associated predicted housing demand to the local councils on a regular basis.
 - Developing strategies to employ, train and upskill people from the local area who are unemployed.
 - Continuing to deliver positive social impacts for Aboriginal people with connections to the land and waters on which the Project is located by supporting on-country land management (such as cool burns) and involvement in rehabilitation programs.
 - Contributing to the Upper Hunter long term transition from coal mining and power generation.
- Decrease local costs or experiences of negative social impacts by:
 - Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop ways of engagement that suits them and develop management measures that are reasonable and feasible.
 - Continuing to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible.

- Supporting the agricultural industry, for example, supporting the continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.
- Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region and participate/advocate for developing and implementing industry-wide management strategies for impacts on air quality and housing for example.

If the Project proceeds, it will be critical to build on existing relationships and to form new ones to develop a SIMP that can address social impacts in a social environment that is experiencing a high level of uncertainty and has started a major transition process associated with economic diversification and a move away from power stations and coal mining.

6.15.2 Monitoring Framework

Given the lag time between the SIA and the decision on whether the Project will proceed or not, it is suggested that a detailed monitoring framework is developed as part of the SIMP. The monitoring framework would be established based on the identified impacts in this SIA and various indicators identified in the Social Baseline Report (Appendix M and N).

The monitoring framework may include, but is not limited to, the following:

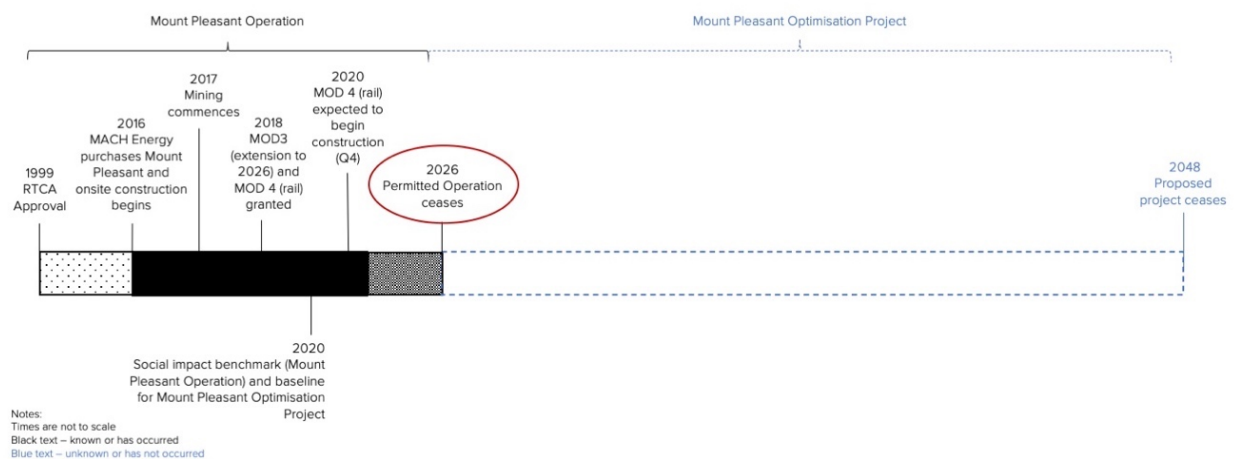
- Evaluation of the ACDF, or a similar Aboriginal community development organisation that is active in the community.
- Regular completion of Workforce and Community Surveys.
- Implementation of the existing monitoring programs established as part of the various approved Mount Pleasant Operation management plans under Development Consent DA 92/97 as modified by the Project Development Consent.
- Review of human resource, complaints data and any relevant secondary data.
- Review and consideration of feedback received through an established dialogue with relevant stakeholders including local community groups (including Aboriginal community groups), neighbouring residents, community service and facility providers, and local suppliers.

7 Project does not proceed

7.1 Introduction

The context for the identification and evaluation of social impacts in the “Project does not proceed” scenario is shown in Figure 11.

Figure 11: Context of the assessment of social impacts of the “Project does not proceed” scenario



A summary of the potential social impacts (positive and negative) if the Project does not proceed is provided below with a full explanation and assessment of impacts provided in Appendix R.

Potential social impacts of the closure of the Mount Pleasant Operation are based on data from the following sources:

- SIA Scoping Stakeholder Case studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided) and
- Professional experience of the SIA practitioner.

At the time the Project may not proceed, the social environment will be expected to be different from when the Social Baseline Study was undertaken. This difference likely to increase due to the uncertainty associated with:

- COVID-19
- The impacts of Liddell Power Station closure and
- Unknown future of other mines and major projects in the area.

There would have been a lag time between the completion of the Social Baseline Study and the social environment at the time of “closure”, which is likely to be materially different to that described in Appendix R.

It should be noted that if any of these assumptions change or the social baseline changes, then the impacts may or may not occur or may occur at a different level of consequence. It is anticipated this would be addressed in the mine closure processes under Development Consent DA 92/97.

7.2 Impacts on way of life – employment

If the Project does not proceed, there would be a loss of 380¹⁴ direct jobs and many more indirect jobs associated with MACH’s local spend or the workforce buying goods and services locally, predominantly in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, but also extending to other areas of NSW. This impact would also be experienced cumulatively with the planned closure of Liddell Power Station and other mining operations in proximity to the Mount Pleasant Operation. Loss of direct and indirect jobs may also have a flow on effect on the affected people’s health and wellbeing.

7.3 Impacts on way of life – housing

Impacts on housing would depend on where the workforce lives at the time they are no longer employed. At the moment the workforce lives across the Hunter Region (including Muswellbrook, Scone, Aberdeen, Singleton, Merriwa, Cessnock, Newcastle), NSW and other states. It is assumed that:

- Those people who live permanently in the area and who cannot gain alternative employment in the area, would relocate away from the area having an impact on housing demand and
- Those people who live temporarily in the area would no longer commute and stay in the area, having an impact on rental housing demand.

It is unknown at this point what the actual impact on housing would be if the Project does not proceed, however, based on what is known, there would be a reduction on demand for housing. A decrease in the demand for housing could have twofold impacts:

- For low income households, access to the private rental market could be made easier and
- For homeowners and investors, it could impact on them by decreasing property prices.

Decreased property values may also have a flow on socio-economic impact on homeowners and investors.

7.4 Impacts on way of life – access

The impact on road access around the Mount Pleasant Operation has been categorised into three road corridors:

Between Muswellbrook and Singleton (i.e. primarily the New England Highway)

¹⁴ As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA.

- Bengalla and Wybong Roads and
- Mount Pleasant Access Road.

It is expected that if the Project does not proceed then there would be a decrease and then cessation of traffic impacts leading to social impacts including decreased congestion and consequently a decrease in frustration. However, subject to the level of activities at the other mines and projects in the region, people may still change their travel times to accommodate peaks in mine traffic on shift changes.

7.5 Impacts on way of life – recreation

Based on the feedback from SIA stakeholders, the three main recreational activities likely to experience impacts are:

- Reduced impacts on the Muswellbrook Race Club due to visual impacts and division in the potential membership base
- NAIDOC Week Celebrations funded by the ACDF and MACH and
- Biennial Cultural Spectacular funded by the ACDF.

Visual impacts on the Muswellbrook Race Club are expected to progressively decrease and then cease once the overburden on the eastern side of the Mount Pleasant Operation is completed (including rehabilitation) and division in the potential membership base is expected to decrease.

Both the NAIDOC Week Celebrations and biennial Cultural Spectacular are expected to cease following the cessation of Mount Pleasant Operation, given MACH would no longer be funding the ACDF and would no longer be providing donations.

7.6 Impacts on health and wellbeing

Impacts relating to health and wellbeing are expected to be experienced if the Project does not proceed. These include (but are not limited to):

- Physical health (particularly for those workers who have lost employment)
- Mental health and stress (particularly for those workers who have lost employment and their families) and
- Solastalgia (for the permanent changes already made to the landscape) and eritalgia (loss of anticipated future).

7.7 Impacts on community services and facilities

Given a proportion of the Mount Pleasant Operation workforce is living in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs and that people are likely to relocate out of the area if they cannot seek alternative employment, there are likely to be some impacts on demand for the following community services and facilities:

- Medical
- Education and child care

- Ambulance
- Rural Fire Service
- Police and
- Community based organisations.

Similar to the “if the Project proceeds scenario”, the reduction in demands on community services and facilities would be dependent on where the workforce and their families live and their own situations and this is reflected in feedback from SIA stakeholders. The impact would also depend on the type and level of service provided at the time and any scope to adjust to the decreased demand.

Based on assumptions about the workforce (refer to Appendix R), population impacts are expected to be low, however, this may change given the high level of uncertainty due to the time lag between the social baseline and the Project closing.

If there is an unplanned change in demand that is not well managed, community services and facilities would be negatively impacted. This negative impact would also be experienced by people who use or rely on the facilities or services.

Muswellbrook Shire Council would cease to receive funding through the Project Voluntary Planning Agreement. The impacts of this would depend on the facilities and services funded at the time.

7.8 Impacts on the quality of the living environment

If the Project does not proceed then it is expected that the quality of life impacts currently experienced by near neighbours, people living in rural communities in proximity to the Mount Pleasant Operation service providers (e.g. Kayuga, communities along Dorset Road and Blairmore Lane) would cease. However, impacts on quality of life from other mines and projects in the area may remain.

7.9 Socio-economic impacts

People who previously received a financial benefit from the Mount Pleasant Operation, namely workers, suppliers (and their employees) and their families would no longer receive this benefit. The Project not proceeding would have a material flow on effect in the local economy.

For those people and businesses who were experiencing costs associated with the Mount Pleasant Operation either through the loss of time or competition for skilled workers, it is expected that these costs would be reduced, but may still be present due to other mining and large infrastructure projects in the region.

7.10 Cultural impacts

If the Project does not proceed, impacts on Aboriginal and agricultural culture would continue.

7.10.1 Impacts on Aboriginal culture

Based on engagement with the Wanaruah Local Aboriginal Land Council and Wonnarua Nation Aboriginal Corporation, there would be both negative and positive impacts on Aboriginal culture.

The negative impacts through the permanent change to the land due to mining and construction of the overburden would remain. However, there could be opportunities to participate in rehabilitation and “healing the land”.

The ACDF, or a similar Aboriginal community development organisation that is active in the community, would no longer be able to fund organisations and projects that promote education, economic development, cultural development and health for Aboriginal people in the region.

7.10.2 Impacts on agricultural culture

Based on engagement with people from the agricultural industry, it is expected that impacts on agricultural culture may reduce with the potential opportunity for agriculture to grow if properties owned by MACH are put up for sale. Current opportunities for neighbouring landholders to lease land not required for mining will no longer be available.

The positive impacts on agricultural culture located on and near the Biodiversity Offsets (to the west of the mine site) are expected to continue if the Offset Management Plan and Re-establishment Management Plan is maintained.

7.11 Impacts on family and community

Families of workers would be directly impacted as well as the communities they contribute to. If families relocate, there would be social instability and a decrease in social networks. There may also be an alteration of family structure for the families who have a parent/s who lose their jobs and are unable to gain alternative employment.

Based on the experience of the Drayton mine closure, for those people who remain, there may be a growing tension between those who support and oppose mining.

7.12 Equity

Based on an analysis of information provided by SIA stakeholders in the Scoping SIA and the SIA, the SIA Community Survey data and the Workforce Survey, how people are impacted is based on where they live and their relationship to the Mount Pleasant Operation (employment or supplier).

People who live closest to Mount Pleasant Operation are more likely to experience a decrease in negative social impacts or costs. People who have a relationship with Mount Pleasant Operation, either through employment or as a supplier would experience the cost of losing their employment and business. This would be experienced where the worker or business is located, predominantly in Muswellbrook, Aberdeen, Scone, Denman, McCully's Gap, Jerry's Plains and Singleton.

Based on the SIA Community Survey, impacts with the largest inequity (or spread of responses), if the Project did not proceed were employment and community cohesion.

7.13 Cumulative impacts

Cumulative impacts would continue to be experienced within and across the Project (e.g. economic and environmental impacts), with other mines and large infrastructure projects in the region, with natural disasters and COVID-19.

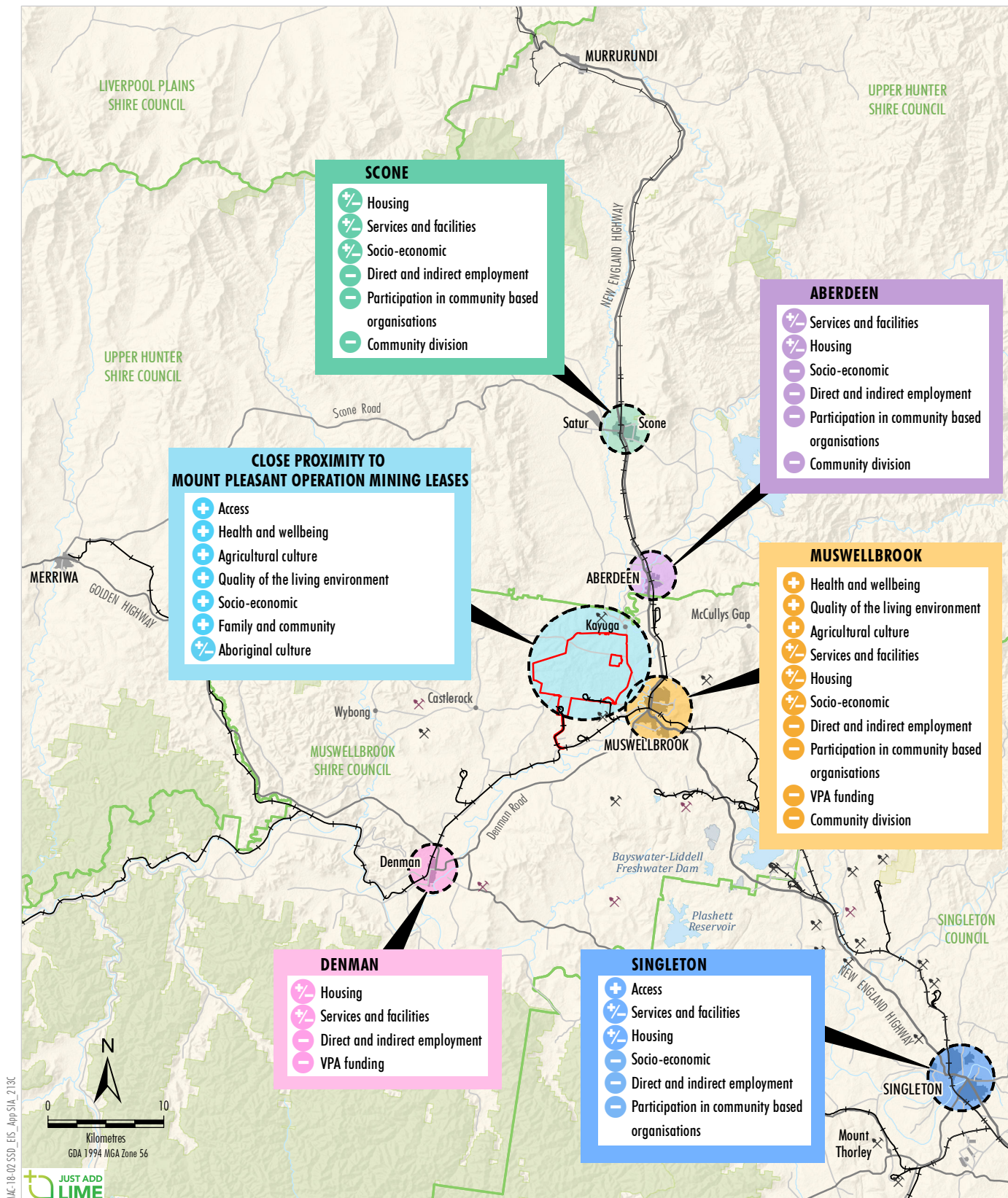
Cumulative social impacts would particularly be expected to occur if multiple major mines close over a short timeframe. It is noted that both the Mount Pleasant Operation and Mt Arthur Coal Mine are currently permitted until 2026.

7.14 Significant social impacts

Social risk/opportunity ratings were assigned to each of the identified social impacts based on the assessed significance (gravity, extent, vulnerability and remediability/opportunity) and likelihood¹⁵, also taking into account the existing management strategies at the Mount Pleasant Operation. The ratings were assigned to allow for prioritisation of the identified social impacts for management. It should be noted that ranking a social impact as high or extreme indicates that due consideration should be given to opportunities to apply mitigation (for negative impacts) or enhancement measures (for positive impacts). Further details regarding the methodology undertaken for this SIA is included in Appendix S.

The key social impacts that were assessed as the highest priority (all negative and positive impacts with a high or extreme risk rating) in the local area are mapped by location in Figure 12. Existing negative impacts are largely experienced in closer proximity to the Mount Pleasant Operation, whereas positive impacts occur more broadly across the Upper Hunter region.

¹⁵ Methodology to prioritise social impacts is provided in Appendix S



7.15 Management and monitoring plans

If the Project does not proceed, Mount Pleasant Operation would continue to operate under the approved Development Consent DA 92/97 until 2026 and continue to apply required management strategies (including requirements for mine closure and rehabilitation).

Although the Development Consent DA 92/97 does not require MACH to develop or implement a SIMP, MACH implements mitigation strategies to reduce the existing social impacts.

These include community engagement under MACH's various community engagement mechanisms and strategies (CCC, complaints management, quarterly newsletter, website and MACH's internal Community Engagement Plan and Environmental Management Framework), ACDF, VPA, and implementation of the approved Mount Pleasant Operation site-wide environmental management plans.

Some of the management and monitoring measures suggested in the 'if the Project proceeds'; scenario (Appendix Q) may have some application to the 'Project does not proceed scenario'. These include (Appendix Q):

- Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop ways of engagement that suits them and develop management measures that are reasonable and feasible.
- Continuing to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible.
- Engage with stakeholders (including Aboriginal community groups/people) regarding mine closure planning and how the Project can contribute to the Upper Hunter long term transition from coal mining and power generation (with added considering of the social transition planning and management framework shown in Figure 3).

Figure 13: Social transition planning and management



Source: ICMM 2019

The monitoring strategies suggested in the 'if the Project proceeds' scenario (Appendix Q) could also be applied to minimise/enhance and monitor the existing social impacts in the 'if the Project does not proceed' scenario.

8 Conclusion

Social impacts will be experienced whether the Project proceeds or not. The social impacts experienced will depend on location, relationship to the Project, e.g. as a near neighbour, employee, supplier and the management strategy applied (including how the management strategy was developed).

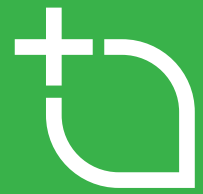
If the Project proceeds, social impacts currently experienced from the Mount Pleasant Operation will continue. Current social impacts of the Mount Pleasant Operation are experienced differentially, with people within the same geographical area experiencing both positive and negative impacts at the same time. For example, for near neighbours, and people living in Kayuga and Muswellbrook:

- People who directly benefit from working at or supplying goods and services to the Mount Pleasant Operation may also experience negative social impacts such as a decrease in the quality of their living environment.
- People who do not benefit from working at or supplying goods and services are experiencing a decrease in the quality of their living environment but may also experience indirect benefits, e.g. through funding for community organisations (if they are involved in the community organisation that has received funding).

If the Project proceeds, it will be critical to build on existing relationships and form new ones to develop a SIMP that addresses social impacts in a social environment that is experiencing a high level of uncertainty and has started a major transition process associated with economic diversification and a move away from power stations and coal mining.

For the people who experience social impacts if the Project proceeds, they will also experience social impacts if the Project does not proceed, however they will be generally opposite. So if someone experiences a positive if the Project proceeds, it is highly likely that the same impact will be felt negatively if the Project does not proceed.

Regardless of whether the Project proceeds or not, social impacts will be experienced cumulatively with impacts from other mines in the area, closure of the Liddell and Bayswater Power Stations, natural disasters, COVID 19 and other large infrastructure projects undertaken in the future (e.g. Singleton and Muswellbrook Bypasses).



Appendix A

Response to Appendix D of NSW SIA Guideline

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1 General

Q1 Has the applicant applied the principles in Section 1.3 of the Guidelines? How?

How the principles of SIA have been applied in the SIA Scoping Phase are set out in Table 1.

Table 1: Application of SIA Principles

Principle	Description	Application
Action-orientated	Delivers outcomes that are practical, achievable and effective.	Suggested management and monitoring strategies have been developed.
Adaptive	Establishes systems to actively respond to new or different circumstances and information and support continuous improvement.	<p>The management strategies have been developed taking into consideration the lag time between the SIA and Project determination.</p> <p>Management and monitoring strategies have been developed for the current Mount Pleasant Operation and provided to MACH. Ongoing monitoring strategies have been developed with the plan to update management plans as likely or unexpected impacts occur.</p>
Distributive equity	Considers how social impacts are distributed within the current generation (particularly across vulnerable and under- represented groups) and between current and future generations.	Social impact categories include equity impacts across various stakeholders (including vulnerable stakeholders), different geographical locations and current and future generations. Vulnerability is one of the criteria to determine the significance of an impact.
Impartial	Is undertaken in a fair, unbiased manner and follows relevant ethical standards.	<p>SIA includes two scenarios:</p> <ul style="list-style-type: none">• the Project proceeding and• the Project not proceeding. <p>A cross section of SIA stakeholders were invited to participate in the SIA.</p> <p>Notes from the meetings with SIA stakeholder are provided in the SIA Report.</p>
Inclusive	Seeks to hear, understand and respect the perspectives of the full diversity of potentially affected groups of people. It is also informed by respectful, meaningful and effective engagement that is tailored to suit the needs of those being engaged (e.g. culturally sensitive, accessible).	<p>SIA stakeholders invited to participate in the SIA were identified on feedback from stakeholders in the SIA Scoping Phase.</p> <p>Due to the COVID-19 restrictions on engagement, we acknowledge that some people may not have been able to participate in the community survey. SIA stakeholders were provided with an option of participating in a way that they felt most comfortable with, either using an online communication platform (Microsoft Teams or Zoom) or over the telephone.</p>

Principle	Description	Application
Integrated	Uses and references relevant information and analysis from other assessments to avoid duplication and double counting of impacts in the EIS. It also supports effective integration of social, economic, and environmental considerations in decision-making.	Other technical studies were reviewed understand the current and potential environmental impacts that could “cause” social impacts if the Project proceeded.
Life cycle focus	Seeks to understand potential impacts (including cumulative impacts) at all Project stages, from preconstruction to post closure.	In the “Project proceeds” scenario, likely social impacts were identified for the planning, construction, operation and closure stages. Cumulative social impacts have been identified throughout. In the “Project does not proceed” scenario, likely social impacts were also identified.
Material	Identifies which potential social impacts matter the most, and/or pose the greatest risk to those expected to be affected.	Likely social impacts have been described using Table 5 in the SIA Guideline, including their extent, duration, severity and sensitivity. Likely social impacts have been evaluated using the method outlined in Esteves <i>et al</i> (2017) which is built on the evaluation tool provided in Section C3 the SIA Guideline.
Precautionary	If there is a threat of serious or irreversible damage to the environment ¹ , lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental (including social) degradation.	A precautionary approach was adopted when identifying and evaluating likely social impacts.
Proportionate	Scope and scale should correspond to the potential social impacts.	The SIA methodology and level of detail in the SIA Report reflects the scope and scale of the likely social impacts.
Rigorous	Uses appropriate, accepted social science methods and robust evidence from authoritative sources.	The SIA methodology is based on a mixed methods social science research methodology. It includes a mix of qualitative and quantitative research methods across primary and secondary data collections. Sources of evidence on which likely social impacts have been identified and evaluated is included in the relevant Appendices. A reference list of secondary data is provided in the report.
Transparent	Information, methods and assumptions are explained, justified and accessible and people can see how their input has been considered.	The SIA methodology, a copy of primary research tools and results are provided in the Appendices of the SIA Report. Data sources have been identified and a reference list provided.

¹ The SIA Guideline refers to section 4(1) of the EP&A Act which defines the ‘environment’ to include ‘all aspects of the surrounding of humans, whether affecting any human as an individual or in his or her social groupings.’

Q2 Does the lead author of the Scoping Report meet the qualifications and skill requirement in Box 2?

Not applicable to the SIA component of the EIS. This was addressed in the Scoping SIA.

Q3 Does the lead author of the SIA component of the EIS meet the qualification and skill requirements in Box 4?

Box 4 sets out who should prepare the social impact assessment component of the environmental impact statement.

The lead author of the SIA component of the EIS should have suitable qualification in a relevant social science discipline and/or proven experience (over multiple years) and competence in social science research methods and SIA theory and practices. The lead author's qualifications and experience should be outlined in the SIA component of the EIS. It is also preferable that the lead author be a member of a recognised impact assessment professional organisation². Members of professional organisations agree to be bound by a code of ethics and professional conduct, which ensures they are accountable for the professional standards they demonstrate and the work they undertake.

The lead author should provide a signed declaration indicating that the SIA component of the EIS contains all information relevant to the SIA for the project, and that the information is not false or misleading. The declaration should indicate the data on which the assessment was completed. The author should also follow relevant ethical considerations that apply to research involving people. Safeguards should be put in place and documented to ensure the process and the results provide an impartial assessment of the anticipated social impacts and avoid potential conflicts of interest.

Rachel Maas is the lead author of the SIA, her CV and signed declaration is provided in Appendix B.

Q4 Has the lead author of the SIA component of the EIS provided a signed declaration certifying that the assessment does not contain false or misleading information?

A signed declaration is provided in Appendix B.

² For instance, the International Association of Impact Assessment, Environment Institute of Australia and New Zealand, Planning Institute of Australia, or Australasian Evaluation Society.

2 Community engagement for social impact assessment (Section 2)

Q5 Does the SIA include adequate explanations of how the engagement objectives have been applied? How?

How the SIA Scoping process addressed the engagement objectives for SIA as set out in Section 2.1 of the SIA Guideline is provided in Table 2.

Table 2: Meeting engagement objectives

DPIE SIA Engagement Objective	How addressed in the SIA for the EIS
<p>Ensuring potentially affected people, groups, organisations and the community are identified and have a sufficient understanding of:</p> <ul style="list-style-type: none"> the proposed project how it may affect them and the EIA process for State significant projects in NSW and how SIA contributes to that process. 	<p>Interviews with SIA Stakeholders</p> <p>A list of questions and Information and Consent forms was sent to all SIA stakeholders prior to formally agreeing to participate in the SIA.</p> <p>The Information and Consent forms outlined:</p> <ul style="list-style-type: none"> the proposed Project the SIA and its context within the SIA Guideline and EIS process and information to be collected in the SIA and how it will be used. <p>A copy of the Information and Consent form template is provided in Appendix D.</p> <p>A list of questions was sent to the SIA stakeholders prior to the meeting, so they had the opportunity to think about questions/topics that would be discussed, and they could prepare if they chose to.</p> <p>During the one on one meetings with the SIA stakeholder:</p> <ul style="list-style-type: none"> a representative from MACH explained the proposed Project and answered any initial questions and Rachel went through the Information and Consent form and explained: <ul style="list-style-type: none"> how the information collection and verification process would work and how the information provided by the SIA stakeholders would be used and published in the SIA Scoping Report. <p>A copy of the Information and Consent form template is provided in Appendix D.</p> <p>Community Survey</p> <p>For the Community Survey (online and hard copies), information on the proposed Project was provided as part of the Project introduction within the survey. A</p>

DPIE SIA Engagement Objective	How addressed in the SIA for the EIS
	<p>copy of the Community Survey is provided in Appendix F.</p> <p>Workforce Survey</p> <p>For the Workforce Survey (online and hard copies), information on the proposed Project was provided as part of the Project introduction within the survey. A copy of the Workforce Survey in Appendix G.</p>
Collecting qualitative and quantitative data, evidence and insights for scoping the SIA and preparing the SIA component of the EIS, in ways that maximise diversity and representativeness.	<p>Both qualitative and quantitative data were collected in the Community and Workforce Surveys.</p> <p>Interviews with SIA stakeholders were undertaken using qualitative research techniques and in a way that made the most of the COVID-19 restrictions.</p>
Understanding the interests that potentially affected and interested people have in the project and how potential impacts are predicted to be experienced from their perspective.	<p>Potentially affected and interested people were able to participate in the SIA as an SIA stakeholder, complete the community survey or workforce survey.</p> <p>Submissions to previous modifications were also reviewed and used to identify potential impacts.</p> <p>Impacts have been identified based on the affected stakeholder and references provided to the relevant stakeholder engagement.</p>
Considering the views of potentially affected and interested stakeholders in a meaningful way and using these insights to inform project planning and design, mitigation and enhancement measures, and monitoring and management frameworks.	<p>Learnings from the stakeholder engagement process were used to update the Social Area of Influence, identify social impacts and develop suggested management and monitoring plans.</p>
Confirming data, assumptions, findings and recommendations.	<p>Notes from the SIA stakeholder interviews were drafted and sent back to the SIA stakeholder for review and finalisation prior to being used in the impact assessment process. Once the stakeholder had finalised the notes, permission was then sought to publish the notes as part of the SIA. Not all notes have been published.</p>
Ensuring people know how their input and views have been taken into account.	<p>The Information and Consent form outlines how the information provided by the SIA stakeholder will be used in the SIA Scoping Report.</p> <p>A copy of the Information and Consent form template is provided in Appendix D.</p> <p>Stakeholder perspectives are one of the evidence sources to identify impacts. Each potential impact has been cross referenced back to the stakeholder who raised it.</p> <p>Stakeholder perspectives have been included in the process of deciding likelihood of an impact occurring (refer to Appendix S).</p>
Helping people understand how other specialist studies prepared for the EIS (for example, air quality, noise), and any other associated proposed mitigation measures, address social impacts.	<p>A MACH representative attended most meeting with SIA stakeholders and they provided a briefing on the current Mount Pleasant Operation, the Project, the Project EIS including technical studies and answer questions.</p>
Respecting people's privacy, allowing them to communicate their view anonymously if they desire.	<p>The final section of the Information and Consent form allows for the SIA stakeholders to choose how they</p>

DPIE SIA Engagement Objective	How addressed in the SIA for the EIS
	would like to be identified in the SIA Report, which includes the ability to remain anonymous. A copy of the Information and Consent form template is provided in Appendix D.

Q6 Does the SIA demonstrate that there has been a genuine attempt to identify and engage with a wide range of people, to inform them about the project, its implications and to invite their input? How?

SIA stakeholders and methods to engage were identified based on feedback during the SIA Scoping process. Due to COVID-19 restrictions engagement methods were revised to exclude face to face meetings. The engagement methods used were:

- SIA stakeholder interviews (notes from meetings are provided in Appendix H)
- Community Survey (survey report is provided in Appendix F) and
- Workforce Survey (survey report is provided in Appendix G)

It is acknowledged that some people may not have been able to participate in the community survey due to a lack of internet access. Advertising for the community survey provided a phone number for MACH in case anyone wanted to participate but did not have access to the internet.

MACH also published a Project specific website that provided further information on the Project.

Q7 Does the SIA demonstrate that an appropriate range of engagement techniques have been used to ensure inclusivity and to ensure the participation of vulnerable or marginalised groups? How?

Organisations that represent vulnerable people in the social area of influence were invited to participate in the SIA. Of those organisations who were able to participate, discussions were held on the best way to facilitate access to the community survey. The social risk/opportunity methodology includes criteria for significance, and vulnerability is one sub-criteria. The social risk/opportunity methodology is provided in Appendix S.

3 Social baseline study (Appendix C – Section C1)

Q8 Does the Scoping Report identify and describe all the different social groups that maybe affected by the project?

The SIA Scoping Report identified and described the different social groups that may be affected by the Project. This has been updated and can be found Appendix M.

Q9 Does the Scoping Report identify and describe all the built or natural features located on or near the project site or in the surrounding region that have been identified as having social value or importance?

The SIA Scoping Report identified and described the built or natural features located on or near the Project site or in the surround region as having social value or importance. This has been updated and can be found in Appendix M.

Q10 Does the Scoping Report identify and describe current and expected social trends or social change processes being experienced by communities near the project site and within the surrounding region?

The SIA Scoping Report identified and described the current and expected social trends or social change processes being experienced by communities near the Project site and within the surrounding region. This has been updated and can be found in Appendices M and N.

Q11 Does the Scoping Report impartially describe the history of the proposed project, and how communities near the project site and within the surrounding region have experienced the project to date and others like it?

The SIA Scoping Report described the history of the proposed Project, and how communities near the project site and within the surrounding region have experienced the Project to date and others like it.

The social impacts of the current operation have been identified and evaluated as it is part of the existing social environment. Management recommendations have been provided to MACH for the existing Mount Pleasant Operation, however, it is acknowledged that no measures are required to be undertaken as part of Development Consent DA 92/97.

4 Scoping – Identifying social impacts (Section 3.2, Appendix A and Appendix B)

Q12 Does the Scoping Report adequately describe and categorise the social impacts (negative and positive), and explain the supporting rationale, assumptions and evidence for those categories?

The SIA Scoping Report described and categories the social impacts and explained the supporting rationale, assumptions and evidence for categories. The social impacts in the SIA Report have been updated based on the Scoping SIA based on the SIA engagement.

Q13 How has feedback from potentially affected people and other interested parties been considered in determining those categories? Does the Scoping Report outline how they will be engaged to inform the preparation of the SIA component of the EIS?

The SIA Scoping Report included feedback from potentially affected people and other interested parties when determining the categories of social impacts. These categories have been updated in the SIA Report based on engagement undertaken for the SIA.

Q14 Does the SIA Scoping Report identify potentially cumulative social impacts?

The SIA Scoping Report identified potentially cumulative social impacts. Cumulative social impacts have been identified for the current operation and Project scenarios (if the Project proceeds or not).

5 Social baseline study (Appendix C – Section C1)

Q15 Does the SIA component of the EIS discuss the local and regional context in sufficient details to demonstrate reasonable understanding of current social trends, concerns and aspirations?

The local and regional context is provided in Appendix M.

Q16 Does the SIA component of the EIS include appropriate justification for each element in the social baseline study, and provide evidence that the elements reflect the full diversity of views and potential experiences of the affected community?

The baseline for each potential social impact is provided in Appendix N and includes the views of stakeholders.

Q17 Does the social baseline study include appropriate mix of quantitative and qualitative analysis, and explanation of data base and limitations?

The social baseline study provides the baseline data on which to assess current and potential future social impacts. The choice of indicators and data collected has been based on the results of stakeholder engagement (interviews, community survey or workforce survey) and a range of existing data sources. Where possible the use of proxy indicators has been limited. There is a mix of quantitative and qualitative data and analysis. Where possible, impacts have been triangulated between various data sources. Limitations to data, particularly that of primary research has been outlined in the limitation section.

6 Prediction and analysis of impacts (Appendix C – Section C2)

Q18 Does the SIA component of the EIS include an appropriate description of the potential impacts in terms of nature and severity of the changes and the location, number, sensitivity and vulnerability of the affected stakeholders?

Each social impact has been described using the following criteria:

- Cause/matter
- Impact description (impact, timing and affected party/ies)
- Current mitigation strategy (if relevant)
- Impact characteristics (before additional mitigation):
 - Extent
 - Duration
 - Severity
 - Sensitivity
- Social risk/opportunity:
 - Significance
 - Likelihood
 - Rating and
- Nature of cumulative impacts.

An assessment of management strategies is then undertaken using the following criteria:

- Cause
- Impact
- Affected party/ies
- Current mitigation (if appropriate)
- Social risk/opportunity:
 - Significance
 - Likelihood
 - Rating
- Nature of cumulative impacts
- Suggested management strategy
- Updated Social risk/opportunity:
 - Significance
 - Likelihood and
 - Rating.

Q19 Does the SIA component of the EIS identify potential impacts across all stages of the project life cycle?

Social impacts, suggested management strategies and monitoring plans have been identified for:

- Current operation (Appendix O)
- SSD process (Appendix P)
- If the Project proceeds (Appendix Q):
 - Operation
 - Key phases of construction (during the operation phase)
 - Post closure and
- If the Project does not proceed (Appendix R).

Q20 Does the SIA component of the EIS appropriately identify and justify any assumptions that have been made in relation to its predictions?

Assumptions for each stage in the Project life (whether proceeding or not) have been identified in the relevant introduction section.

Q21 Does the SIA component of the EIS include appropriate sensitivity analysis and multiple scenarios to allow for uncertainty and unforeseen consequences? If relevant, does it include comparisons with studies of similar projects elsewhere?

The SIA includes an assessment of the Project proceeding and not proceeding. Where possible social impacts have been cross referenced to peer reviewed research/literature on other mining projects in the Hunter River region, NSW, Australia or internationally.

7 Evaluation of significance (Appendix C – Section C3)

Q22 Does the SIA component of the EIS explain how impacts were evaluated and prioritised in terms of significance?

Appendix S sets out the methodology for evaluating and prioritising impacts.

Q23 Does the evaluation of significance consider cumulative aspects where relevant?

Cumulative impacts relating to social impacts are identified:

- within the Mount Pleasant Operation
- between the Mount Pleasant Operation and the Project
- with other mines in proximity to the Mount Pleasant Operation
- other potential major projects and
- other industries.

Where the distinction between the cause of the impact cannot be identified, solely as the Mount Pleasant Operation or the Project, the rating has been put in context of the cumulative impact.

Q24 Does the evaluation of significance consider the potentially uneven experiences of impacts by different people and groups, especially vulnerable groups?

Each affected party/ies are identified for each existing or potential social impact. The evaluation takes into consideration who is impacted and their level of vulnerability, refer to Appendix S for the methodology for evaluating and prioritising impacts.

8 Responses and monitoring and management framework (Appendix C – Section C4 and C5)

Q25 Does the SIA identify appropriate measures to avoid, reduce or otherwise mitigate any significant negative impacts of the project and justify these measures?

A management strategy has been developed for each negative social impact with a rating of high or extreme.

Q26 Does the SIA explain and justify measures to secure and/or enhance positive social impacts?

Management strategies have been developed to enhance positive social impacts.

Q27 Does the SIA component of the EIS impartially assess the acceptability, likelihood and significance of residual social impacts?

For each stage of the Project life (Project proceeds or not) the residual social impact has been assessed using the same methodology for the pre-mitigated social impact, refer to Appendix S for the methodology for evaluating and prioritising impacts.

Q27 Does the SIA component of the EIS propose an effective monitoring and management framework.

A management and monitoring framework is suggested for the Project. Suggested management measures if the Project does not proceed is outside the scope of this SIA, but has been provided to MACH separately.



Appendix B
CV and declaration of SIA
Practitioner
Rachel Maas

Rachel Maas



Developing SIA methodologies that promote stakeholder participation in research and analysis while meeting company and legislative requirements

Engaging with urban, regional and remote communities and people from different of cultural backgrounds

Project and policy development from various stakeholder perspectives (community, government and proponent)

Understanding the implications of SIA and SIMPs in the context of organisational and project decision making

Rachel is a Social Impact Assessment (SIA) practitioner with formal qualifications and 20 years' experience in infrastructure, mining and urban projects across Australia and Aotearoa (New Zealand).

Rachel has completed over 30 SIAs under relevant State legislation across Australia and Aotearoa (New Zealand). Rachel has completed SIAs for a variety of projects, including land and marine infrastructure, resource development and aquaculture. Rachel has worked with urban, regional, rural and remote communities and people from different cultural backgrounds.

Project Experience

Mount Pleasant Optimisation Project, Scoping Social Impact Assessment – MACH Energy

Rachel undertook the scoping SIA for the Mount Pleasant Optimisation Project under the NSW SIA Guideline for State significant mining, petroleum production and extractive industry development September 2017

North Queensland Dry Tropics – Survey Training

Rachel worked with North Queensland Dry Tropics to develop an in-house survey training package.

Byerwen Coal Works Camp Needs Assessment

Rachel undertook a Needs Assessment for the proposed Works Camp under the Isaac Regional Council Proposed Isaac Regional Planning Scheme (April 2018).

Downtown Programme, Cumulative Social Impact Assessment – Auckland Transport

A desk based Cumulative Social Impact Assessment for Auckland Transport's Downtown Programme.

City Rail Link (CRL) C7 Social Impact and Business Disruption (SIBD) Delivery Work Plan (DWP)

Working with the C7 Systems IT&C, Rachel developed the SIBD DWP for Stage 1A and 1B construction works of Contract 7 for the CRL project in Mount Eden, Auckland.

SeaPath, Social Impact Assessment – AECOM

Rachel worked with AECOM and the NZ Transport Agency to undertake a Preliminary Assessment of Social Impacts for the SeaPath project under the Waka Kotahi New Zealand Transport Agency SIA Guideline. SeaPath is a proposed walking and cycling path on the North Shore, Auckland.

SH1 Whāngārei to Te Hana, Social Impact Assessment – Jacobs

Rachel worked with Jacobs and the NZ Transport Agency to undertake a Preliminary Assessment of Social Impacts for the upgrade of the SH1 from Whāngārei to Te Hana in Northland under the Waka Kotahi New Zealand Transport Agency SIA Guideline. The project involves proposed widening the existing state highway and potential bypasses to increase driver safety and increase the networks resilience.

CURRICULUM VITAE

QUALIFIED AND CONNECTED

- Certified Environmental Practitioner (CEnvP) Impact Assessment Specialist



- Masters of Evaluation
- Co-convenor of the EIANZ SIA Working Group
- Bachelor of Science, Australian Environmental Studies (Major - Ecology), with Honours (Major - Social Policy and Development)
- Post Graduate Diploma in Social Impact Assessment
- Completed MINE 7056 - Community Research Methods for the Resources Sector Centre for Social Responsibility in Mining (CSRMI), University of Queensland
- Completed University of Melbourne Research Integrity Online Training
- Member, International Association for Impact Assessment (IAIA), Environmental Institute of Australia and New Zealand (EIANZ) and Aotearoa New Zealand Evaluation Association (ANZEA)

SH1 Papakura to Bombay project, Social Impact Assessment – AECOM

Rachel worked with AECOM and the NZ Transport Agency to undertake a Preliminary Assessment of Social Impacts for the SH1 South of Papakura, South Auckland under the Waka Kotahi New Zealand Transport Agency SIA Guideline. The project involves a number of proposed highway and intersection upgrades and a shared path for walking and cycling.

Participatory Social Impact Assessment and Stakeholder Engagement Framework– Pacific Reef Fisheries

Rachel worked with Pacific Reef Fisheries to undertake a participatory social impact assessment (p-SIA) for their prawn farm located near Ayr, North Queensland. The p-SIA was undertaken to gain certification under Aquaculture Stewardship's Councils Shrimp Standard. Following on from the p-SIA, Rachel worked with Pacific Reef Fisheries to develop their Stakeholder Engagement Framework.

Lincoln Road Improvements Project, Social Impact Assessment - MWH

Rachel undertook the Social Impact Assessment to support the NoR for Auckland Transport's Lincoln Road Improvements project. Rachel also wrote evidence to the Hearing before the Independent Commissioners.

Social Impact Assessment Guideline - NZTA

Rachel wrote a submission on NZ Transport Agency's *Draft Guide to assessing social impacts for state highway projects*. Based on this submission, Rachel was asked to work with NZ Transport Agency to finalise the draft.

Hillalong Coal Project, Social Impact Assessment – CDM Smith

Rachel undertook the Social Impact Assessment for the Shandong proposed Hillalong Coal Project in the northern Bowen Basin, Queensland.

Previous work

Rachel's previous work has provided her with a unique understanding project development issues from a variety of stakeholder perspectives, across the life of a project.

Bandanna Energy, Manager Community and Environment

At Bandanna Energy, Rachel lead the environmental approval process, community engagement, native title and cultural heritage negotiations for the Springsure Creek Coal Project. This included addressing highly sensitive environmental legacy issues with landholders and establishing relationships with key stakeholders while progressing through the environmental approval process (including the submission of the project's Environmental Impact Assessment). Rachel's responsibilities also included meeting requirements under the existing Cultural Heritage Management Plan (CHMP for the mine site) and negotiating agreements and CHMPs for the proposed transport corridor and train load out facility). Rachel also managed the establishment and on-going governance of the Springsure Creek Agricultural Coexistence Research Committee.

Macarthur Coal and Peabody Energy, Community Relations Senior Advisor

As the first dedicated community relations specialist at Macarthur Coal, Rachel was responsible for designing and implementing a company-wide Community Relations Strategy for exploration, projects and operating assets; and developed a Northern Region Community Relations Plan to cover projects and operating assets in the Isaac Regional Council area. Rachel was able to continue her community relations after the Peabody Energy acquired Macarthur Coal.

GHD Pty Ltd, Social Impact Assessment (SIA) Practitioner

As GHD's first dedicated SIA Practitioner, Rachel lead and peer reviewed SIAs across Australia. This included:

- mining projects such as the Aurukun Bauxite Project, and Drake Coal Mine;
- resource developments such as the Kogan B Power Station, Dyno Nobel Ammonium Nitrate facility and Yabulu nickel refinery;

+64 9 212 8685

39 Dockside Lane
Quay Park, Auckland 1010
New Zealand

sayhello@justaddlime.co.nz
www.justaddlime.co.nz



CURRICULUM VITAE

- linear infrastructure projects such as, CopperString Project, Hancock Coal rail development and the Western Corridor Recycled Water Project;
- marine development projects such as the Port of Gladstone Western Basin Dredging and Disposal, Fisherman's Landing Port Expansion and the Notional Seaway Project; and
- urban developments such as the Suntown Landfill, Hale Street Link and Gold Coast Rapid Transit Project.

Rachel developed an inhouse SIA training course to ensure a consistency of quality across SIAs undertaken by GHD.

Rachel also lead the stakeholder engagement for the Gold Coast Waterways Access Needs Study, Ben Hammond Stage 2 Upgrade, the Pacific Paradise Bypass and the Bruce Highway Upgrade.

Central Land Council, Project Officer – Prescribed Bodies Corporate

At the Central Land Council Rachel was responsible for supporting Indigenous Land Use Agreement (ILUA) negotiations between Lhere Artepe Aboriginal Corporation and the Northern Territory Government. This included the development of culturally appropriate and legally defensible decision-making frameworks, meeting facilitation and coordination with a range of stakeholders, coordination of site visits for Native Title Holders. Rachel also provided governance, management and administration assistance to Lhere Artepe Aboriginal Corporation to ensure compliance with the Aboriginal Councils and Associations Act 1976 and the Native Title Act 1993.

MLCS Consulting, Consultant

While at MLCS Consulting Rachel assisted in the development of Homeland and Outstation Policies with Aboriginal and Torres Strait Islander Commission (ATSIC) Regional Councils in Port Augusta (South Australia), Broome and Derby (Western Australia), Tennant Creek (Northern Territory). Rachel also assisted in the Review of Essential and Municipal Services to Indigenous Communities in South Australia.

ImpaxSIA, Consultant

While at ImpaxSIA Rachel assisted with the SIAs for Lang Park Redevelopment, and the Stuart Oil Shale Project (Stage 2), Gladstone. Rachel also assisted with the social audit of BHP Cannington and ATSIC Grantee Organisational Reviews in Western Australia and New South Wales.

+64 9 212 8685

39 Dockside Lane
Quay Park, Auckland 1010
New Zealand

sayhello@justaddlime.co.nz
www.justaddlime.co.nz

Physical Address	Postal Address	Phone & Email	Website
39 Dockside Lane Quay Park Auckland 1010 New Zealand	PO Box 105-756 Auckland 1143	+64 9 212 8783 sayhello@justaddlime.co.nz	www.justaddlime.co.nz



9 September 2020

Social Impact Statement Declaration

I, Rachel Maas, declare that the Social Impact Assessment (SIA) component of the MACH Mount Pleasant Optimisation Project Environmental Impact Statement contains all the information relevant to the SIA for the Project and the information is not false or misleading.

The SIA has been undertaken to align with the NSW Department of Planning, Infrastructure and Environment Social Impact Assessment Guideline for State significant mining, petroleum and extractive industry development, September 2017.

The SIA was undertaken from April to September 2020.

I have followed the ethical considerations required as a member of the Environmental Institute of Australia and New Zealand (EIANZ) and as a Certified Environmental Practitioner (CEnvP), Impact Assessment Specialist.

Rachel Maas
Principal - Social Scientist





Appendix C

SIA Methodology

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1 Limitations and assumptions

1.1 Limitations

There are a number of limitations to this SIA Report as follows:

1. Findings of this report are based on the information available at the time of writing the Report.
2. The Social Baseline Study does not include an assessment of the social environment prior to the Mount Pleasant Operation beginning construction. A SIA was undertaken in the original EIS (1997) which included a description of the operational workforce, sources of labour, housing and accommodation and community services and facilities at the time.
3. Given the SIA is based on information available for the Scoping SIA through to early September 2020 and the anticipated timeframe for the SSD application process to be completed (up to two or three years), that is the time it will take for a decision to be made on whether the Project proceeds or not, the social environment may change, therefore the social area of influence and potential social impacts would also be expected to change.
4. The following EIS technical studies were received in August 2020 and have been considered when assessing social impacts:
 - Draft Economic Assessment (July 2020) prepared by AnalytEcon.
 - Draft Road Transport Assessment (July 2020) prepared by The Transport Planning Partnership.
 - Draft Air Quality Impact Assessment (20 May 2020) prepared by Todoroski Air Sciences Pty Ltd.
 - A Draft map of “Noise Summary – EIS Adverse Meteorological Conditions”.
 - A Draft map of “Mount Pleasant Operation Final Landform_12a (27-05-2020)”.

These technical studies only assessed the Project proceeds scenario.

5. Other technical studies for the Project had not been received e.g. Human Health Assessment so have not been considered.
6. The Stakeholder Case Studies (Appendix H, I and J) are based on the available Project information at the time of the stakeholders’ participation.
7. Not all stakeholders invited to participate in the Stakeholder Case Study accepted the invitation to participate or were able to participate due to existing commitments during the engagement timeframe (e.g. managing the impact of COVID 19 on their business and/or organisation). For those stakeholders who were able to participate, some just wanted to meet and discuss the project rather than undertake the case study process. Not all case studies were able to be finalised by the participants in time to be included in this report.
8. The limitations of the Community and Workforce Surveys the respective reports (Appendix F and G).

1.2 Assumptions

All assumptions made to assess social impacts are identified in the relevant part of the scenario being assessed.

2 SIA Engagement

2.1 SIA Engagement and COVID-19

Engagement for the SIA was originally planned to be undertaken in a face to face context. Due to COVID-19 restrictions coming into place prior to the engagement being undertaken, all engagement methods were moved to online communication platforms or via the telephone.

2.2 Engagement objectives

How the SIA met the engagement objectives set out in the DPIE SIA Guideline is provided in Question 5 in Appendix A.

2.3 Engagement activities

2.3.1 Interviews with SIA Stakeholders

Interviews were undertaken with a cross section of people/organisations likely to be impacted by the current Mount Pleasant Operation and if the Project proceeds or not. Not all stakeholders were able to participate in the SIA or were able to complete the SIA process. Table 1 sets out the interviews held with stakeholders. A MACH representative attended the start of each meeting to explain the Project and answer any questions of the stakeholder regarding the Project. It was at the discretion of the stakeholder whether the MACH representative/s then remained in the meeting or not.

Table 1: Interviews with SIA stakeholders

SIA Stakeholder Group	SIA Stakeholder	Date of Meeting	MACH Representative ¹
Mount Pleasant statutory groups	Community Consultative Committee	30 June 2020	✓
	Aboriginal Community Development Fund	8 July 2020	✓
Near neighbours	Johnathan and Elizabeth Moore, Gilgai	9 July 2020	✓
	Jim Lonergan, Kayuga	18 August 2020	-
	Glen Eden Holsteins	24 August 2020	-
Native title holders	Wonnarua Nation Aboriginal Corporation	9 July 2020	✓
Aboriginal stakeholders	Wanaruah Local Aboriginal Land Council	9 July 2020	✓
Local Councils (staff only)	Muswellbrook Shire Council	9 July 2020	✓
	Upper Hunter Shire Council	4 August 2020	✓
	Singleton Council	2 July 2020	✓
Environmental/ community groups	Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group	21 July 2020	✓ (at the start only)
		26 August 2020	
	Friends of the Upper Hunter	6 August 2020	✓
Industry groups	Muswellbrook Chamber of Commerce	9 July 2020	✓

SIA Stakeholder Group	SIA Stakeholder	Date of Meeting	MACH Representative ¹
	Scone Chamber of Commerce	23 July 2020	-
Local Business	EHP First National	23 July 2020	-
Local Suppliers	Blackrock Industries	6 July 2020	✓
	Supply Solutions Group	6 July 2020	✓
	SGS Hunter Valley	6 July 2020	✓
Stakeholders who wish not to be identified	Stakeholder A	9 July 2020	✓
	Stakeholder B	2 July 2020	✓
		14 July 2020	-
	Stakeholder C	22 July 2020	-
	Stakeholder D	7 July 2020	✓
	Stakeholder E	28 July 2020	-
State Government Departments/ Agencies	Department of Planning, Infrastructure and Environment	3 June 2020	✓
	NSW Ambulance (Muswellbrook)	22 July 2020	-
	NSW Police (Muswellbrook)	28 July 2020	-
	NSW Rural Fire Service (RFS)	22 July 2020	-

¹ Indicates whether or not the MACH representative/s remained in the meeting.

The following stakeholders were contacted but were unable to participate in the SIA:

- Compass Housing
- Hunter New England Local Health District/Hunter New England Population Health
- Upper Hunter Community Services
- Ungaroo Aboriginal Corporation
- Singleton Business Chamber
- Muswellbrook High School
- NSW Fire and Rescue and
- Muswellbrook Race Club.

The majority of service provider stakeholders were focused on maintaining a level of service throughout the COVID-19 restrictions and in 'normal circumstances' they would have participated in the SIA.

2.3.2 Community Survey

The purpose of the Community Survey was to create an opportunity for those people who are currently impacted by the Mount Pleasant Operation or likely to be impacted by the Project in a positive, negative and cumulative way to participate in the SIA.

The purpose of the Community Survey was to establish and report on a social baseline and better understand the social impacts of both the Project proceeding or not proceeding. A voluntary survey methodology was selected as a way of engaging with a broad range of stakeholders beyond the SIA stakeholders and to navigate restrictions on engagement due to COVID-19.

The SIA Community Survey was open from Friday 19 June 2020 through to Friday 31 August 2020. This includes the survey period being extended for one week based on community feedback. As well as collecting demographic information, the survey asked respondents to consider impacts of the current Mount Pleasant Operation, the proposed Project proceeding, and the proposed Project not proceeding. The impacts considered as part of the survey included potential impacts on water, quality of the living environment, visual amenity, access, housing, community services, culture, the local economy, employment and community cohesion. Respondents were asked to provide supporting comments to support their chosen Likert scale rating.

2.3.3 Workforce Survey

The purpose of including the workforce in the SIA is two-fold:

- to further understand and report on the social baseline/existing social environment as the existing Mount Pleasant Operation workforce forms part of the existing social environment and
- to clarify the potential positive and negative social impacts of the Project if it proceeds or not based on the experiences of the existing Mount Pleasant Operation workforce.

The SIA Workforce survey was open from 8 July 2020 through to 31 July 2020.

2.3.4 Letters from interested stakeholders

Letters were received from the People For Heritage, Upper Hunter Inc. and Carol Ray (from Scone). The letters are provided in Appendix L.

2.4 Results of the SIA Engagement

Results of the SIA Engagement are provided in the following Appendices:

- verified notes from meetings with SIA stakeholders are provided in Appendix H
- community Survey Report is provided in Appendix F and
- workforce Survey Report is provided in Appendix G.

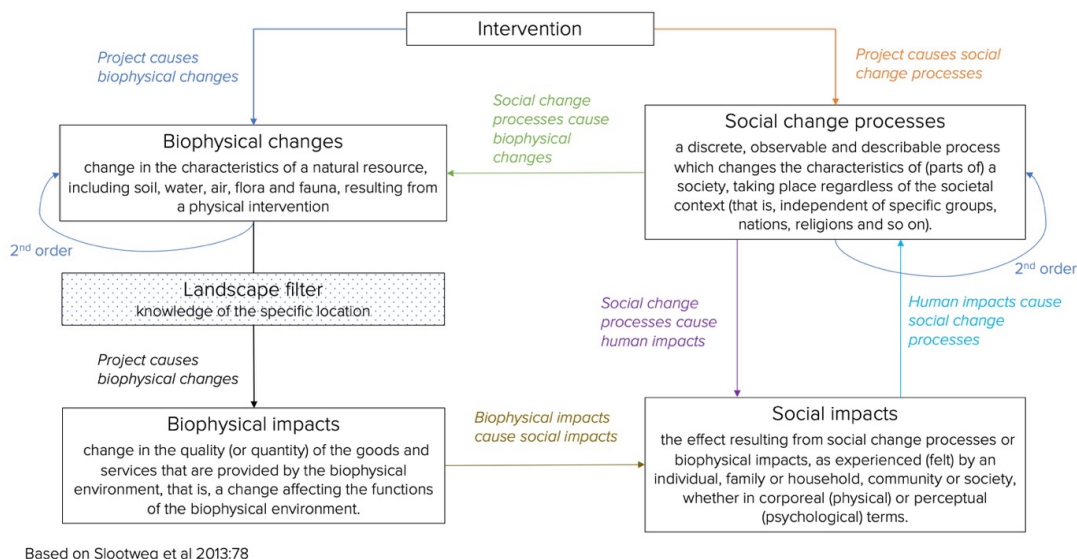
The results of the engagement for the SIA and the Scoping SIA have been used to:

- review and update social impact categories
- review and update the social area of influence
- identify social impacts and provide data sources for the social baseline
- identify and evaluate social impacts of the Mount Pleasant Operation (social baseline), including cumulative impacts
- identify and evaluate social impacts of the SSD process, including cumulative impacts and suggest management and monitoring strategies
- predict and evaluate social impacts if the Project proceeds (operation, key phases of construction and post closure), including cumulative impacts and suggest management and monitoring strategies and
- predict and evaluate social impacts if the Project does not proceed.

3 Conceptual model of impact identification

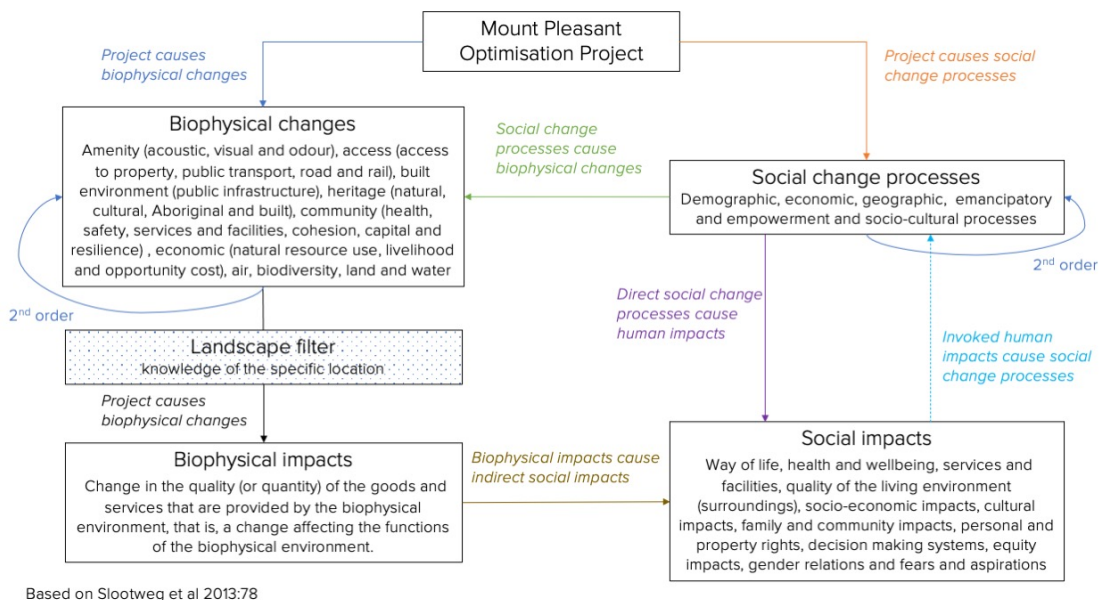
Social impacts in the scoping phase were identified using two conceptual models. The first or foundation conceptual model is from Slootweg *et al* 2013. The Slootweg *et al* (2013) model (see Figure 1) identifies the pathways by which environmental and social impacts may result from proposed projects.

Figure 1: Slootweg *et al* (2013) impact identification model



A second conceptual model has been developed (based on the Slootweg model) to be applied to the Project, see in Figure 2.

Figure 2: The Project social identification model





Appendix D

Information and Consent

Form

Social Impact Assessment (SIA) Information and Consent Form

Introduction

MACH Mount Pleasant Operations Pty Ltd is the manager of the Mount Pleasant Operation as agent for and on behalf of the unincorporated Mount Pleasant Joint Venture between MACH Energy Australia Pty Ltd (MACH Energy) (95 per cent [%] owner) and J.C.D. Australia Pty Ltd (5% owner)¹.

Just Add Lime has been contracted by MACH to undertake the Social Impact Assessment (SIA) component of the Environmental Impact Statement (EIS) for the Mount Pleasant Optimisation Project (the Project). My name is Rachel Maas. I am the Principal Social Scientist at Just Add Lime and I will be leading the SIA. I can be contacted on either 0418 728 895 or rachel.maas@justaddlime.com.au

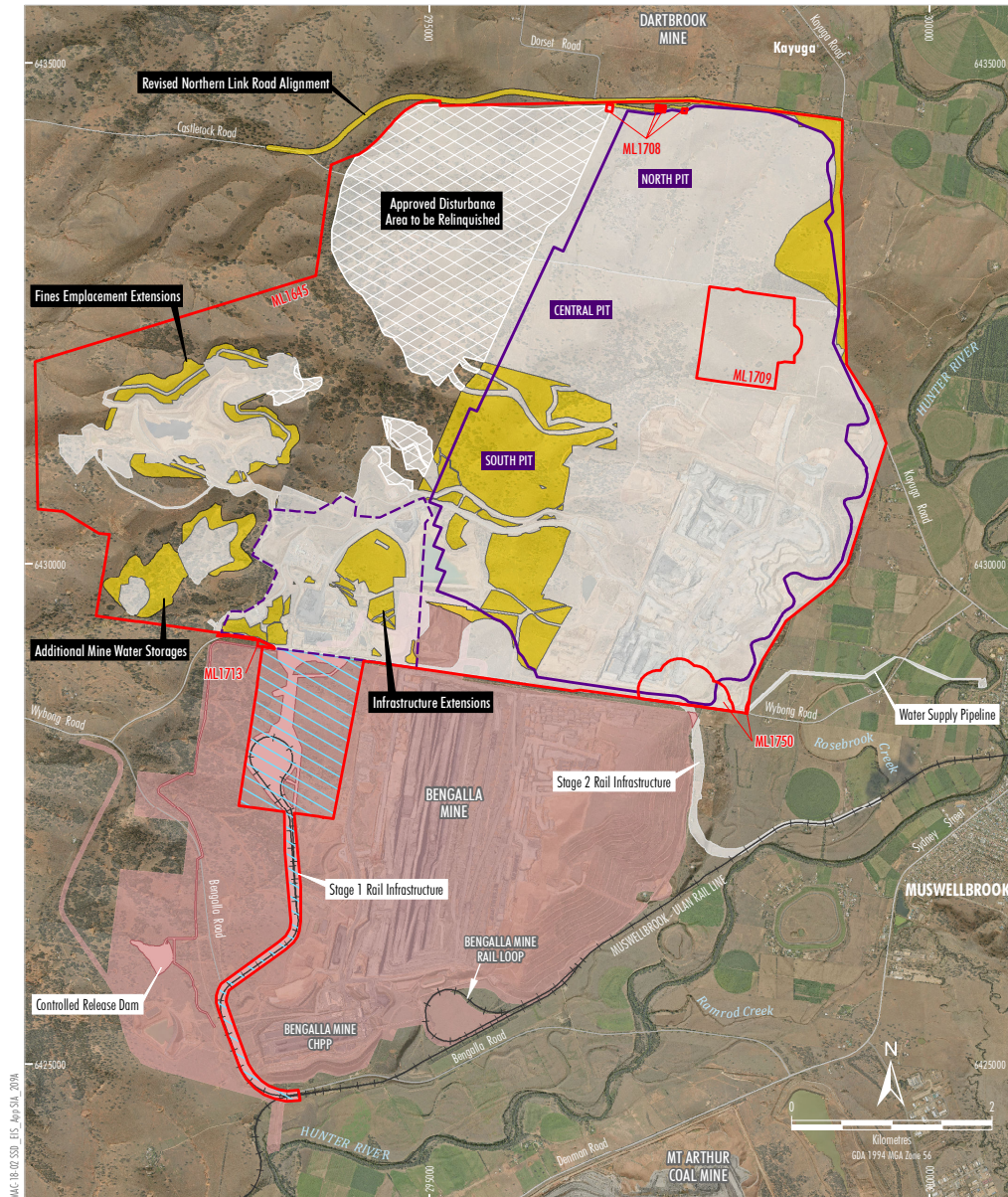
The Mount Pleasant Optimisation Project

The Project would include the following development: (a map is provided on the next page):

- increased open cut extraction within Mount Pleasant Operation Mining Leases (MLs) by mining of additional coal reserves, including lower coal seams in North Pit;
- a staged increase in extraction, handling and processing of run-of-mine (ROM) coal up to 21 million tonnes per annum (Mtpa) (i.e. progressive increase in ROM coal mining rate from 10.5 Mtpa over the Project life);
- staged upgrades to the existing Coal Handling and Preparation Plant (CHPP) and coal handling infrastructure to facilitate the handling and processing of additional coal;
- rail transport of up to approximately 17 Mtpa of product coal to domestic and export customers;
- upgrades to workshops, electricity distribution and other ancillary infrastructure;
- existing infrastructure relocations to facilitate mining extensions (e.g. local roads, powerlines and water pipelines);
- construction and operation of new water management and water storage infrastructure in support of the mine;
- additional reject dewatering facilities to allow co disposal of fine rejects with waste rock as part of ROM waste rock operations;
- development of an integrated waste rock emplacement landform that incorporates geomorphic drainage design principles for hydrological stability, and varying topographic relief to be more natural in exterior appearance;
- construction and operation of new ancillary infrastructure in support of mining;
- extension to the time limit on mining operations to 22 December 2048;
- an average operational workforce of approximately 600 people, with a peak of approximately 830 people;
- ongoing exploration activities; and
- other associated infrastructure, plant, equipment and activities.

¹ Throughout this form, MACH Mount Pleasant Operations Pty Ltd and the unincorporated Mount Pleasant Joint Venture will be referred to as MACH.

DRAFT



MAC 18-02-SSD_195_Apr-5-14_2016

LEGEND

Existing Mine Elements

- Mining Lease Boundary (Mount Pleasant Operation)
- Approximate Extent of Existing/Approved Surface Development (DA92/97) ¹
- Infrastructure to be removed under the Terms of Condition 37, Schedule 3 (DA92/97)
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Existing/Approved Mount Pleasant Operation Infrastructure within Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Additional/Revised Project Elements**
- Approved Disturbance Area to be Relinquished
- Approximate Additional Disturbance of Project Extensions ¹
- Approximate Extent of Project Open Cut and Waste Rock Emplacement Landforms
- Revised Infrastructure Area Envelope

NOTE

1. Excludes some incidental Project components such as water management infrastructure, road diversions, access tracks, topsoil stockpiles, power supply, temporary offices, signalling, other ancillary works and construction disturbance.

Source: MACH Energy (2020); NSW Spatial Services (2020); Department of Planning and Environment (2016)
Orthophoto: MACH Energy (Jan 2020)

MACHEnergy
MOUNT PLEASANT OPTIMISATION PROJECT
Project General Arrangement

A comparison of the Project and the existing Mount Pleasant Operation is provided below.

Component	Approved Mount Pleasant Operation DA 92/97	Project
Mine Life	Originally 21 years from the date of grant of Development Consent DA 92/97 (i.e. 22 December 2020). Extended to 22 December 2026 (Modification 3).	Until 22 December 2048 (i.e. extension of 22 years, allowing for 31 years of mining operations overall).
Mining Method	Open cut mining method incorporating truck and excavator and dragline operations (dragline not envisaged prior to 2026).	Unchanged. Use of dragline subject to feasibility studies.
ROM Coal Production	ROM coal production at a rate of up to 10.5 Mtpa.	ROM coal production at a rate of up to 21 Mtpa.
Waste Rock Production	Waste rock removal at a rate of up to approximately 53 million bank cubic metres (Mbcm) per annum.	Waste rock removal at a rate of up to approximately 89 Mbcm per annum.
Waste Emplacements	Waste rock emplaced both in-pit, and in out-of-pit emplacement areas.	Unchanged. Relinquishment of the North West Out-of-Pit Emplacement area.
Coal Beneficiation	Beneficiation of ROM coal in the on-site CHPP.	Unchanged. Staged upgrades to the CHPP to allow the handling and processing of additional ROM coal.
Coal Loading	Reclaim from product coal stockpiles with coal valves and reclaim conveyors, and loading to trains via a train load-out conveyor and load-out bin.	Unchanged.
Coal Transport	Coal transported along the Muswellbrook–Ulan Rail Line and then the Main Northern Railway to the Port of Newcastle for export, or to domestic customers.	Unchanged.
	An average of three, and a maximum of nine, laden trains per day leaving the mine.	An average of 6.5, and a maximum of 10, laden trains at peak coal production.
Coal Rejects	Coarse rejects are placed within mined out voids and out-of-pit emplacements, and used to build walls of the Fines Emplacement Area. Fine rejects are stored in the Fines Emplacement Area.	As approved, plus fine reject dewatering infrastructure would also be installed on new Coal Processing Plant modules so dewatered fine rejects can be co-disposed with coarse rejects.
Water Supply and Disposal	Water requirements are met from pit groundwater inflows, catchment runoff and make-up water from the Hunter River and the Bengalla or Dartbrook Mines. Surplus water will be discharged into the Hunter River (or its tributaries) in compliance with the Hunter River Salinity Trading Scheme (HRSTS) and Environment Protection Licence (EPL) 20850.	Unchanged.



Component	Approved Mount Pleasant Operation DA 92/97	Project
Approximate Disturbance Area	Approximately 2,800 hectares (ha) of surface development, exclusive of some incidental components such as water management infrastructure.	Unchanged.
Final Landform and Land Use	A final landform that incorporates macro-relief and micro-relief concepts so it does not look "engineered" when viewed from Muswellbrook, and avoids major engineered drop structures where practical. One final void would remain if mining was to cease in 2026. The full 21-year mine life indicative final landform includes two final voids associated with the North Pit and South Pit open cuts and a smaller third final void located between the two larger final voids.	Development of an integrated waste rock emplacement landform that incorporates geomorphic drainage design principles for hydrological stability, and varying topographic relief to be more natural in exterior appearance. One final void would remain.
	Rehabilitation with a mixture of pasture and forest, with increased revegetation with native tree species on the eastern face of the final landform.	Unchanged.
Hours of Operation	Operations are approved to be undertaken 24 hours per day, seven days per week.	Unchanged.
Operational Workforce	Average operational workforce throughout the life of the mine of approximately 330 people, and an estimated peak of approximately 380 people.	An average workforce of approximately 600 people, with a peak of approximately 830 full time equivalent operational personnel (including MACH staff and on-site contractor personnel).
Construction Workforce	Construction workforce is expected to peak at approximately 350 people.	Construction workforce may have short-term peaks of up to 500 people.

If the Project does not proceed, the Mount Pleasant Operation would continue to operate at a maximum rate of 10.5 Mtpa ROM coal until 2026. In 2026, mining operations and associated operational employment would cease and the site would be subject to final rehabilitation and closure in accordance with its current environmental approvals.

The Social Impact Assessment (SIA)

The SIA needs to be undertaken in accordance with the New South Wales (NSW) Department of Planning, Infrastructure and Environment (DPIE) [Social Impact Assessment Guideline](#) (SIA Guideline).

The SIA Guideline sets out the key phases of an SIA across the environmental impact assessment process. The NSW SIA Guideline outlines the four core objectives the SIA should meet:

1. The extent and nature of potential social impacts² are predicted and analysed using accepted social science methods against existing baseline conditions.
2. The SIA component of the EIS effectively draws attention to, and focuses effort on, the potential social impacts that are assessed as being significant.
3. Potential social impacts, particularly those evaluated as significant, have an appropriate, justified response, and residual social impacts are identified and explained.
4. Appropriate arrangements are proposed to monitor and manage mitigation and enhancement measures and residual social impacts over the life of the project, including unforeseen issues.

Just Add Lime will prepare the SIA Report. The SIA Report will be provided to DPIE as part of the EIS. Once the EIS and related documents (including the SIA) have been reviewed by DPIE, DPIE will make them available for public exhibition and comment for a minimum of 30 days. The SIA Report will be made public on DPIE's project webpage.

Your role in the Social Impact Assessment (SIA)

Your role in the SIA will involve participating in an informal interview/meeting and verifying the data or information collected.

During the informal interview/meeting we will discuss:

- The current social environment (or social baseline):
 - Social trends or social change processes being experienced in the area surrounding the current Mount Pleasant Operation, such as Muswellbrook, Aberdeen or the broader Upper Hunter region, e.g. changing demographics or housing availability.
 - Any built or natural features located on or near the Project site or in the surrounding region that are socially valuable or important, including social infrastructure, facilities and amenities.
 - The existing Mount Pleasant Operation impacts people have been experiencing (positive and negative).
 - Cumulative impacts with other mining operations in the region.
- Two scenarios – the Project proceeds and the Project does not proceed. For both scenarios topics for discussion will include:
 - Who may be affected;
 - How they, their values and aspirations may be impacted in a positive or negative way; and
 - Potential management and monitoring strategies to enhance positive social impacts and reduce negative social impacts.
- Any other topics you feel is relevant to the SIA.

² The NSW SIA Guideline (p. 6) states that social impacts can be positive or negative; tangible or intangible; direct, indirect or cumulative; directly quantifiable, indirectly or partly quantifiable or qualitative; and experienced differently.

During our discussion, I will be taking hand written notes. I will ask you to review and verify a typed-up summary of our discussion to ensure it is an accurate representation of our discussion. I can provide a scanned copy of my handwritten notes if requested. You are more than welcome to add more detail to the summary I provide.

Once you have verified the information/data as being accurate, you will be granting Just Add Lime permission to publish the summary (and any other additional information you provide) as an appendix to and to use the information throughout the SIA report, which may include direct quotes.

A copy of all verified information/data collected during the SIA will be provided to MACH for its use. Please let me know if there is any data/information you would not like to be provided to MACH.

Data/information provided by you will be used to:

- Update the Project's area of social influence as identified in the SIA Scoping Report
- Develop the social baseline
- Update likely social impacts (positive, negative and cumulative) in two scenarios:
 - if the Project proceeds; and
 - if the Project does not proceed.
- Develop management and monitoring strategies in both scenarios.

Voluntary participation

Your participation in the SIA is voluntary and you can choose to stop participating at any time without having to give a reason.

Your participation in the SIA is encouraged to ensure the information presented in the SIA Report is as accurate as possible.

If you have any concerns

If you have any concerns about how I am conducting the SIA, you can contact either Ngaire Baker (External Relations Manager) at MACH on 0400 214 885 or my manager Julie Boucher, Principal Social Sustainability on +64 27 404 5292 or julie.boucher@justaddlime.co.nz.

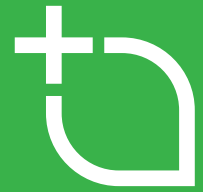
Agreement to participate in the Social Impact Assessment (SIA)

If you are happy to participate in the SIA after reading this Information and Consent Form, please provide your consent via e-mail to Rachel Maas at Just Add Lime at rachel.maas@justaddlime.com.au stating:

"I, *[insert name]* agree to participate in the Social Impact Assessment (SIA) for the MACH Mount Pleasant Optimisation Project as outlined in the Information and Consent Form.

I wish to be acknowledged/quoted/cited in the SIA Report as *[please choose which is relevant]*

- Acknowledgement by name, position and company/organisation
- Acknowledgement by company/organisation only or
- Confidential participation (information is de-identified).



Appendix E

The Current Mount Pleasant Operation

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1 Introduction

This Appendix provides an overview of the current Mount Pleasant Operation. This information has been used to assess the social impacts (positive and negative) of the current operation, which forms part of the baseline for the Project.

The Appendix contains information on:

- the history of the Mount Pleasant Operation
- location and land ownership
- works on site
- workforce
- Local Supplier Strategy
- Voluntary Planning Agreement (VPA) with Muswellbrook Shire Council (MSC)
- community contributions and support
- Aboriginal Community Development Fund (ACDF)
- environmental initiatives (Biodiversity Offsets and Aboriginal Heritage Conservation) and
- community engagement (CCC and complaints).

2 History of the Mount Pleasant Operation

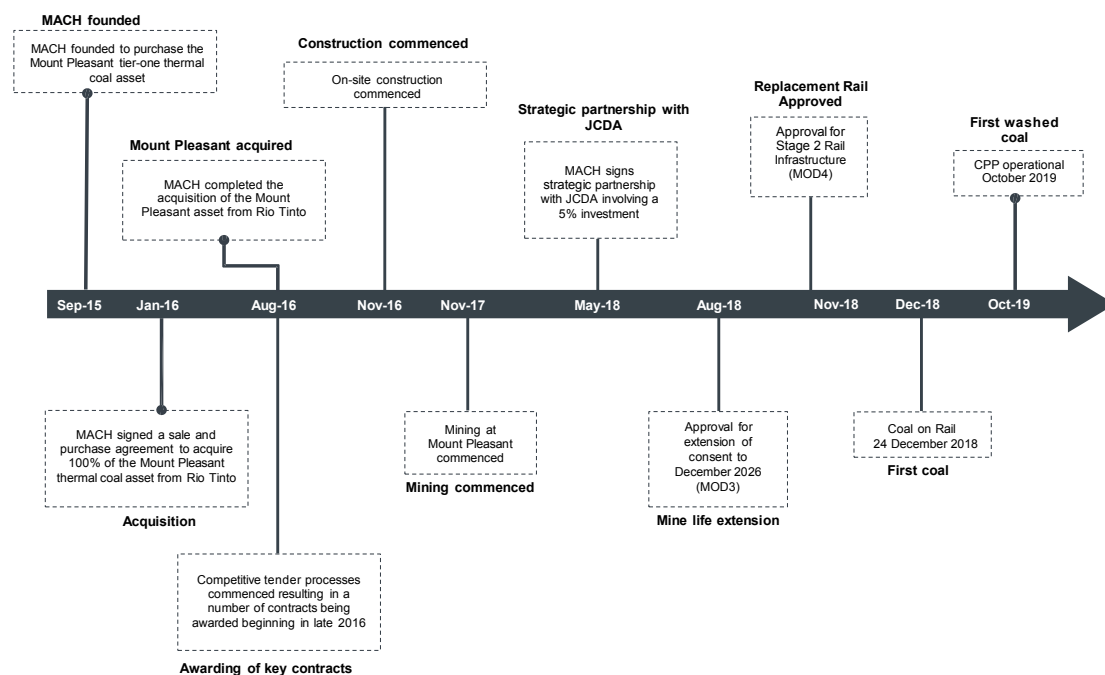
The Mount Pleasant Operation was originally approved under the NSW Environmental Planning and Assessment Act in December 1999 and included:

- operation to December 2020
- production of 10.5 Mtpa ROM coal
- infrastructure area located in the south-west
- operations undertaken 24 hours per day, 7 days a week and
- average operational workforce of 330 employees (peak at approximately 380).

The Mount Pleasant Operation as proposed by Coal & Allied was approved (as the Mount Pleasant Project) under the *Commonwealth Environmental Protection and Biodiversity Conservation Act* in February 2012 until 2035.

When the Mount Pleasant Operation was purchased by MACH from Coal & Allied in August 2016, only limited engineering and construction works had been undertaken (e.g. surveying, geotechnical investigation, construction of a dam, etc) and no mining operations had been conducted at the site. Figure 1 outlines the recent history of the Mount Pleasant Operation.

Figure 1: History of the Mount Pleasant Operation



Source: MACH.

To date there have been four approved Modifications of the Mount Pleasant Operation. A summary of the Modifications and issues raised by special interest groups and the general public is provided in Table 1.

Table 1: Summary of Modifications

MOD #	Applicant	Summary of Modification	Approval Authority	Approval Date	Issues raised by special interest groups and the general public	Response
MOD 1	Coal & Allied (Rio Tinto)	<ul style="list-style-type: none"> addition of a service and conveyor corridor, allowing coal to be transported to the Bengalla Mine for rail loading and transport as an alternative to the approved rail loop¹ and relocation of mine infrastructure. 	Department	19 September 2011	<p>Of the 6 submissions from special interest groups, 4 objected, 1 did not object but raised concerns, and 1 (the CFMEU) supported the Modification.</p> <p>Concerns raised included the level of consultation conducted by Coal & Allied regarding the Modification, noise and dust impacts and the broader cumulative impacts of coal mining in the region including potential:</p> <ul style="list-style-type: none"> noise, dust and visual impacts impacts on water resources impacts on local infrastructure and land use conflicts, including potential impacts on the wine and thoroughbred industries. 	None included in Section 4 of the DPI Assessment Report.
					<p>All 13 of the submissions from the general public objected to the proposed Modification.</p> <p>Concerns raised included potential noise and dust impacts, visual and light spill, potential impacts to water resources and road and rail</p>	Coal & Allied provided responses to the issues raised in submissions. The Department considered the issues raised, and Coal & Allied's response to these issues, in its assessment of the proposed Modification.

¹ The MOD 4 DPE Assessment Report notes that the conveyor service corridor option was not pursued. On 20 January 2017, MACH advised the Department of its intention to proceed with the rail loop as originally approved.

Source: Department of Planning and Environment Mount Pleasant Coal Mine section 75W Modification Assessment (DA92/97 MOD 4)

MOD #	Applicant	Summary of Modification	Approval Authority	Approval Date	Issues raised by special interest groups and the general public	Response
					<p>infrastructure, greenhouse gas emissions, and cumulative impacts of coal mining in the region (noise, dust and visual).</p> <p>Many of these concerns were directed towards the potential impacts of the approved mine, rather than the proposed Modification.</p>	
MOD 2	MACH Energy	<ul style="list-style-type: none"> Relocation of the South Pit Haul Road. 	Department	29 March 2017	<p>The Department of Planning and Environment Assessment Report for Mount Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 2) states that following the exhibition of the Environmental Assessment for the Modification, the Department received 4 submissions on the Modification from government agencies. MSC expressed support for the proposal and none of the remaining three authorities raised any concerns with the Modification. The Department did not receive any public submissions.</p>	-

MOD #	Applicant	Summary of Modification	Approval Authority	Approval Date	Issues raised by special interest groups and the general public	Response
MOD 3	MACH Energy	<ul style="list-style-type: none"> Extension of approved mine life until 22 December 2026. Minor changes to mining methods. Sourcing water from the Bengalla Mine and Dartbrook Mine to reduce reliance on the Hunter River. Extension of the Eastern Overburden Emplacement Area (OEA). Relinquishing the northern portion of the South West OEA. 	Independent Planning Commission	24 August 2018	<p>DPE noted that they had received 250 submissions in the nature of objections from the general public and special interest groups during the Environmental Assessment exhibition period (p. 11). They identified that the key issues raised by objectors included the following (and that a number of objectors raised more than one issue):</p> <ul style="list-style-type: none"> interaction with Bengalla (n=185) incompatibility with other industries (n=68) outdated impact studies (n=42) air quality (n=34) cumulative impacts (n=28) health (n=23) noise (n=21) and rehabilitation (n=12). 	<p>MACH provided a detailed Response to Submissions which addressed submissions from public authorities, the community and SIGs. The Response to Submissions and MACH's response to the late submission from a resident in Aberdeen were placed on the Department's website. The Response to Submissions summarised the submissions into four groups, being Government agencies, non-government organisations, BMC and the public, and provided responses to the specific issues raised in submissions by each group. The Response to Submissions also included analysis of the submissions, discussion of the engagement activities undertaken by MACH and a concluding statement that, following review of the issues raised by submissions, MACH did not propose any change to the requested Modification.</p>

MOD #	Applicant	Summary of Modification	Approval Authority	Approval Date	Issues raised by special interest groups and the general public	Response
					<p>DPE noted they had received 85 submissions from the general public and special interest groups during the Environmental Assessment exhibition period (p. 12). They identified the following matters raised in support:</p> <ul style="list-style-type: none"> • employment opportunities (n=55) • local economy (n=35) • local and regional community support (n=26) • economic benefits (n=14) • general support (n=12) and • positive rehabilitation outcomes (n=12). 	As per row above.
MOD 4	MACH Energy	<ul style="list-style-type: none"> • Constructing new product coal transport infrastructure, including a rail spur, rail loop, coal conveyor and rail loading facility. • Constructing new water supply infrastructure, including a water pipeline, pump station and associated electricity supply. • Demolishing and removing redundant rail and water supply infrastructure within the Bengalla Mine development consent boundary. 	Department	16 November 2018	<p>Three submissions in the form of objection:</p> <ul style="list-style-type: none"> • one submission from the general public and • two from special interest groups representing the Hunter thoroughbred breeding industry. 	None included in Section 4 of the DPE Modification Assessment Report.
					<p>44 submissions in support of the proposal. Many of these submissions were provided by mine employees, contractors and associated local businesses.</p>	None included in Section 4 of the DPE Modification Assessment Report.

3 Location and land ownership

MACH largely owns the freehold land within the MLs and owns a significant portion of the surrounding freehold land (Table 2), which is either:

- leased back to the previous owners or local farmers
- rented out through real estate agents in Muswellbrook or
- used to house MACH staff and/or contractors.

3.1 Property purchases within Mount Pleasant Operation and surrounding area

Property purchases within the Mount Pleasant Operation were undertaken by Coal & Allied in conjunction with the original approval and Modification 1 in the late 1990s and early 2000s. These property purchases had largely already occurred by the time MACH acquired the Mount Pleasant Operation from Coal & Allied. Acquisitions of properties surrounding the Mount Pleasant Operation have also been undertaken by MACH “upon request” based on the Environmental Performance Conditions in Development Consent DA 92/97.

3.2 Near neighbours – privately owned residences

There are a number of privately owned residences outside the Mount Pleasant Operation MLs for which owners can seek acquisition or mitigation on request (Table 2) under Development Consent DA 92/97.

Table 2: Privately-owned residences surrounding the Mount Pleasant Operation with existing acquisition or mitigation upon request rights

Property	Number
Privately owned residence with Mount Pleasant Operation acquisition upon request	25 ^{1, 2}
Privately owned residence with Mount Pleasant Operation mitigation on request	20 ³

Source: Development Consent DA 92/97.

Notes:

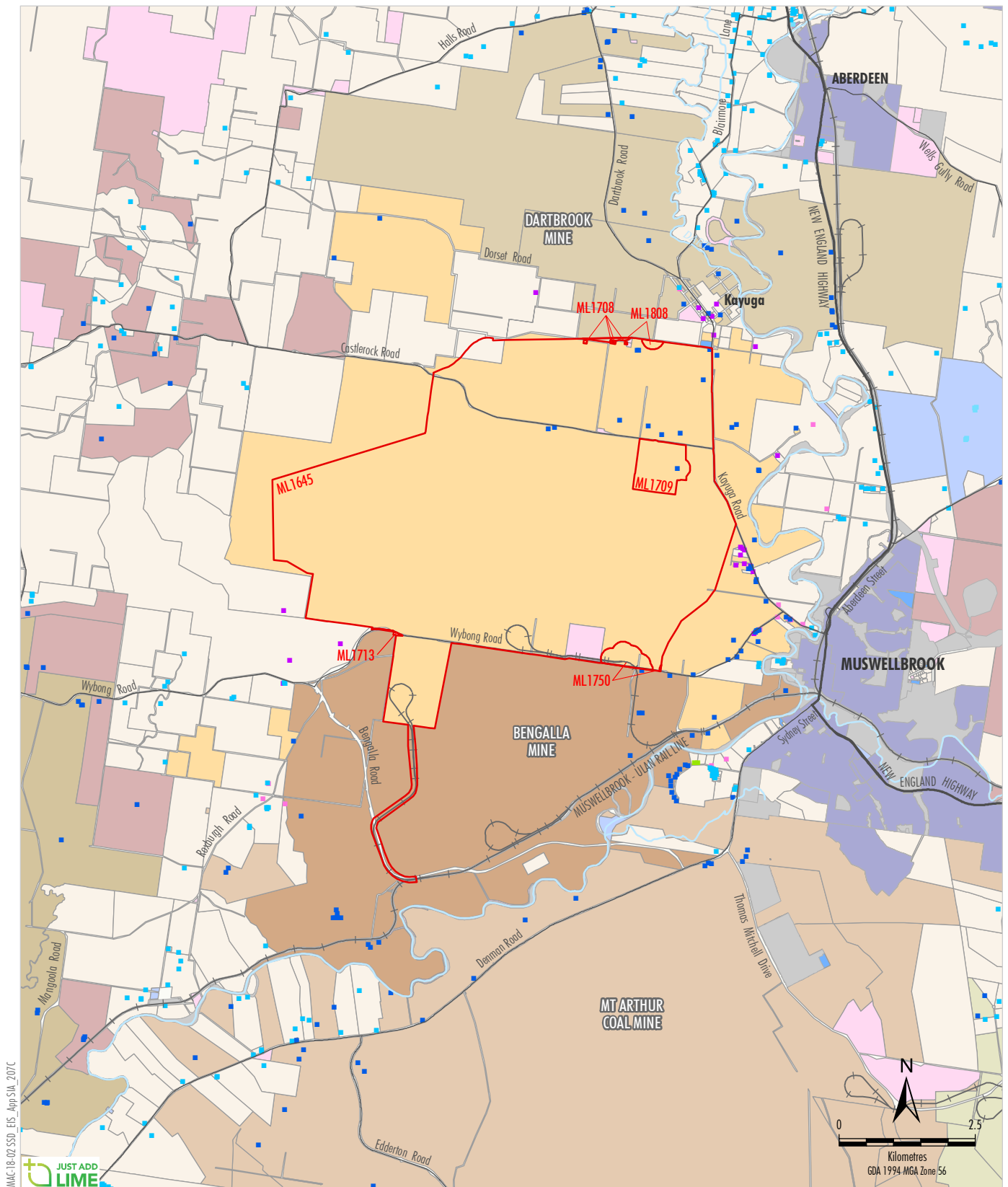
- ¹ This total number includes two properties that have been purchased by MACH and two properties at which MACH is only required to acquire and/or install mitigation measures at this property if acquisition and/or mitigation is not reasonably achievable under a separate approval for Bengalla Mine.
- ² This total number does not include vacant land where the owner of the land has acquisition upon request rights (seven properties).
- ³ This total number includes properties that have been purchased by MACH (three properties).

MACH has indicated any future agricultural land purchases associated with the Mount Pleasant Operation (acquisition on request) will generally continue to be managed as agricultural land, with the exception of residences located in close proximity to the operations in Collins Lane.

3.3 Land use of near neighbours

There are a number of people living and working on properties surrounding the current Mount Pleasant Operation (see Figure 2). There are a number of small rural communities surrounding the Mount Pleasant Operation. Although the term community is used, it does not necessarily reflect a consistency of views, values or experiences of the people living in the geographic area. These communities include:

- to the north, Dorset Road community
- to the north-east, Blairmore Lane and residents living at Kayuga
- to the east, Collins Lane community and residents of Muswellbrook who live on the floodplain of the Hunter River
- to the south-east, the Racecourse Road community
- to the south-west and west, Wybong community and
- to the north-west, the Castlerock community.



IMC-18-02 SSD: EIS_Apr SIA_207C



LEGEND

- Mining Lease Boundary (Mount Pleasant Operation)
- Mount Pleasant-controlled
- Bengalla-controlled
- Dartbrook-controlled
- Mangoola-controlled
- Muswellbrook Coal-controlled
- Mt Arthur-controlled
- Other Mining/Resource-controlled
- Crown
- The State of NSW
- Muswellbrook Shire Council
- Upper Hunter Shire Council
- Privately-owned Land
- Muswellbrook and Upper Hunter LEP Zones B2, B5, R1, R5
- Muswellbrook and Upper Hunter LEP Zones IN1, SP2, RE1, RE2, W1

- Mine-owned Dwelling
- Privately-owned Residence - MPO Acquisition on Request
- Privately-owned Residence - MPO Mitigation on Request
- Privately-owned Residence - MPO Mitigation/Acquisition on Request *
- Other Privately-owned Residence

* MPO Mitigation on Request - rail noise. MPO is only required to acquire and/or install air quality mitigation measures at this property if acquisition and/or mitigation is not reasonably achievable under a separate approval for the Bengalla Mine.

Source: MACH Energy (2020); NSW Spatial Services (2020)

MACHEnergy

MOUNT PLEASANT OPTIMISATION PROJECT

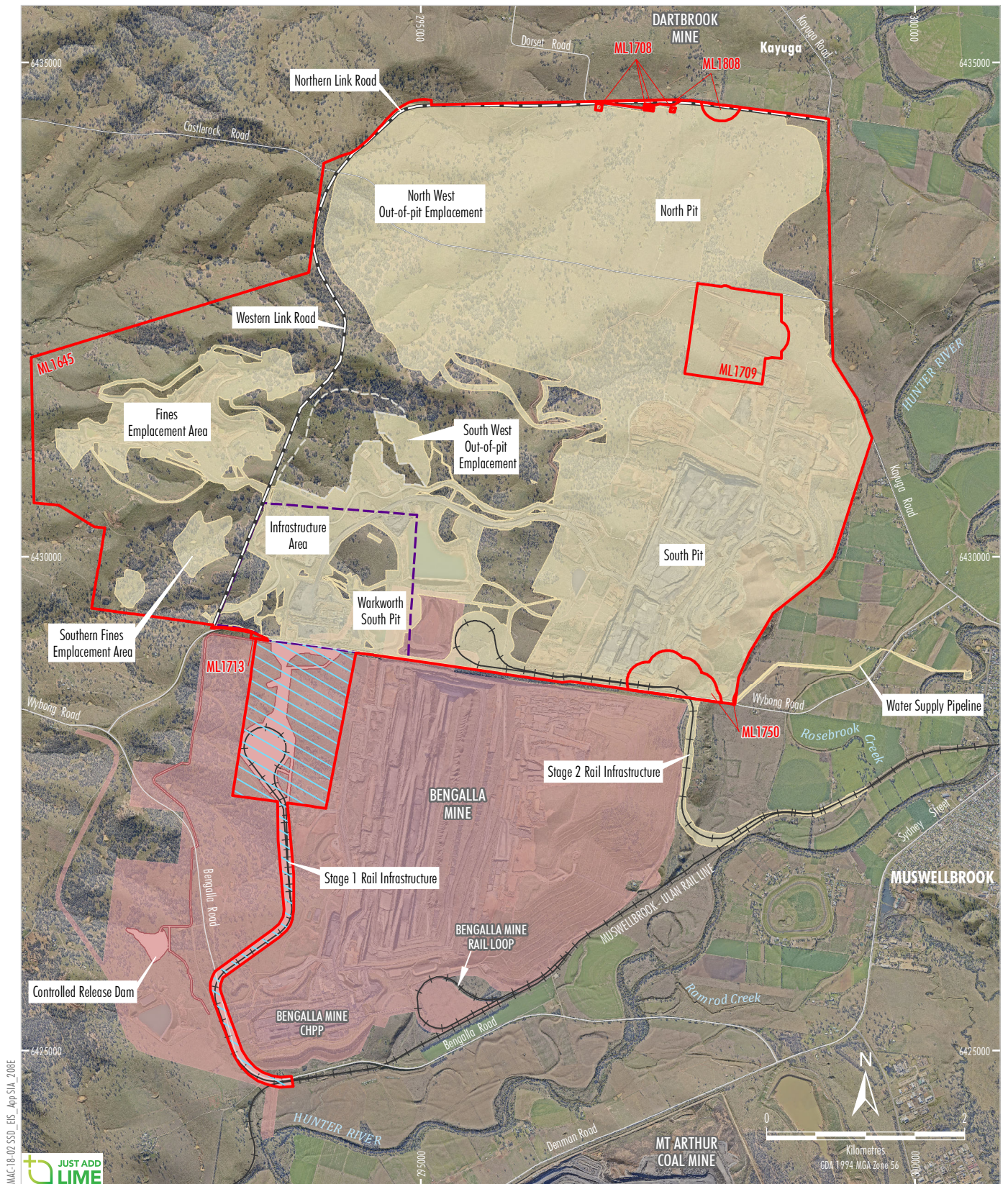
Land Ownership Overview

Figure 2

4 Works on site

At the time of writing this SIA (August 2020), the current status of the Mount Pleasant Operation was:

- Permitted to carry out development:
 - generally in accordance with the EIS, EA (Mod 1), EA (Mod 2), EA (Mod 3), EA (Mod 4) and project layout plans and
 - in accordance with Development Consent DA 92/97. This includes the surface disturbance plan shown in Figure 3, which includes the mining of the area across Castlerock Road.
- Producing, washing and transporting coal as per the conceptual 2025 mine layout plan provided in Figure 4.
- Mine Optimisation Modification (Mod 3) landform design with micro-relief (waste rock emplacement or bund) was in progress with ongoing rehabilitation (see Figure 5 and Figure 6).
- Rail Modification (Mod 4) rail engineering studies were completed, the Construction Environmental Management Plan completed and the material construction of Stage 2 rail infrastructure anticipated in the fourth quarter of 2020.
- Some proximal private owners had initiated land acquisition or noise mitigation rights upon request in accordance with Development Consent DA 92/97.



MAC-18-02 SSD_EIS_Appl SIA_20BE



LEGEND

- Mining Lease Boundary (Mount Pleasant Operation)
- Approximate Extent of Existing/Approved Surface Development (DA92/97) ¹
- Area Relinquished for Overburden Emplacement and Major Infrastructure
- Infrastructure Area Envelope
- Northern and Western Link Road
- Infrastructure to be removed under the Terms of Condition 37, Schedule 3 (DA92/97)
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Existing/Approved Mount Pleasant Operation Infrastructure within Bengalla Mine Approved Disturbance Boundary (SSD-5170) ¹

NOTE

1. Excludes some incidental Project components such as water management infrastructure, access tracks, topsoil stockpiles, power supply, temporary offices, other ancillary works and construction disturbance.

Source: MACH Energy (2020); NSW Spatial Services (2020); Department of Planning and Environment (2016)
Orthophoto: MACH Energy (July 2020)

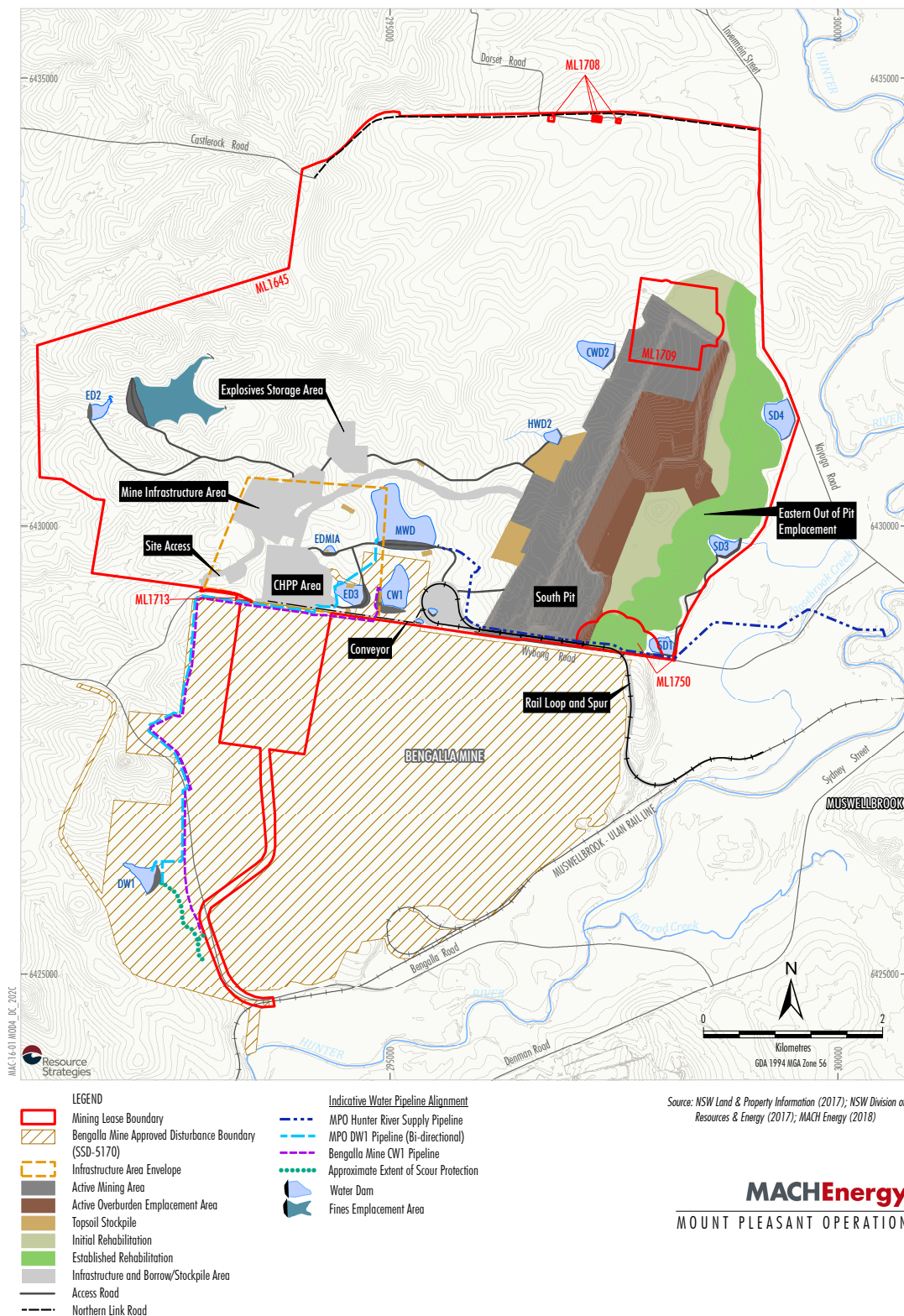
MACHEnergy

MOUNT PLEASANT OPTIMISATION PROJECT

General Arrangement of the
Approved Mount Pleasant Operation

Figure 3

Figure 4: Mount Pleasant Operation, conceptual layout plan 2025



Source: Development Consent DA92/97 available from <https://machenergyaustralia.com.au/wp-content/uploads/2018-MOD4-Consolidated-Consent.pdf>

Figure 5: Landform progress, May 2020, looking north



Source: MACH

Figure 6: Landform progress, May 2020, looking north-west



DATE: May 2020

Source: MACH

5 Current workforce

5.1 Local employment

On its website, MACH makes the following commitment regarding local employment:

“At MACH Energy we believe in hiring locally. To do this, we have aligned ourselves with contractors who share this objective. We know how important it is that mining communities, like Muswellbrook, share in the success of long-term mining operations. That’s why we make it a part of our recruitment strategy to source talent locally where possible, engage local recruiters to assist us with the search, and when the right person for the job can’t be found locally, relocate the chosen candidate to the area. Local businesses are then able to enjoy the benefits of increased expenditure, thanks to a growth in population, and capital is invested back into local amenities.”

5.2 Snapshot from March 2020

In March 2020, the workforce at the Mount Pleasant Operation had an estimated workforce of 380² who were employed or contracted:

- MACH
- Thiess – responsible for operating the mine for five years, from 2017 – 2022 and
- Sedgman – construction and operation of the CHPP.

The place of usual residence of the workforce is shown in Table 3.

Table 3: Workforce residential location

Place of residence	Percentage
Muswellbrook Shire Council LGA	33%
Upper Hunter Shire Council LGA	16%
Singleton Shire Council LGA	21%
Cessnock Shire Council LGA	7%
Maitland Shire Council LGA	5%
Other NSW	13%
Other Australia	4%

Source: AnalytEcon 2020

² As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA.

6 Local Supplier Strategy

On its website, MACH makes the following commitment regarding purchasing locally:

Strong relationships with our local business partners are essential as we establish ourselves as committed, long term members of the Muswellbrook business community. We will work collaboratively with new and existing suppliers to drive innovation and build capability to achieve our local supplier strategy objectives.

To this end, it is the objective of procurement to achieve value for money and maximise supplier performance in procurement activities to assist MACH Energy in achieving its corporate objectives.

MACH's Community Engagement Plan sets out the priority categories for opportunities to engage with local businesses and economic stakeholders, refer to Table 4.

Table 4: Local Procurement

Category	Sub-Category
Equipment and supply	<ul style="list-style-type: none">• Office Supplies• Catering• Visitor accommodation• Property management• Conference facilities• Transport and freight
Maintenance and services	<ul style="list-style-type: none">• Rubbish removal• Labour Supply
Construction and trades	<ul style="list-style-type: none">• Painting• Electrical contractors• Maintenance contractors• Sewerage and plumbing• Welding and fabrication• Air conditioning servicing• Vehicle services• Building
Health and safety	<ul style="list-style-type: none">• Fire extinguisher testing• Security

Source: MACH

7 Voluntary Planning Agreement with Muswellbrook Shire Council

MACH currently meets the commitments in the VPA negotiated between Coal & Allied with MSC. The VPA agreement was novated to MACH. These commitments are outlined in Table 5 below.

Table 5: MACH Contribution Plan under VPA

Item	Development contribution
Mount Pleasant Community Contribution	\$500,000 per annum (indexed annually according to CPI). A community representative committee will be established, including Coal & Allied (MACH) representatives, to make recommendations to Council regarding these community contributions.
Council road maintenance costs	Costs associated with the maintenance of roads, as reasonably apportioned to the use of the road by Mount Pleasant, up to a maximum annual payment of \$220,000 per annum (indexed annually according to CPI). This contribution will be made for recurrent road maintenance to be used at Council's discretion for that purpose.
Environmental Officers	Coal & Allied (MACH) to make contributions to an Environmental Officer, up to a maximum of \$20,000 per annum (indexed annually according to CPI).
Apprenticeships	Coal & Allied (MACH) to use its best endeavours to engage 4 apprentices per year for the life of the mine sourced from residents within the Muswellbrook Shire Council LGA and Aberdeen.

Source: MSC and Coal & Allied (2011) Voluntary Planning Agreement

The community representative committee consists of the Mayor, General Manager, relevant staff of the MSC, a community member of the Mount Pleasant CCC and the MACH External Relations Manager.

The allocation of Mount Pleasant Community Contribution is at the discretion of MSC. Allocations for the past three years are set out in Table 6.

Table 6: Allocation of the Mount Pleasant Community Contribution

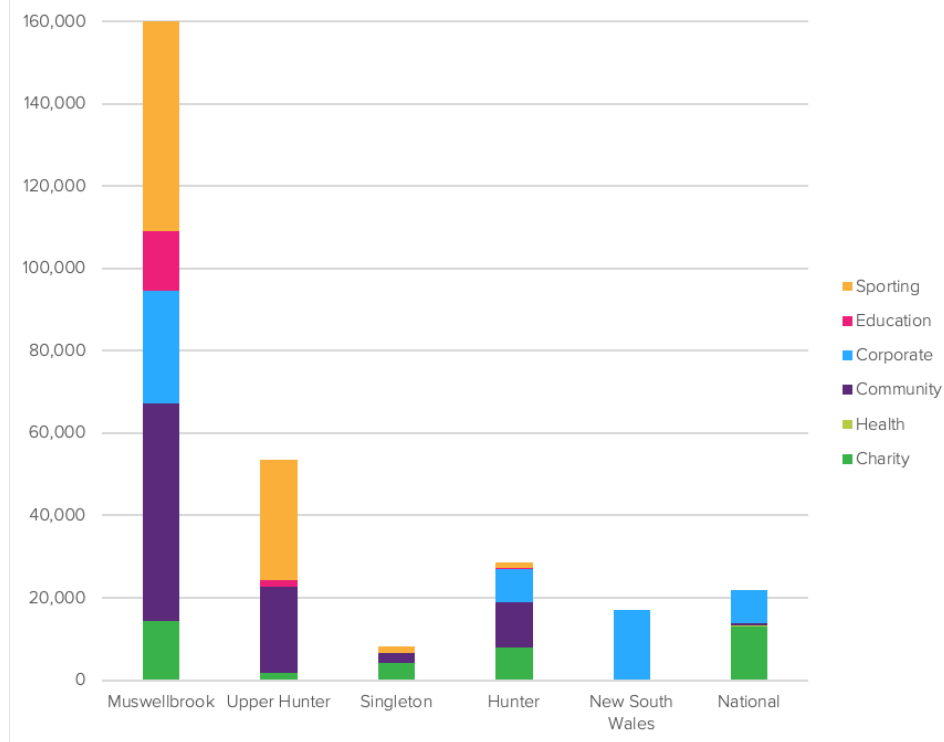
Year	Allocation
2020/2021	<ul style="list-style-type: none"> \$345,000 covering works to the new Muswellbrook outdoor swimming pool and the Muswellbrook Tertiary Education Centre. \$250,000 for the establishment of the Hunter 2050 Foundation.
2019/2020	<ul style="list-style-type: none"> \$605,000 was allocated to the Denman Business Precinct Masterplan.
2018/2019	\$1,455,000 was allocated to: <ul style="list-style-type: none"> Muswellbrook Entertainment Centre Denman Business Precinct Masterplan Muswellbrook Animal Shelter and Aquatic Centre.

Source: MACH

8 Community contributions

MACH provides community contributions to a range of community organisations in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, as well as contributing to organisations who provide services across New South Wales and nationally. From 2017 to 2020, MACH has contributed nearly \$290,000. The types of organisations and locations are set out in Figure 7.

Figure 7: MACH community contribution across community groups and area



Source: MACH

9 Aboriginal Community Development Fund

9.1 History of the ACDF

MACH oversees commitments relating to the Aboriginal Community Development Fund (ACDF). The Fund was amongst community benefits identified in 2005 as part of a Native Title Agreement with the Wonnarua People, represented by Victor Perry. MACH, through the ACDF, welcomes the opportunity to make meaningful contributions to the sustainability and well-being of Aboriginal communities in the Upper Hunter Valley.

Established in 2006, the ACDF had a starting fund of \$500k, which is indexed against CPI each year. Since then, the Fund has invested more than \$4M into projects that benefit Upper Hunter Valley Aboriginal communities. Funds not allocated at the end of each calendar year are transferred to a Future Fund. The existing Fund expires in 2026. The ACDF committee continues to meet regularly to review submissions made for funding support, and to monitor the progress and benefits of existing partnerships. MACH representatives form part of the committee to administer funds and manage partnerships.

The Fund seeks to support partnerships that target issues, needs and opportunities which are priorities for local Aboriginal communities in areas such as health, economic development, cultural and community development and education.

Fund is led by and decisions on funding are made by members of the ACDF. MACH supports the ACDF by providing an executive officer. The executive officer does not have a decision making role.

9.2 The objective and vision of the ACDF

The objective of the ACDF is to provide funds to community-identified and driven projects that will assist in developing the vision of the Upper Hunter Valley Aboriginal Community (UHVAC). The ACDF's vision is to achieve equivalent access and outcomes in education, training, employment and economic participation as enjoyed by the community as a whole as well as retaining the unique heritage and traditions of the UHVAC.

The Vision for the ACDF is to also include a biennial Cultural Spectacular, an event open to all to come together and celebrate Aboriginal culture in the community. The first Cultural Spectacular was held in 2017 in Singleton and the second in Muswellbrook in 2018. The Committee then made the decision to hold the event on a biennial basis with the next event scheduled to be held in Singleton in 2020. However, due to COVID-19, the event has been postponed until May 2021.

The ACDF Committee attends an annual Strategic Planning Day to ensure the goals and objectives of the ACDF are being followed and also to discuss the funds allocated to the Future Fund and how they would best serve the Upper Hunter Aboriginal Community.

9.3 ACDF funded projects

The ACDF funds projects under the categories of:

- economic development
- education
- cultural development and
- health.

Appendix J contains a summary of the 2019 ACDF funded projects.

10 Environmental Initiatives

10.1 Biodiversity Offsets

To offset the impacts of the approved Mount Pleasant Operation, 12,875 ha of land comprising of similar ecological communities and habitat quality are to be managed for biodiversity offsets. The lands to be offset (the Offset Areas) occur within the Biodiversity Management Areas (BMAs) which total 15,590 ha of land. The BMAs include areas managed as agricultural enterprises as well as the 12,875 ha of offset areas. Condition 2 of approval 2011/5795 requires a legally binding conservation covenant to be registered over the BMAs to provide enduring protection for the offsets.

Appendix K provides further details regarding the Offset Areas and identifies potential social impacts associated with the implementation of the Offset Management Plan and Re-Establishment Plan.

10.2 Aboriginal Heritage Conservation

An Aboriginal Heritage Management Plan (AHMP) has been prepared by MACH to satisfy the requirements under Development Consent DA 92/97 and specifically Condition 36, Schedule 3.

Under the AHMP, MACH is implementing staged implementation of an Aboriginal Heritage Conservation Strategy. The three stages are (MACH, 2019):

- Stage 1 Conservation Area A (approved) – approximately 329 ha as guaranteed for the 2016-2020 development of the Mount Pleasant Operation
- Stage 2 Conservation Area C (potential) – approximately 235 ha to be considered for the post 2020 development at the Mount Pleasant Operation and
- Stage 3 Conservation Area B (potential) – approximately 150 ha as potential, subject to further consideration.

As part of establishing the Aboriginal Heritage Conservation Areas, preparation of the Aboriginal Heritage Conservation Strategy is required by Condition 33, Schedule 3 of Development Consent DA 92/97.

11 Community Engagement

11.1 Community Engagement Plan

MACH's internal Community Engagement Plan sets out the following community engagement objectives:

- retain favourable community relationships by building positive and enduring relationships through open and transparent communication
- manage impacts, responsibly, consistently and in an effective manner through effective risk identification and mitigation and
- achieve social performance goals and commitments.

MACH would achieve these objectives by assessing, reporting and demonstrating their social contribution to the community and having a clear and consistent understanding of deliverable areas of:

- operational and environmental impact mitigation
- employment of local residents
- engagement of local suppliers and subcontractors to ensure full, fair and reasonable opportunity to participate and
- community investment through direct financial and or contribution which targets community health and wellbeing in the areas of Aboriginal affairs and education.

Key community engagement activities include the following:

- ongoing meetings with key stakeholders
- MACH website
- quarterly newsletter
- Community Consultative Committee (CCC) and
- complaints process

11.2 Community Consultative Committee (CCC)

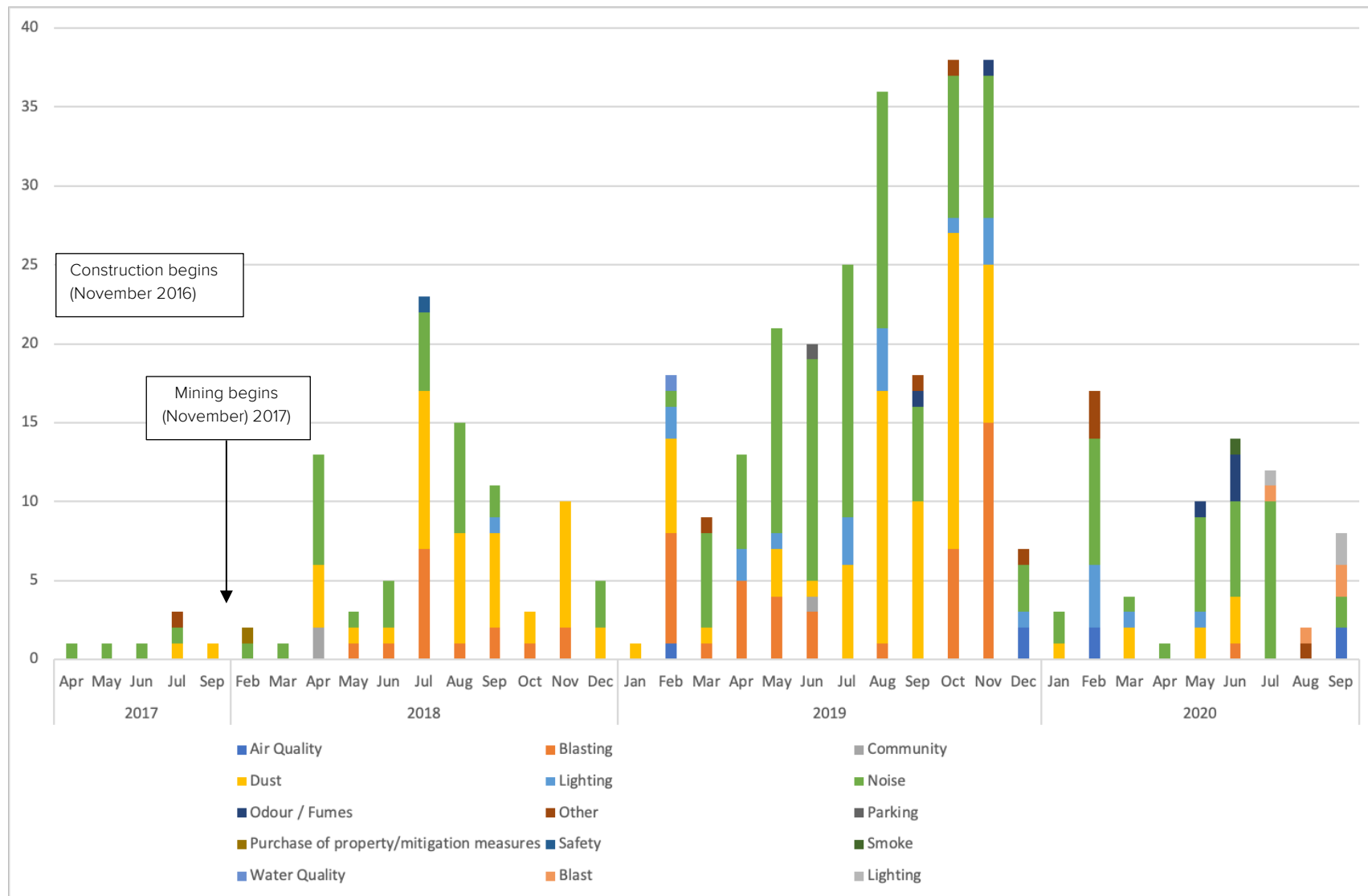
A CCC was established as per Development Consent DA 92/97. It is comprised of seven residents who have an interest in the operations at Mount Pleasant Operation, and meet regularly with MACH representatives to discuss the management of the mine and also its future. Along with representatives from MACH and principal contractors, the meetings provide a platform for community members to raise issues, voice concerns and provide feedback, of a positive or constructive nature. Although this group is not a decision making Committee, where possible, advice from the Committee members does influence site matters. Meeting minutes are uploaded to MACH's Mount Pleasant website.

11.3 Complaints data

MACH publishes its complaints data on its website, with data starting in 2017. Complaints data is important because it represents a tangible expression of community concern about mining activity and because it is routinely and continuously recorded (Moran and Brereton 2013). The number of complaints does not reflect the number of complainants.

Figure 8 shows the number of complaints from April 2017 through to September 2020. There was a general increase in complaints in 2019 and a decrease in 2020. The decrease in 2020, in particular complaints about dust was attributed to a period of rainfall over late 2019 and early 2020.

Figure 8: Mount Pleasant Operation complaints over time



Source: MACH (<https://machenergyaustralia.com.au/mount-pleasant/documentation/>)



MACH Energy



Mount Pleasant Optimisation Project

Community Survey Report

December 2020



Prepared by

Just Add Lime Ltd

Review History

	Revision	Date	Prepared by	Reviewed
1	Draft for client review	28 August 2020	Aaron Hutching	Julie Boucher
2	Final for release	6 December November 2020	Aaron Hutching	Julie Boucher



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Appendices

Attachment A - SIA Community Survey

Attachment B - Advertisement of SIA Community Survey



Executive Summary

The purpose of the Community Survey was to create an opportunity for those people who are currently impacted by the Mount Pleasant Operation or likely to be impacted by the Mount Pleasant Optimisation Project in a positive, negative and cumulative way to participate in the SIA.

The community survey was undertaken to engage with a broad range of stakeholders outside of the immediate Project area. The survey methodology was also developed in light of restrictions on engagement due to COVID-19.

In addition, the survey purpose was to establish and report on a social baseline and better understand the social impacts of the Mount Pleasant Optimisation Project proceeding or not proceeding.

The SIA Community Survey was open from Friday 19 June 2020 through to Friday 31 August 2020. This includes the survey being extended for one week based on community feedback.

As well as collecting demographic information, the survey asked respondents to consider impacts of the current Mount Pleasant Operation, the proposed Mount Pleasant Optimisation Project proceeding, and the proposed Mount Pleasant Optimisation Project not proceeding. The impacts considered are on water, quality of the living environment, visual amenity, access, housing, community services, culture, the local economy, employment and community cohesion. Respondents were asked to provide supporting comments to support their chosen Likert scale rating.

The survey results indicate survey participants are divided on the positive and negative impacts of both the current Mount Pleasant Operation and the proposed Mount Pleasant Optimisation Project proceeding or not proceeding. Impacts of noise and dust and changes to the landscape are a key concern, while jobs and economic growth and their potential loss are also strongly represented in the survey responses.

The survey results, findings and conclusions from this report will be used in the Social Impact Assessment to provide understanding and a baseline for social impacts on the community for Mount Pleasant Optimisation Project. This report will be included as an appendix to the SIA report.



1 Introduction

1.1 Context

The main aim of the Community Survey was to create the opportunity for those people who are currently impacted by the Mount Pleasant Operation or likely to be impacted by the Mount Pleasant Optimisation Project in a positive, negative and cumulative way to participate in the Social Impact Assessment (SIA).

One of the findings of the Scoping SIA was that the SIA component of the EIS needed to engage with people broader than those stakeholders who participated in the Scoping SIA. Given the restrictions on face to face engagement due to COVID-19, an online survey was selected as the preferred method of engagement.

Just Add Lime undertook a Community Survey as one of the data collections for the Mount Pleasant Optimisation Project SIA.

1.2 Purpose of this report

The purpose of this report is to provide the background, data and findings of the MACH Mount Pleasant SIA Community Survey.

This Report will become an appendix and document this engagement for the SIA Report for the Mount Pleasant Optimisation Project.

1.3 Structure of the Report

The structure of this report reflects the Community Survey structure. The survey background describes the context and purpose of the survey, explaining how the survey was implemented and the limitations and assumptions that apply to survey results.

The survey results section provides the survey responses. Questions are presented in this report in the order they appeared in the survey. Respondents assess the current and future Mount Pleasant Operation across a range of factors, such as water and access. Responses are compared across demographic groupings, such as gender and age.

Finally, conclusions are presented.

2 Background

2.1 Purpose of the survey

The Community Survey was undertaken as part of the SIA for the Mount Pleasant Optimisation Project.

The purpose of undertaking the community survey was to:

- further understand and report on the social baseline/existing social environment
- clarify the potential positive and negative social impacts of the Mount Pleasant Optimisation Project if it proceeds or not, and
- provide the opportunity for more people from the Muswellbrook, Upper Hunter and Singleton Shire Council Local Government Areas to participate in the SIA.

2.2 Survey audience

The general audience of the community survey are the people who live in the Muswellbrook, Upper Hunter and Singleton Council Local Government Areas.

2.3 Survey design

The main aim of the Community Survey was to create the opportunity for those people who are currently impacted by the Mount Pleasant Operation or likely to be impacted by the Mount Pleasant Optimisation Project in a positive, negative and cumulative way, to participate in the SIA.

Based on this we used a volunteer sampling (a non-probability sampling method). This creates restrictions on how the data is interpreted and utilised (see section 2.6 on limitations). However, providing the opportunity for those people who would like to participate to do so, was considered more important.

Another finding of the Scoping SIA was the level of community division on coal mining. Because of this existing division, respondents completed the survey anonymously. By participating anonymously, we were also able to respect individual respondent's privacy.

After an introduction with a link to the MACH Mount Pleasant Optimisation Project website, the survey was split into a number of sections:

- Consent – to ensure people understand what they are completing and what the information will be used for.
- Demographic questions - identify differential impacts, positive and negative across different geographical locations, gender, age, ethnicity, if working at or supplying goods and services to the Mount Pleasant Operation.
- Impacts of the current Mount Pleasant Operation and impacts on water, quality of the living environment, visual amenity, access, housing, community services, culture, the local economy, employment and community cohesion. These topics were selected based on the findings of the Scoping SIA and New South Wales SIA Guideline (2017).

- If the Mount Pleasant Optimisation Project proceeds, impacts on water, quality of the living environment, visual amenity, access, housing, community services, culture, the local economy, employment and community cohesion. These topics were selected based on the findings of the Scoping SIA and New South Wales SIA Guideline (2017).
- If the Mount Pleasant Optimisation Project does not proceed, impacts on water, quality of the living environment, visual amenity, access, housing, community services, culture, the local economy, employment and community cohesion. These topics were selected based on the findings of the Scoping SIA and New South Wales SIA Guideline (2017).
- Identification of cumulative social impacts.
- Any else that should be taken into account in the SIA.

2.4 Dates

The SIA Community Survey was open from Friday 19 June 2020 through to Friday 31 August 2020. This includes the survey being extended for one week based on community feedback.

2.5 Advertising

SIA Community Survey was advertised on the MACH home page (see Attachment B) from Friday 19 June 2020 with a link on the MACH Project webpage. The SIA Community Survey was also advertised through the following:

- Advertisement in Hunter River Times on Friday 19 June 2020 (see Attachment B).
- Advertisement in Muswellbrook Chronicle, which appeared online from 22 June 2020 to 24 July 2020 (see Attachment B).
- Letterbox drop of DL flyer to Muswellbrook Shire Council Local Government Area (including Denman) and Aberdeen on Monday 6 July 2020 (see Attachment B).
- SMS and emails sent to people on the MACH consultation database on 30 June 2020 (see Attachment B).

An email with a to the survey and the invitation to share with people who may be interested was sent to:

- Muswellbrook Chamber of Commerce and Industry
- Scone Chamber of Commerce and Industry
- Wanaruah Local Aboriginal Land Council
- Denman Aberdeen Muswellbrook Scone Healthy Environment Group
- Friends of the Upper Hunter and
- Individual SIA stakeholders.

2.6 Limitations

This survey acknowledges voluntary response bias. It only includes responses from people who voluntarily choose to participate as opposed to targeting specific target audiences and taking a random survey of those people. Given the different perspectives on the mining industry in the area, this was expected. To counter voluntary response bias, we avoided using leading questions, broke down the different concepts (baseline, current operation, if the Project proceeded and did not proceed), and offered a range of responses using Likert scales, to capture both positive and negative responses.

Because we used volunteer sampling, the results can only be interpreted for those people who participated and not generalised to the broader community. We cannot say based on the results of people from Muswellbrook, that the results represent everyone in Muswellbrook.

Limitations of not having a statistically representative survey (i.e. voluntary responses) include the inability to undertake detailed statistical analysis of the data.

We also need to acknowledge digital inequity, and that not everyone who wanted to participate, was able too because they did not have access to a computer or tablet connected to the internet, or a smart phone.

By allowing the survey to be completed anonymously, respondents may not feel encouraged to provide accurate, honest answers.

Because the survey was relatively long, some responses may be affected by lack of memory on the subject, or even boredom.

Using the Likert scale could lead to unclear data because certain answer options may be interpreted differently by respondents. For example, the answer option “significant and slightly significant” may represent different things to different subjects and have its own meaning to each individual respondent.

We need to include a note that based on community feedback to them, on the last day of the survey (31 August 2020), Upper Hunter Shire Council asked if the survey could be open for longer so they could advertise it on their Facebook page. As the survey had already been extended by approximately four weeks, and had been open for 72 days, MACH concluded that the survey would not be extended further.

2.7 Assumptions

We have assumed that everyone who participated in the survey has done so honestly.

3 Survey results - demographics

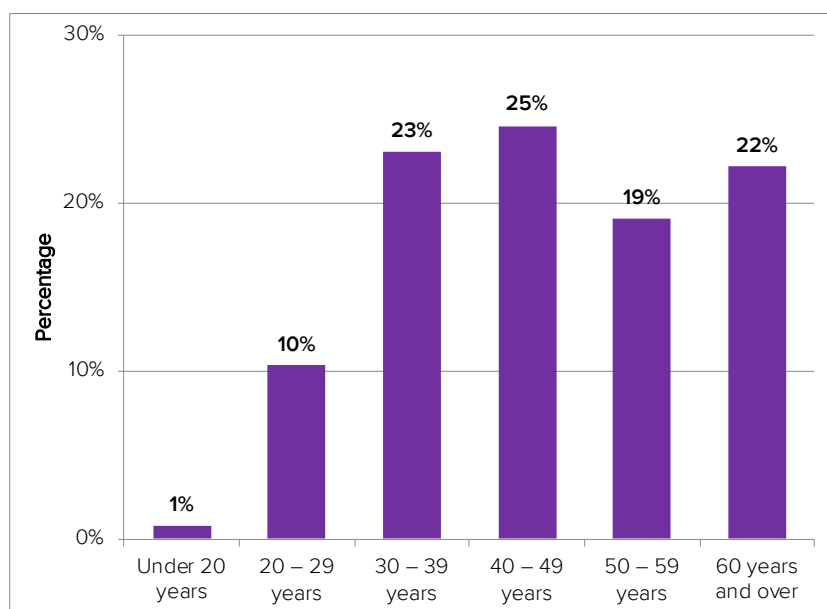
3.1 Age groups

Respondents were asked to indicate their age range with the results shown in Table 1. The highest number, 31 respondents, within the 40-49 years age range. A significantly lower number, 13 respondents, were in the 20-29 years age range, and only one under 20 years. The results for the question by percentage are shown in Figure 1.

Table 1: Respondent age ranges

Age range	Count of respondents
Under 20 years	1
20 – 29 years	13
30 – 39 years	29
40 – 49 years	31
50 – 59 years	24
60 years and over	28
Total	126

Figure 1: Respondent age range as a percentage



n=126

3.2 Gender

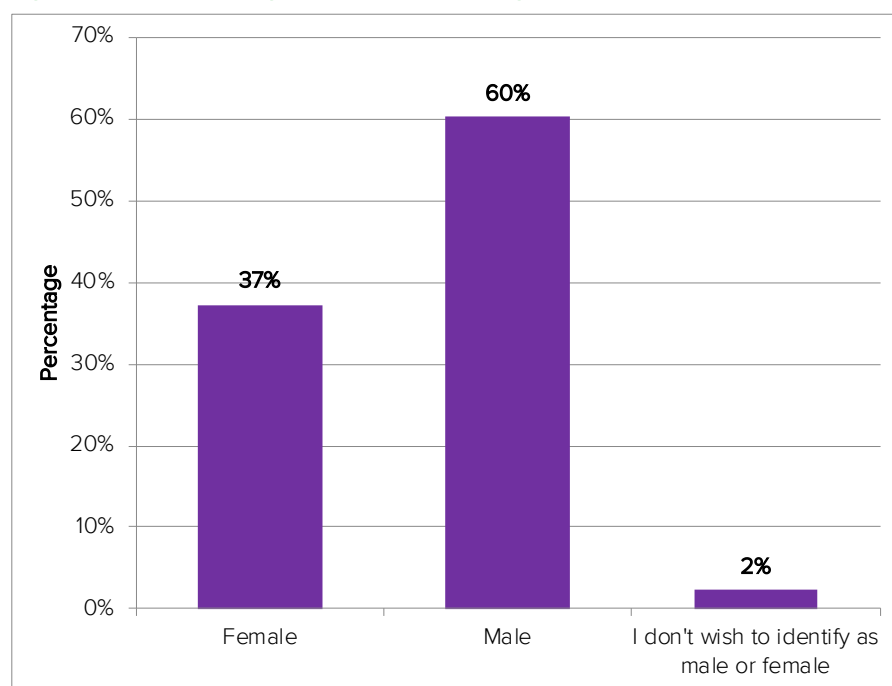
Respondents were asked to indicate their gender with the results shown in Table 2.

Table 2: Respondent gender

Gender	Count of respondents
Female	47
Male	76
I don't wish to identify as male or female	3
Total	126

As shown in Figure 2, significantly more men than women completed the survey, 60% to 37%, with 2% indicating they did not wish to identify as either male or female.

Figure 2: Respondent gender as a percentage



n=126

3.3 Aboriginal and Torres Strait Islander participation

Respondents were asked to indicate whether they identified as Aboriginal or Torres Strait Islander. Of 126 responses, 10 (8%) indicated they identify as Aboriginal or Torres Strait Islander.

3.4 Where respondents live

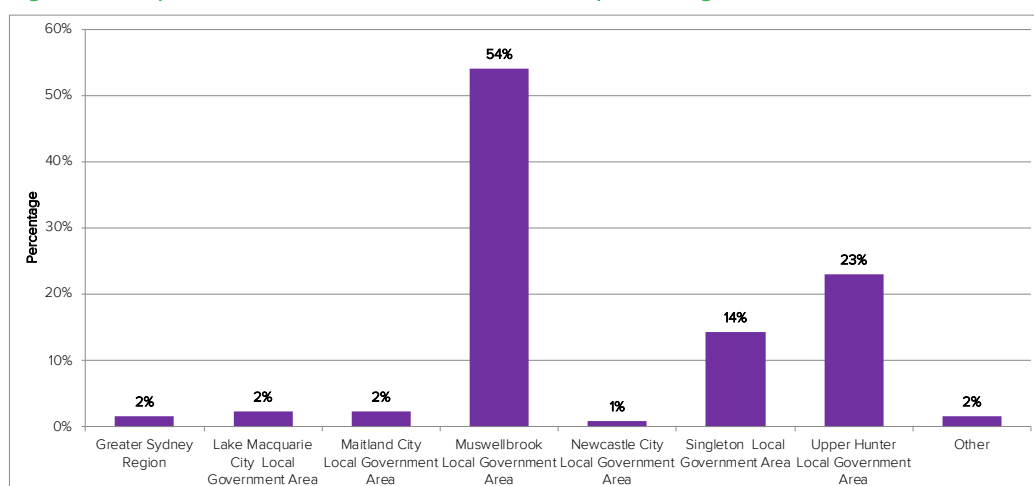
Respondents were asked to indicate which local government area they lived in, responses are shown in Table 3.

Table 3: Respondent Local Government Area

Local Government Area	Count of respondents
Greater Sydney Region	2
Lake Macquarie City Council Local Government Area	3
Maitland City Council Local Government Area	3
Muswellbrook Shire Council Local Government Area	68
Newcastle City Council Local Government Area	1
Singleton Council Local Government Area	18
Upper Hunter Shire Council Local Government Area	29
Other	2
Total	126

Significantly more people from the Muswellbrook Shire Council Local Government Area responded to the survey, followed by the Upper Hunter Shire Council Local Government Area and Singleton Shire Council Local Government Area Figure 3).

Figure 3: Respondent Local Government Area as a percentage



$n=126$

3.4.1 Within Muswellbrook Shire Council Local Government Area

If respondents indicated they lived in the Muswellbrook Shire Council Local Government Area, they were asked to indicate which town, village or community they lived in. Results are shown in Table 4.

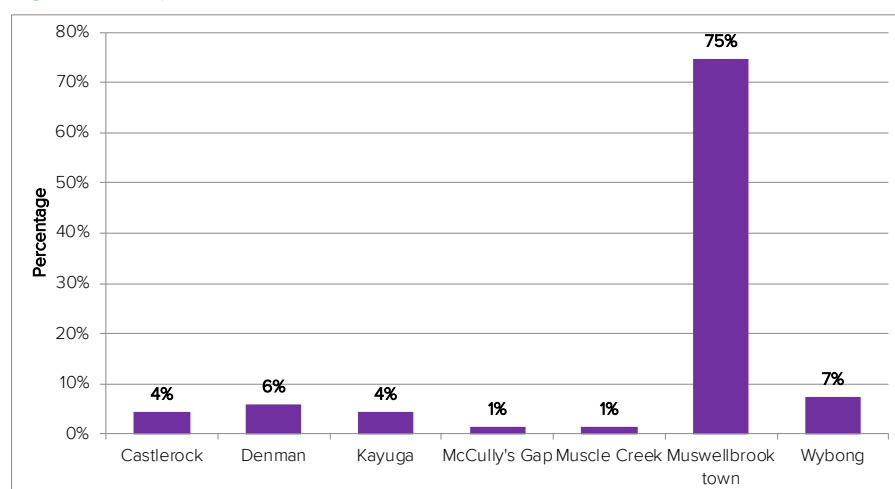
Table 4: Respondents from within Muswellbrook Shire Council Local Government Area

Area within Muswellbrook Shire Council Local Government Area	Count of respondents
Castlerock	3

Area within Muswellbrook Shire Council Local Government Area	Count of respondents
Denman	4
Kayuga	3
McCully's Gap	1
Muscle Creek	1
Muswellbrook town	50
Wybong	5
Total	67

The highest percentage of people who completed the survey who lived in the Muswellbrook Shire Council Local Government Area were from the town of Muswellbrook (Figure 4).

Figure 4: Respondents from within Muswellbrook Shire Council Local Government Area as a percentage



n=67

3.4.2 Within Upper Hunter Shire Council Local Government Area

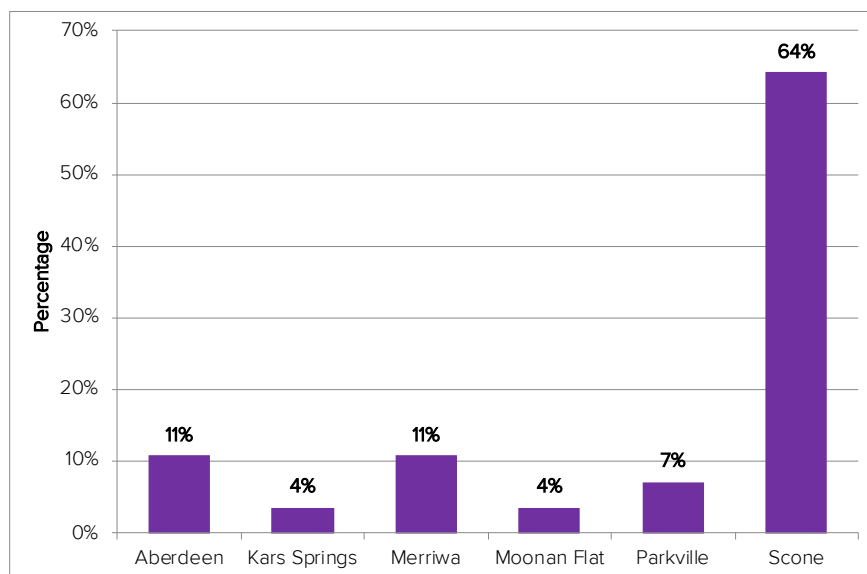
If respondents indicated they lived in the Upper Hunter Shire Council Local Government Area, they were asked to indicate which town, village or community they lived in. Results are shown in Table 5.

Table 5: Respondents from within Upper Hunter Shire Council Local Government Area

Area within Upper Hunter Shire Council Local Government Area	Count of respondents
Aberdeen	3
Kars Springs	1
Merriwa	3
Moonan Flat	1
Parkville	2
Scone	18
Total	28

The highest percentage of people who completed the survey who lived in the Upper Hunter Shire Council Local Government Area were from the town of Scone (Figure 5).

Figure 5: Respondents from within Upper Hunter Shire Council Local Government Area as a percentage



n=28

3.5 Description of where respondents live

Survey respondents were asked to briefly describe the area in which they live, responses are presented for the Muswellbrook Shire Council and Upper Hunter Shire Council Local Government Areas and outside these areas.

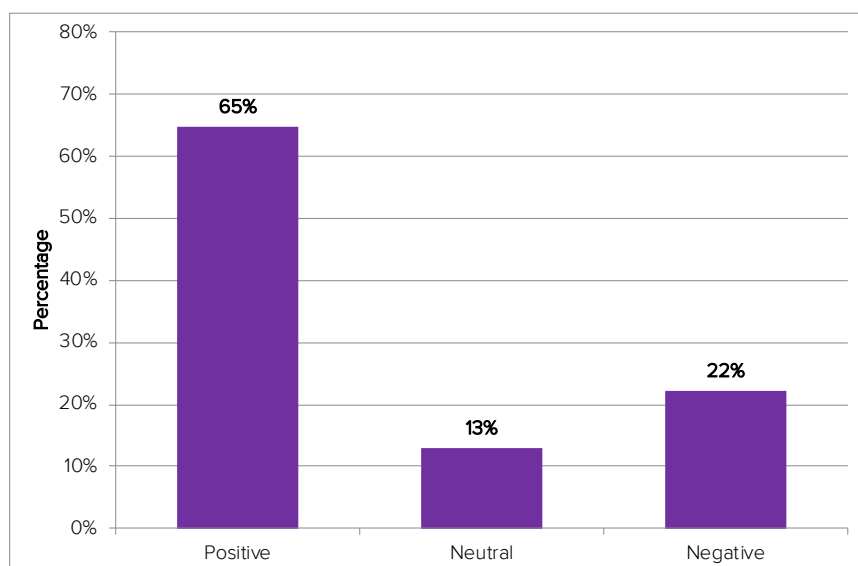
3.5.1 Muswellbrook Shire Council Local Government Area

The responses from within the Muswellbrook Shire Council Local Government Area were categorised as positive, neutral and negative. The general sentiment of responses from respondents within the Muswellbrook Shire Council is shown in Table 6 and Figure 6.

Table 6: Respondent sentiment describing where they live, within the Muswellbrook Shire Council Local Government Area

Description of area sentiment	Count of respondents
Positive	35
Neutral	7
Negative	12
Total	54

Figure 6: Respondent sentiment describing where they live as a percentage from the Muswellbrook Shire Council Local Government Area



n=54

Positive sentiment

Of 35 positive sentiments expressed by survey respondents about Muswellbrook Shire Council Local Government Area, most centred around references to its community and rural context. Four people mentioned mining as a positive aspect.

"Muswellbrook is a lovely town, with a strong community spirit."

Neutral sentiment

Of seven neutral sentiments expressed by survey respondents about Muswellbrook Shire Council Local Government Area, five mentioned mines or dust as a negative feature, along with other positive sentiments.

"A beautiful area. The community has been dislocated by mines."

Negative sentiment

Of 12 negative sentiments expressed by survey respondents about Muswellbrook Shire Council Local Government Area, seven mentioned mines or dust as a negative feature and three mentioned the transient nature of the workforce.

"The area has changed greatly. It used to be rural but is now increasingly a mining town. The community spirit and cohesiveness is gone."

3.5.2 Within Upper Hunter Local Government Area

A survey error meant only one respondent from Upper Hunter Shire Council Local Government Area was asked to describe the area in which they live. Their response was categorised as positive.

"Great place to live. Friendly people."

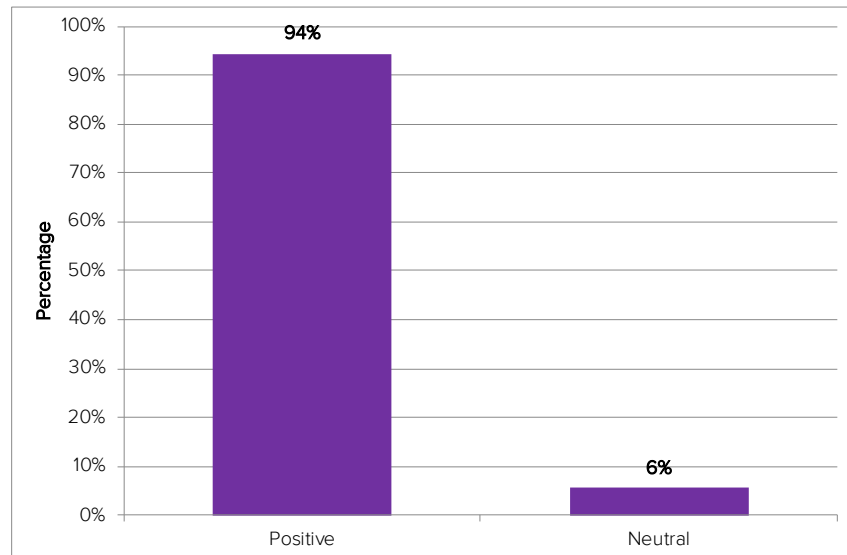
3.5.3 Outside of Muswellbrook and Upper Hunter Shire Council Local Government Areas

The responses from outside of the Muswellbrook and Upper Hunter Shire Council Local Government Areas were categorised as positive, neutral and negative. The general sentiment of responses from respondents within the Muswellbrook Shire Council is shown in Table 7 and Figure 7.

Table 7: Respondent sentiment describing where they live outside the Muswellbrook and Upper Hunter Shire Council Local Government Areas.

Description of area sentiment	Count of respondents
Positive	17
Neutral	1
Negative	0
Total	18

Figure 7: Respondent sentiment describing where they live outside the Muswellbrook and Upper Hunter Shire Council Local Government Areas.



n=18

Positive sentiment

Of 17 positive sentiments expressed by survey respondents about Local Government Areas outside of the Muswellbrook and Upper Hunter Shire Council Local Government Areas, seven referenced community, people, or family.

"I have recently moved and I like the family feel of my area and the friendly community."

Neutral sentiment

The one neutral sentiment expressed by a survey respondent about a Local Government Areas outside of the Muswellbrook and Upper Hunter Shire Council Local Government Areas focussed on the need for economic stability.

"The area has huge potential but needs strong economic stability to enable it."

Negative sentiment

There were no negative sentiments expressed by survey respondents about Local Government Areas outside of the Muswellbrook and Upper Hunter Shire Council Local Government Areas.

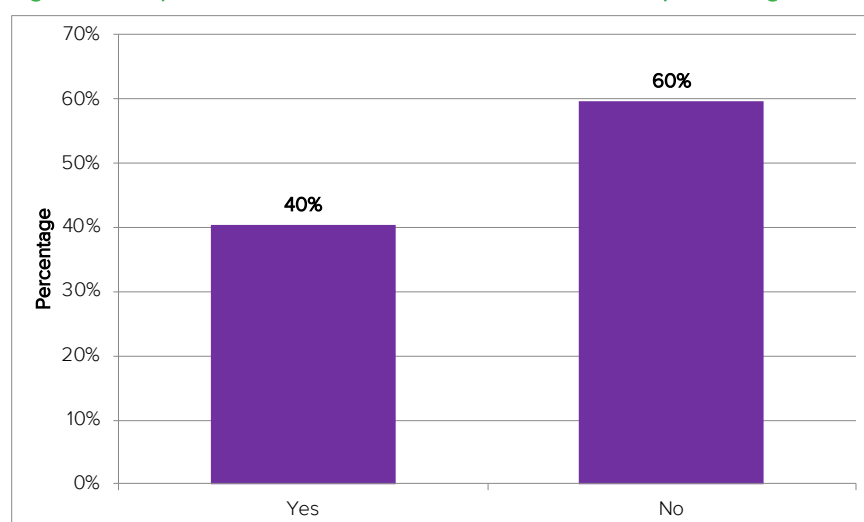
3.6 Number of respondents who work at the Mount Pleasant Operation

The number of people who completed the community survey and who work at the Mount Pleasant Operation are shown in Table 8 and Figure 8.

Table 8: Respondents who work at Mount Pleasant

Yes/No	Count of respondents
Yes	38
No	56
Total	94

Figure 8: Respondents who work at Mount Pleasant as a percentage



n=94

A survey error meant only one respondent from Upper Hunter Shire Council Local Government Area was asked whether they worked at Mount Pleasant. Their absence is accounted for in the analysis below.

Across all Local Government Areas, 40% of survey respondents question indicated they work at Mount Pleasant, versus 60% who indicated they do not. If excluding responses from the Muswellbrook Shire Council Local Government Area survey, the proportions change to 59% of survey respondents working at Mount Pleasant, versus 41% who do not. This reflects the survey's wider community distribution within Muswellbrook Shire Council Local Government Area.

3.7 Number of respondents who supply goods and services to Mount Pleasant

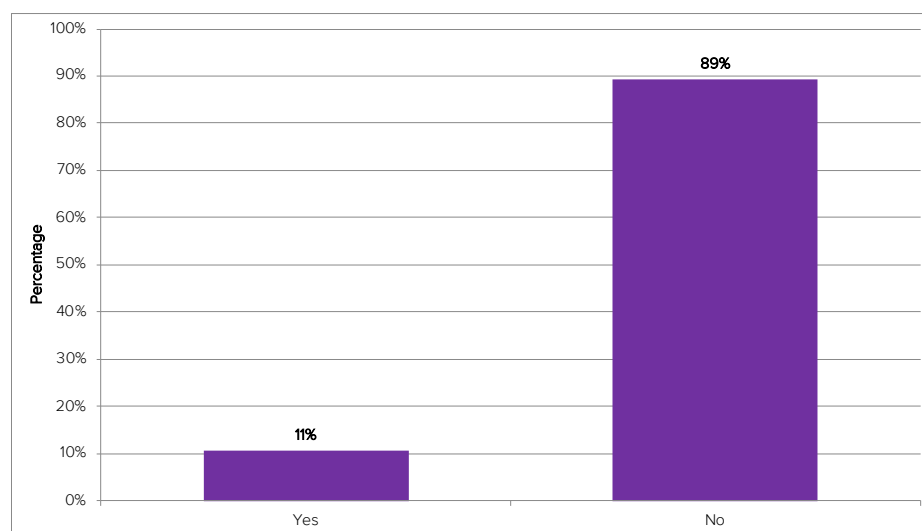
A survey error meant no respondents from the Upper Hunter Shire Council Local Government Area were asked whether they supply goods and services to Mount Pleasant.

Survey respondents who indicated they worked at Mount Pleasant were not asked this question but are accounted for in the analysis below. Across all Local Government Areas, 10 or 11% of survey respondents indicated they supply goods and services to Mount Pleasant (Table 9 and Figure 9) and 80% of survey respondents who indicated they supply goods and services to Mount Pleasant, live within Muswellbrook Shire Council Local Government Area.

Table 9: Respondents who supply goods and services to Mount Pleasant

Yes/No	Count of respondents
Yes	10
No	84
Total	94

Figure 9: Respondents who supply goods and services to Mount Pleasant as a percentage



$N = 94$

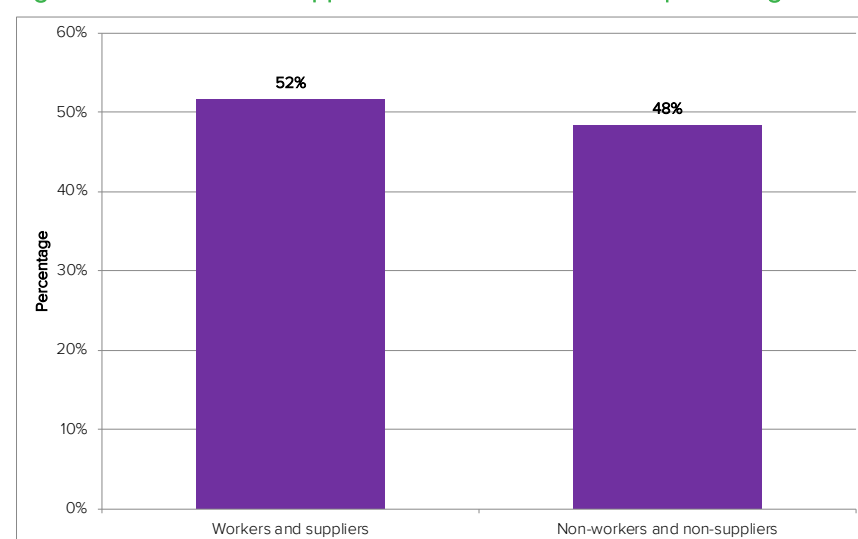
3.8 Number of respondents who work at or supply goods and services to the Mount Pleasant Operation

Combined, 48 or 52% of survey respondents who answered these questions either work at, or supply goods and services to Mount Pleasant (Table 10 and Figure 10). The high number of survey respondents having an employment or commercial relationship with Mount Pleasant reflects the distribution of the survey and the interest for this group in participating.

Table 10: Workers and suppliers to Mount Pleasant

Workers and suppliers	Count of respondents
Workers and suppliers	48
Other Respondents	45
Total	93

Figure 10: Workers and suppliers to Mount Pleasant as a percentage



n=93

3.9 Industry of employment

Respondents were asked to nominate their industry of employment, results are shown in Table 11.

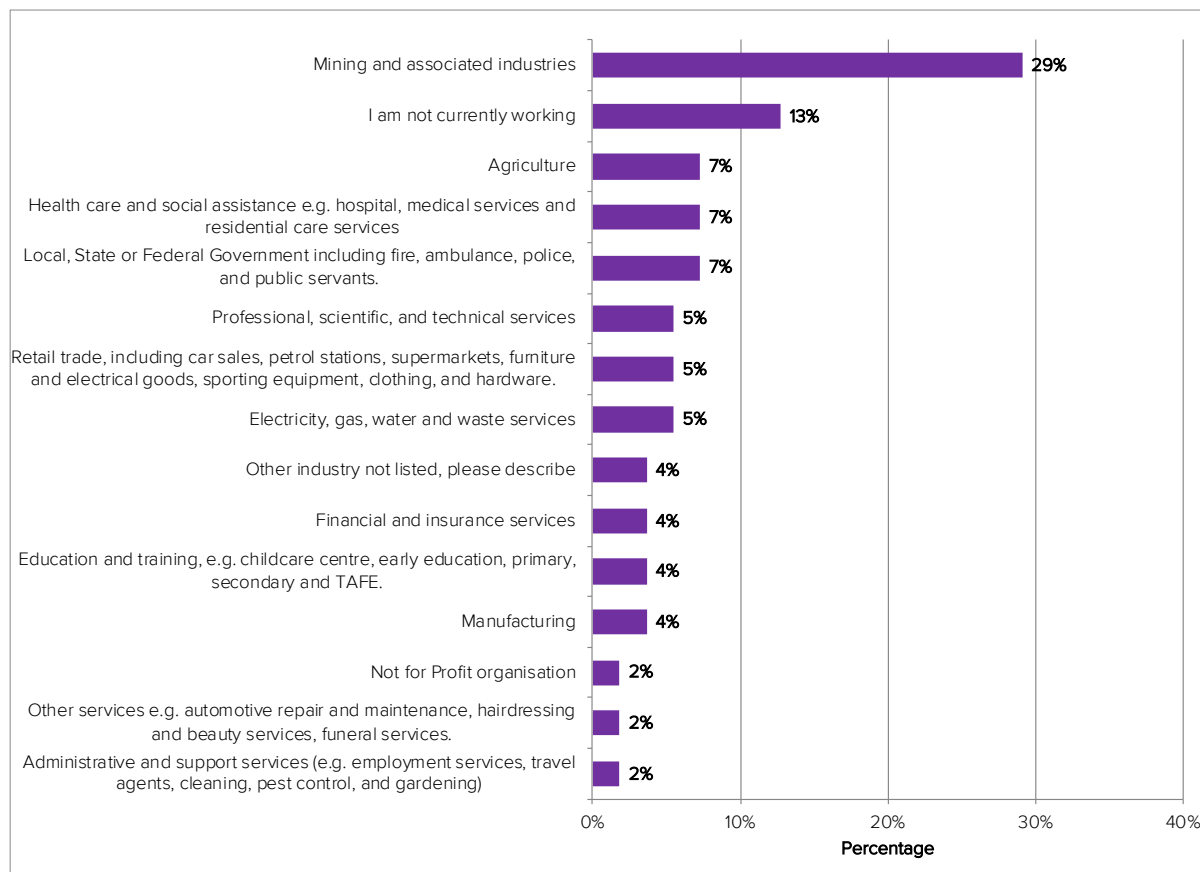
Table 11: Respondent industry of employment

Industry	Count of respondents
Mining and associated industries	16
Not currently working	7
Health care and social assistance e.g. hospital, medical services and residential care services	4
Agriculture	4
Local, State or Federal Government including fire, ambulance, police, and public servants.	4
Electricity, gas, water and waste services	3
Professional, scientific, and technical services	3
Retail trade, including car sales, petrol stations, supermarkets, furniture and electrical goods, sporting equipment, clothing, and hardware.	3
Other industry not listed, please describe	2
Education and training, e.g. childcare centre, early education, primary, secondary and TAFE.	2
Manufacturing	2
Financial and insurance services	2
Other services e.g. automotive repair and maintenance, hairdressing and beauty services, funeral services.	1
Administrative and support services (e.g. employment services, travel agents, cleaning, pest control, and gardening)	1
Not for Profit organisation	1
Grand Total	55

A survey error meant no respondents from the Upper Hunter Shire Council Local Government Area were asked in what industry they work.

Survey respondents who indicated they do not work at Mount Pleasant and do not supply goods and services to Mount Pleasant were asked in what industry they work. Of these, 29% indicated they work within mining and associated industries (Figure 11). The next highest percentage was of those not currently working at 13%, with the remainder split between a variety of industries.

Figure 11: Respondent industry of employment as a percentage



n=55

4 Survey Results - impacts of the current Mount Pleasant operation

Using a Likert scale, survey respondents were asked to indicate, within the area in which they currently live, the degree of overall positive, neutral, or negative impact from the current Mount Pleasant Operation on a variety of social, economic, and environmental outcomes.

For the purposes of analysis, 'slight' and 'significant' Likert scale responses have been placed together in positive and negative groupings. Throughout the analysis 'Neutral or no impact' has been treated as a separate grouping, noting that in some contexts, 'neutral or no impact' could be considered as a positive.

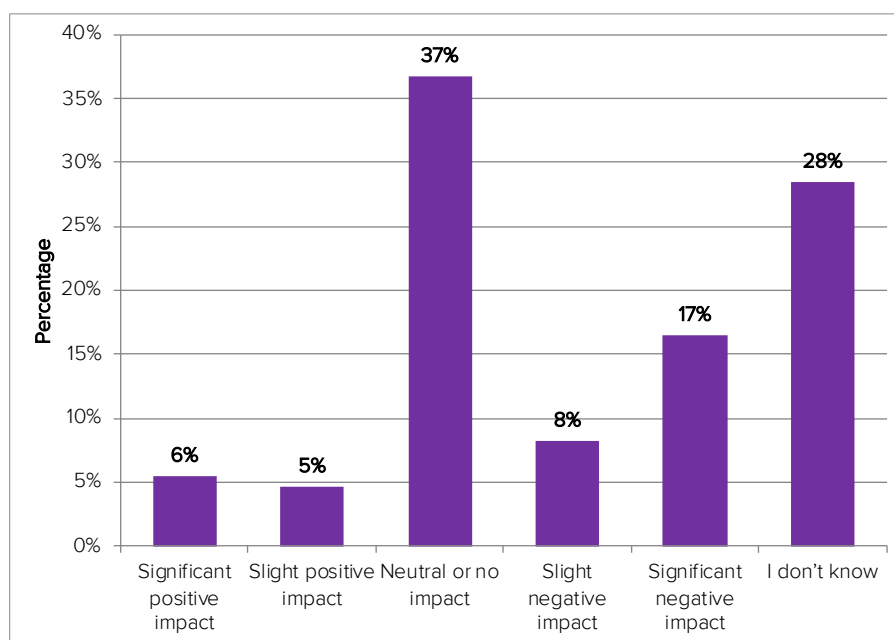
4.1 Water

Survey question: What overall impact has the current Mount Pleasant Operation had on water resources within the area in which you live?

4.1.1 All responses

Figure 12 shows the percentages of responses to the question on the overall impact the current Mount Pleasant Operation has had on water resources within the area in which they live.

Figure 12: Impact on water – all responses



n=109

28% of survey respondents indicated 'I don't know' in response to the question. This figure is relatively high compared to the 'I don't know' response for other questions.

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 41% of negative ratings, compared with 18% of positive ratings and 5% of neutral ratings.

Two comments were provided in support of positive Likert scale ratings. One comment states that people close to the mine are aware of a reduced water table. Considering the mismatch between this comment and the positive Likert scale rating, and on review of the respondent's answers to other survey questions, it is likely the positive rating was given in error.

Comments supporting negative Likert scale ratings focussed on Mount Pleasant taking water at the expense of agriculture. There was also concern on the effect of the mine on water in general, e.g. through dust.

Positive comment

"They dam their own water which reduces the usage from the town"

Negative comment

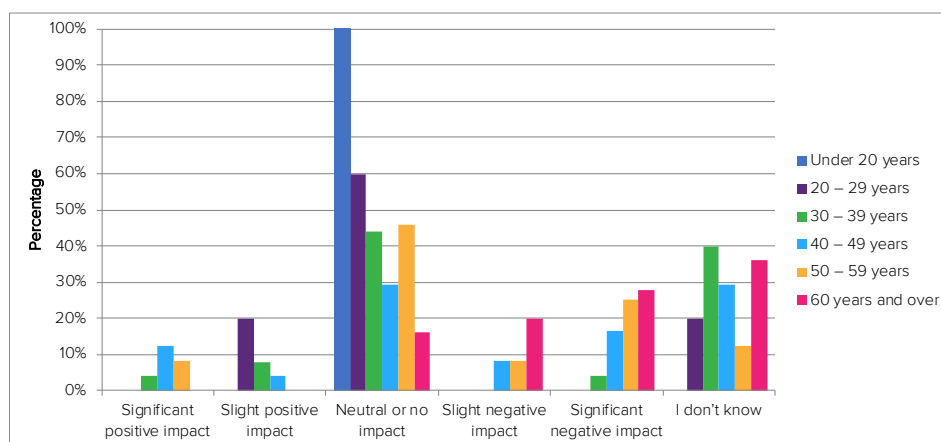
"Buying all available water allocations - leaving nothing available for farmers who have been farming for years."

4.1.2 Key differences across demographics

Age

Figure 13 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 13: Impact on water – comparison by age

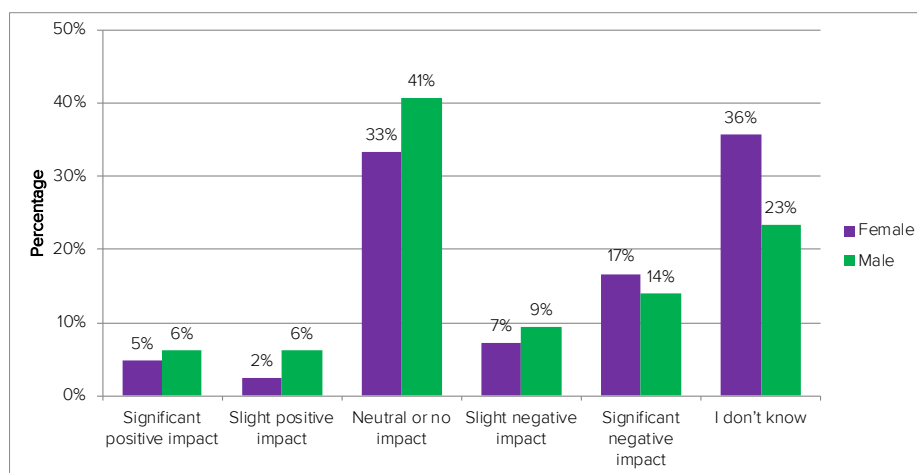


n=109

Gender

12% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 7% of female survey respondents (Figure 14).

Figure 14: Impact on water – comparison by gender

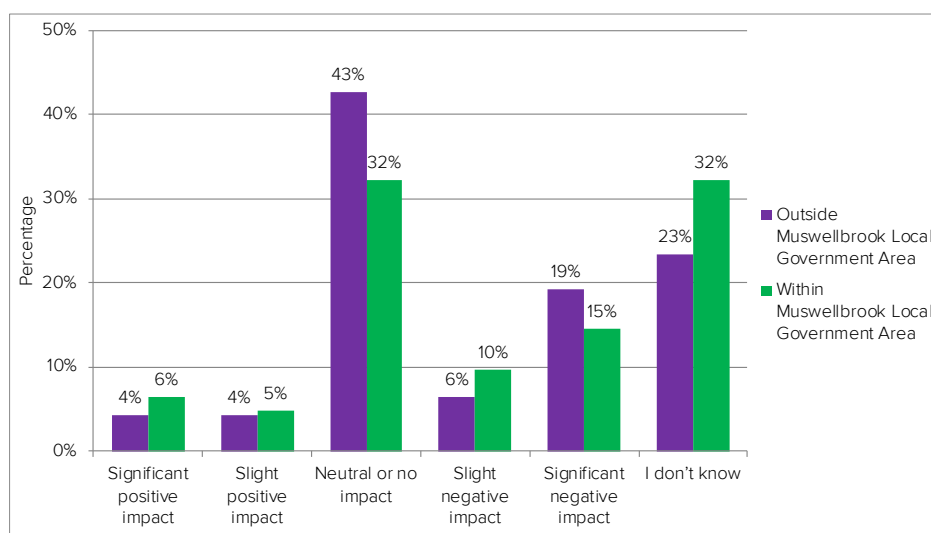


n=106

Geography

Responses to the question across those within and out of the Muswellbrook Shire Council Local Government Area show a similar trend (Figure 15).

Figure 15: Impact on water – comparison by Local Government Area

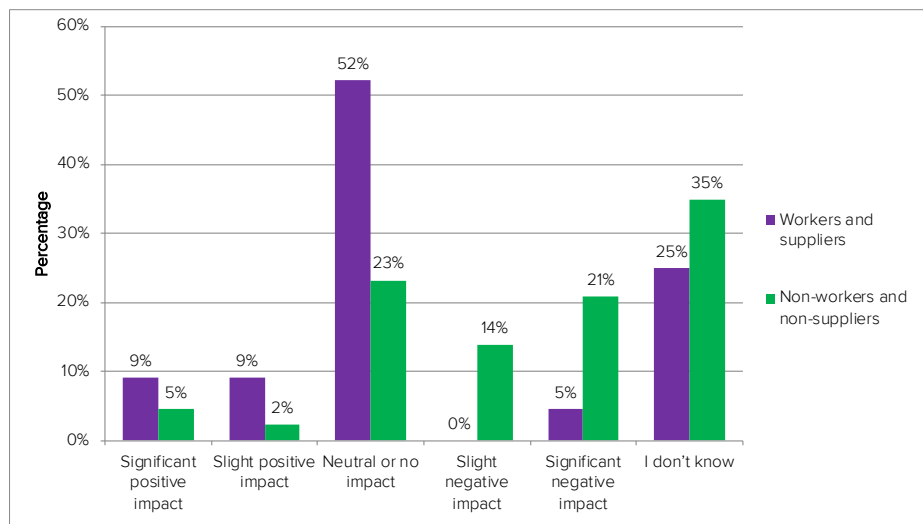


n=109

Workers and suppliers

35% of non-workers and non-suppliers responded to this question with negative Likert scale ratings, compared with 5% of workers and suppliers (Figure 16).

Figure 16: Impact on water by – comparison by employment and suppliers



n=87

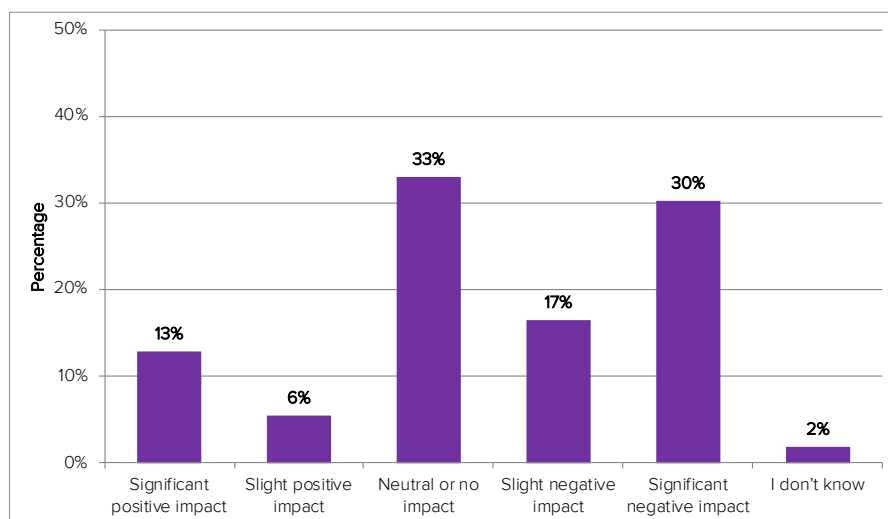
4.2 Quality of the living environment

Survey question: What overall impact has the current Mount Pleasant Operation had on the quality of the living environment of the area in which you live?

4.2.1 All responses

Figure 17 shows the percentages of responses to the question on the overall impact the current Mount Pleasant Operation has had of the living environment of the area in which they live.

Figure 17: Impact on the living environment – all responses



n=109

47% of respondents provided a negative Likert scale rating in response to this question; relatively high when compared to negative Likert scale ratings for other questions.

44 supporting comments were provided in response to this question, the highest for any question. As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 71% of negative ratings, compared with 20% of positive ratings and 8% of neutral ratings. Three of four comments relating to positive Likert scale ratings focussed on job opportunities and community support, rather than comments about the living environment. The survey question supporting text indicated quality of the living environment to include impacts on the liveability of an area, such as noise, odour, vibration, artificial light, and air quality. 78% of comments supporting negative Likert scale ratings mentioned dust or air quality.

Positive comment

“Compared to Mount Arthur’s dust, and Bengallas dragline. Mount Pleasant is great!”

Negative comment

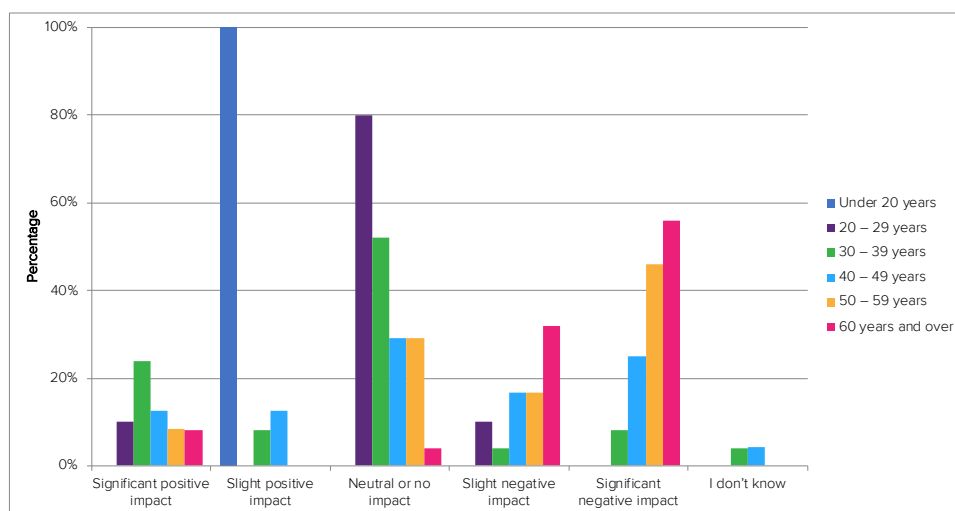
“The area of Muswellbrook is known for decreased liveability with reduced air quality, vibrations and noise.”

4.2.2 Key differences across demographics

Age

Figure 18 shows the survey respondents’ Likert scale ratings across the different age groups.

Figure 18: Impact on the living environment – comparison by age

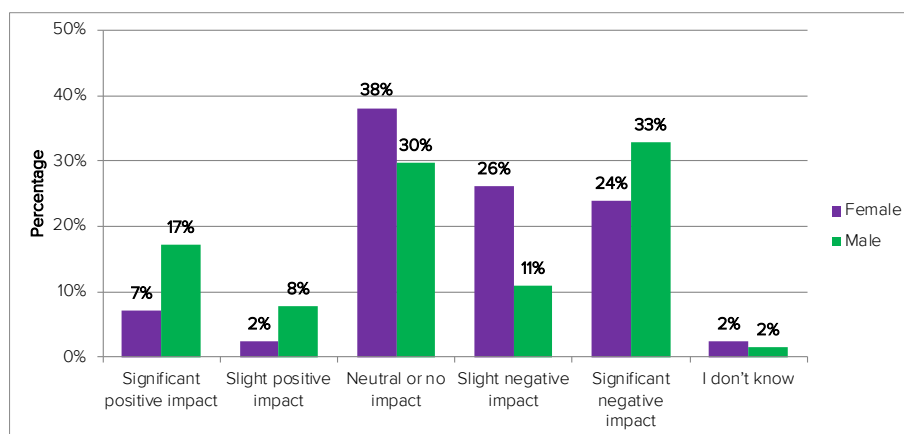


n=109

Gender

25% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 9% of female survey respondents (Figure 19).

Figure 19: Impact on the living environment – comparison by gender

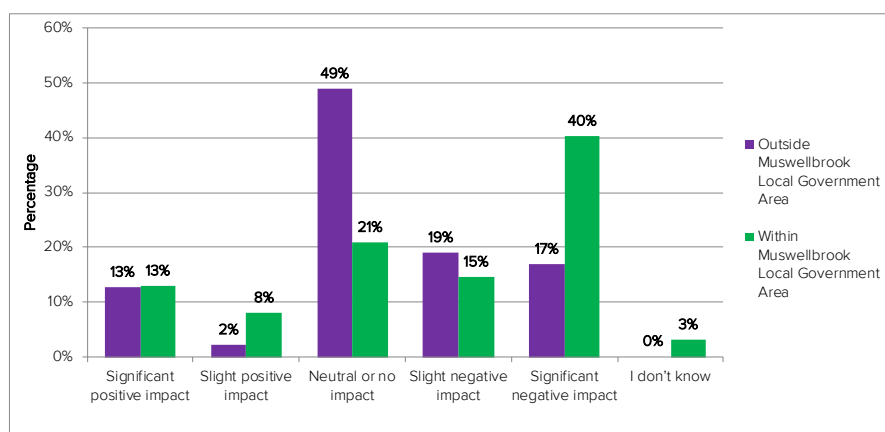


n=106

Geography

55% of survey respondents living within Muswellbrook Shire Council Local Government Area provided negative Likert scale ratings in response to this question, compared with 36% of respondents living outside Muswellbrook Shire Council Local Government Area (Figure 20).

Figure 20: Impact on the living environment – comparison by Local Government Area

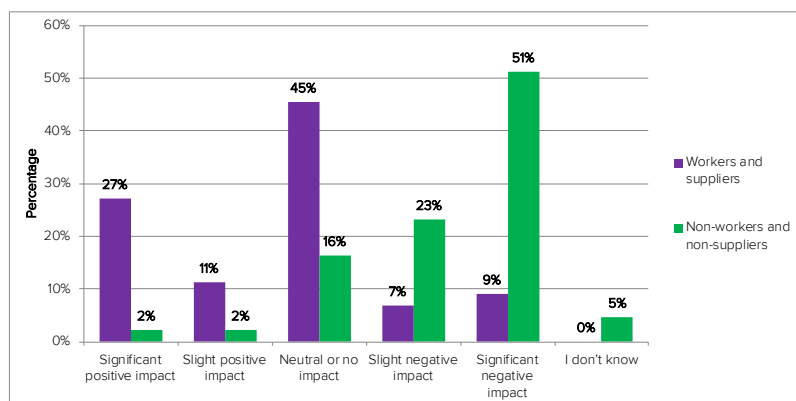


n=109

Workers and suppliers

74% of non-workers and non-suppliers responded to this question with negative Likert scale ratings, compared with 16% of workers and suppliers (Figure 21).

Figure 21: Impact on the living environment by – comparison by employment and suppliers



n=87

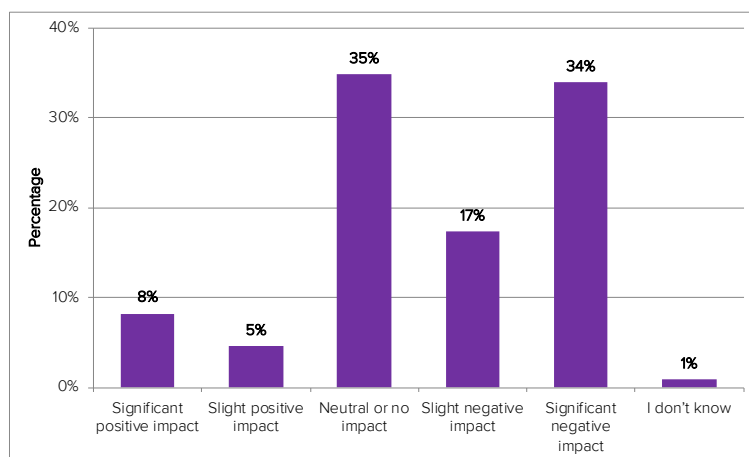
4.3 Visual amenity

Survey question: What overall impact has the current Mount Pleasant Operation had on the visual amenity of the area in which you live?

4.3.1 All responses

51% of respondents provided a negative Likert scale rating in response to this question (Figure 22). This is relatively high when compared to negative Likert scale ratings for other questions. As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 57% of negative ratings, compared with 36% of positive ratings and 8% of neutral ratings. All four comments relating to positive Likert scale ratings referred to rehabilitation of the landscape. Comments supporting negative Likert scale ratings focussed on the negative visual impact of the mines, with 22% of comments framed in terms of a negative change to the landscape over time. 9% of comments supporting negative Likert scale ratings mentioned light pollution. Three comments noted that visual impacts are expected to reduce as the mine develops.

Figure 22: Impact on visual amenity – all responses



n=109

Positive comment

"The Mount Pleasant Operation has demonstrated its commitment to progressive, innovative rehabilitation and the view from the center of town shows this. I look forward to see the continued progress. The natural landscape shape that Mount Pleasant has chosen looks great."

Negative comment

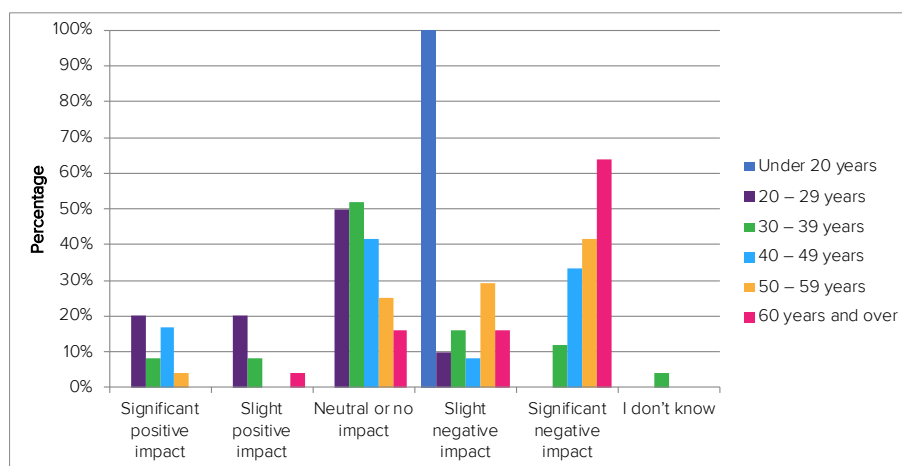
"I used to look out across sloping green hills and pasture, now it's a dirty brown and dusty landscape."

4.3.2 Key differences across demographics

Age

Figure 23 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 23: Impact on visual amenity – comparison by age

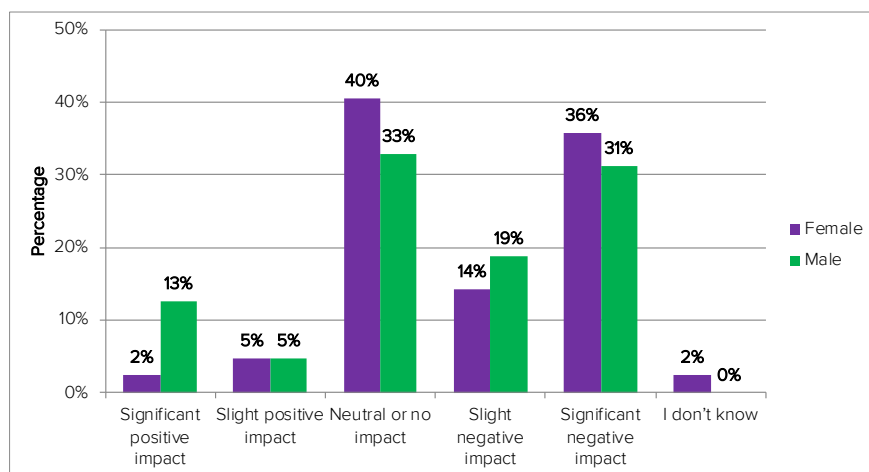


n=109

Gender

18% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 7% of female survey respondents, however 50% of both male and female survey respondents provided negative Likert scale ratings in response to this question (Figure 24). The difference is accounted for by an increased proportion of female survey respondents who indicated a neutral Likert scale rating – 40% compared with 33% for male respondents.

Figure 24: Impact on visual amenity – comparison by gender

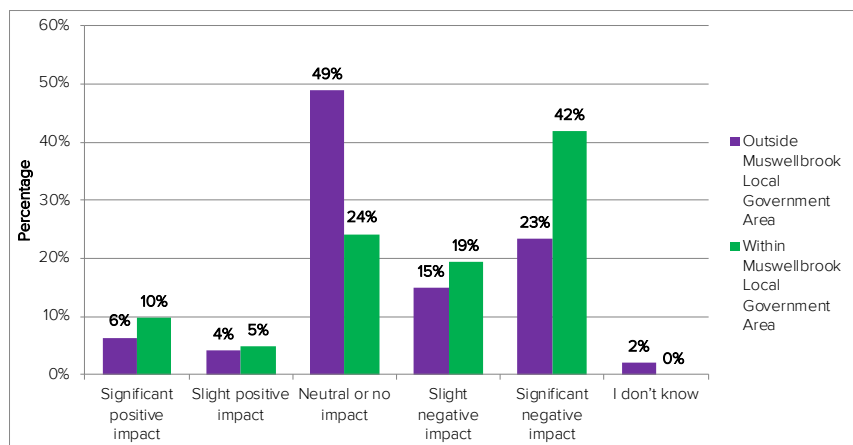


n=106

Geography

61% of survey respondents living within Muswellbrook Shire Council Local Government Area provided negative Likert scale ratings in response to this question, compared with 38% of respondents living outside Muswellbrook Shire Council Local Government Area (Figure 25).

Figure 25: Impact on visual amenity – comparison by Local Government Area

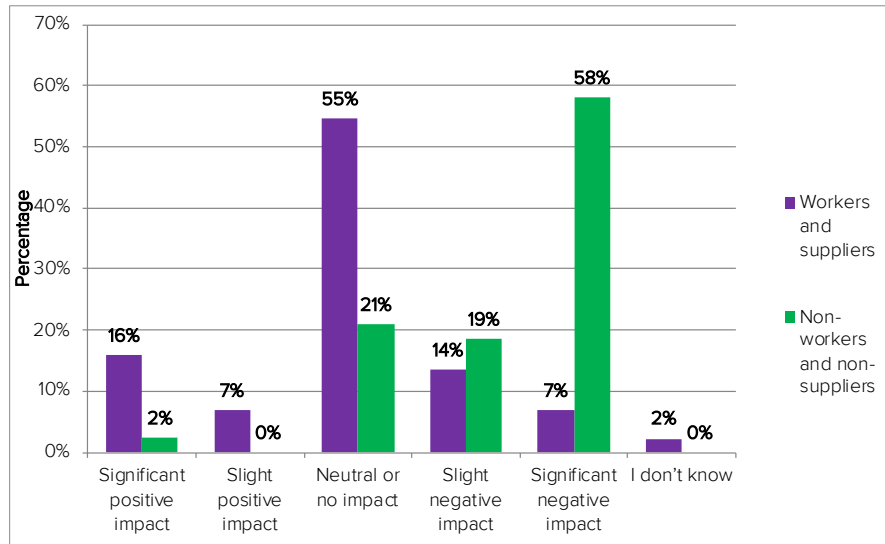


n=109

Workers and suppliers

77% of non-workers and non-suppliers responded to this question with negative Likert scale ratings, compared with 21% of workers and suppliers (Figure 26).

Figure 26: Impact on visual amenity by – comparison by employment and suppliers



n=87

4.4 Access

Survey question: What overall impact has the current Mount Pleasant Operation had on access within the area in which you currently live?

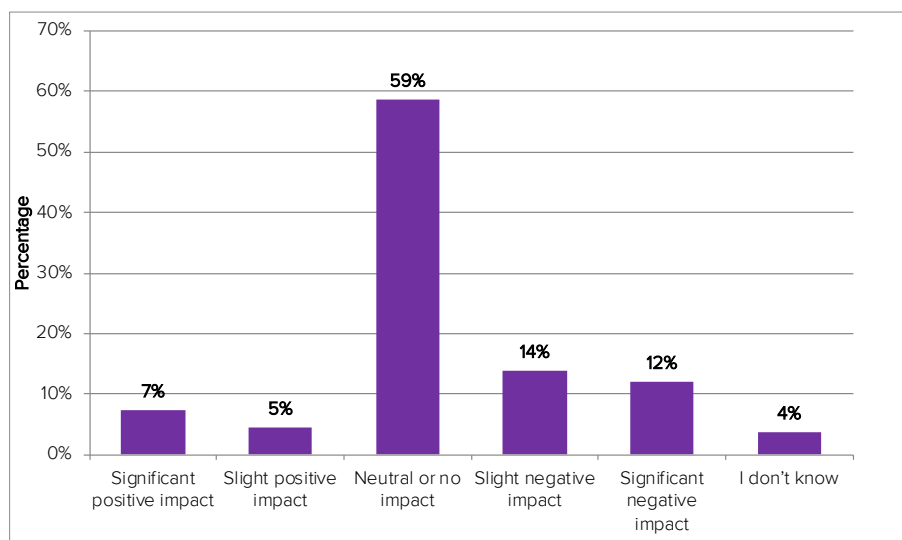
4.4.1 All responses

59% of respondents provided a neutral Likert scale rating in response to this question; relatively high when compared to neutral Likert scale ratings for other questions (Figure 27).

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 64% of negative ratings, compared with 31% of positive ratings and 9% of neutral ratings.

Four comments supported positive Likert scale ratings, of which three referred to the Mount Pleasant Operation having funded improvements to local roads. The fourth comment related to the local economy rather than access.

Figure 27: Impact on access – all responses



n=109

78% of comments supporting negative Likert scale ratings in response to this question, focussed on traffic impacts and road works.

Comments supporting neutral Likert scale ratings indicated no change due to the mine.

Positive comment

"The mine was required to build a new Wybong Road to its entrance. The realignment of the new road has completely removed sharp bends which were a traffic hazard. This new road easily handles the increased flow of traffic. Mount Pleasant mine traffic has also been denied access on some local roads which has improved traffic for local residents."

Negative comment

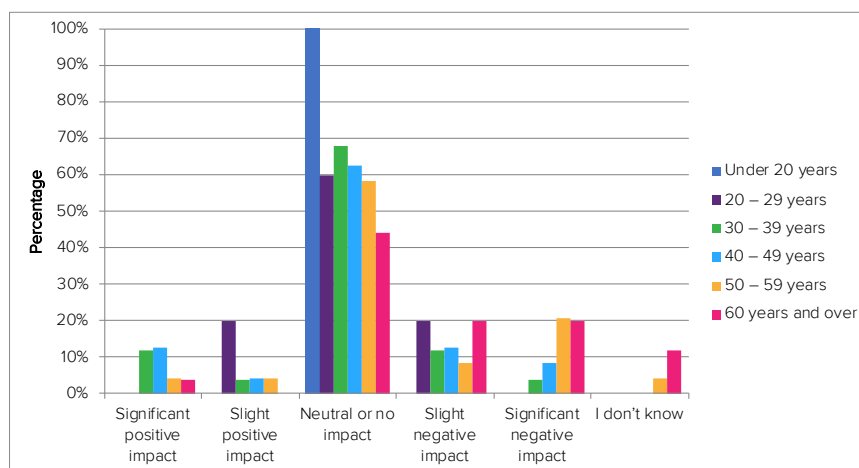
"To travel to Muswellbrook we used to use Wybong Road, and now mainly use Dartbrook Road through Kayuga. Both these roads will be intermittently closed due to mine activity and heavy vehicle traffic will increase. To travel by an alternative route adds about 15 minutes travel time and also involves travelling on the busy New England highway instead of a quiet scenic country road... We local residents feel we are simply being overlooked and overwhelmed by the mining sector."

4.4.2 Key differences across demographics

Age

Figure 28 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 28: Impact on access – comparison by age

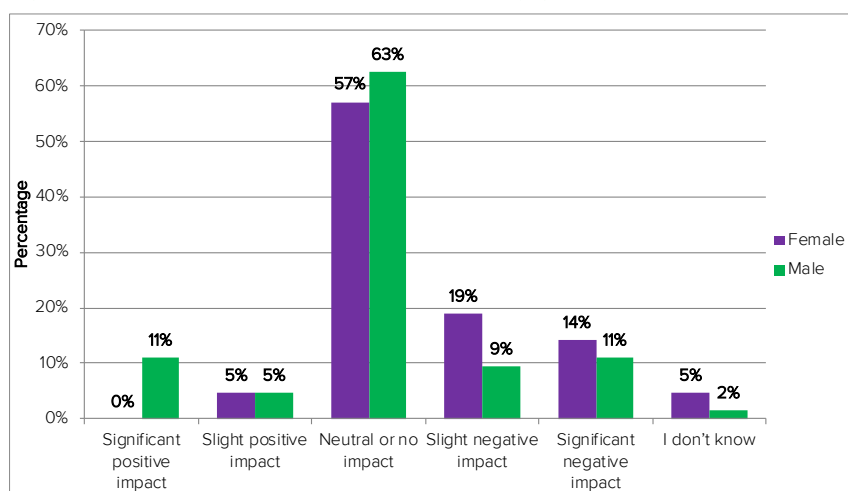


n=109

Gender

33% of female survey respondents provided negative Likert scale ratings in response to this question, compared with 20% of male survey respondents (Figure 29).

Figure 29: Impact on access – comparison by gender

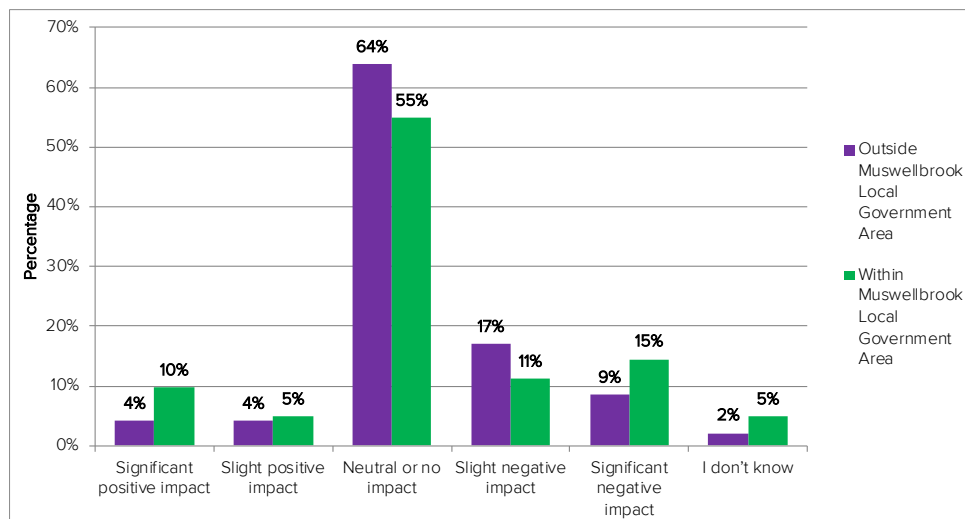


n=106

Geography

Survey respondents living within Muswellbrook Shire Council Local Government Area were more likely to provide a positive Likert scale rating in response to this question, compared with those living outside Muswellbrook Shire Council Local Government Area (Figure 30). This is largely due to a greater proportion of respondents outside the Muswellbrook Shire Council Local Government Area providing a neutral Likert scale rating, rather than a higher proportion of negative Likert scale ratings.

Figure 30: Impact on access – comparison by Local Government Area

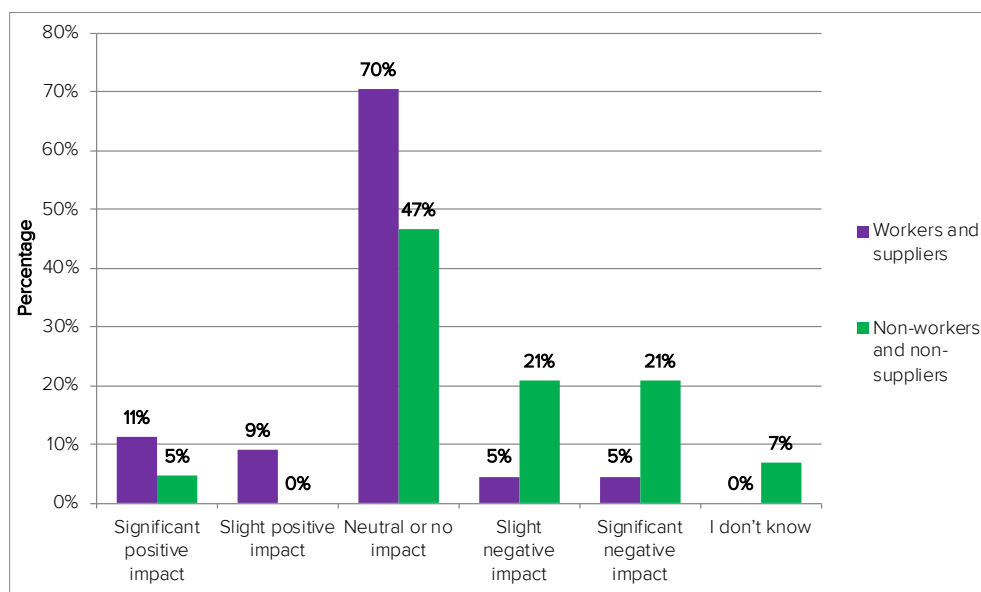


n=109

Workers and suppliers

42% of non-workers and non-suppliers responded to this question with negative Likert scale ratings, compared with 10% of workers and suppliers (Figure 31)

Figure 31: Impact on access by – comparison by employment and suppliers



n=87

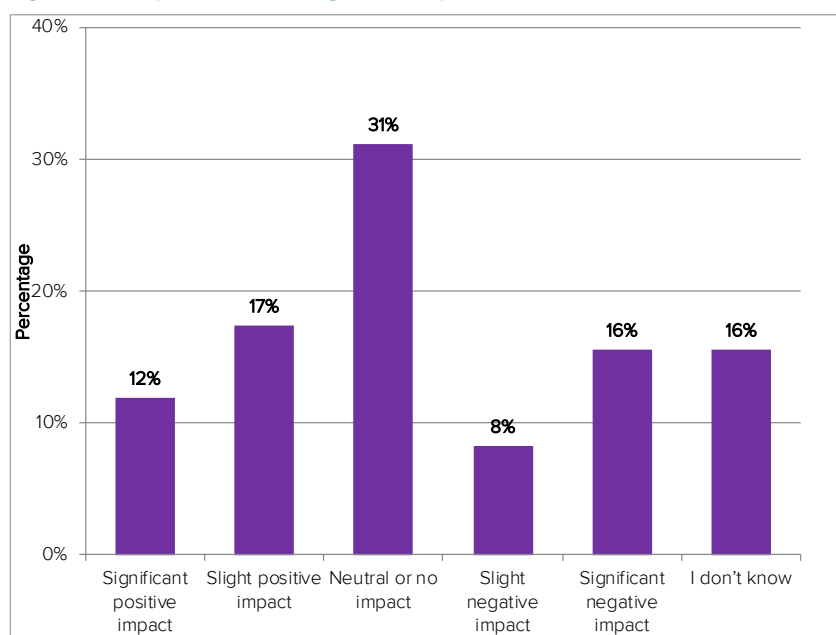
4.5 Housing

Survey question: What overall impact has the current Mount Pleasant Operation had on housing within the area in which you currently live?

4.5.1 All responses

Figure 32 shows the percentages of responses to the question on the overall impact the current Mount Pleasant Operation has had housing in the area in which they live. Responses to this question were relatively evenly distributed compared to the responses to other questions. 29% of survey respondents provided a positive Likert scale rating, compared with 24% of respondents who provided a negative Likert scale rating.

Figure 32: Impact on housing – all responses



n=109

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 58% of negative ratings, compared with 25% of positive ratings and 3% of neutral ratings.

Comments supporting positive Likert scale ratings link a healthy housing market to a healthy economy. Two refer to good return on investment from rental properties.

Comments supporting negative Likert scale ratings detail a complex picture whereby rental prices have risen, but house values are depressed or difficult to sell, due to the mine. 27% of comments discuss the transient nature of the local population.

Positive comment

"I have two properties within the Muswellbrook LGA. One is a investment rental property, which has been providing a good returns and growth."

Negative comment

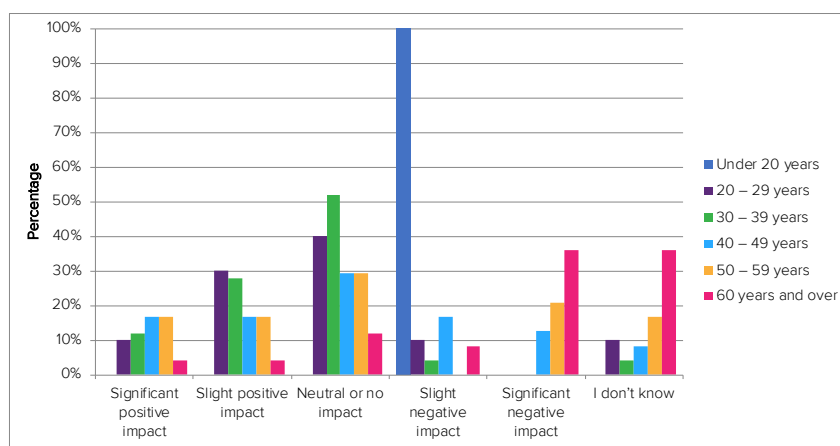
"Nobody wants to actually live in Muswellbrook. Witness the traffic through Singleton of an afternoon, with people working in the mines and residing outside the mining area."

4.5.2 Key differences across demographics

Age

Figure 33 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 33: Impact on housing – comparison by age

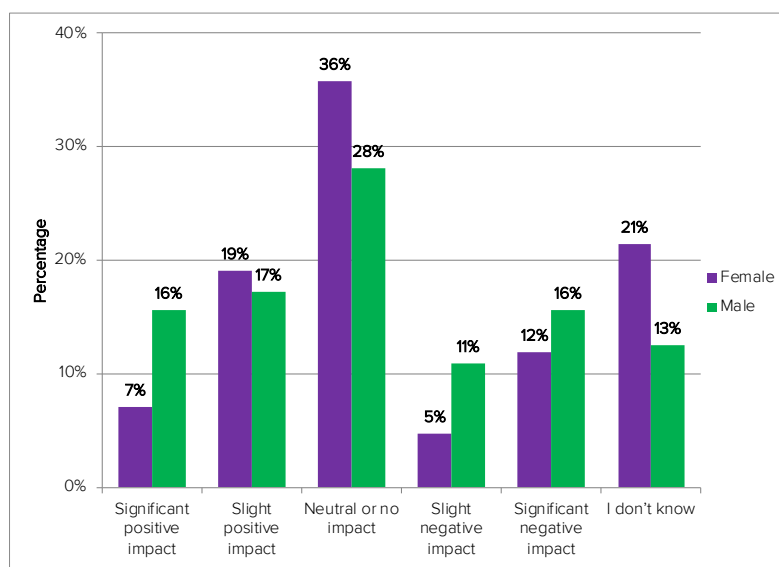


n=109

Gender

Male survey respondents gave proportionally more positive and negative Likert scale ratings, compared with female survey respondents, a larger proportion of whom provided a neutral Likert scale rating, or indicated 'I don't know' (Figure 34).

Figure 34: Impact on housing – comparison by gender

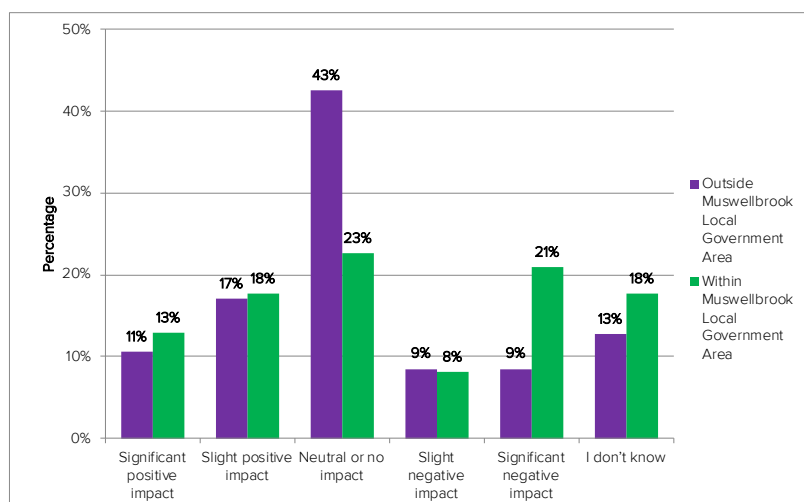


n=106

Geography

Survey respondents living within Muswellbrook Shire Council Local Government Area were more likely to provide a negative Likert scale rating in response to this question, compared with those living outside Muswellbrook Shire Council Local Government Area (Figure 35). This is largely due to a greater proportion of respondents outside the Muswellbrook Shire Council Local Government Area providing a neutral Likert scale rating, rather than a higher proportion of positive Likert scale ratings.

Figure 35: Impact on housing – comparison by Local Government Area

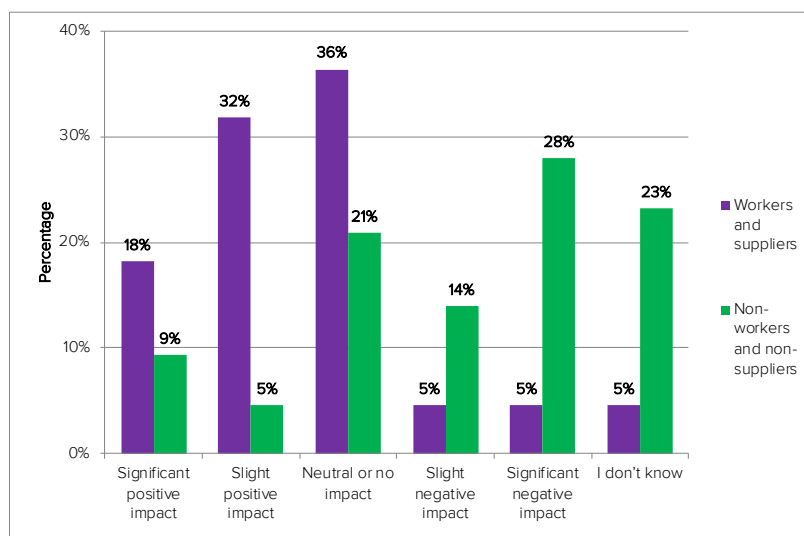


n=109

Workers and suppliers

50% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 14% of non-workers and non-suppliers (Figure 36).

Figure 36: Impact on housing by – comparison by employment and suppliers



n=87

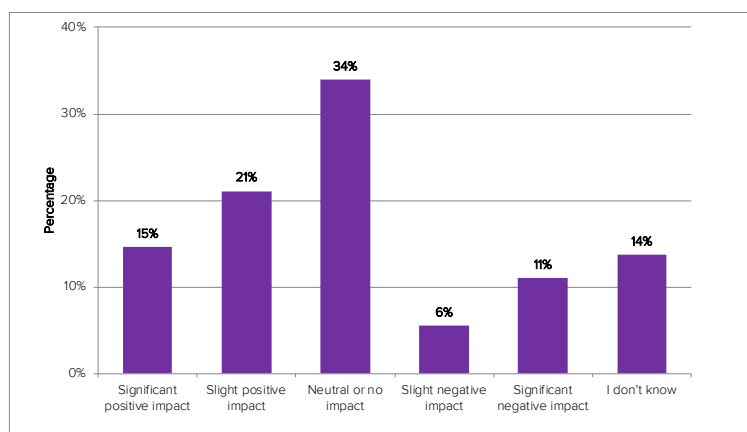
4.6 Community services

Survey question: What overall impact has the current Mount Pleasant Operation had on community services within the area in which you currently live?

4.6.1 All responses

36% of survey respondents provided a positive Likert scale rating in response to this question, compared with 17% of survey respondents who provided a negative rating (Figure 37).

Figure 37: Impact on community services – all responses



$n=109$

63% of comments supporting negative Likert scale ratings are framed in terms of pressure on services such as health. One comment links fluctuating air quality with the ability of sports teams to hold training days.

Positive comment

"The Mach Energy team are very supportive of all community projects. The Muswellbrook community has benefited greatly from this."

Negative comment

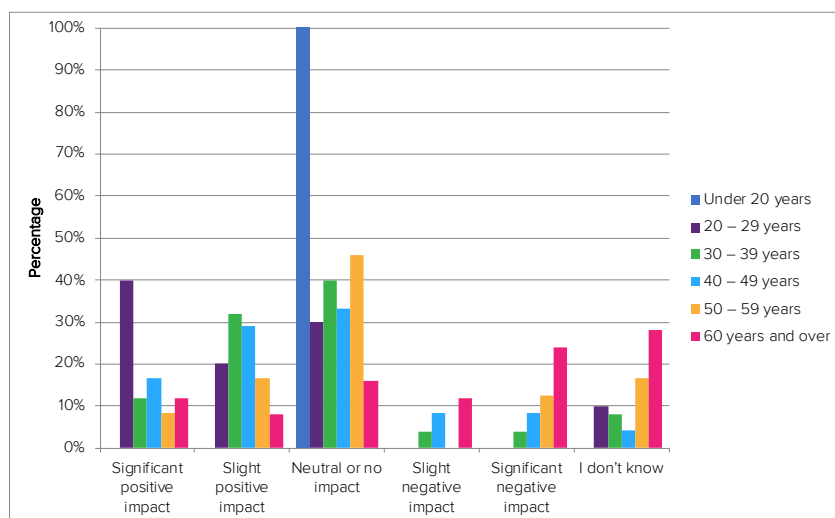
"Additional staff and contractors from outside of Muswellbrook are now utilising services in the town that were already limited for local people."

4.6.2 Key differences across demographics

Age

Figure 38 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 38: Impact on community services – comparison by age

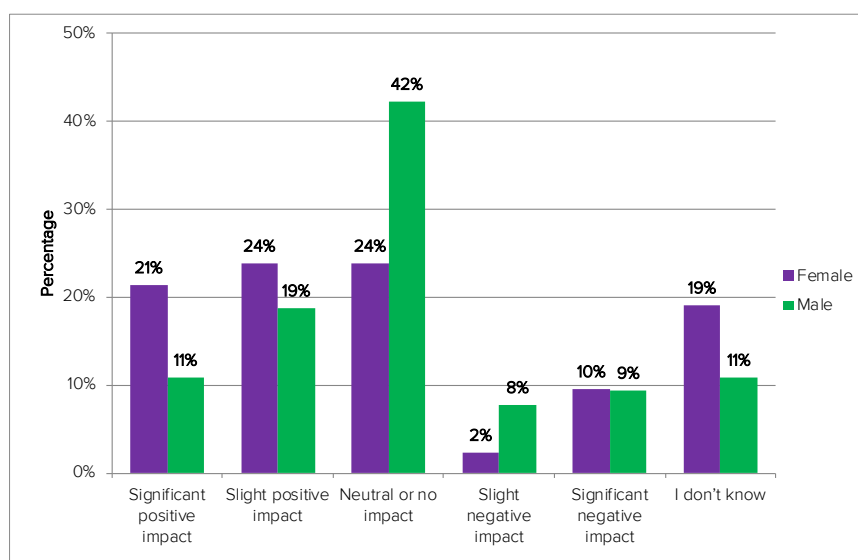


n=109

Gender

45% of female survey respondents provided positive Likert scale ratings in response to this question, compared with 30% of male survey respondents (Figure 39).

Figure 39: Impact on community services – comparison by gender

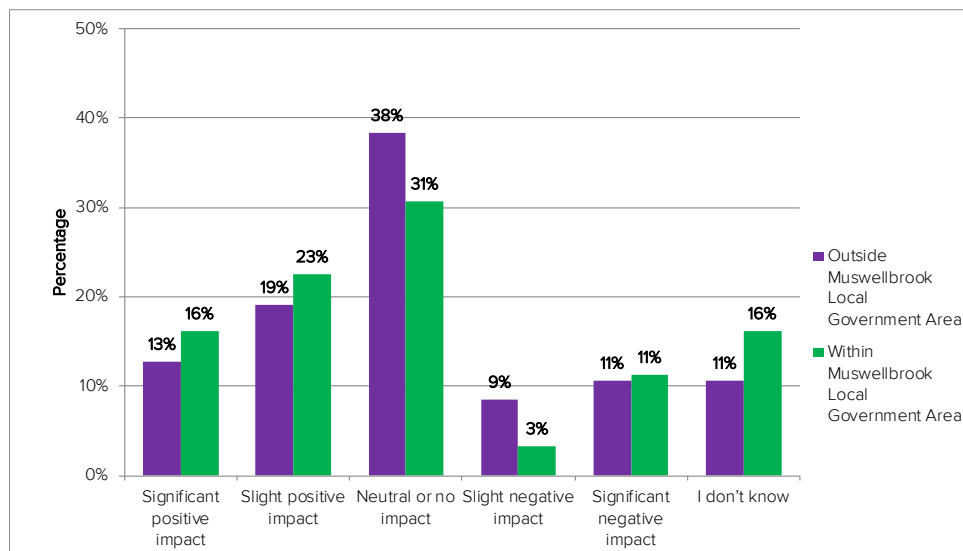


n=106

Geography

There was no significant difference between the responses of those within and outside Muswellbrook Shire Council Local Government Area (Figure 40).

Figure 40: Impact on community services – comparison by Local Government Area

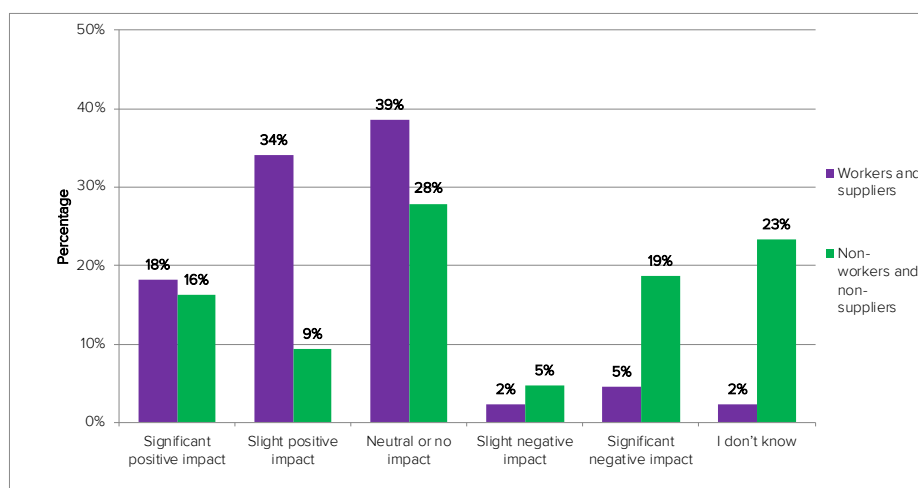


n=109

Workers and suppliers

52% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 25% of non-workers and non-suppliers (Figure 41).

Figure 41: Impact on community services by – comparison by employment and suppliers



n=87

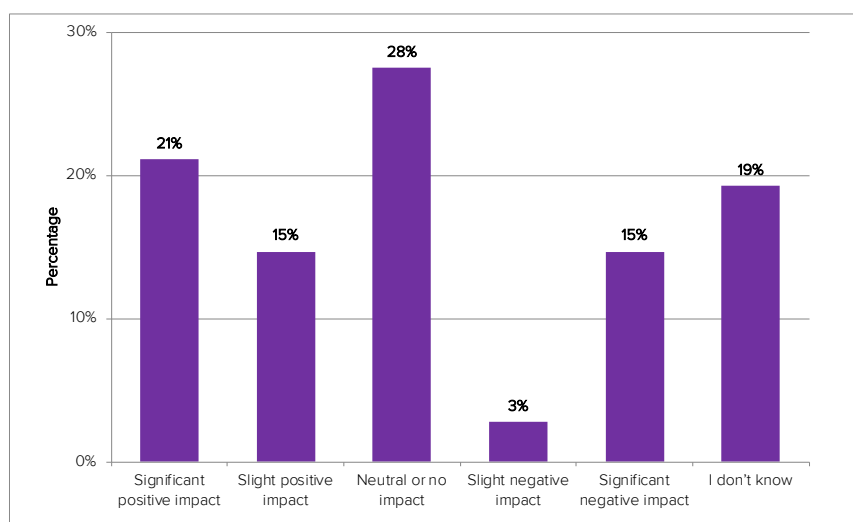
4.7 Culture

Survey question: What overall impact has the current Mount Pleasant Operation had on the culture of people living within your area?

4.7.1 All responses

36% of survey respondents provided a positive Likert scale rating in response to this question, compared with 18% of survey respondents who provided a negative rating. At 19%, a relatively high number of survey respondents have indicated 'I don't know' (Figure 42).

Figure 42: Impact on culture – all responses



n=109

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 58% of negative ratings, compared with 18% of positive ratings and 3% of neutral ratings.

Comments supporting positive Likert scale ratings overwhelmingly focus on the mine's support for Aboriginal communities, noting their participation in the Aboriginal Community Development Fund.

Comments supporting negative Likert scale ratings focus on a range of issues, primarily around the destruction of the natural environment and its effects on the community.

Positive comment

"Mach Energy have actively engaged with local indigenous communities and contributed positively with these communities via employment, sponsorship, promotion and celebration of culture."

Negative comment

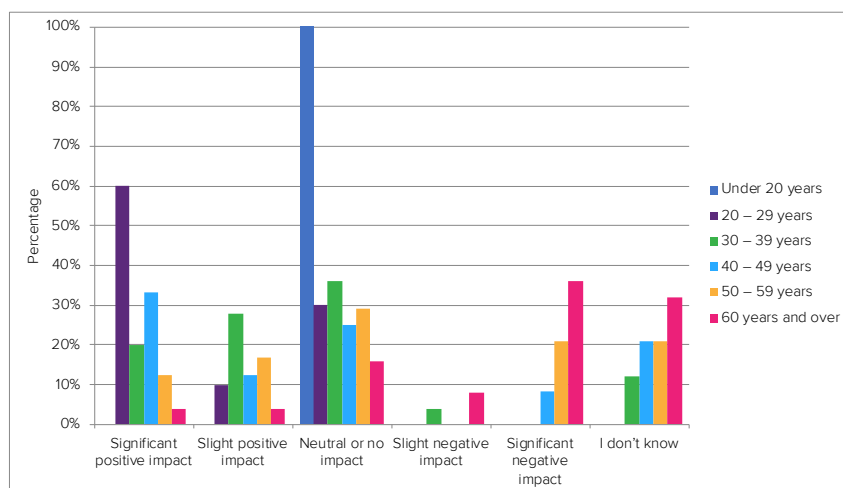
"Culture as defined here is blown out of the water. Forget it. The place is now repellent, and the history gone."

4.7.2 Key differences across demographics

Age

Figure 43 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 43: Impact on culture – comparison by age

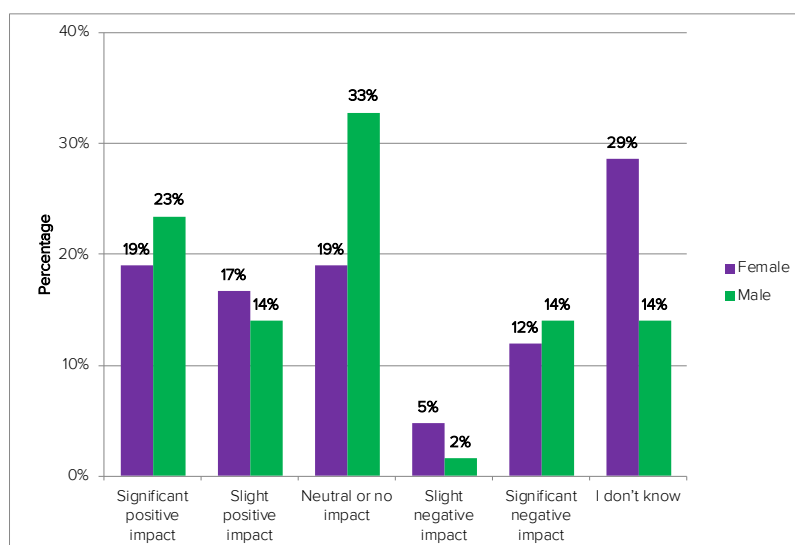


n=109

Gender

Positive and negative Likert scale ratings from male and female survey respondents were very similar, however 29% of female respondents indicated 'I don't know', compared with 14% of male respondents (Figure 44).

Figure 44: Impact on culture – comparison by gender



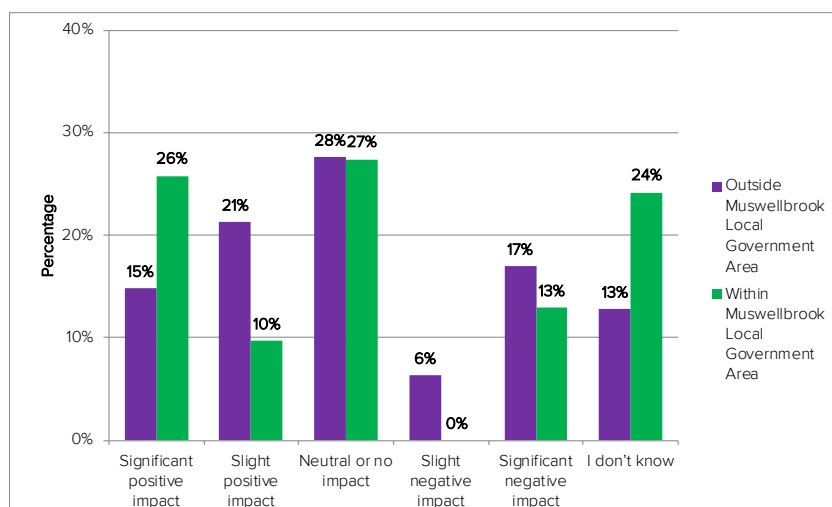
n=106

Geography

Survey respondents outside Muswellbrook Shire Council Local Government Area were more likely to provide a negative Likert scale rating, compared with those within Muswellbrook Shire Council Local

Government Area, however the proportion of positive Likert scale ratings were identical between the two groups (Figure 45). The difference is accounted for by a higher proportion of survey respondents inside Muswellbrook Shire Council Local Government Area selecting 'I don't know'.

Figure 45: Impact on culture – comparison by Local Government Area

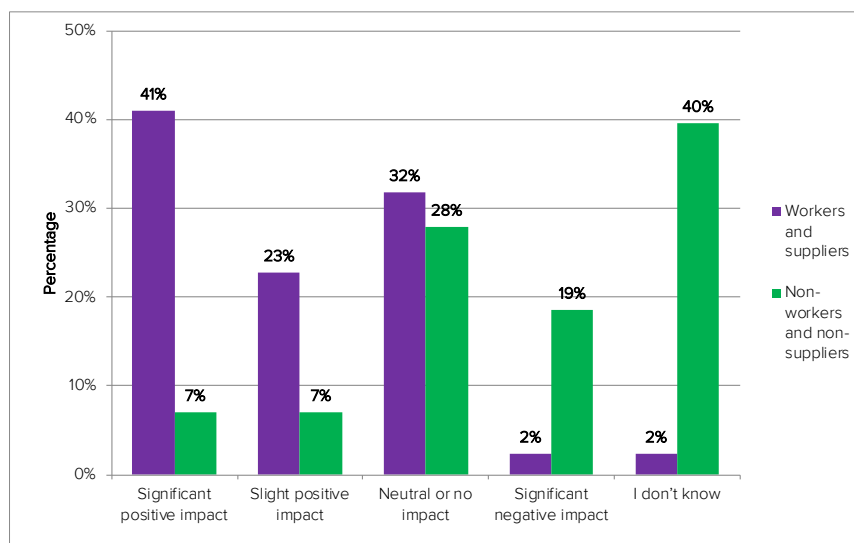


n=109

Workers and suppliers

64% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 14% of non-workers and non-suppliers (Figure 46). The proportion of non-workers and non-suppliers indicating 'I don't know' was also high, relative to other questions.

Figure 46: Impact on culture by – comparison by employment and suppliers



n=87

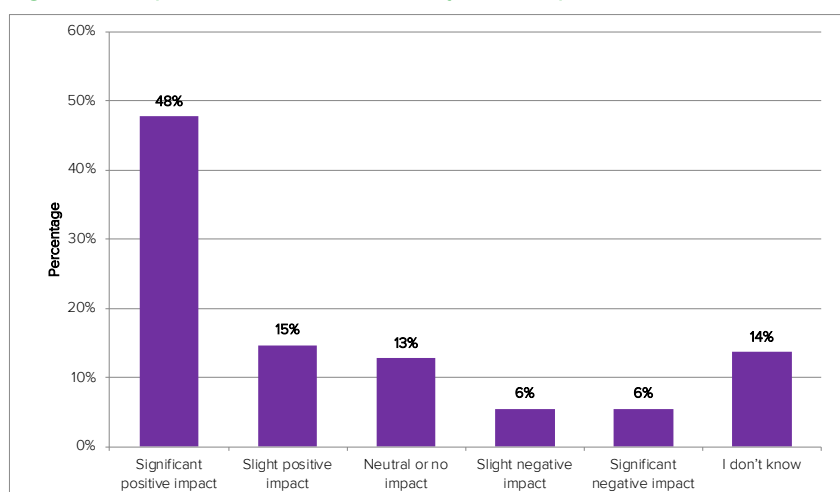
4.8 The local economy

Survey question: What overall impact has the current Mount Pleasant Operation had on the economy within the area in which you currently live?

4.8.1 All responses

63% of survey respondents provided a positive Likert scale rating in response to this question, compared with 12% of survey respondents who provided a negative rating (Figure 47).

Figure 47: Impact on the local economy – all responses



n=109

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 67% of negative ratings, compared with 21% of positive ratings. Comments for neutral ratings were relatively high, at 36%.

Comments supporting positive Likert scale ratings overwhelmingly focus on the mine's benefit to the local economy, through employment and creating a market for services. Three of the comments supporting positive ratings note that economic benefits do not accrue to the local community, but are taken out of town. Another notes that economic benefits are short term when compared to the long-term health of the environment.

63% of comments supporting negative Likert scale ratings focus on the lack of economic benefit to the local area, due to the mine employing few local people.

Comments supporting neutral Likert scale ratings were similar to those supporting negative ratings, focussing on the lack of benefit to the local economy.

Positive comment

"The Mount Pleasant has had a significant positive level of impact on the economy providing stimulus through providing jobs and using local suppliers. Providing jobs has a huge flow on effect with people then spending income in the local area, thereby supporting local businesses."

Negative comment

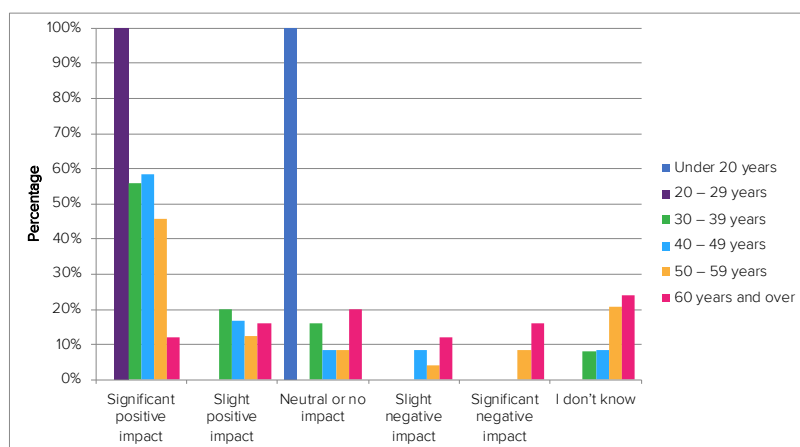
"We already see that a significant number of workers living locally only for their rotation then leave back to their families. They don't settle their families here [and] as a result the money they make is not spent in the local economy."

4.8.2 Key differences across demographics

Age

Figure 48 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 48: Impact on the local economy – comparison by age

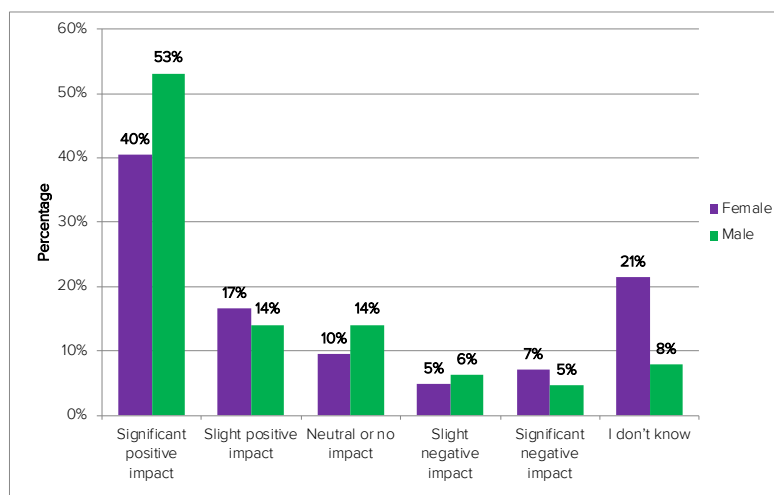


n=109

Gender

57% of female survey respondents provided positive Likert scale ratings in response to this question, compared with 67% of male survey respondents. 21% of female respondents indicated 'I don't know', compared with 8% of male respondents (Figure 49).

Figure 49: Impact on the local economy – comparison by gender

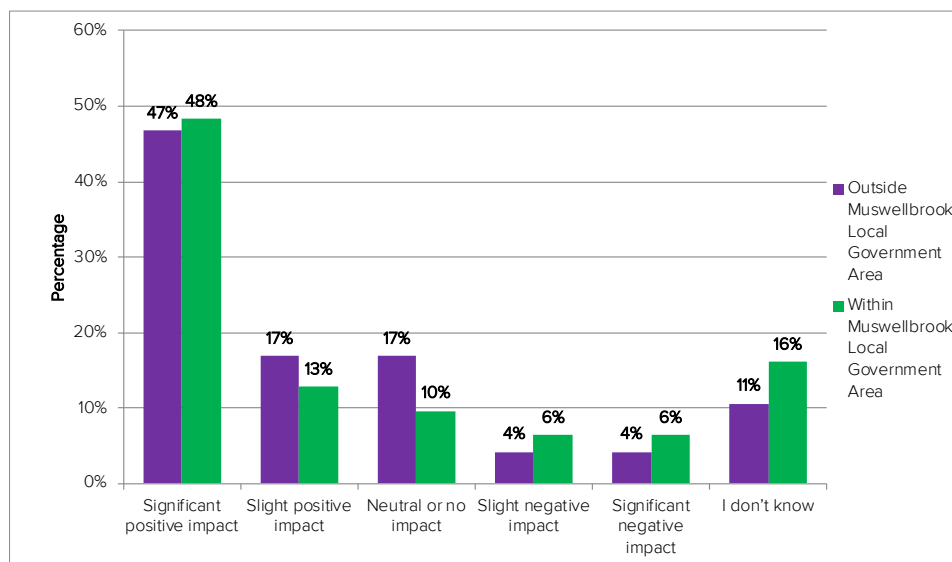


n=106

Geography

Survey respondents within of Muswellbrook Shire Council Local Government Area were somewhat more likely to provide a negative Likert scale rating, compared with those within Muswellbrook Shire Council Local Government Area (Figure 50).

Figure 50: Impact on the local economy – comparison by Local Government Area

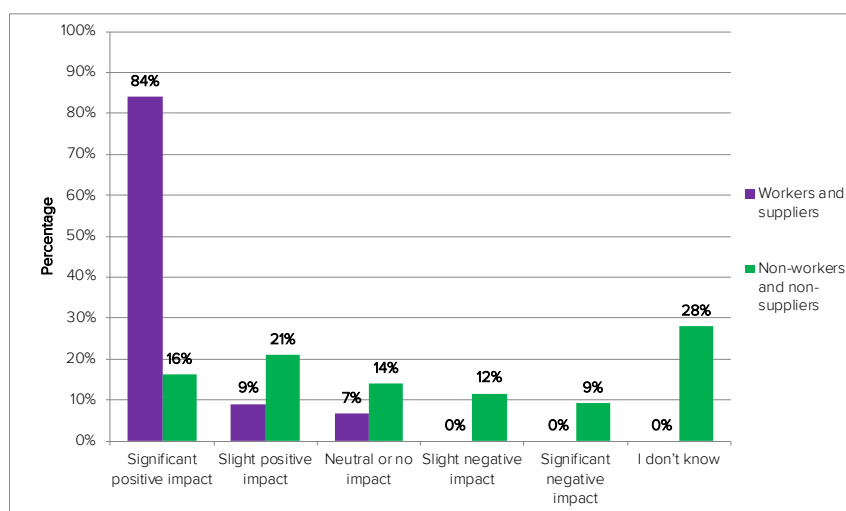


n=109

Workers and suppliers

93% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 37% of non-workers and non-suppliers (Figure 51).

Figure 51: Impact on the local economy by – comparison by employment and suppliers



n=87

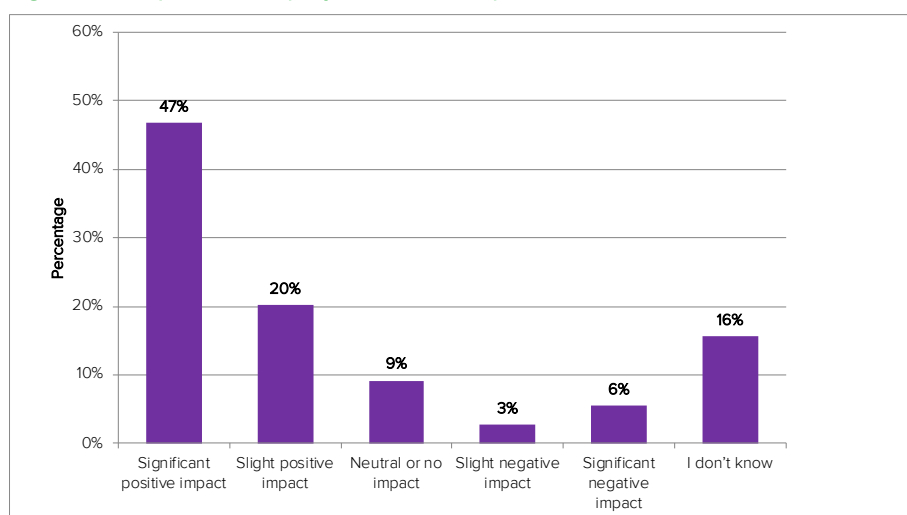
4.9 Employment

Survey question: What overall impact has the current Mount Pleasant Operation had on the employment within the area in which you currently live?

4.9.1 All responses

67% of survey respondents provided a positive Likert scale rating in response to this question, compared with 8% of survey respondents who provided a negative rating (Figure 52).

Figure 52: Impact on employment – all responses



n=109

As a proportion, supporting comments were mainly provided for negative Likert scale ratings, however there were a relatively small number of negative ratings in response to this question. Comments supported 33% of negative ratings, compared with 16% of positive ratings. Comments for neutral ratings were relatively high, at 40%.

Comments supporting positive Likert scale ratings overwhelmingly focus on the mine's benefit to the local economy, similar to comments for the question about Mount Pleasant Operation's impact on the economy. Similar also, are comments that economic benefits do not accrue to the local community and that 'FIFO' (fly in, fly out) should be relinquished.

Comments supporting negative Likert scale ratings describe a variety of concerns, including non-resident workers and the disruptive effect of the mine on the local economy.

Comments supporting neutral Likert scale ratings focussed on a lack of local employment by the mine.

Negative comment

"Locals find it hard to provide wages equal to mines so it is hard to get mechanics etc."

Positive comment

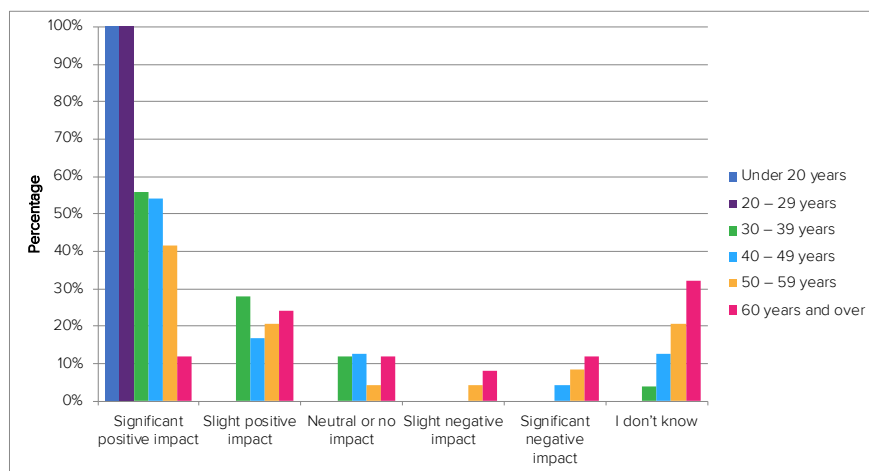
"As a significant employer, an operating mine means local jobs. Mount Pleasant Operation has a reputation of focusing on hiring local."

Key differences across demographics

Age

Figure 53 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 53: Impact on employment – comparison by age

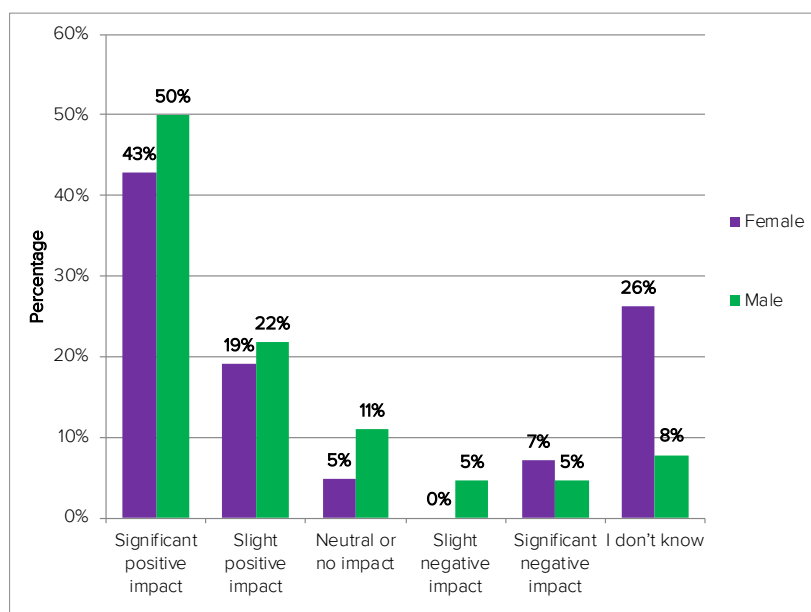


n=109

Gender

72% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 62% of female survey respondents (Figure 54). Positive and negative Likert scale ratings from male and female survey respondents were similar, however 26% of female respondents indicated 'I don't know', compared with 8% of male respondents.

Figure 54: Impact on employment – comparison by gender

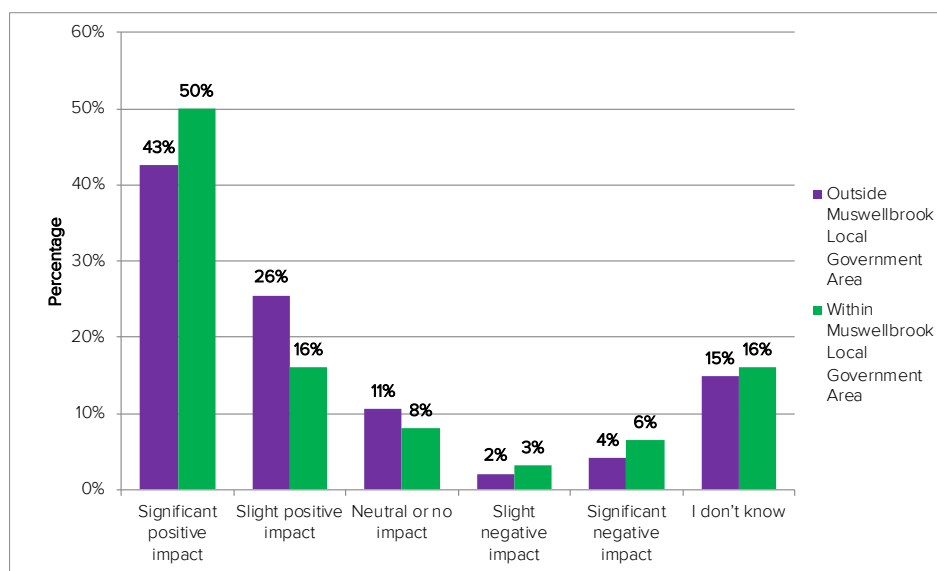


n=106

Geography

When comparing between those within Muswellbrook Shire Council Local Government Area and those outside there were no significant differences (Figure 55)

Figure 55: Impact on employment – comparison by Local Government Area

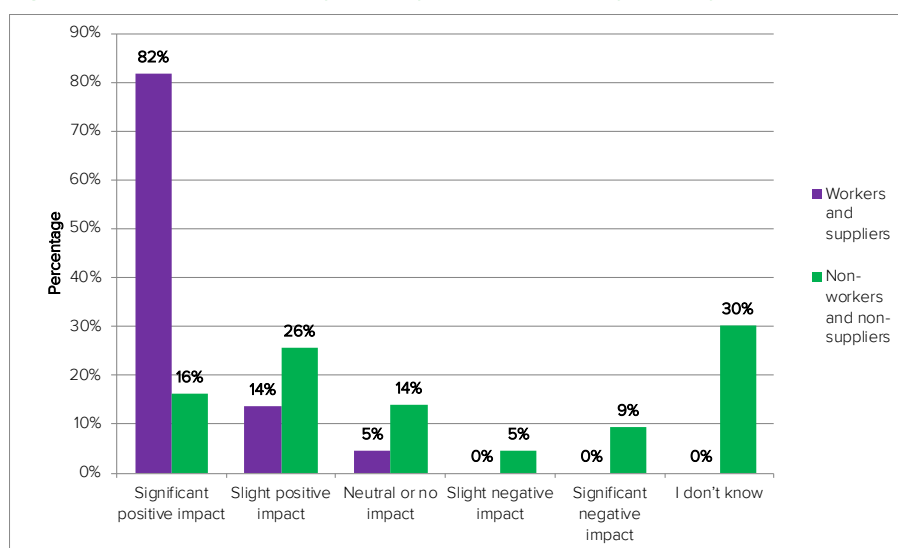


n=109

Workers and suppliers

96% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 42% of non-workers and non-suppliers.

Figure 56: Impact on employment by – comparison by employment and suppliers



n=87

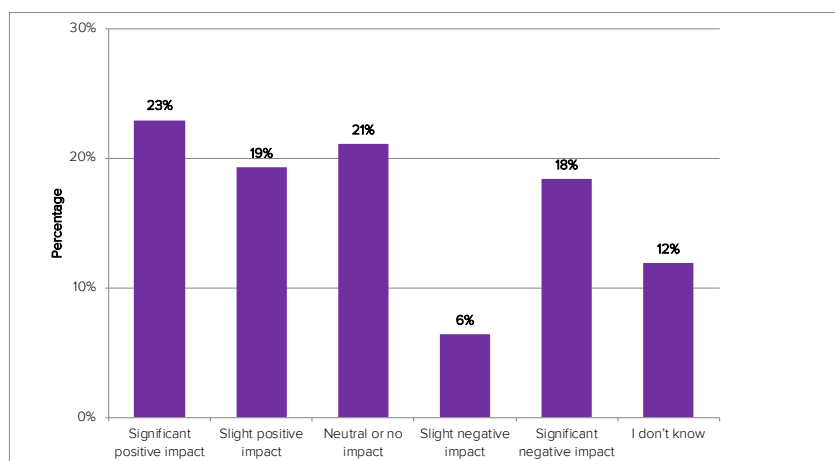
4.10 Community cohesion

Survey question: What overall impact has the current Mount Pleasant Operation had on community cohesion within the area in which you currently live?

4.10.1 All responses

Responses to the overall impact the current Mount Pleasant Operation has on community cohesion in the area where people live is shown in Figure 57.

Figure 57: Impact on community cohesion – all responses



n=109

42% of survey respondents provided a positive Likert scale rating in response to this question, compared with 24% of survey respondents who provided a negative rating.

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 52% of negative ratings, compared with 9% of positive ratings. No comments were provided for neutral ratings.

Comments supporting positive Likert scale ratings focus on the mine's engagement with the local community and community groups.

36% of comments supporting negative Likert scale ratings focus on community divisions caused by mining; between those working in the mines and those not. 21% mention mining impacts on climate change as a reason for community tension.

Positive comment

"The mines are keen to support local activities. I was involved in the town athletics club and the Eisteddfod, both supported by mine workers and mine funding."

Negative comment

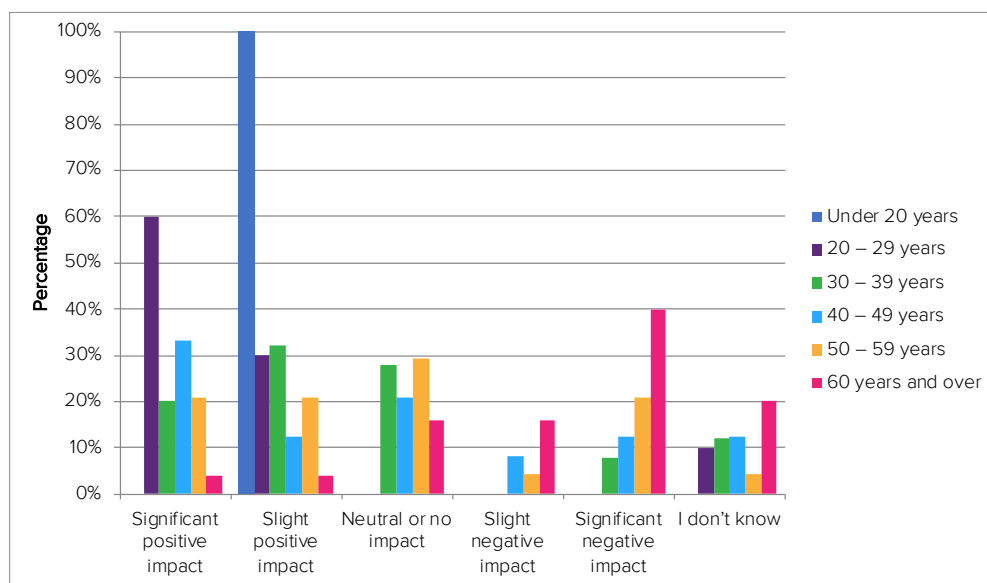
"More than money is required to help communities. Granted the mine helps out financially in a number of ways but it can't buy community spirit."

4.10.2 Key differences across demographics

Age

Figure 58 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 58: Impact on community cohesion – comparison by age

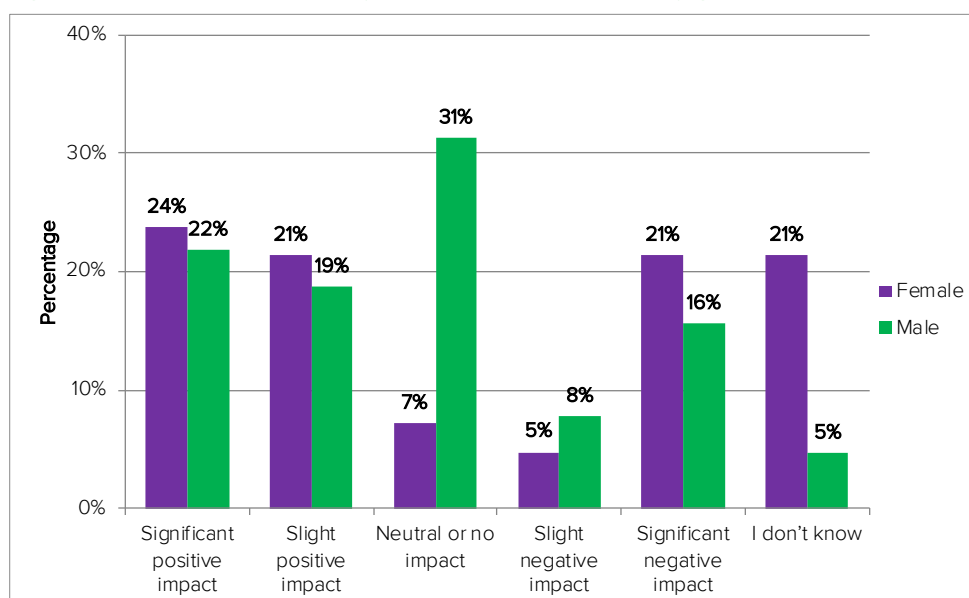


n=109

Gender

Positive and negative Likert scale ratings from male and female survey respondents were similar, but 21% of female respondents indicated 'I don't know', compared with 5% of male respondents (Figure 59). 31% of male respondents indicated a neutral Likert scale rating, compared with 7% of women.

Figure 59: Impact on community cohesion – comparison by gender

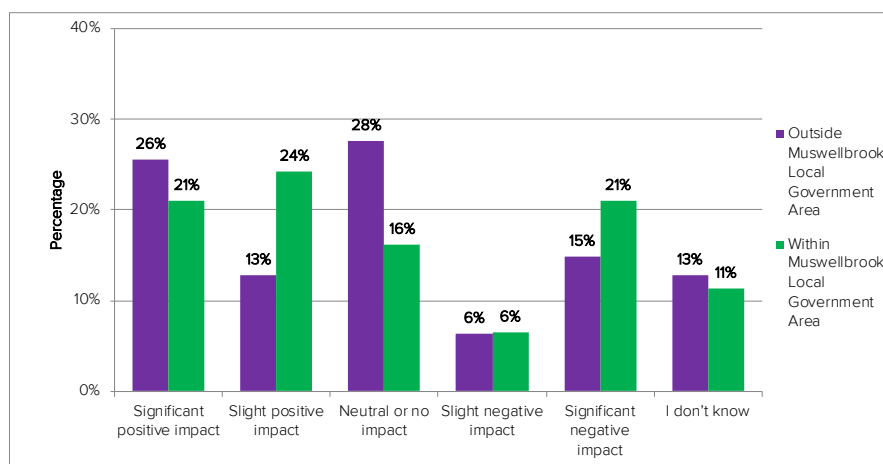


n=106

Geography

Survey respondents within Muswellbrook Shire Council Local Government Area were more likely to provide either a positive or a negative Likert scale rating, compared with those outside of Muswellbrook Shire Council Local Government Area (Figure 60). This difference is accounted for by the 28% of respondents outside Muswellbrook Shire Council Local Government Area who provided a neutral rating, compared with 16% within Muswellbrook Shire Council Local Government Area.

Figure 60: Impact on community cohesion – comparison by Local Government Area

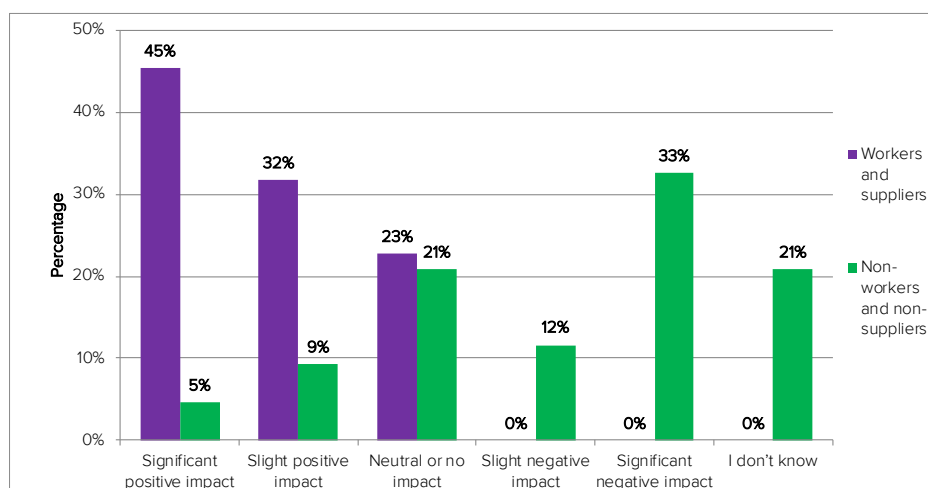


n=109

Workers and suppliers

77% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 14% of non-workers and non-suppliers (Figure 61).

Figure 61: Impact on community cohesion by – comparison by workers and suppliers



n=87

5 Survey results - impacts of the Mount Pleasant Optimisation Project proceeding

Using a Likert scale, survey respondents were asked to indicate, within the area in which they currently live, the degree of overall positive, neutral, or negative impact from the Mount Pleasant Optimisation Project proceeding, on a variety of social, economic, and environmental outcomes.

Note that not everyone completed all survey questions. The single person under the age of 20 who completed the demographics questions did not complete the questions in this or the subsequent section of the survey, therefore there is no under 20 representation in any of the graphs

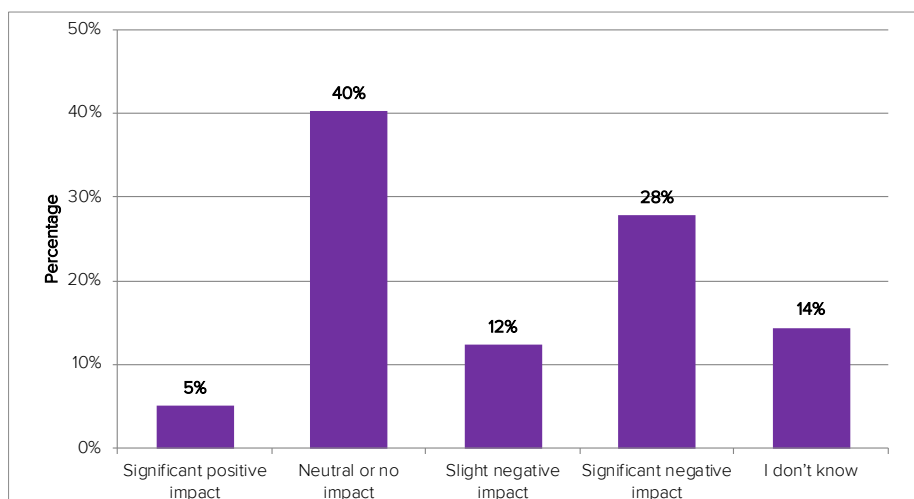
5.1 Water

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on water resources within the area in which you currently live?

5.1.1 All responses

Figure 62 shows all responses to the impact on water resources if the project proceeds, with 40% of responses selecting there will be neutral or no impact, following by 28% selecting a significant negative impact.

Figure 62: Impact on water – all responses



n=97

40% of survey respondents provided a negative Likert scale rating in response to this question, compared with 5% of survey respondents who provided a positive rating. 40% of respondents provided a neutral Likert scale rating in response to this question; relatively high when compared to neutral Likert scale ratings for other questions.

Comments supported 38% of negative ratings and 8% of neutral ratings. There were no comments provided for positive ratings, however there were relatively few positive ratings in response to this question.

60% of comments supporting negative Likert scale ratings focussed on Mount Pleasant's impact on groundwater. There was also concern on the effect of the mine on water quality.

Neutral comment

"The mine will need to draw water (for CHPP, dust suppression), however still has to use the same water licensing requirements as any other mine, commercial farm or thoroughbred industry."

Negative comment

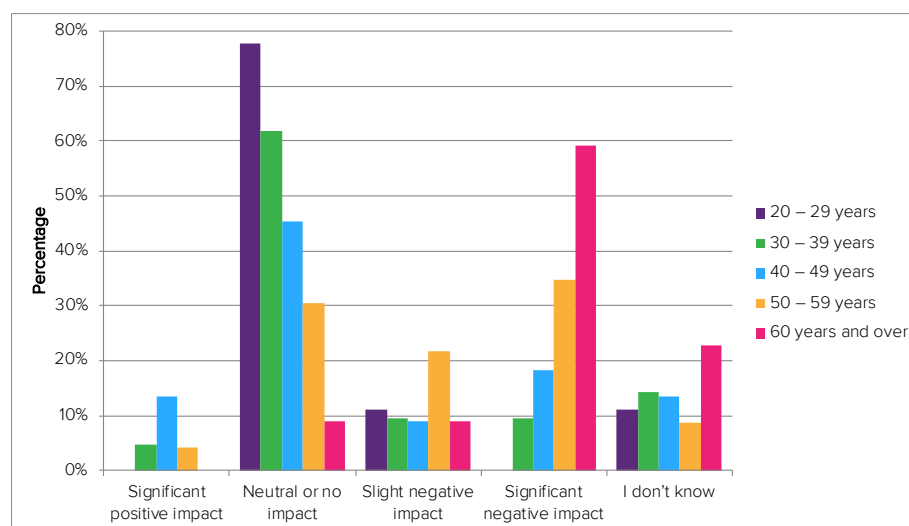
"Mining in the upper hunter area causes reduced water in our area able to be used on agricultural concerns and also pollutes the usable water, making it undesirable to use on crops. It also caused the groundwater levels to drop which is very detrimental in these times of increased drought."

5.1.2 Key differences across demographics

Age

Figure 63 show the survey respondents' Likert scale ratings across the different age groups.

Figure 63: Impact on water – comparison by age

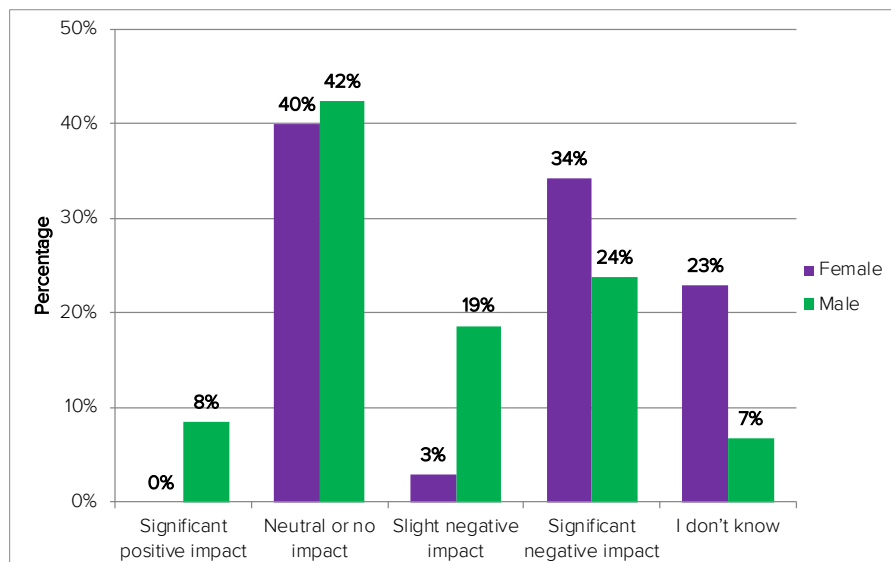


n=97

Gender

No female survey respondents provided a positive Likert scale response to this question, compared with 8% of male respondents (Figure 64). 23% of female respondents indicated 'I don't know' in response to this question, compared with 7% of male respondents.

Figure 64: Impact on water – comparison by gender

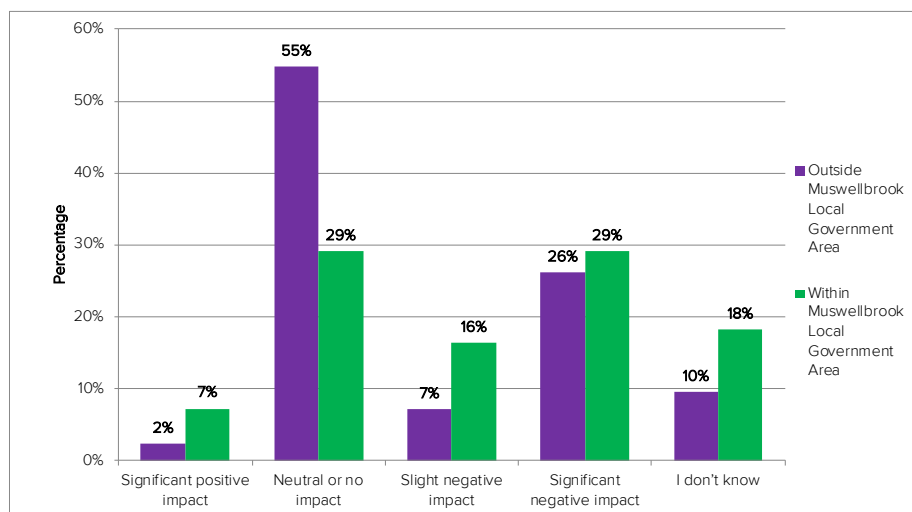


n=94

Geography

Survey responses are shown in Figure 65. The majority of responses were neutral or negative response for those from within the Muswellbrook Shire Council Local Government Area and outside the area.

Figure 65: Impact on water – comparison by Local Government Area

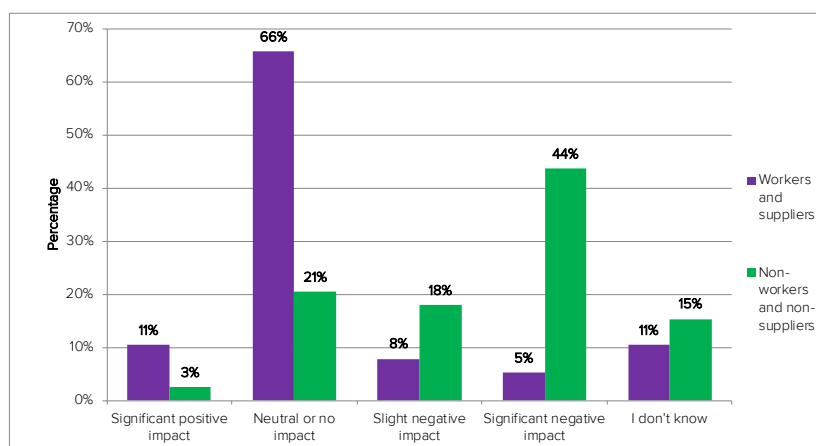


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were more positive than the responses of non-workers and non-suppliers (Figure 66). Additionally, 66% of survey respondents who are either workers at, or suppliers to Mount Pleasant provided neutral ratings, compared with 21% from non-workers and non-suppliers.

Figure 66: Impact on water by – comparison by employment and suppliers



n=77

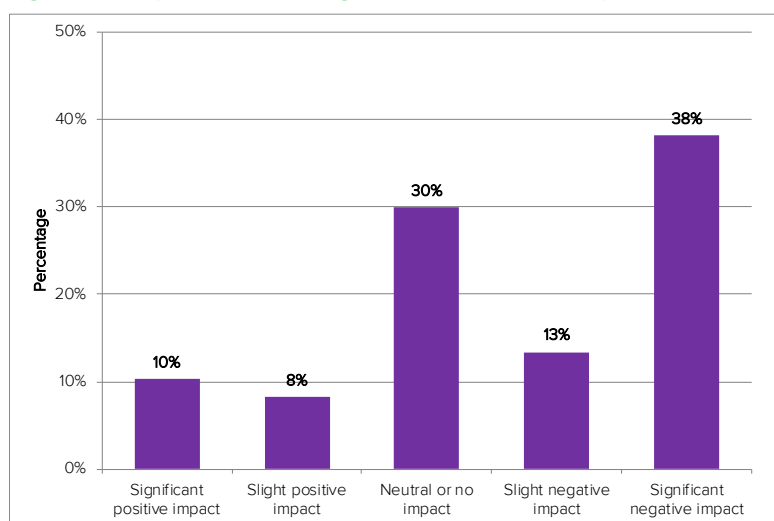
5.2 Quality of the living environment

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the quality of the living environment of the area in which you live?

5.2.1 All responses

51% of survey respondents provided a negative Likert scale rating in response to this question; relatively high when compared to negative Likert scale ratings for other questions (Figure 67).

Figure 67: Impact on the living environment – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 58% of negative ratings, compared with 6% of positive ratings and 3% of neutral ratings.

One comment was provided in support of a positive Likert scale rating, however it was in regard to investment in the community, rather than the living environment.

69% of comments supporting negative Likert scale ratings mentioned dust or air quality.

Neutral comment

“Mount Pleasant has had minimal impact and that has been managed through the installation of the bund (outer dump) and their demonstrated commitment to progressive rehabilitation. Mount Pleasant is also the only mine in the valley that has to shut down its operation if the Muswellbrook NW Upper Hunter Air Quality Monitor goes over a set limit regardless of where the dust or smoke is coming from.”

Negative comment

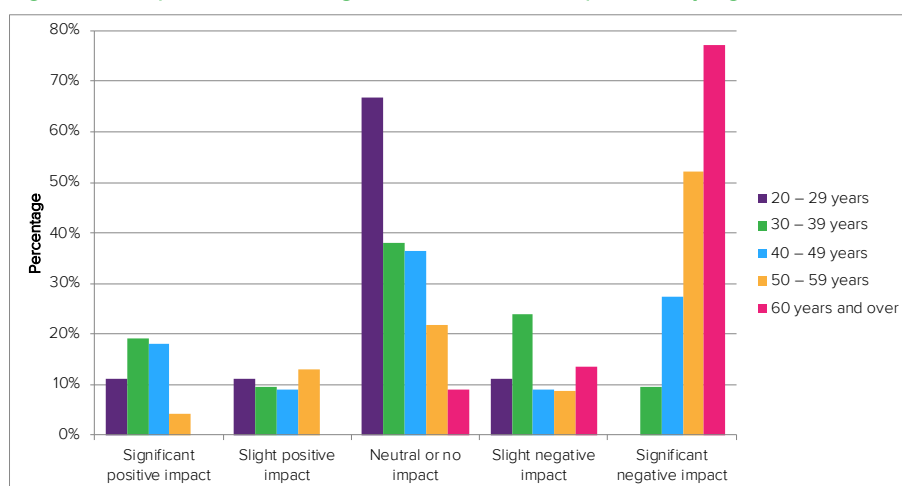
“Noise & Dust are already having an impact on our lifestyle without the optimisation project, I feel that any if the project extension proceeds it will only further effect our quality of living.”

5.2.2 Key differences across demographics

Age

Figure 68 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 68: Impact on the living environment – comparison by age

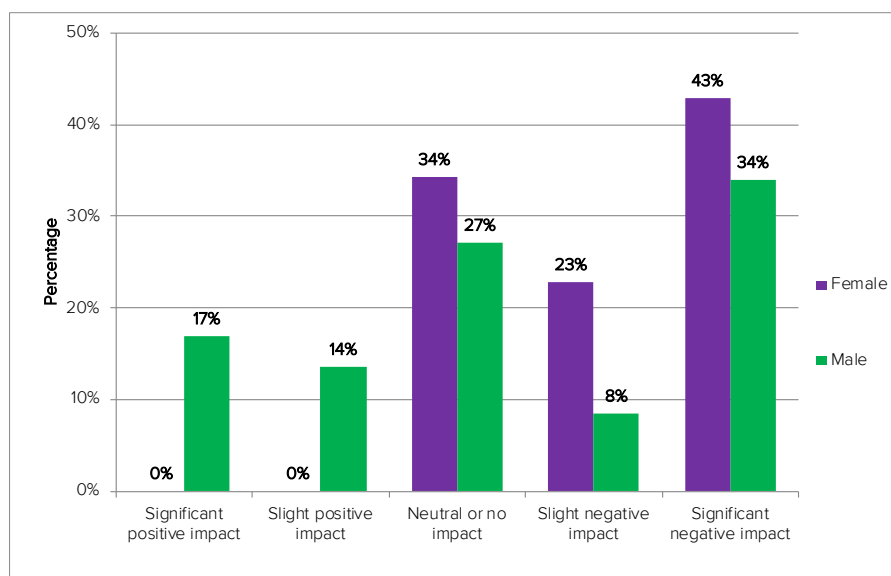


n=97

Gender

No female survey respondents provided positive Likert scale ratings in response to this question, compared with 31% of male respondents.

Figure 69: Impact on the living environment – comparison by gender

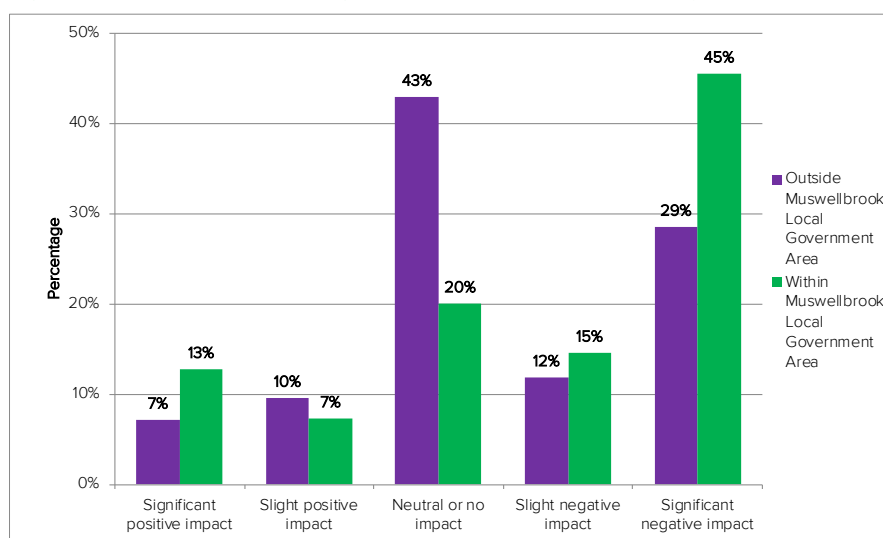


n=94

Geography

The majority of survey responses for people living within the Muswellbrook Shire Council Local Government Area were negative and the majority for those living outside the Area was neutral or no impact (Figure 70).

Figure 70: Impact on the living environment – comparison by Local Government Area

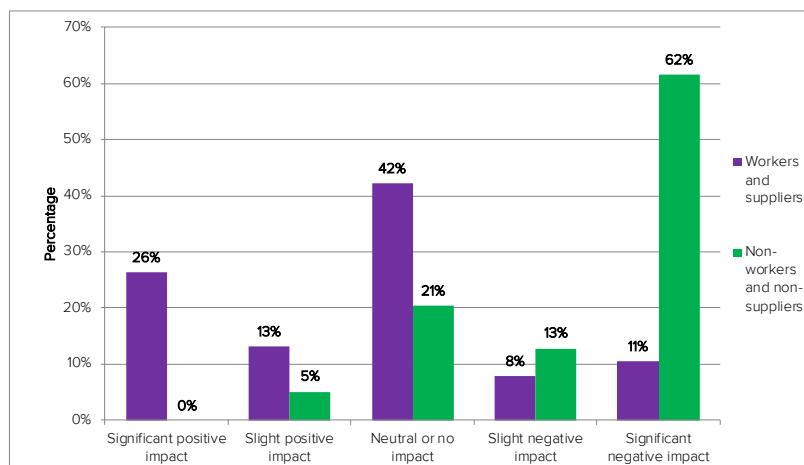


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were more positive than the responses of non-workers and non-suppliers (Figure 71).

Figure 71: Impact on the living environment by – comparison by employment and suppliers



n=77

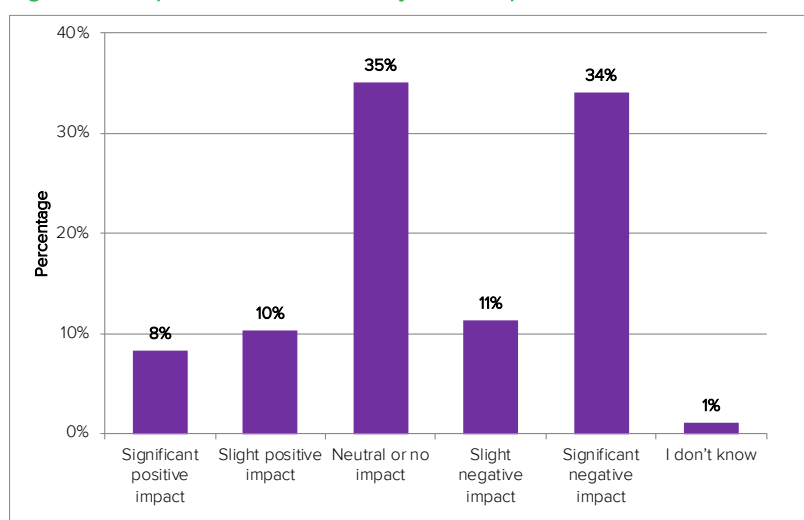
5.3 Visual amenity

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the visual amenity of the area in which you live?

5.3.1 All responses

45% of survey respondents provided a negative Likert scale rating in response to this question, compared with 18% of respondents who provided a positive rating.

Figure 72: Impact on visual amenity – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings, but not by a significant amount. Comments supported 32% of negative ratings, compared with 28% of positive ratings and 9% of neutral ratings.

All five comments relating to positive Likert scale ratings referred to rehabilitation of the landscape. Comments supporting negative Likert scale ratings focussed on the negative visual impact of the mines.

Positive comment

"Continued remediation north will provide an attractive western back-drop to Muswellbrook."

Negative comment

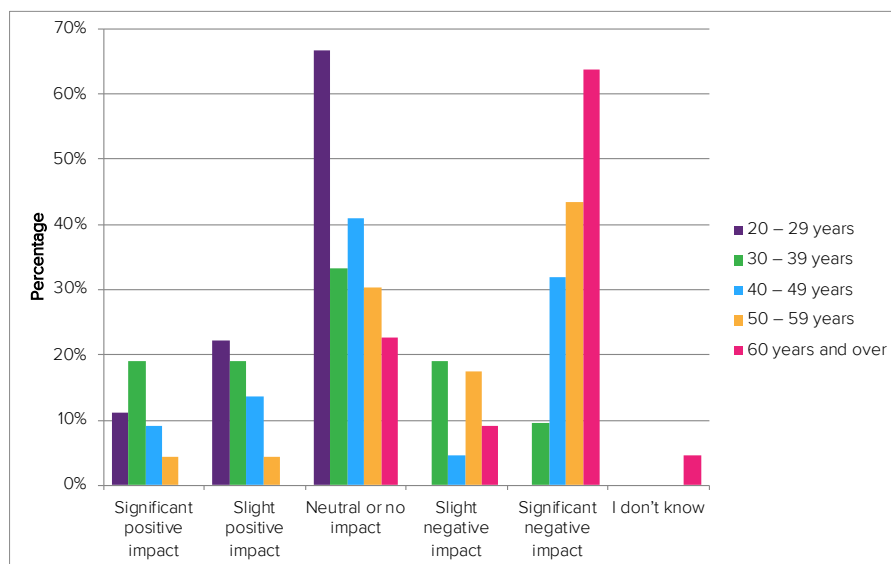
"The Hunter Valley looks like a moonscape because of mines. Mount Pleasant increasing its footprint will just exacerbate this."

5.3.2 Key differences across demographics

Age

Figure 73 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 73: Impact on visual amenity – comparison by age

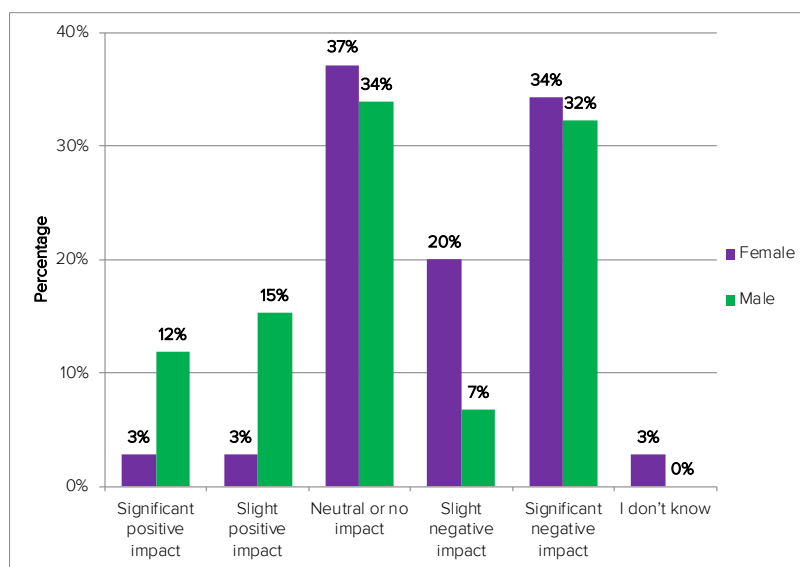


n=97

Gender

27% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 6% of female survey respondents (Figure 74).

Figure 74: Impact on visual amenity – comparison by gender

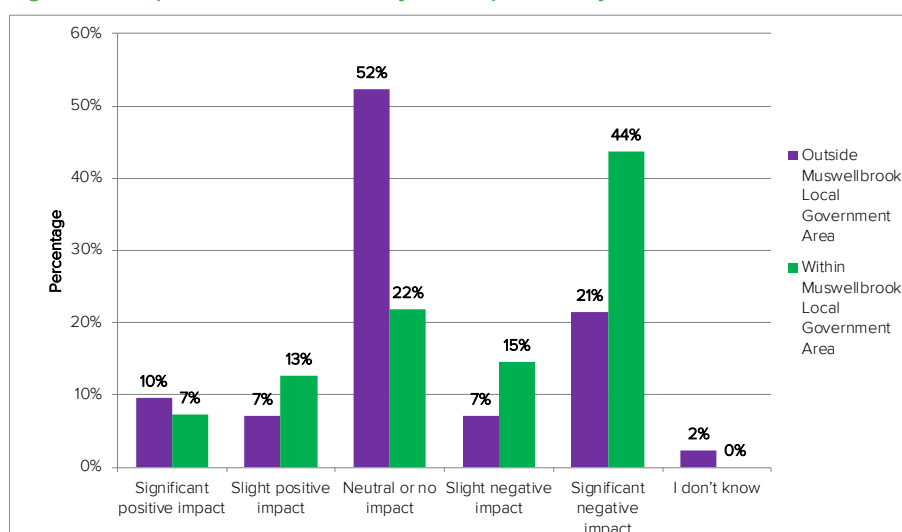


n=94

Geography

The majority of survey responses for people living within the Muswellbrook Shire Council Local Government Area were negative and the majority for those living outside the Area was neutral or no impact (Figure 75).

Figure 75: Impact on visual amenity – comparison by Local Government Area

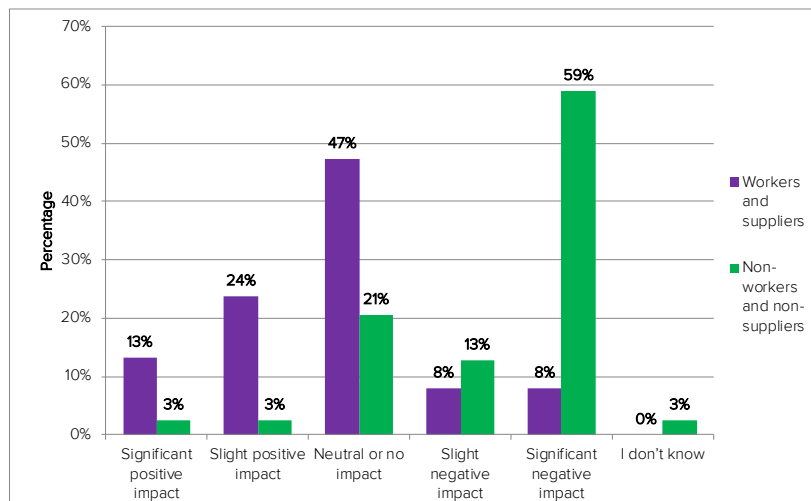


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were more positive than the responses of non-workers and non-suppliers (Figure 76).

Figure 76: Impact on visual amenity by – comparison by employment and suppliers



n=77

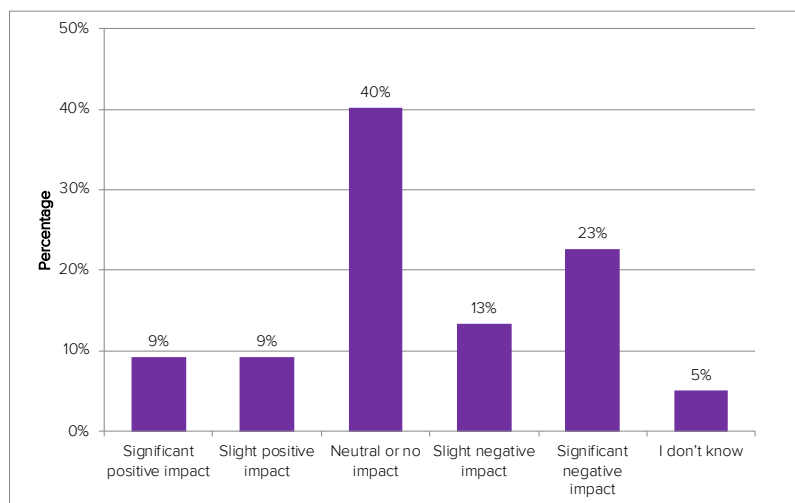
5.4 Access

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on access within the area in which you currently live?

5.4.1 All responses

40% of survey respondents provided a neutral Likert scale rating in response to this question, compared with 36% of respondents who provided a negative rating.

Figure 77: Impact on access – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 54% of negative ratings, compared with 6% of positive ratings and 5% of neutral ratings.

One comment supported a positive Likert scale rating, regarding investment in the local road network. The comment suggests funding could be increased but is unclear. An example neutral comment with greater clarity has been used below.

Around half of comments supporting negative Likert scale ratings in response to this question, focus on traffic impacts and road works.

Neutral comment

“The Mount Pleasant Operation to my knowledge has had no impact on access to road, rail - public transport, public transport and parking and I do not believe that the Mount Pleasant Optimisation Project would have any impact on transport systems.”

Negative comment

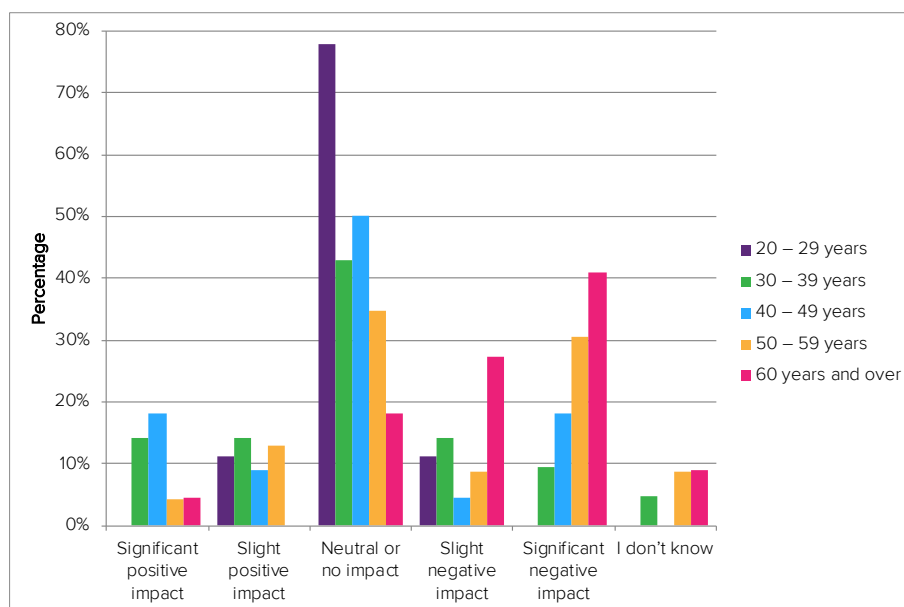
“More cars on New England Highway at peak times causing more problems than there already are.”

5.4.2 Key differences across demographics

Age

Figure 78 shows the survey respondents’ Likert scale ratings across the different age groups.

Figure 78: Impact on access – comparison by age

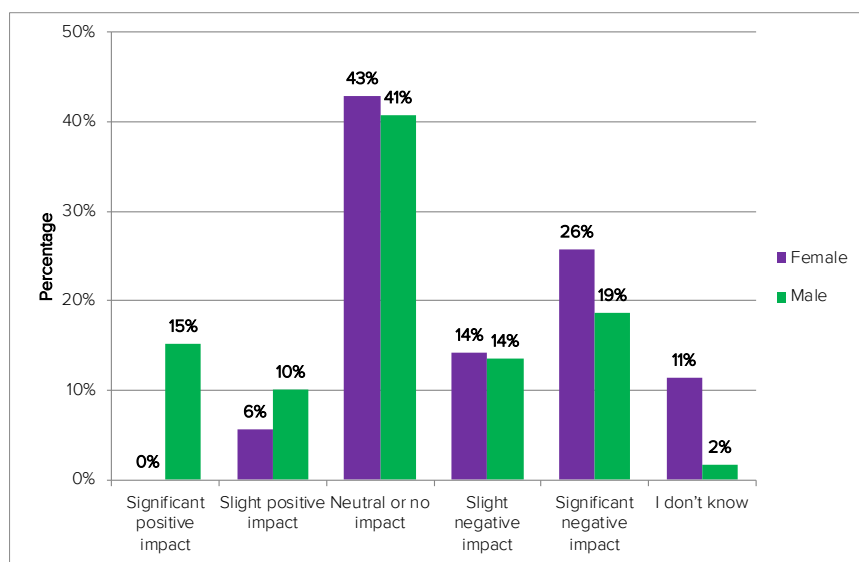


n=97

Gender

40% of female survey respondents provided negative Likert scale ratings in response to this question, compared with 33% of male survey respondents (Figure 79).

Figure 79: Impact on access – comparison by gender

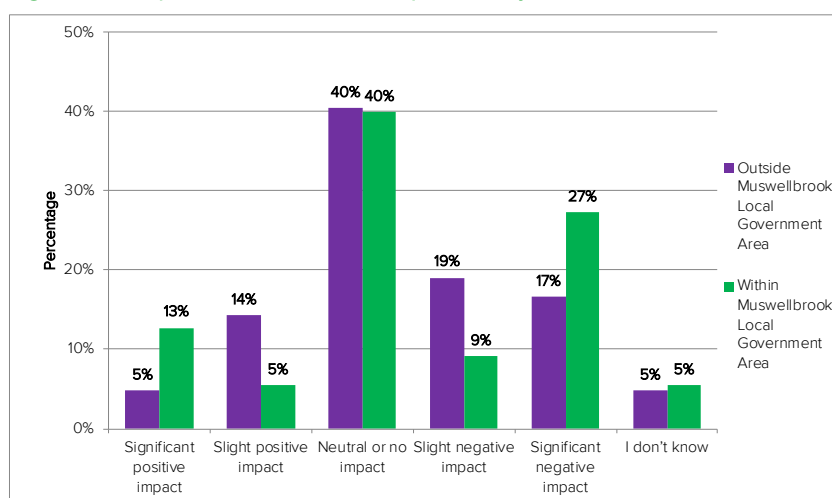


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 80.

Figure 80: Impact on access – comparison by Local Government Area

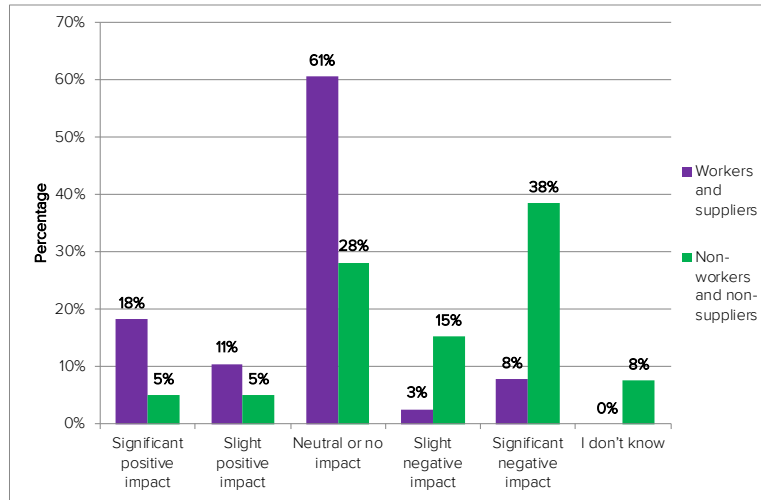


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were more positive than the responses of non-workers and non-suppliers (Figure 81).

Figure 81: Impact on access by – comparison by employment and suppliers



n=77

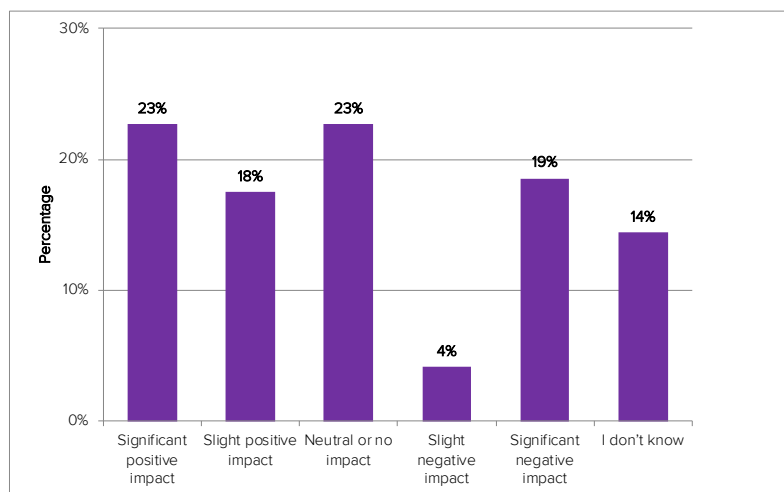
5.5 Housing

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on housing within the area in which you currently live?

5.5.1 All responses

41% of survey respondents provided a positive Likert scale rating in response to this question, compared with 23% of respondents who provided a negative Likert scale rating (Figure 82).

Figure 82: Impact on housing – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 55% of negative ratings, compared with 13% of positive ratings and 14% of neutral ratings.

Comments supporting positive Likert scale ratings link a healthy housing market to a healthy economy.

67% of comments supporting negative Likert scale ratings focus on high rental prices and short supply of housing. Other comments indicate the sale value of properties is negatively affected by the mine.

Some of the negative comments detail a complex picture whereby rental prices have risen, but house values are depressed or difficult to sell, due to the mines. 27% of comments discuss the transient nature of the local population.

Positive comment

“Further construction and operational jobs will create increased demand for accommodation. This is great for the economy.”

Negative comment

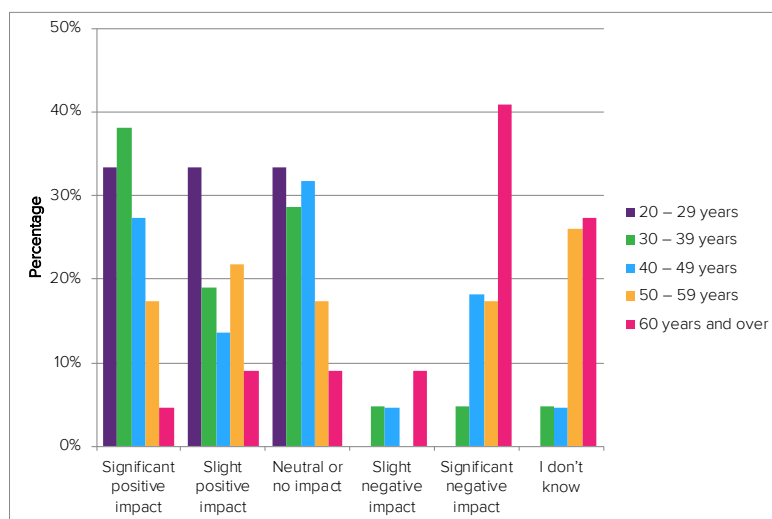
“Rental prices up, house prices down, eyesore coal mine facing town.”

5.5.2 Key differences across demographics

Age

Figure 83 shows the survey respondents’ Likert scale ratings across the different age groups.

Figure 83: Impact on housing – comparison by age

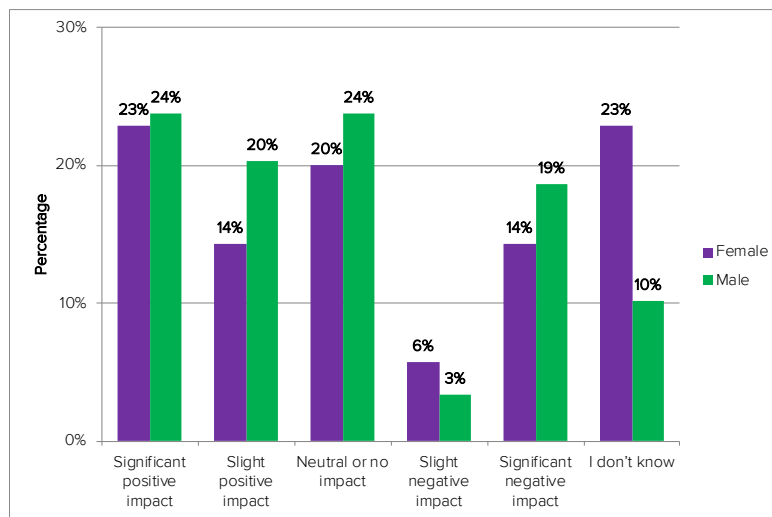


n=97

Gender

In response to this question, male survey respondents gave somewhat more positive Likert scale ratings than female survey respondents, a larger proportion of whom indicated ‘I don’t know’ than male respondents (Figure 84).

Figure 84: Impact on housing – comparison by gender

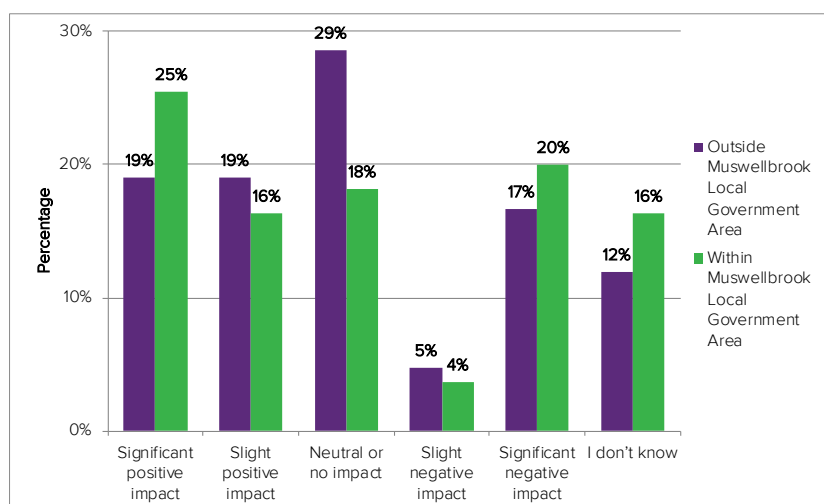


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 85.

Figure 85: Impact on housing – comparison by Local Government Area

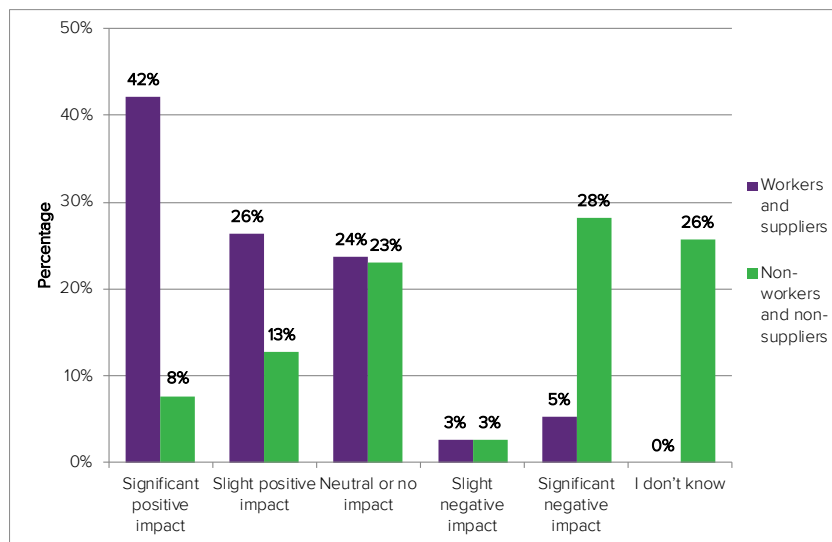


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were more positive than the responses of non-workers and non-suppliers (Figure 86).

Figure 86: Impact on housing by – comparison by employment and suppliers



n=77

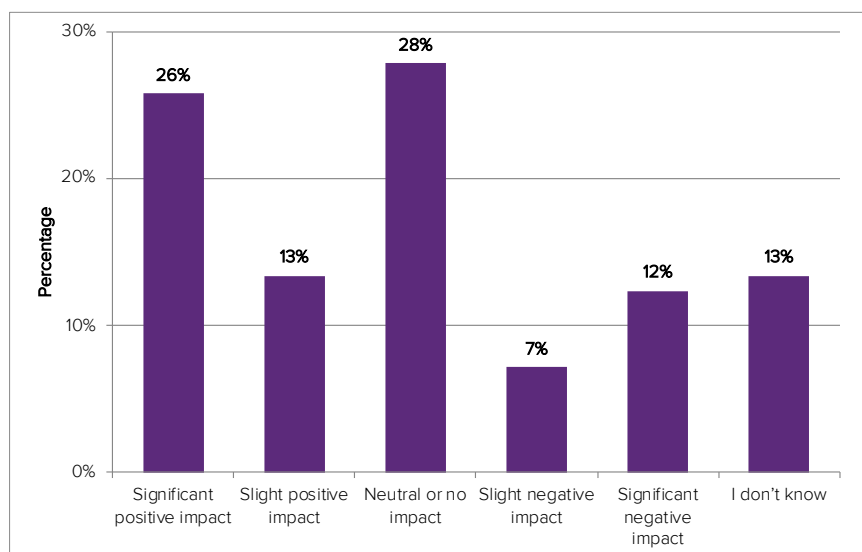
5.6 Community Services

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on community services within the area in which you currently live?

5.6.1 All responses

39% of survey respondents provided a positive Likert scale rating in response to this question, compared with 20% of survey respondents who provided a negative rating (Figure 87).

Figure 87: Impact on community services – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 47% of negative ratings, compared with 8% of positive ratings and 11% of neutral ratings.

Comments supporting positive Likert scale ratings link a healthy economy with community services.

Comments supporting negative Likert scale ratings focus on the additional pressure to community services and the increased costs.

Positive comment

"More jobs means a better local economy and increase in community services."

Negative comment

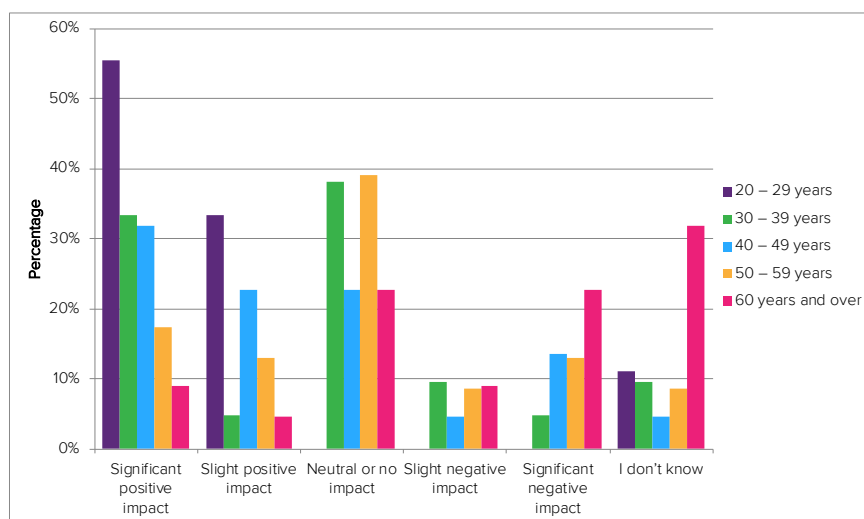
"More stress on local services."

5.6.2 Key differences across demographics

Age

Figure 88 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 88: Impact on community services – comparison by age

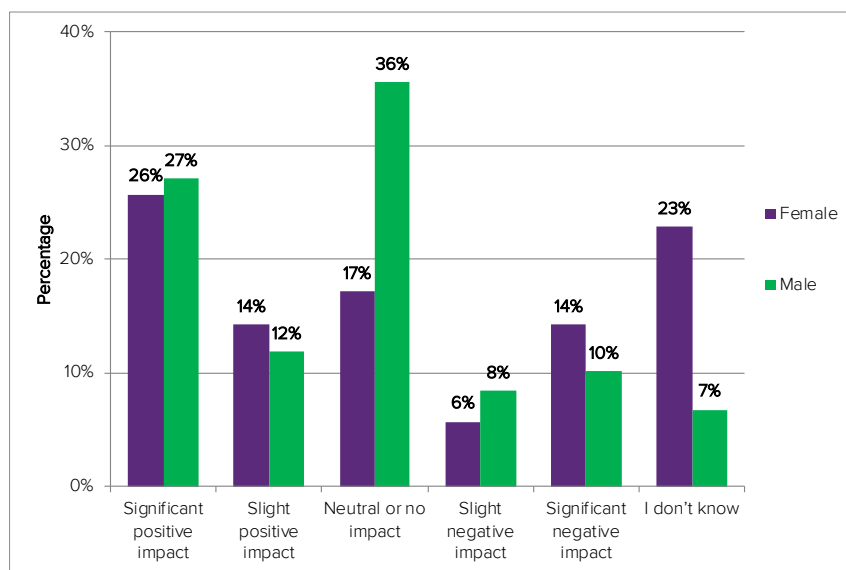


n=97

Gender

36% of male survey respondents provided a neutral Likert scale rating to this question, compared with 17% of female survey respondents. 23% of female survey respondents indicated 'I don't know' to this question, compared with 7% of male survey respondents (Figure 89).

Figure 89: Impact on community services – comparison by gender

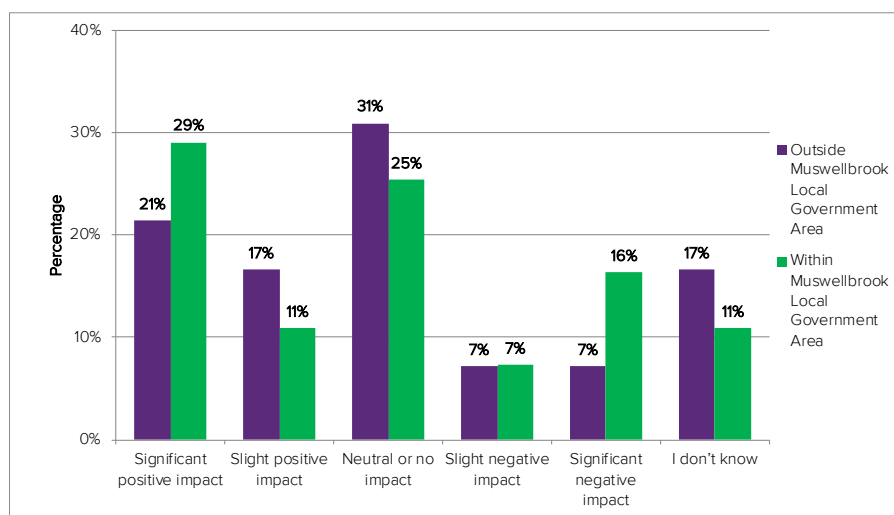


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 90.

Figure 90: Impact on community services – comparison by Local Government Area

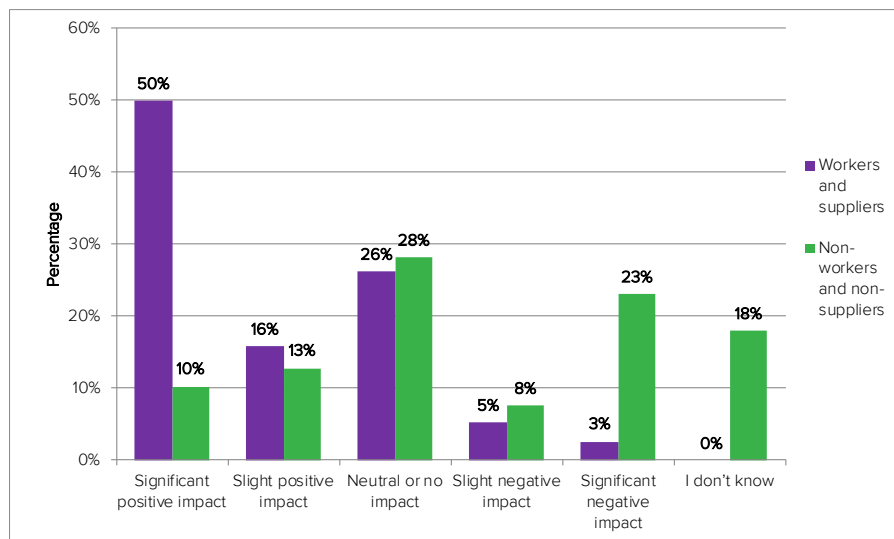


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were more positive than the responses of non-workers and non-suppliers (Figure 91).

Figure 91: Impact on community services by – comparison by employment and suppliers



n=77

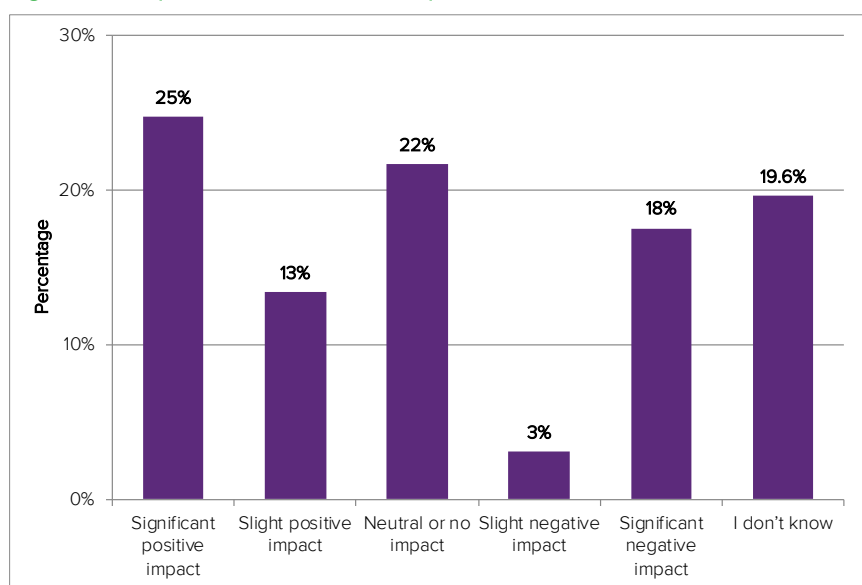
5.7 Culture

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the culture of people living within your area?

5.7.1 All responses

38% of survey respondents provided a positive Likert scale rating in response to this question, compared with 21% of respondents who provided a negative rating. At 20%, a relatively high number of survey respondents have indicated 'I don't know' (Figure 92).

Figure 92: Impact on culture – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 45% of negative ratings, compared with 11% of positive ratings and 21% where 'I don't know' was indicated. No supporting comments were provided for neutral ratings.

Comments supporting positive Likert scale ratings focus on the mine's support for Aboriginal communities. One comment notes their participation in the Aboriginal Community Development Fund.

Comments supporting negative Likert scale ratings focus on a range of issues, primarily around the destruction of the natural environment.

Comments where 'I don't know' was indicated are mixed, with three indicating the mine could have a negative effect and one indicating the mine could have a positive effect.

Positive comment

"The Mount Pleasant Operation has provided a significant level of support promote culture within the local community. The Mount Pleasant Operation has actively participated in the ACDF and provided both monetary and support to a range of projects, local artists as well as supporting local Aboriginal businesses through its supply chain. With the Mount Pleasant Optimisation Project this would mean a continuation of this support and promotion of culture within the local community."

Negative comment

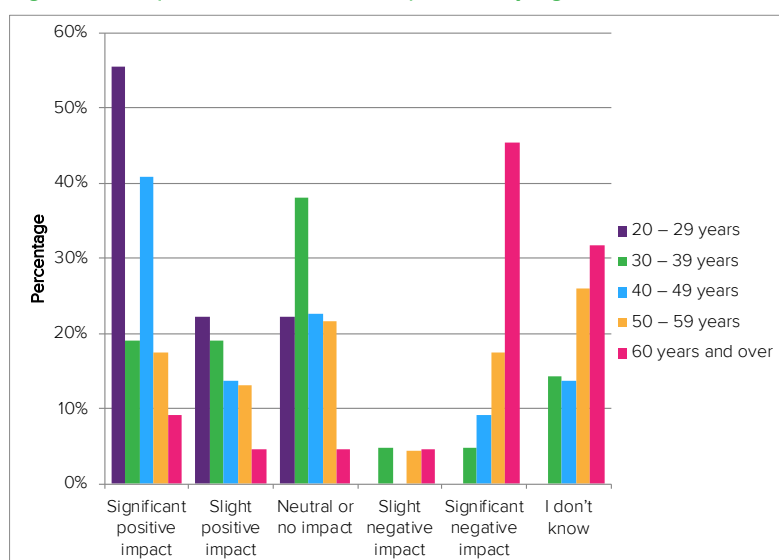
"This needs much more investigation by anthropologists and archaeologists and local aboriginal communities."

5.7.2 Key differences across demographics

Age

Figure 93 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 93: Impact on culture – comparison by age

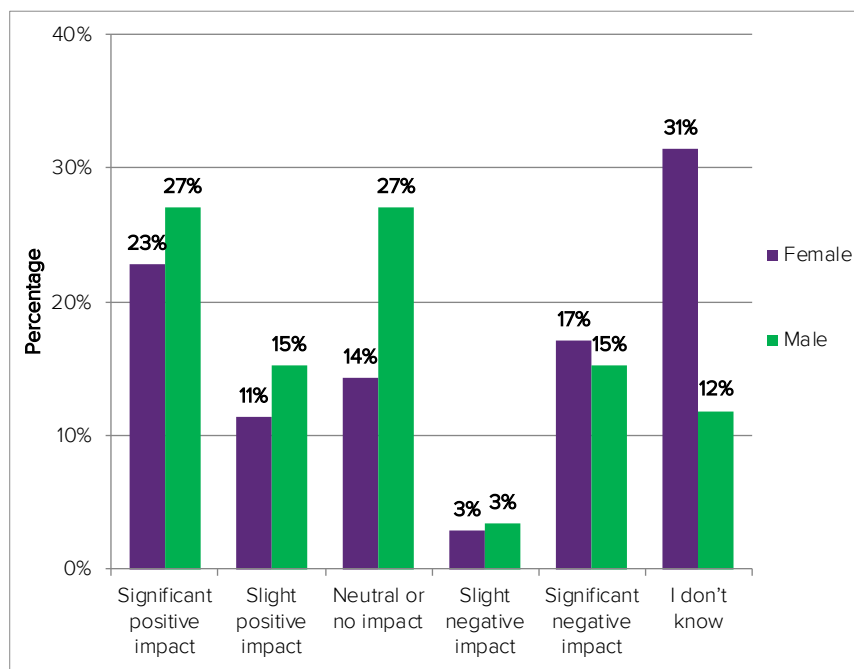


n=97

Gender

Positive and negative Likert scale ratings from male and female survey respondents were broadly similar, however 31% of female respondents indicated 'I don't know', compared with 12% of male respondents (Figure 94).

Figure 94: Impact on culture – comparison by gender

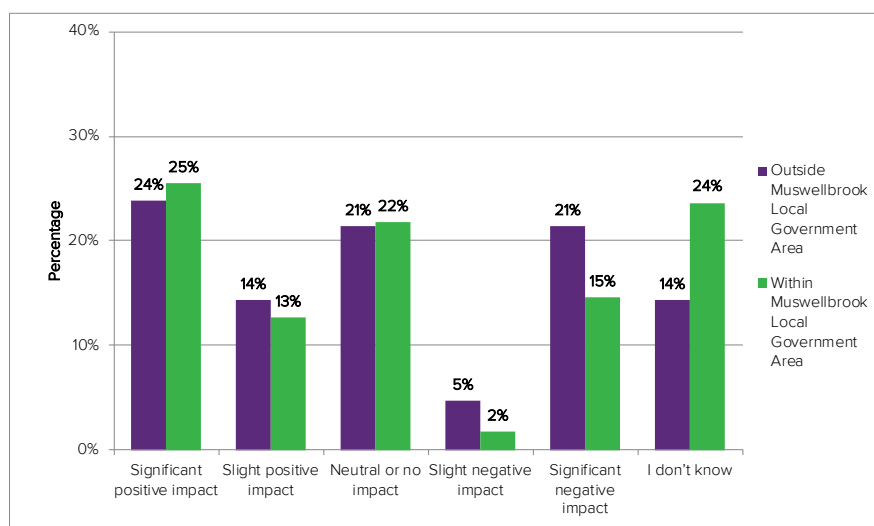


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 95.

Figure 95: Impact on culture – comparison by Local Government Area

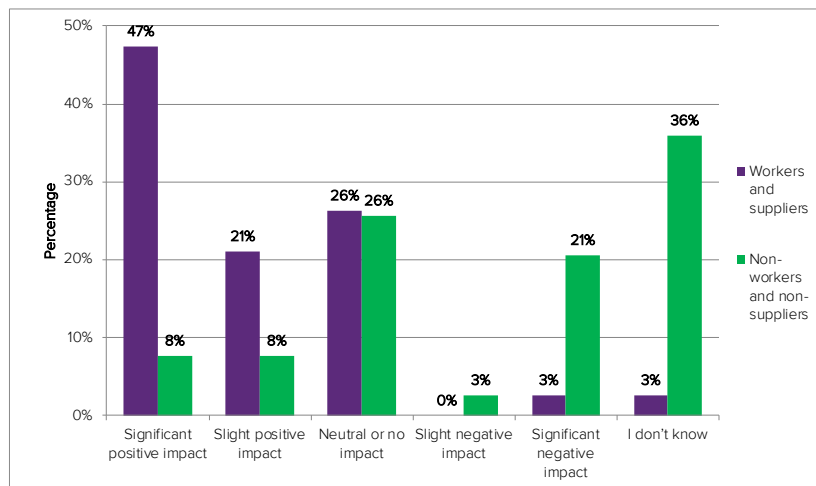


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were significantly more positive than the responses of non-workers and non-suppliers (Figure 96).

Figure 96: Impact on culture by – comparison by employment and suppliers



n=77

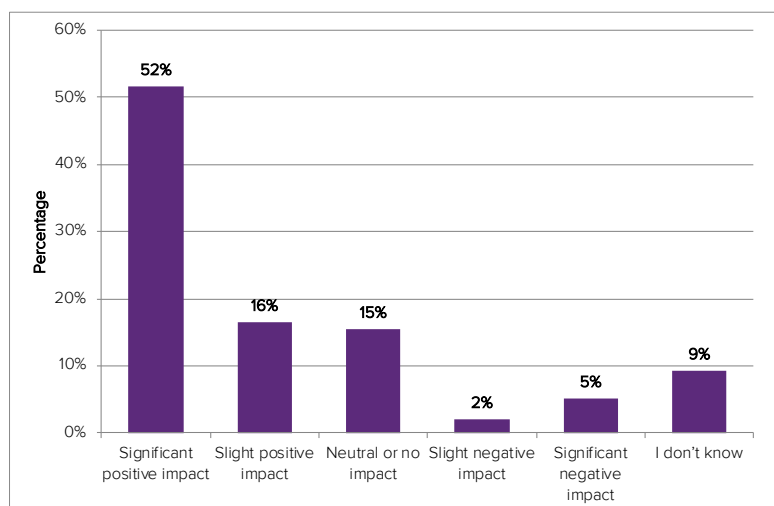
5.8 The local economy

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the economy within the area in which you currently live?

5.8.1 All responses

68% of survey respondents provided a positive Likert scale rating in response to this question, compared with 7% of survey respondents who provided a negative rating.

Figure 97: Impact on the local economy – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 43% of negative ratings, compared with 15% of positive ratings. Comments for neutral ratings were relatively high, at 40%.

Comments supporting positive Likert scale ratings focus on the mine's benefit to the local economy, through employment and use of local services.

Three comments supported negative Likert scale ratings, focussing on the lack of economic benefit to the local area and the negative effects on other economic activities such as agriculture.

Comments supporting neutral Likert scale ratings were mixed, but overall negative in content, focussing on the lack of benefit to the local economy.

Positive comment

"if the expansion goes ahead and more local people are employed it would have a positive impact of more locals spending within the town."

Negative comment

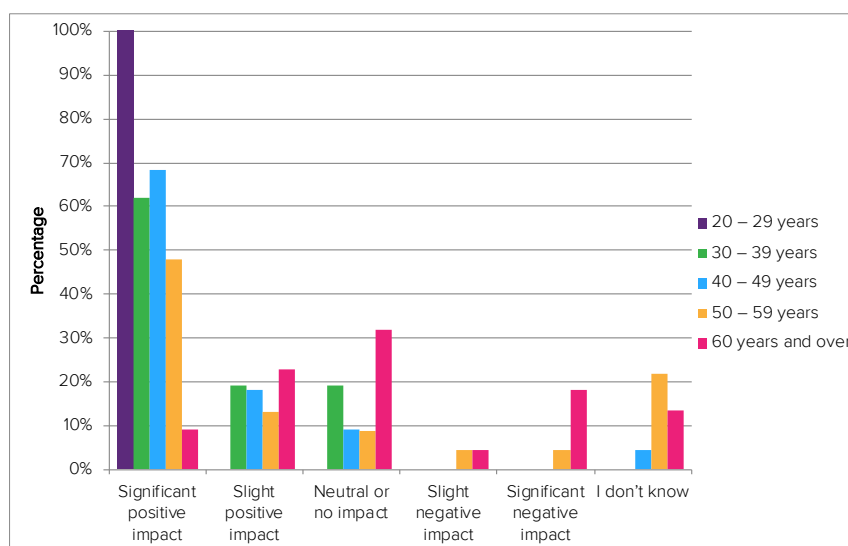
"Employees and contractors don't generally reside locally so don't spend their money locally."

5.8.2 Key differences across demographics

Age

Figure 98 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 98: Impact on the local economy – comparison by age

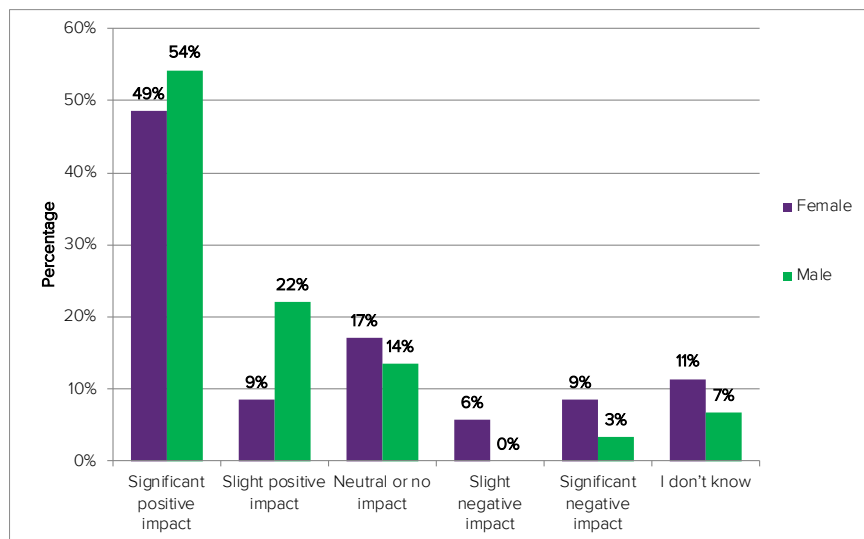


n=97

Gender

76% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 58% of female respondents. A higher proportion of female respondents also provided negative ratings, compared to male respondents (Figure 99).

Figure 99: Impact on the local economy – comparison by gender

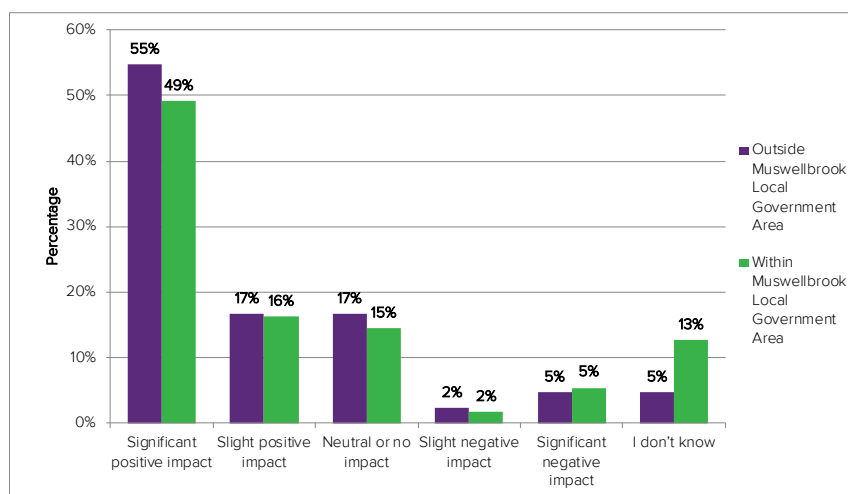


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 100.

Figure 100: Impact on the local economy – comparison by Local Government Area

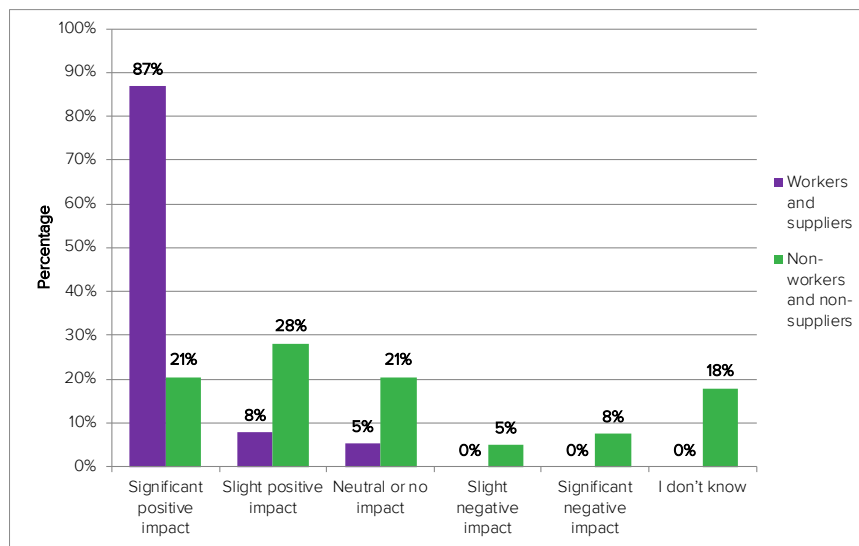


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were significantly more positive than the responses of non-workers and non-suppliers (Figure 101).

Figure 101: Impact on the local economy by – comparison by employment and suppliers



n=77

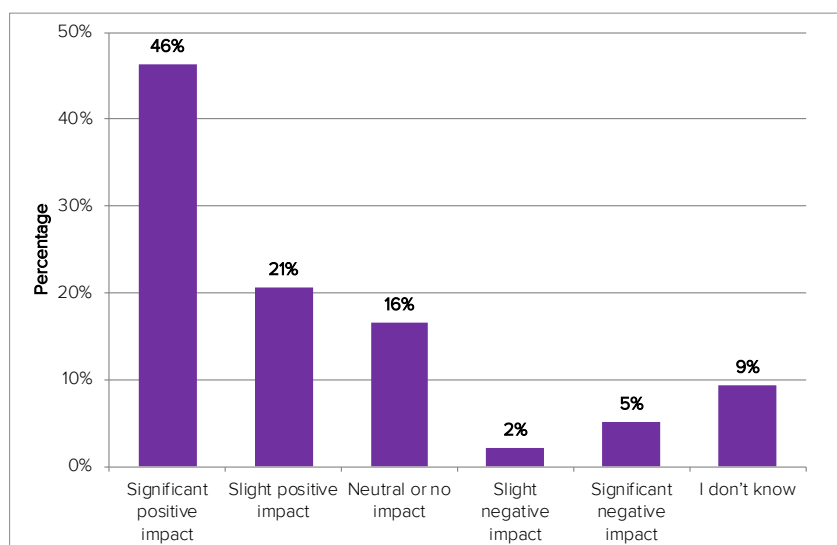
5.9 Employment

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the employment within the area in which you currently live?

5.9.1 All responses

67% of survey respondents provided a positive Likert scale rating in response to this question, compared with 7% of survey respondents who provided a negative rating (Figure 102).

Figure 102: Impact on employment – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings, however there were a relatively small number of negative ratings in response to this question. Comments

supported 43% of negative ratings, compared with 15% of positive ratings. There were a relatively high proportion of comments supporting neutral ratings or where 'I don't know' was indicated, at 44% and 56%.

Comments supporting positive Likert scale ratings overwhelmingly focus on the mine's benefit to the local economy, similar to comments for the question about Mount Pleasant's impact on the economy. Comments focus on the need for jobs to go to local people.

Comments supporting negative Likert scale ratings describe a variety of concerns, including non-resident workers and the disruptive effect of the mine on the local economy.

Comments supporting neutral Likert scale ratings and where 'I don't know' was indicated focus on the need for local jobs over out of town workers.

Positive comment

"More local jobs is a big plus."

Negative comment

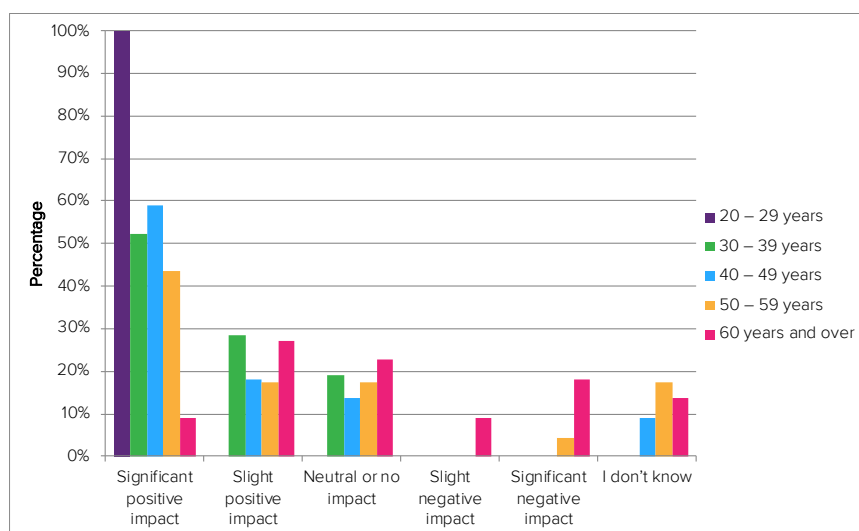
"Locals find it hard to provide wages equal to mines so it is hard to get mechanics etc."

5.9.2 Key differences across demographics

Age

Figure 103 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 103: Impact on employment – comparison by age

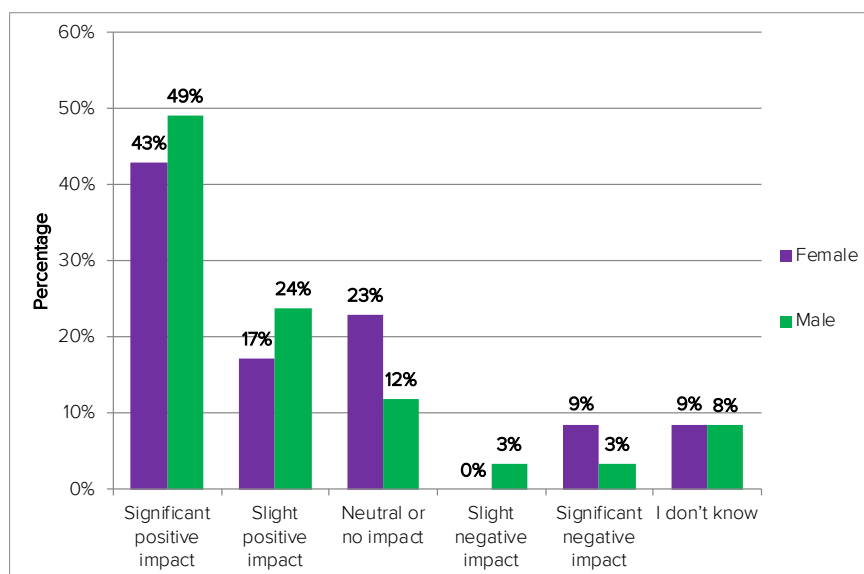


n=97

Gender

73% of male survey respondents provided positive Likert scale ratings in response to this question, compared with 60% of female respondents. A higher proportion of female respondents also provided negative ratings, compared with male respondents (Figure 104).

Figure 104: Impact on employment – comparison by gender

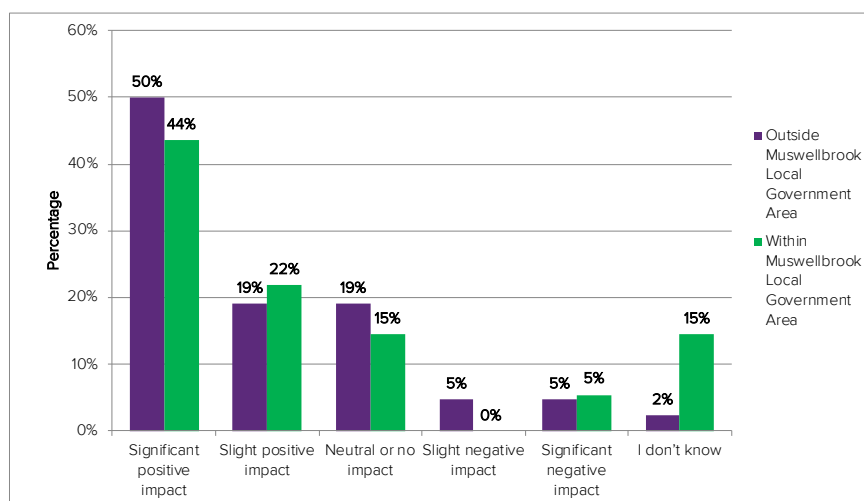


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 105.

Figure 105: Impact on employment – comparison by Local Government Area

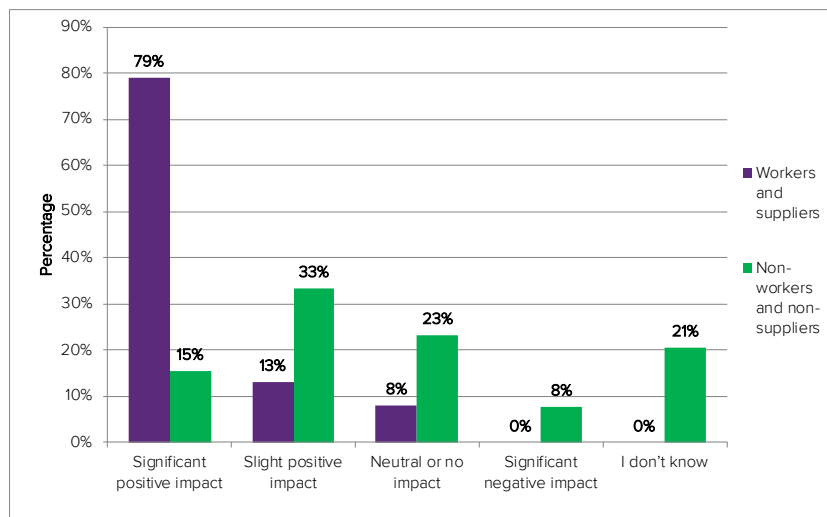


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were significantly more positive than the responses of non-workers and non-suppliers (Figure 106).

Figure 106: Impact on employment by – comparison by employment and suppliers



n=77

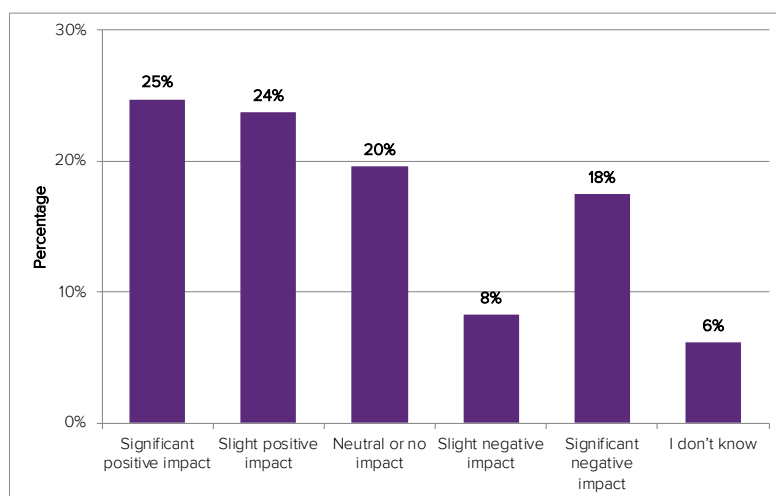
5.10 Community cohesion

Survey question: If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the community cohesion within the area in which you currently live?

5.10.1 All responses

49% of survey respondents provided a positive Likert scale rating in response to this question, compared with 28% of respondents who provided a negative rating (Figure 107).

Figure 107: Impact on community cohesion – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 44% of negative ratings, compared with 6% of positive ratings and 5% of neutral ratings. Three comments support positive Likert scale ratings, with one key comment focusing on the mine's

engagement with the local community and community groups. Comments supporting negative Likert scale ratings are mixed in focus. Key themes are community division and a depopulated area.

Positive comment

"I believe the Mount Pleasant Optimisation Project will have a significant positive impact on social cohesion in the community, for example through an indirect capacity by providing support to the local community through community organisations such as the PCYC or supporting local sporting teams. In turn these organisation[s] strengthen the social cohesion of the community."

Negative comment

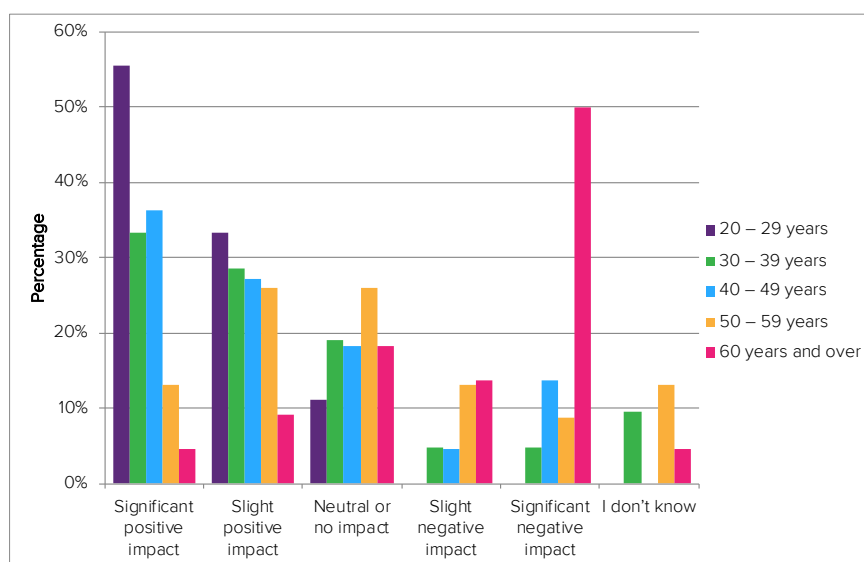
"Mining fractures a community between the monetary beneficiaries and the dust/noise/air/cost impacted. It creates income and social disparity and violence."

5.10.2 Key differences across demographics

Age

Figure 108 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 108: Impact on community cohesion – comparison by age

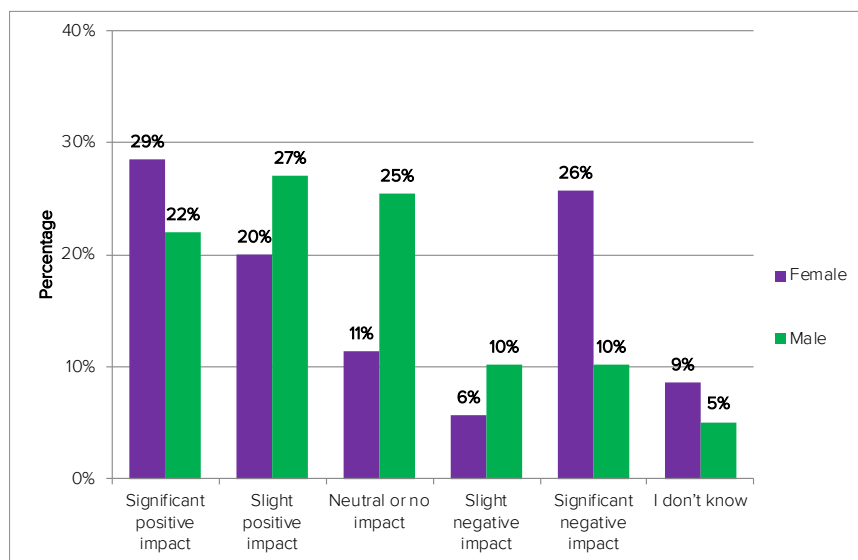


n=97

Gender

Figure 109 shows the survey respondents Likert scale ratings across the different genders.

Figure 109: Impact on community cohesion – comparison by gender

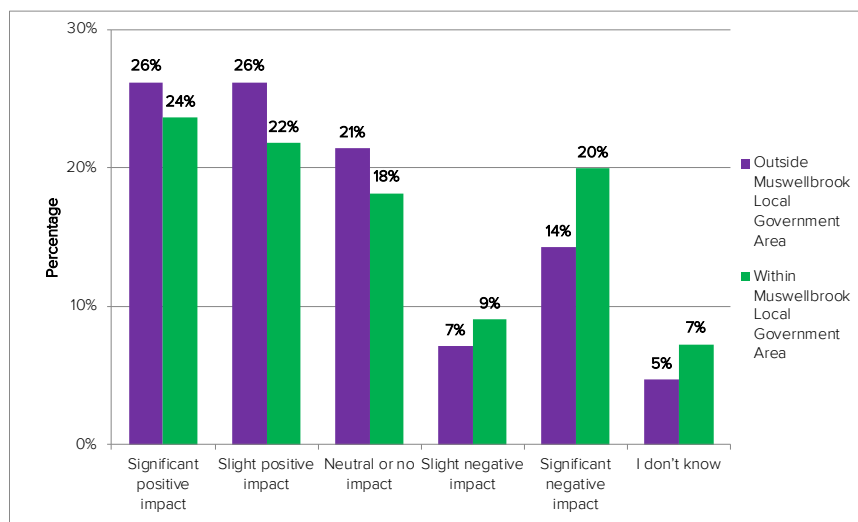


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 110.

Figure 110: Impact on community cohesion – comparison by Local Government Area

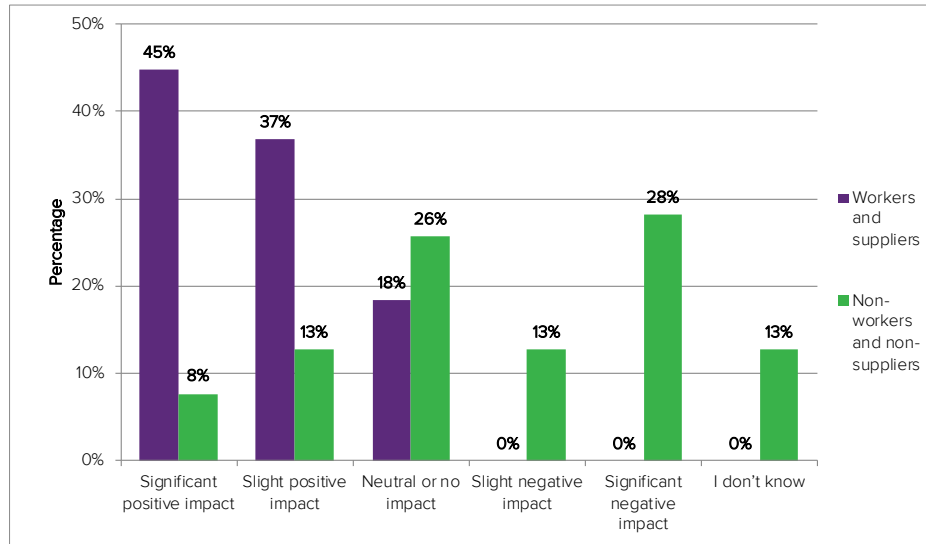


n=97

Workers and suppliers

Survey respondents who are either workers at, or suppliers to Mount Pleasant, responded to this question with Likert scale ratings that were significantly more positive than the responses of non-workers and non-suppliers.

Figure 111: Impact on community cohesion by – comparison by workers and suppliers



n=77

6 Survey results - impacts of the Mount Pleasant Optimisation Project not proceeding

Using a Likert scale, survey respondents were asked to indicate, within the area in which they currently live, the degree of overall positive, neutral, or negative impact from the Mount Pleasant Optimisation Project not proceeding, on a variety of social, economic, and environmental outcomes.

Note that not everyone completed all survey questions. The single person under the age of 20 who completed the demographics questions did not complete the questions in this or the subsequent section of the survey, therefore there is no under 20 representation in any of the graphs

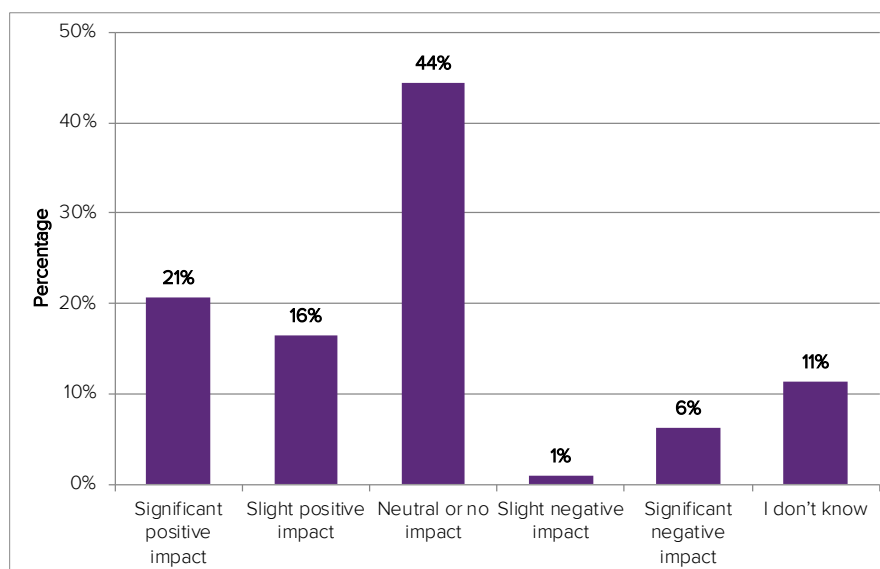
6.1 Water

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on water resources within the area in which you currently live?

6.1.1 All responses

37% of survey respondents provided a positive Likert scale rating in response to this question, compared with 7% of respondents who provided a negative Likert scale rating (Figure 112).

Figure 112: Impact on water – all responses



n=97

A somewhat higher proportion of comments were provided for positive Likert scale ratings. Comments supported 19% of positive ratings, compared with 14% of positive ratings and 2% of neutral ratings.

Comments supporting positive Likert scale ratings focus on more water being available for the community and environment.

One comment was provided in support of a negative Likert scale rating: “Could be significant. Unknown.” On review of this and other Likert ratings and comments from the survey respondent, they may have misunderstood this group of questions’ premise, being consideration of impacts relating to the project *not* proceeding. An example of a comment supporting a neutral rating is provided below in its place.

Positive comment

“Resources for local people will not be taken by mining.”

Neutral comment

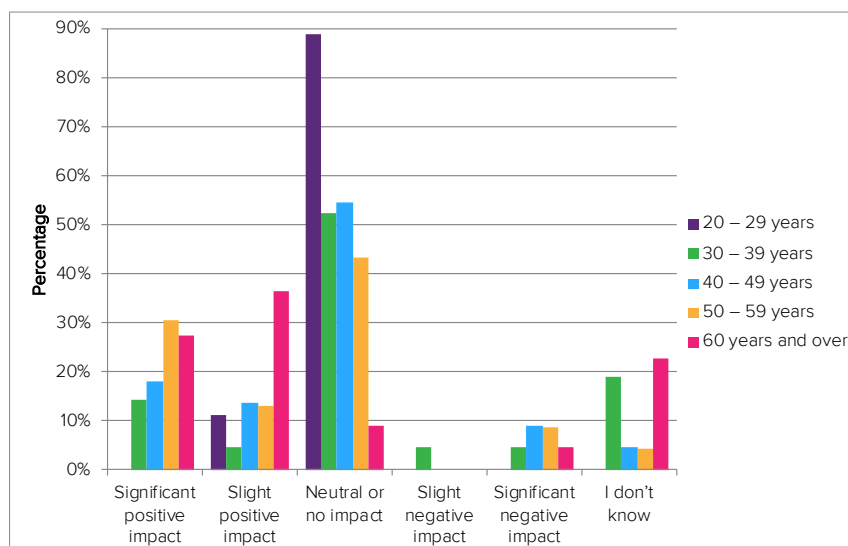
“If the project did not proceed, there would still be a need for water for rehabilitation and mine closure.”

6.1.2 Key differences across demographics

Age

Figure 113 shows the survey respondents’ Likert scale ratings across the different age groups.

Figure 113: Impact on water – comparison by age

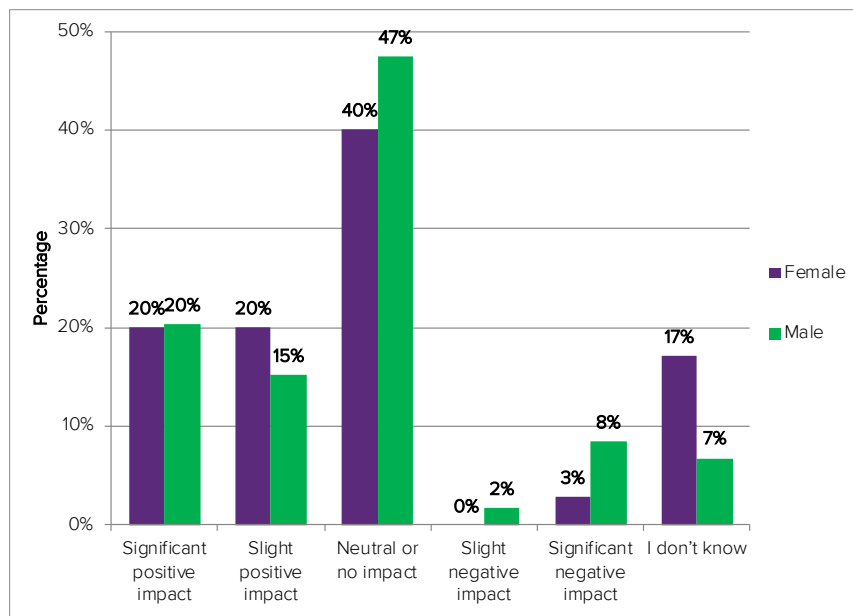


n=97

Gender

There is little difference between the responses to this question from male and female survey respondents. Female respondents are somewhat more likely to provide a positive Likert scale rating, compared to male respondents who are somewhat more likely to provide a negative rating (Figure 114).

Figure 114: Impact on water – comparison by gender

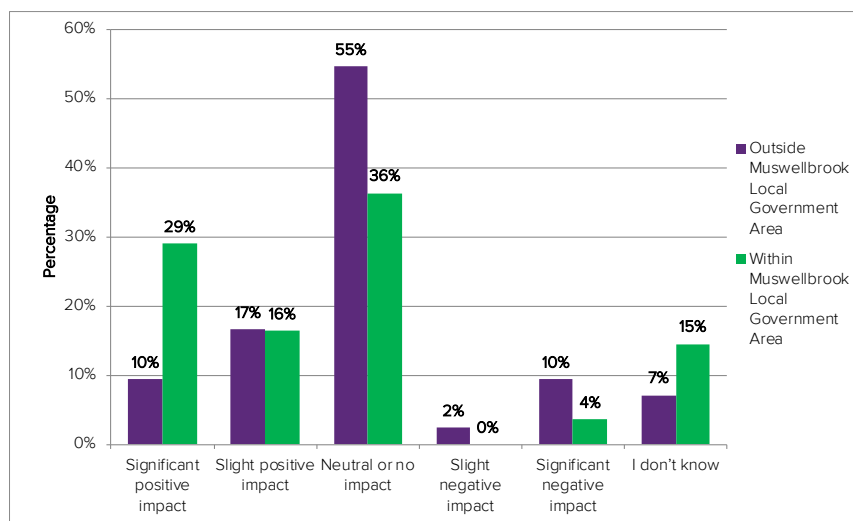


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 115.

Figure 115: Impact on water – comparison by Local Government Area

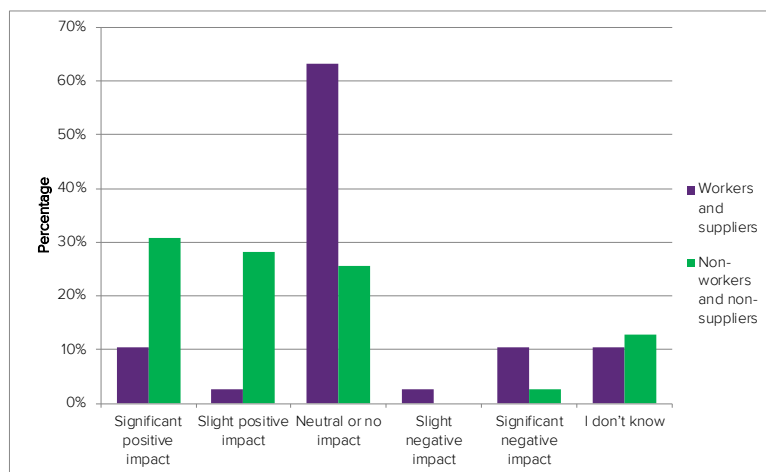


n=97

Workers and suppliers

59% of non-workers and non-suppliers responded to this question with positive Likert scale ratings, compared with 14% of workers and suppliers. 63% of workers and suppliers responded to this question with a neutral Likert scale rating, compared with 26% of non-workers and non-suppliers (Figure 116).

Figure 116: Impact on water by – comparison by workers and suppliers



n=77

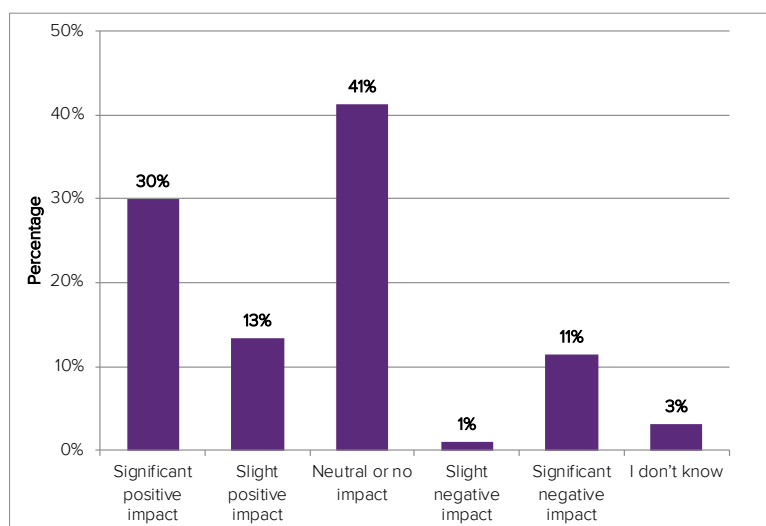
6.2 Quality of the living environment

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the quality of the living environment of the area in which you live?

6.2.1 All responses

43% of survey respondents provided a positive Likert scale rating in response to this question, compared with 12% of respondents who provided a negative response (Figure 117).

Figure 117: Impact on the living environment – all responses



n=97

As a proportion, supporting comments were mainly provided for positive Likert scale ratings. Comments supported 21% of positive ratings, compared with 8% of negative ratings and 5% of neutral ratings.

Comments supporting positive Likert scale ratings focus on the opportunity for environmental recovery and rehabilitation.

One comment supports a negative Likert scale rating, but focuses on economic impacts rather than the living environment.

Positive comment

“Less mining means a better quality of the living environment in the local area.”

Negative comment

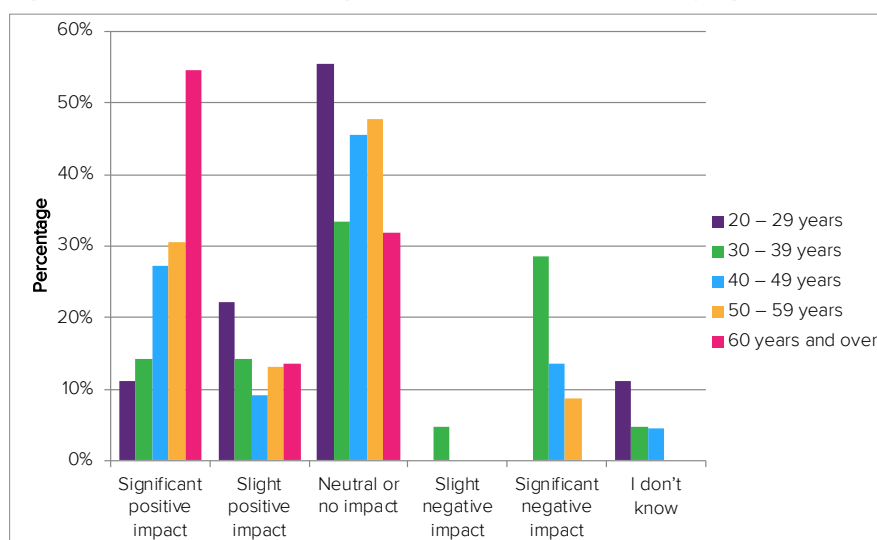
“Will limit dust but won’t stop it.”

6.2.2 Key differences across demographics

Age

Figure 118 shows the survey respondents’ Likert scale ratings across the different age groups.

Figure 118: Impact on the living environment – comparison by age

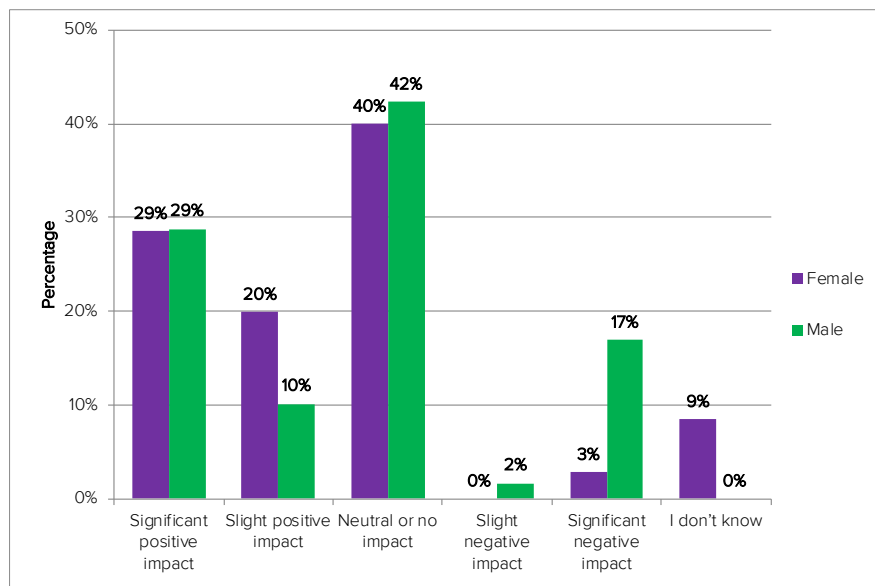


n=97

Gender

19% of male survey respondents provided negative Likert scale ratings in response this question, compared with 3% of female respondents (Figure 119).

Figure 119: Impact on the living environment – comparison by gender

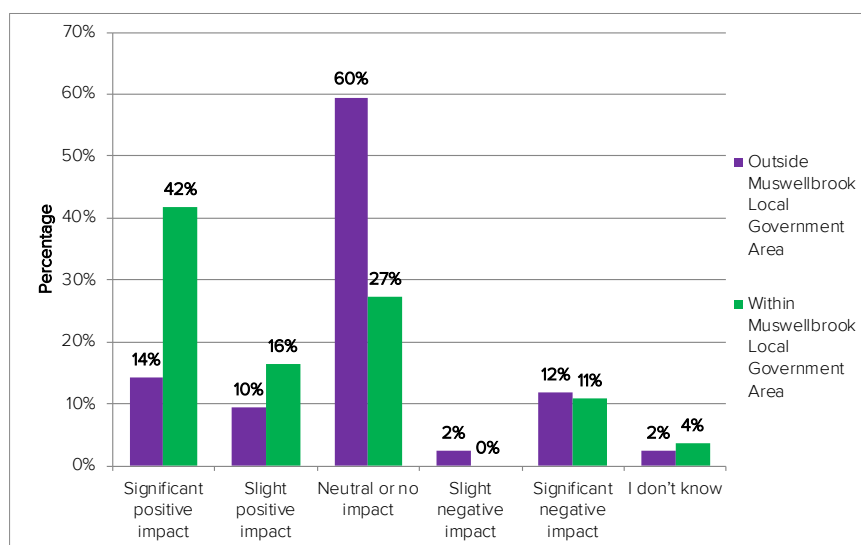


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 120.

Figure 120: Impact on the living environment – comparison by Local Government Area

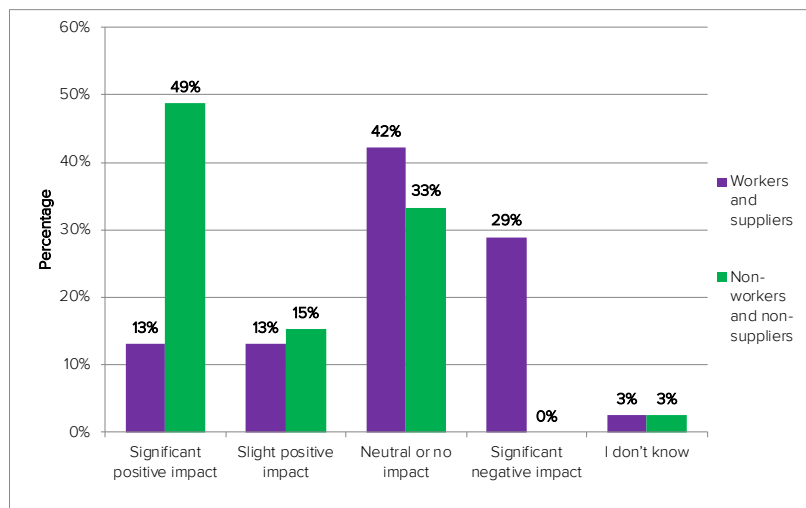


n=97

Workers and suppliers

64% of non-workers and non-suppliers responded to this question with positive Likert scale ratings, compared with 26% of workers and suppliers (Figure 121).

Figure 121: Impact on the living environment by – comparison by employment and suppliers



n=77

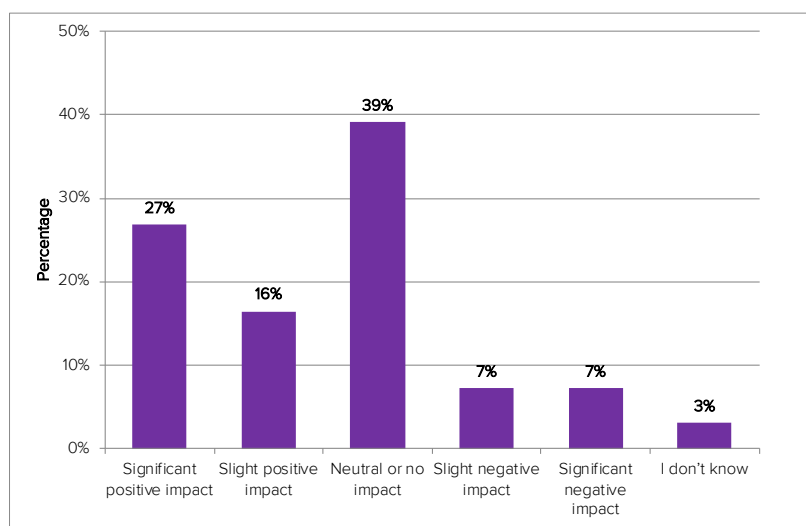
6.3 Visual amenity

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the visual amenity of the area in which you live?

6.3.1 All responses

43% of survey respondents provided a positive Likert scale rating in response to this question, compared with 14% of respondents who provided a positive rating (Figure 122).

Figure 122: Impact on visual amenity – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings, but not by a significant amount. Comments supported 29% of negative ratings, compared with 21% of positive ratings and 3% of neutral ratings.

56% of comments relating to positive Likert scale ratings referred to rehabilitation or restoration of the landscape. Comments supporting negative Likert scale ratings focussed on the negative visual impact of the mines.

Positive comment

"No coal stacks or overburdens, no ugly mine, no gaping poisonous holes."

Negative comment

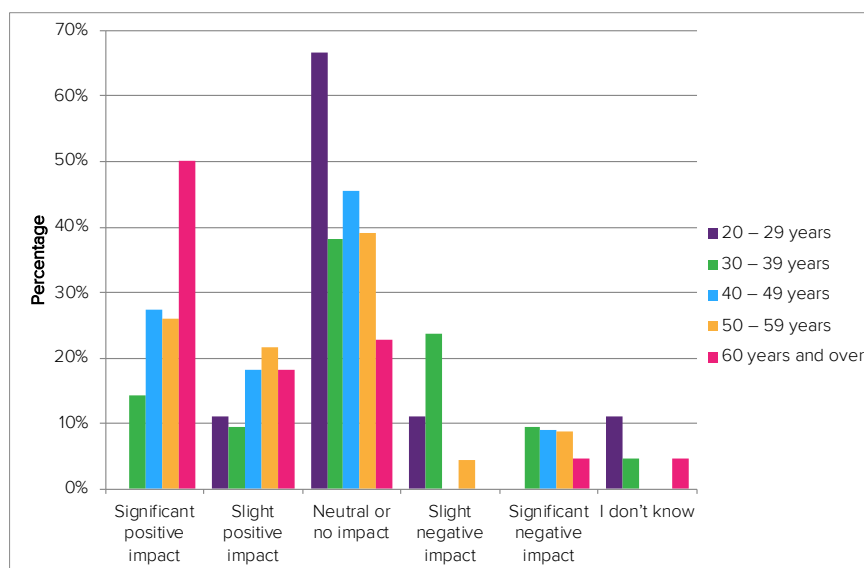
"If the Mount Pleasant Optimisation Project does not proceed; while the operation as it is would be rehabilitated there would be a negative impact as there would not be the opportunity to further improve the landscape and increase the quality of native habitat and vegetation at the site."

6.3.2 Key differences across demographics

Age

Figure 123 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 123: Impact on visual amenity – comparison by age

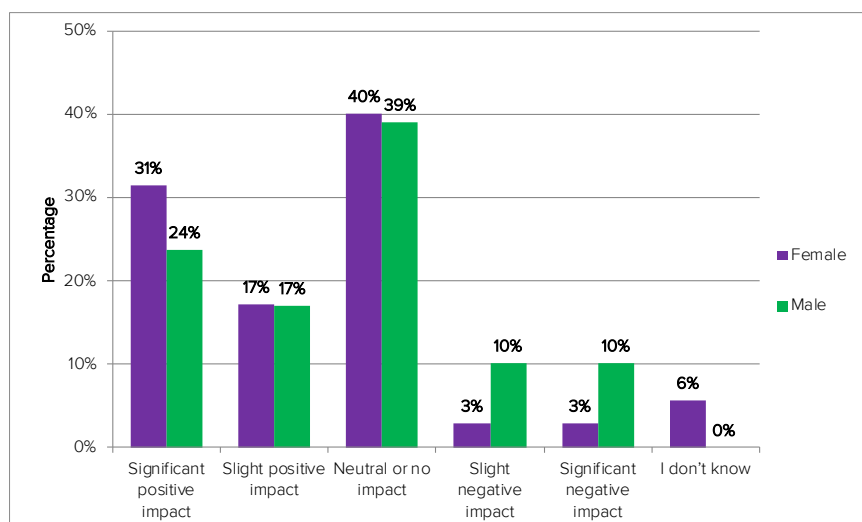


n=97

Gender

20% of male survey respondents provided negative Likert scale ratings in response to this question, compared with 6% of female respondents (Figure 124).

Figure 124: Impact on visual amenity – comparison by gender

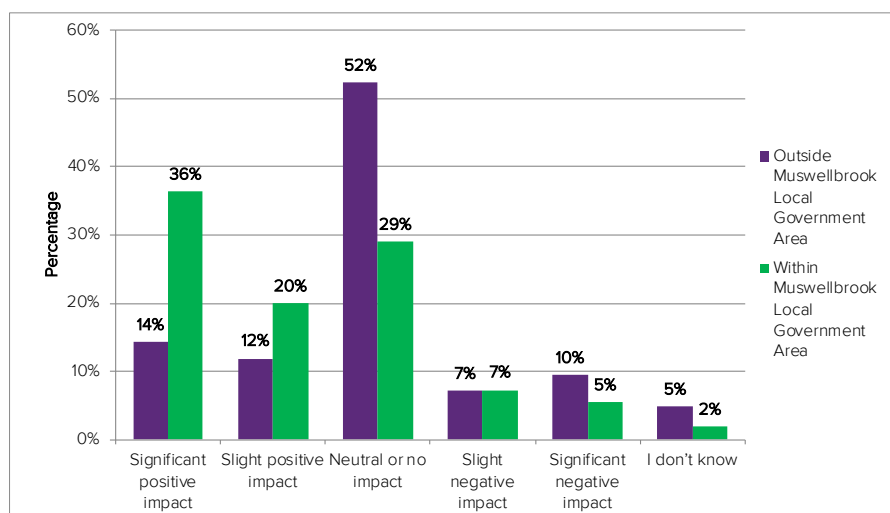


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 125.

Figure 125: Impact on visual amenity – comparison by Local Government Area

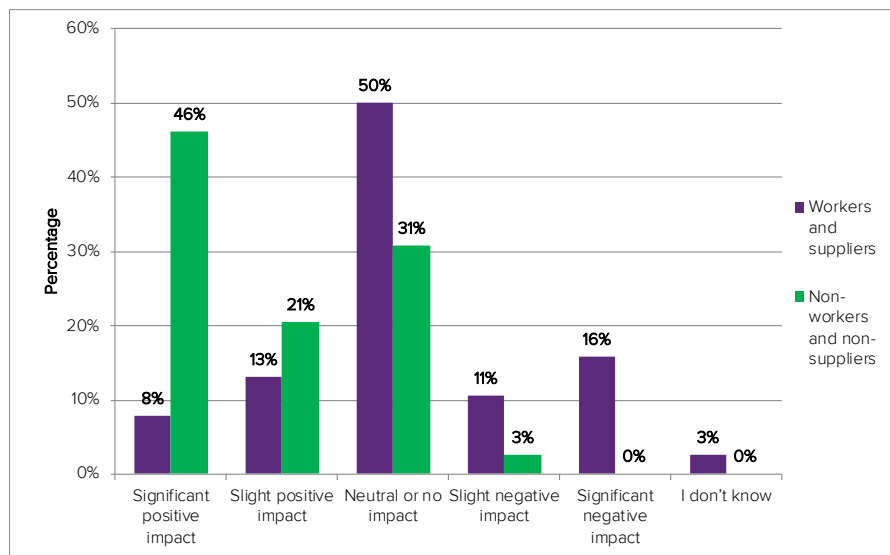


n=97

Workers and suppliers

67% of non-workers and non-suppliers responded to this question with positive Likert scale ratings, compared with 21% of workers and suppliers (Figure 126).

Figure 126: Impact on visual amenity by – comparison by employment and suppliers



n=77

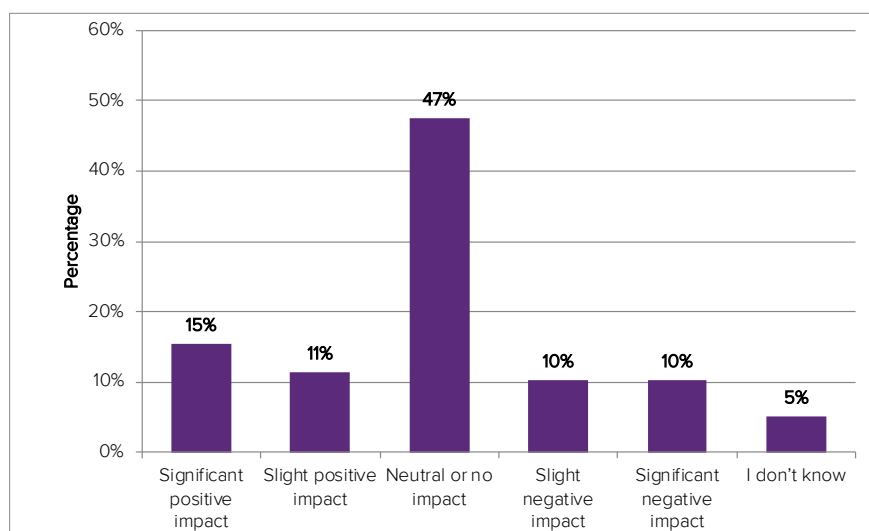
6.4 Access

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on access within the area in which you currently live?

6.4.1 All responses

26% of survey respondents provided a positive Likert scale rating in response to this question, compared with 20% of respondents who provided a positive rating. Neutral ratings were relatively high, at 47% (Figure 127).

Figure 127: Impact on access – all responses



n=97

There was no significant difference between the proportion of comments supporting negative Likert scale ratings and the proportion of comments supporting negative ratings. Comments supported 25% of negative ratings, compared with 23% of positive ratings. No comments were provided for neutral ratings.

Comments relating to positive Likert scale ratings focus on an expected reduction in traffic. Of three comments supporting negative Likert scale ratings, one key comment focuses on an expected reduction in maintenance.

Positive comment

"Less mine traffic in the local area."

Negative comment

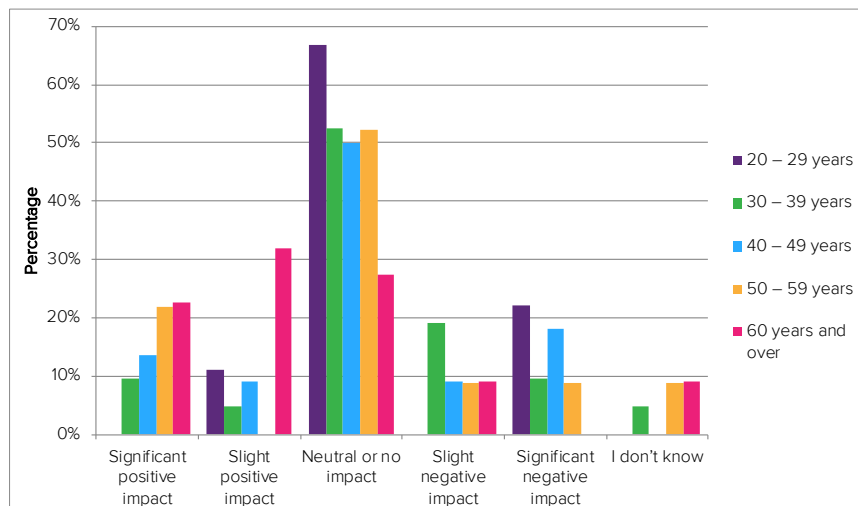
"Less maintenance of local roads."

6.4.2 Key differences across demographics

Age

Figure 128 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 128: Impact on access – comparison by age

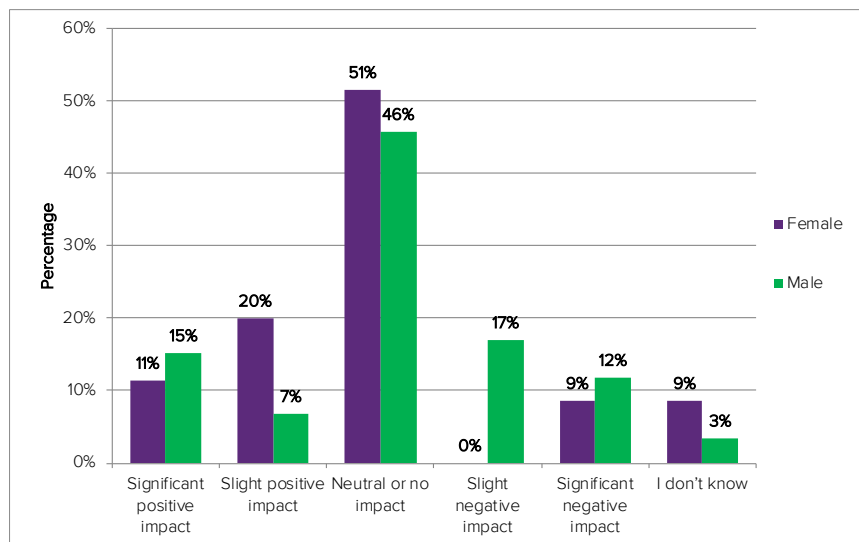


n=97

Gender

29% of male survey respondents provided negative Likert scale ratings in response to this question, compared with 9% of female respondents (Figure 129).

Figure 129: Impact on access – comparison by gender

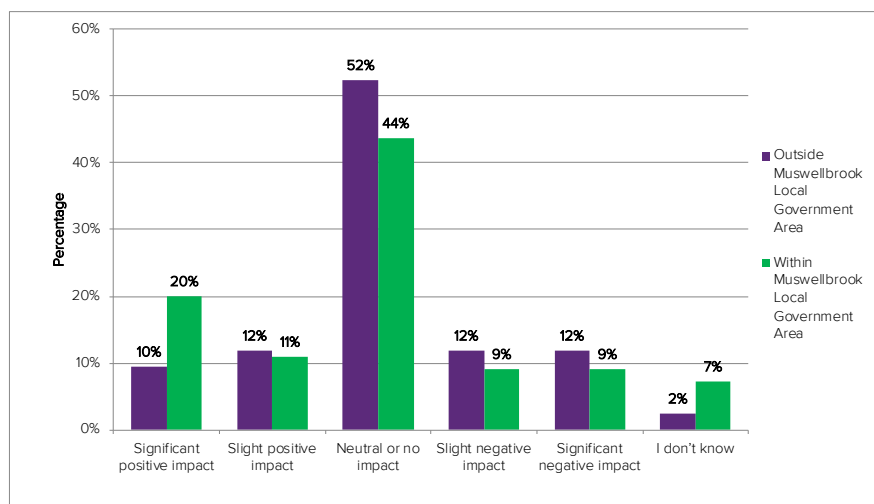


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 130.

Figure 130: Impact on access – comparison by Local Government Area

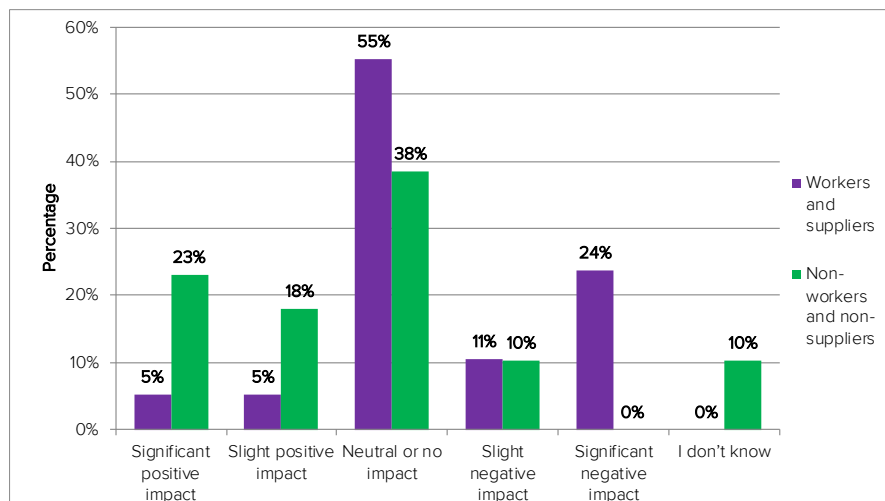


n=97

Workers and suppliers

41% of non-workers and non-suppliers responded to this question with positive Likert scale ratings, compared with 10% of workers and suppliers (Figure 131).

Figure 131: Impact on access by – comparison by employment and suppliers



n=77

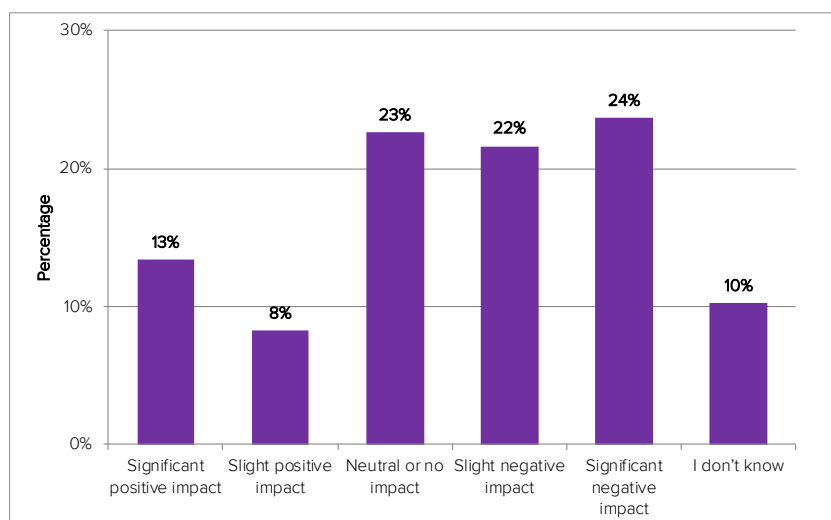
6.5 Housing

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on housing within the area in which you currently live?

6.5.1 All responses

46% of survey respondents provided a negative Likert scale rating in response to this question, compared with 21% of respondents who provided a positive rating (Figure 132).

Figure 132: Impact on housing – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 25% of negative ratings, compared with 19% of positive ratings. No comments were provided in support of neutral ratings. Comments relating to positive Likert scale ratings focus on benefits to the

housing market; a reduction in rents and an increase in house value. 55% of comments supporting negative Likert scale ratings focus on people leaving the area and the effect this would have on housing.

Positive comment

"No dirty big mine on the edge of the town will have a positive effect visually and be more desirable for people looking to purchase in the area."

Negative comment

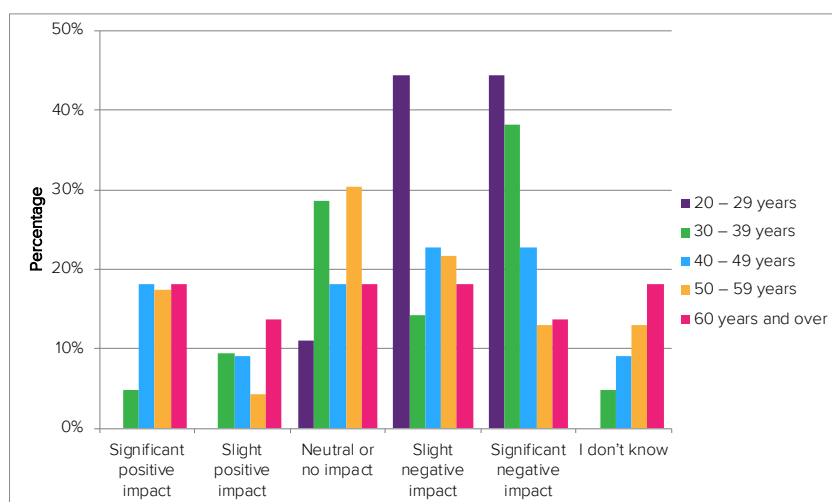
"The townships will lose alot of people and therefore the price of housing will decrease and rentals will be in abundance. This is poor for homeowners."

6.5.2 Key differences across demographics

Age

Figure 133 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 133: Impact on housing – comparison by age

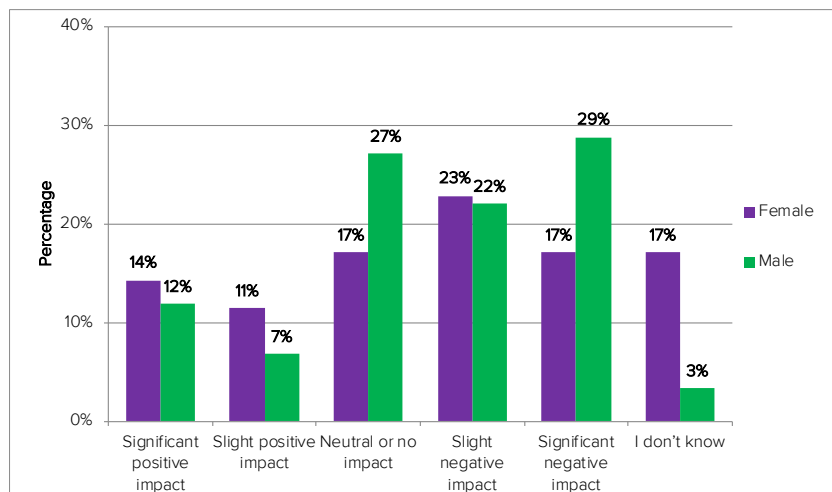


n=97

Gender

51% of male survey respondents provided negative Likert scale ratings in response to this question, compared with 40% of female respondents (Figure 134).

Figure 134: Impact on housing – comparison by gender

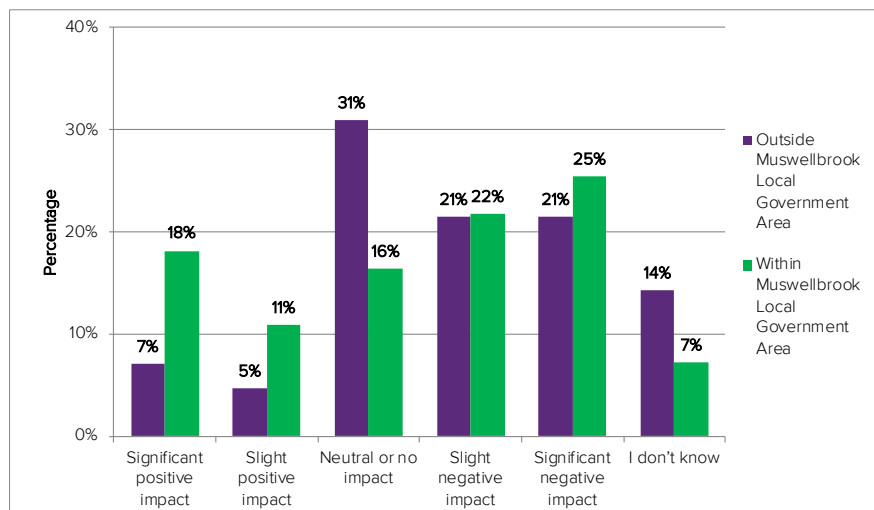


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 135.

Figure 135: Impact on housing – comparison by Local Government Area

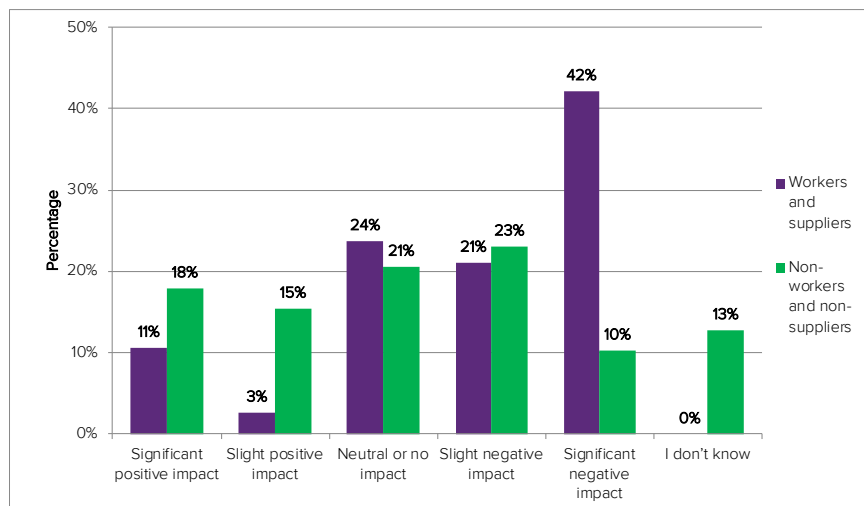


n=97

Workers and suppliers

33% of non-workers and non-suppliers responded to this question with positive Likert scale ratings, compared with 14% of workers and suppliers (Figure 136).

Figure 136: Impact on housing by – comparison by employment and suppliers



n=77

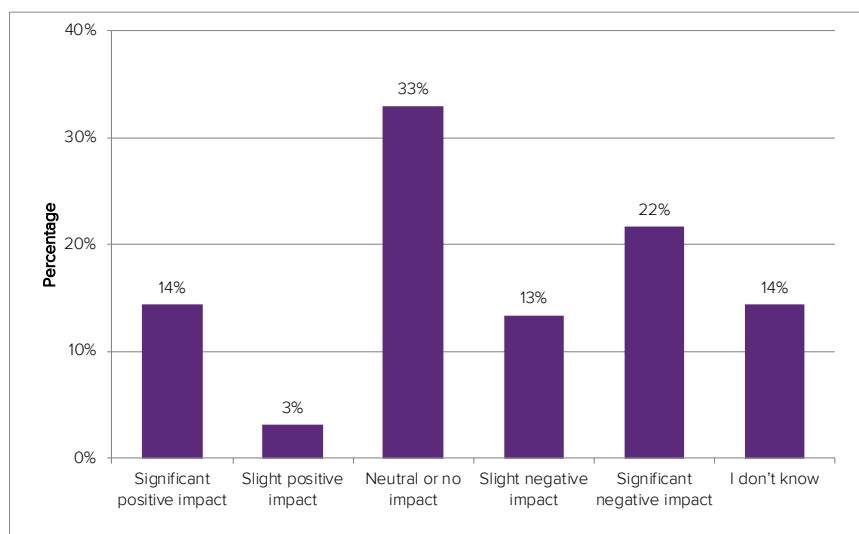
6.6 Community Services

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on community services within the area in which you currently live?

6.6.1 All responses

35% of survey respondents provided a negative Likert scale rating in response to this question, compared with 17% of respondents who provided a positive rating (Figure 137).

Figure 137: Impact on community services – all responses



n=97

As a proportion, supporting comments were mainly provided for positive Likert scale ratings, but not by a significant amount. Comments supported 18% of positive ratings, compared with 12% of positive ratings and 3% of neutral ratings. Comments relating to positive Likert scale ratings focus on a freeing up of

services for local people. Comments supporting negative Likert scale ratings focus on the support to the community that the mine would no longer provide.

Positive comment

"Limited resources will be available to local people rather than additional fifo workers."

Negative comment

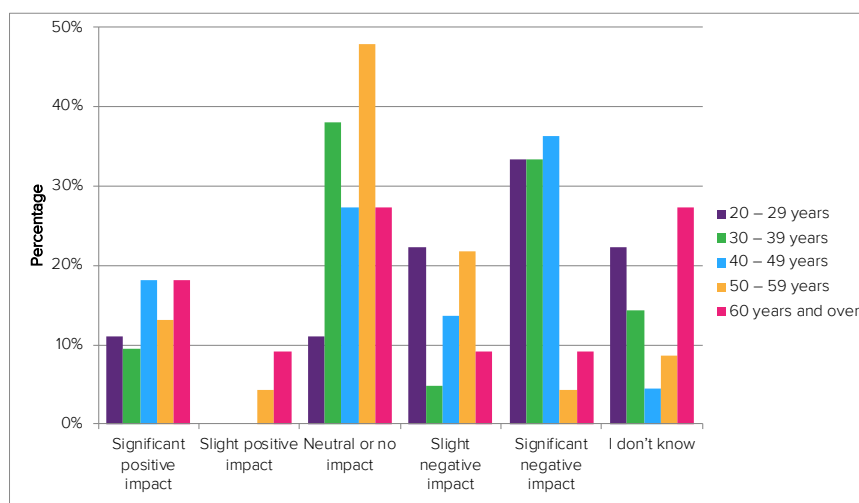
"MACH are very visible in the community, without their support, many groups, clubs and associations will be negatively affected."

6.6.2 Key differences across demographics

Age

Figure 138 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 138: Impact on community services – comparison by age

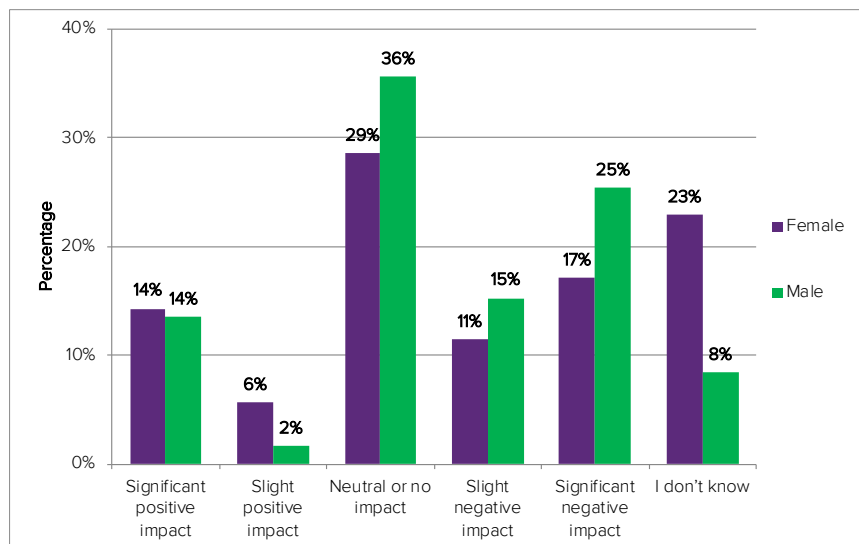


n=97

Gender

40% of male survey respondents provided negative Likert scale ratings in response to this question, compared with 28% of female respondents (Figure 139).

Figure 139: Impact on community services – comparison by gender

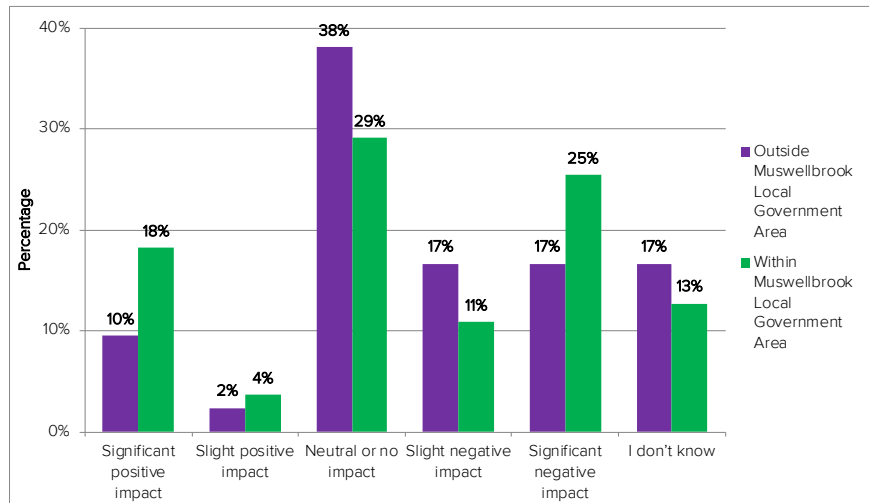


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 140.

Figure 140: Impact on community services – comparison by Local Government Area

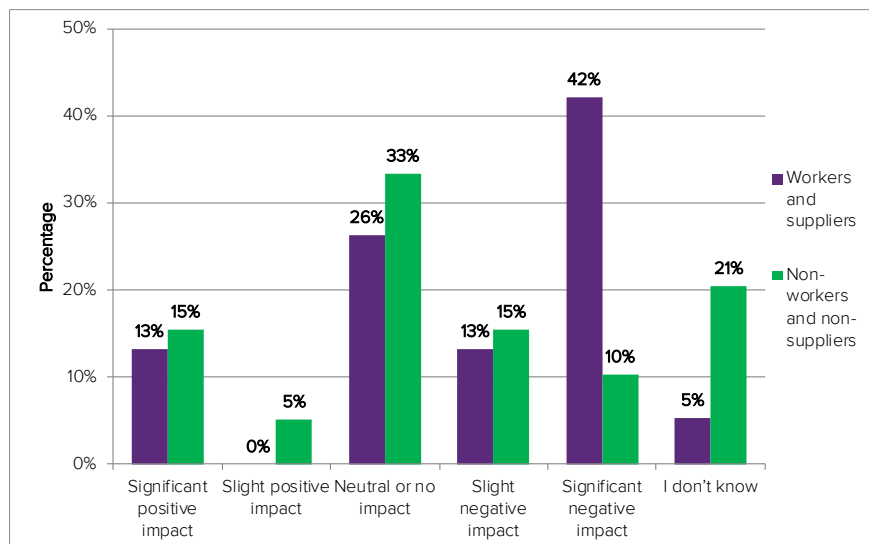


n=97

Workers and suppliers

20% of non-workers and non-suppliers responded to this question with positive Likert scale ratings, compared with 13% of workers and suppliers (Figure 141).

Figure 141: Impact on community services by – comparison by employment and suppliers



n=77

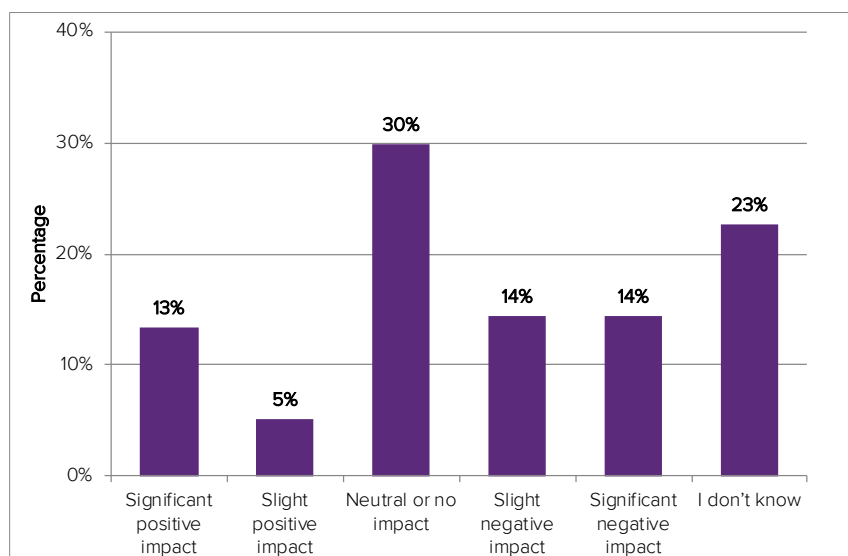
6.7 Culture

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the culture of people living within your area?

6.7.1 All responses

28% of survey respondents provided a negative Likert scale rating in response to this question, compared with 18% of respondents who provided a positive rating (Figure 142).

Figure 142: Impact on culture – all responses



n=97

As a proportion, supporting comments were mainly provided for negative Likert scale ratings. Comments supported 21% of negative ratings, compared with 11% of positive ratings and 3% of neutral ratings.

Comments relating to positive Likert scale ratings focus on the recovery of the area, though do not explicitly frame this as a cultural concern. Comments supporting negative Likert scale ratings focus on the support to the community that the mine would no longer provide.

Positive comment

"Recovery and hope can take the place of despair and disgust."

Negative comment

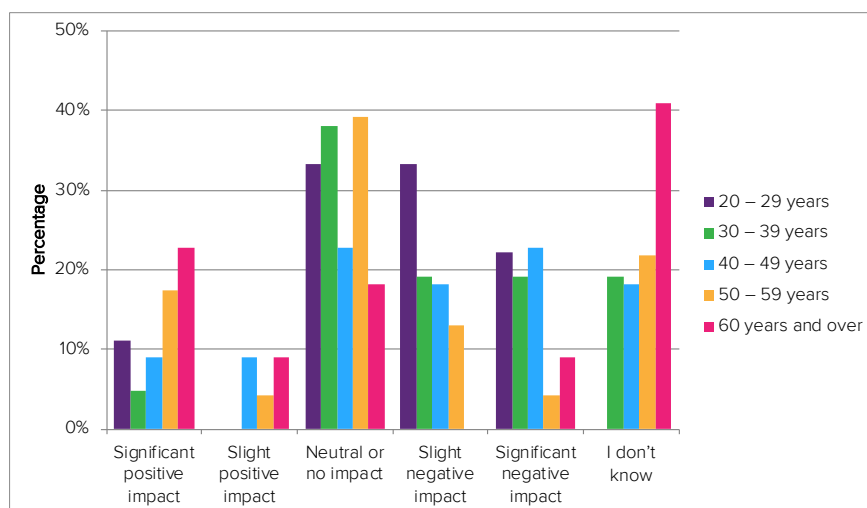
"Mach Energy are active contributors to the community. If the continuation project doesn't go ahead, there is less of an opportunity for Mach to build on current support levels."

6.7.2 Key differences across demographics

Age

Figure 143 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 143: Impact on culture – comparison by age

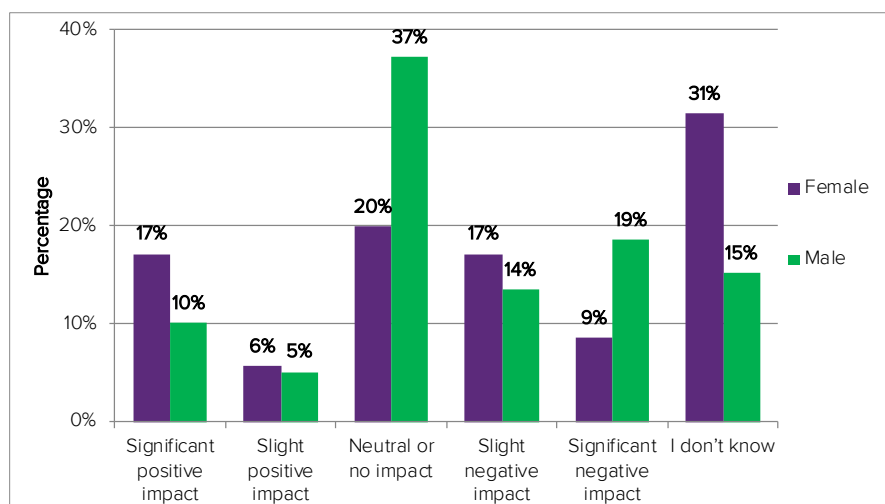


n=97

Gender

23% of female survey respondents provided positive Likert scale ratings in response to this question, compared with 15% of male respondents (Figure 144).

Figure 144: Impact on culture – comparison by gender

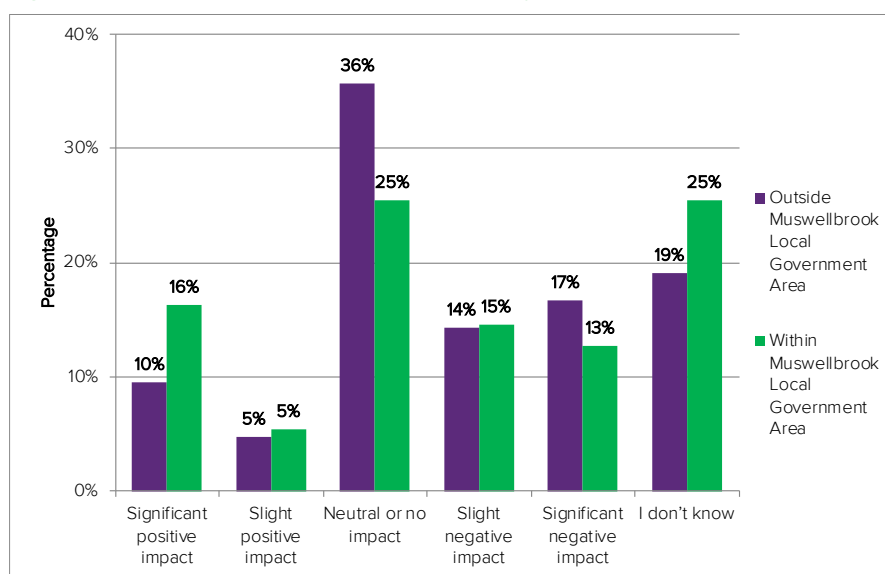


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 145.

Figure 145: Impact on culture – comparison by Local Government Area

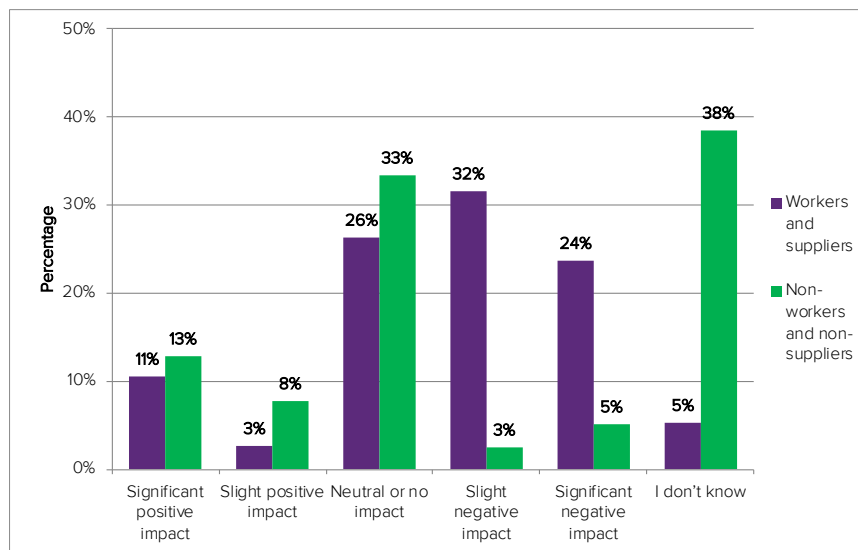


n=97

Workers and suppliers

56% of workers and suppliers responded to this question with negative Likert scale ratings, compared with 8% of non-workers and non-suppliers. 38% of non-workers and non-suppliers indicated 'I don't know', compared with 5% of workers and suppliers (Figure 146).

Figure 146: Impact on culture by – comparison by employment and suppliers



n=77

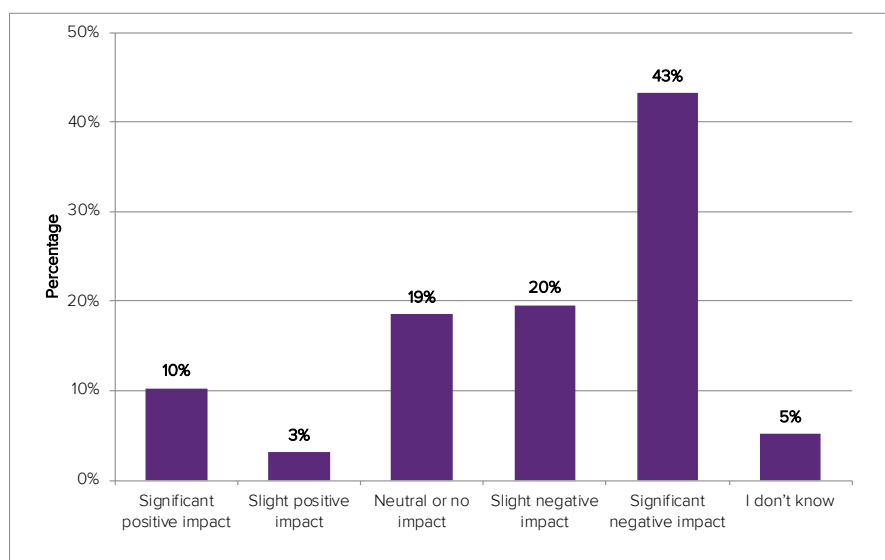
6.8 The local economy

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the economy within the area in which you currently live?

6.8.1 All responses

63% of survey respondents provided a negative Likert scale rating in response to this question, compared with 13% of respondents who provided a positive rating (Figure 147).

Figure 147: Impact on the local economy – all responses



n=97

As a proportion, supporting comments were evenly split between positive and negative Likert scale ratings. Comments supported 15% of positive ratings, 15% of negative ratings and 6% of neutral ratings.

Two comments relate to positive Likert scale ratings and focus on the rebalancing of the local economy. Comments supporting negative Likert scale ratings focus on the support to the community that the mine would no longer provide.

Positive comment

"Communities are beginning to plan for life after coal. Diversification can only be a positive thing for business."

Negative comment

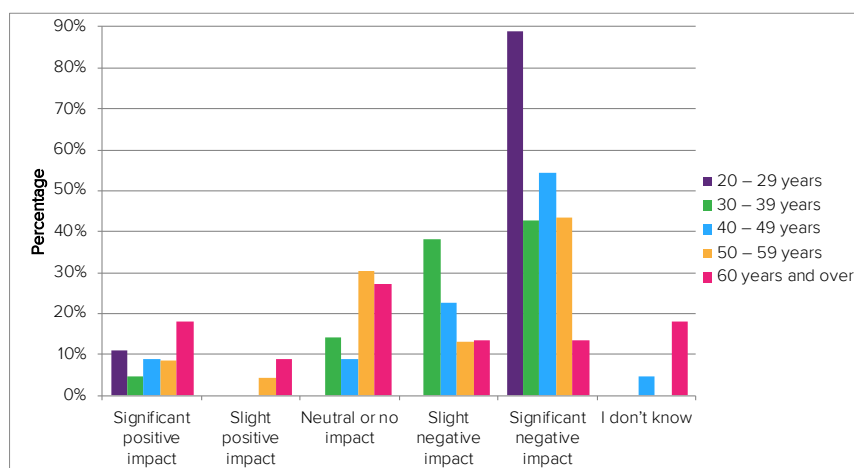
"If the mine doesn't get an extension it would have a negative impact due to job losses in the area and less money circulating within our community."

6.8.2 Key differences across demographics

Age

Figure 148 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 148: Impact on the local economy – comparison by age

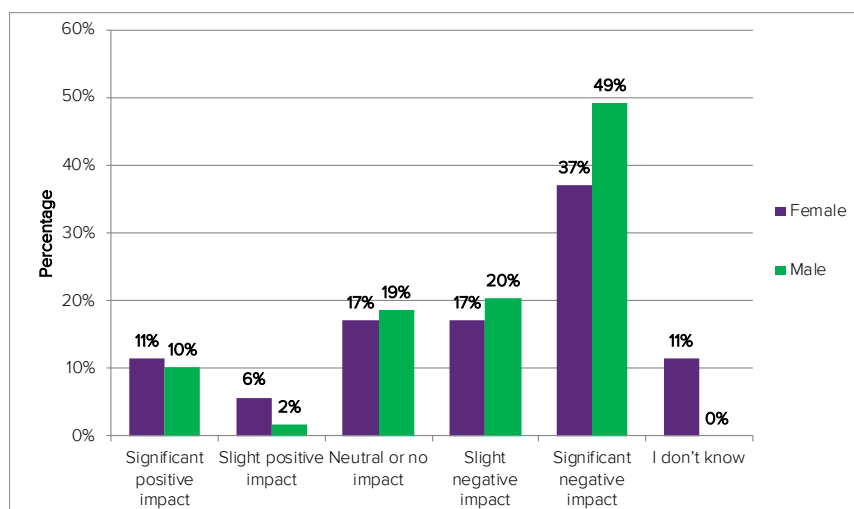


n=97

Gender

69% of male survey respondents provided negative Likert scale ratings in response to this question, compared with 54% of female respondents (Figure 149).

Figure 149: Impact on the local economy – comparison by gender

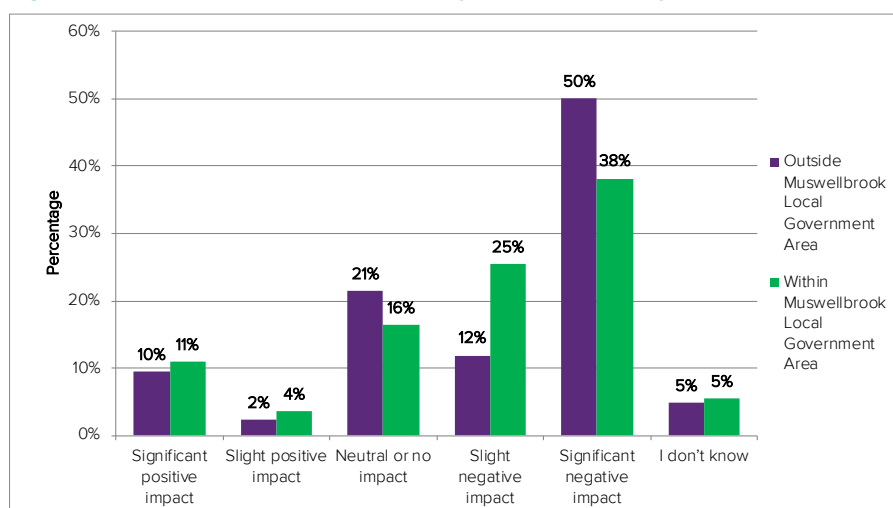


n=94

Geography

The differences in responses between those within and outside the Muswellbrook Shire Council Local Government Area are shown in Figure 150.

Figure 150: Impact on the local economy – comparison by Local Government Area

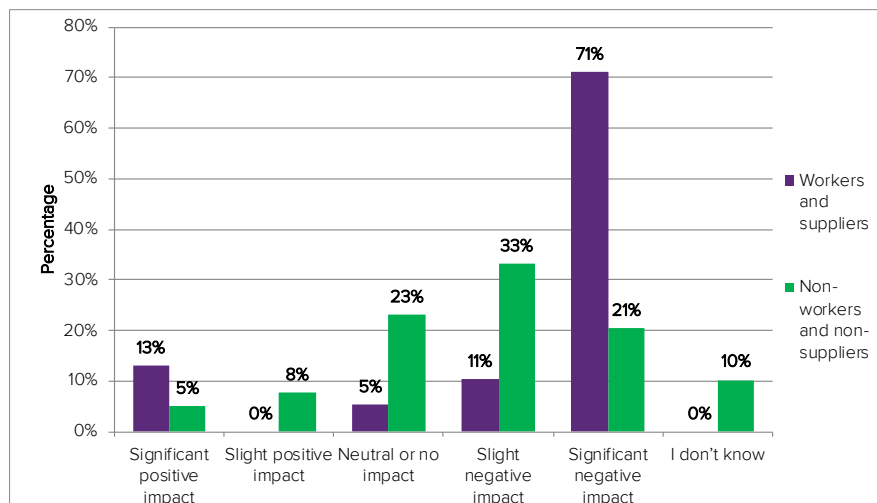


n=97

Workers and suppliers

82% of workers and suppliers responded to this question with negative Likert scale ratings, compared with 54% of non-workers and non-suppliers (Figure 151).

Figure 151: Impact on the local economy by – comparison by employment and suppliers



n=77

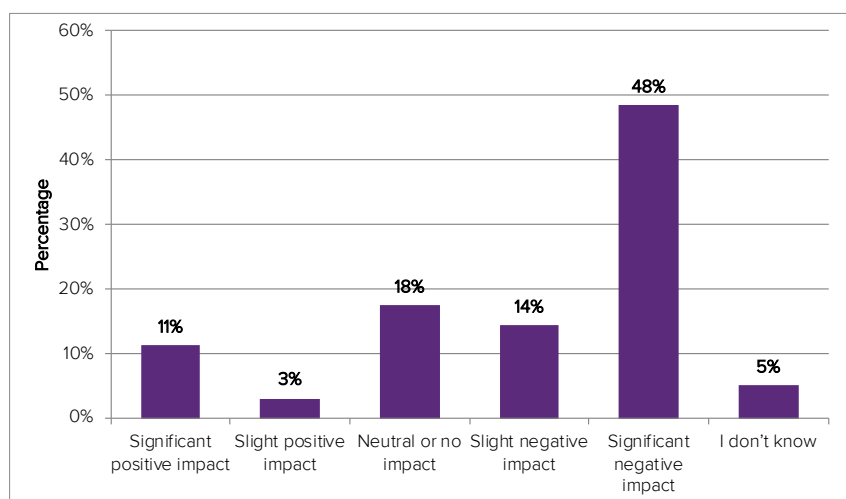
6.9 Employment

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the employment within the area in which you currently live?

6.9.1 All responses

62% of survey respondents provided a negative Likert scale rating in response to this question, compared with 14% of respondents who provided a positive rating (Figure 152).

Figure 152: Impact on employment – all responses



n=97

As a proportion, supporting comments were mainly provided for neutral Likert scale ratings. Comments supported 18% of neutral ratings, compared with 14% of positive ratings and 8% of negative ratings.

Two comments relate to positive Likert scale ratings with the key comment focussing on the mine workers returning to the local economy. Five comments support negative Likert scale ratings and focus on reduced local employment.

Positive comment

"We get back the people whose training and previous work has been wasted and lost driving mine trucks."

Negative comment

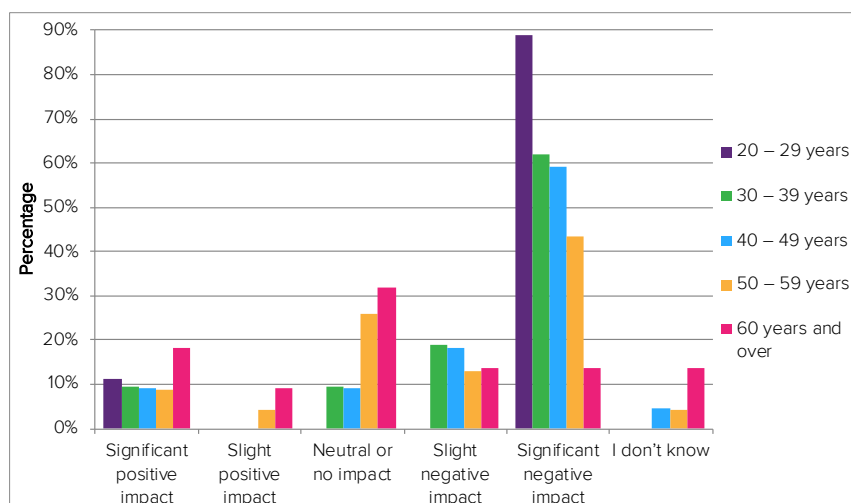
"Less employment and no mining jobs in Muswellbrook."

6.9.2 Key differences across demographics

Age

Figure 153 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 153: Impact on employment – comparison by age

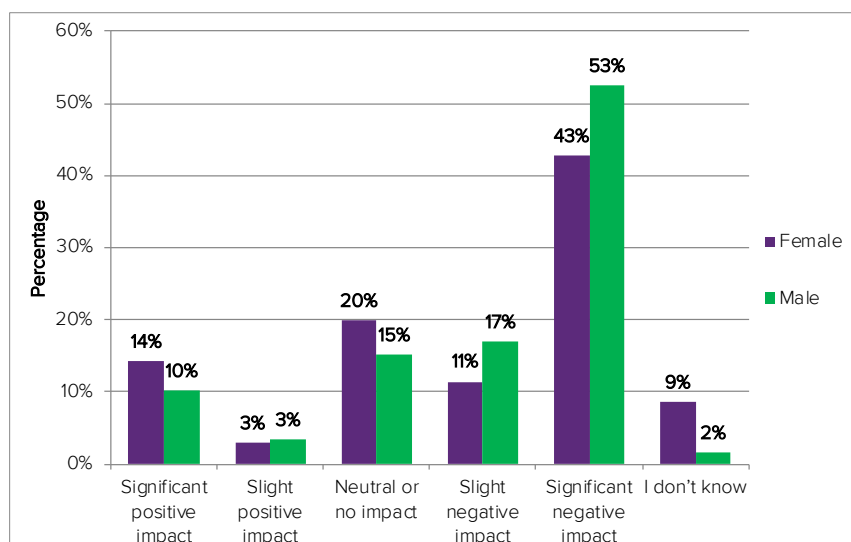


n=97

Gender

70% of male survey respondents provided negative Likert scale ratings in response to this question, compared with 54% of female respondents (Figure 154).

Figure 154: Impact on employment – comparison by gender

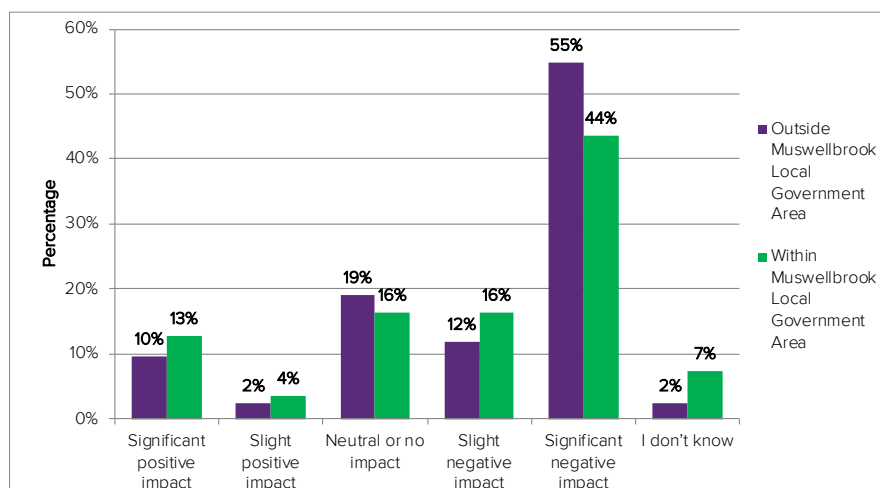


n=94

Geography

67% of survey respondents living outside Muswellbrook Shire Council Local Government Area provided negative Likert scale ratings, compared with 60% provided by those living inside Muswellbrook Shire Council Local Government Area (Figure 155).

Figure 155: Impact on employment – comparison by Local Government Area

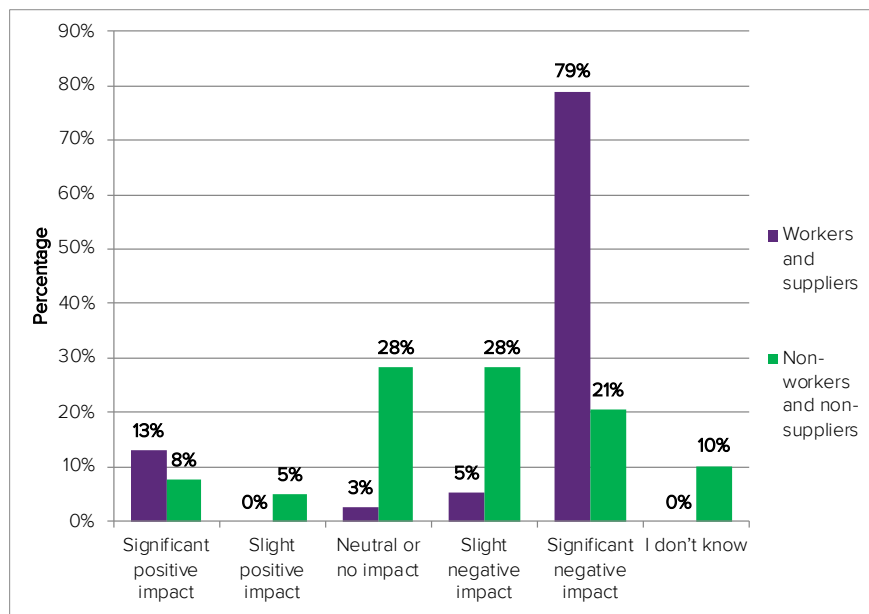


n=97

Workers and suppliers

84% of workers and suppliers responded to this question with negative Likert scale ratings, compared with 49% of non-workers and non-suppliers (Figure 156).

Figure 156: Impact on employment by – comparison by employment and suppliers



n=77

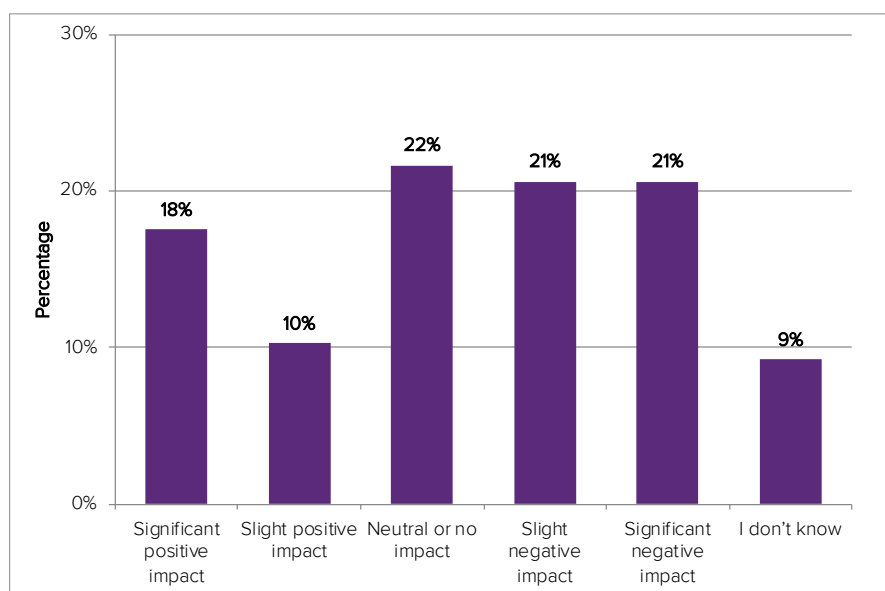
6.10 Community cohesion

Survey question: If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the community cohesion within the area in which you currently live?

6.10.1 All responses

42% of survey respondents provided a negative Likert scale rating in response to this question, compared with 28% of respondents who provided a positive rating (Figure 157).

Figure 157: Impact on community cohesion – all responses



n=97

Seven supporting comments were provided in response to this question, the lowest for any question. Due to a low number of comments, proportions per rating category are of no value.

Comments supporting positive Likert scale ratings focus on the positives of a community transition away from mining. Comments supporting negative Likert scale ratings focus on the community effects of fewer jobs.

Positive comment

"Local mine workers who work disgustingly long shifts causes lack of social cohesion and reduced quality time with family. Ex-miners will hopefully [find] employment with hours more conducive to family time together."

Negative comment

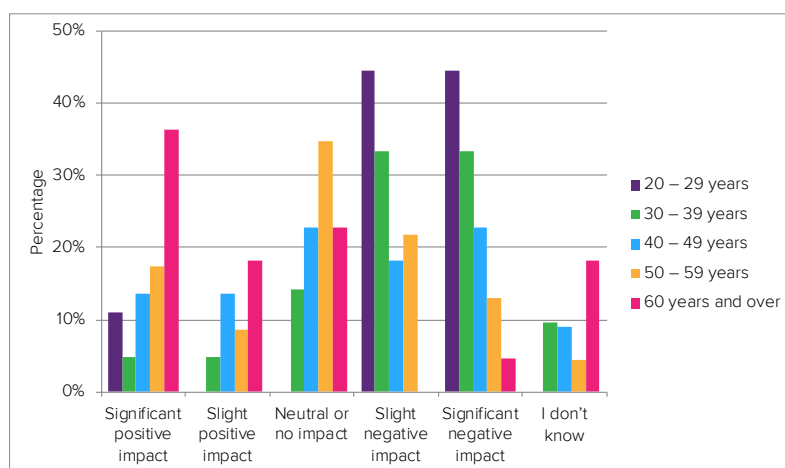
"If the Mount Pleasant Optimisation Project did not proceed there would be impacts for lack of employment opportunities which would It would cause families to relocate and leave the area. It would mean a decrease in support for community groups to provide services that promote social cohesion."

6.10.2 Key differences across demographics

Age

Figure 158 shows the survey respondents' Likert scale ratings across the different age groups.

Figure 158: Impact on community cohesion – comparison by age

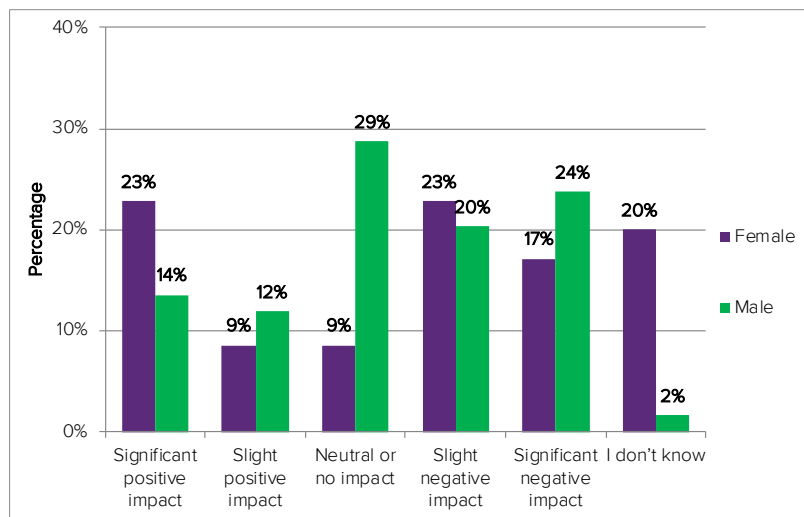


n=97

Gender

Figure 159 shows the survey respondents' Likert scale ratings across the different genders.

Figure 159: Impact on community cohesion – comparison by gender

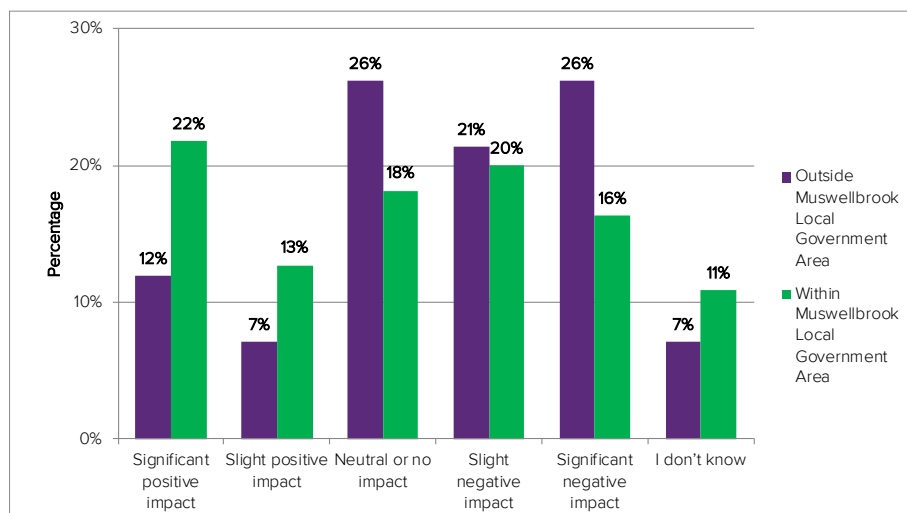


n=94

Geography

35% of survey respondents living within Muswellbrook Shire Council Local Government Area provided positive Likert scale ratings, compared with 19% provided by those living outside Muswellbrook Shire Council Local Government Area (Figure 160).

Figure 160: Impact on community cohesion – comparison by Local Government Area

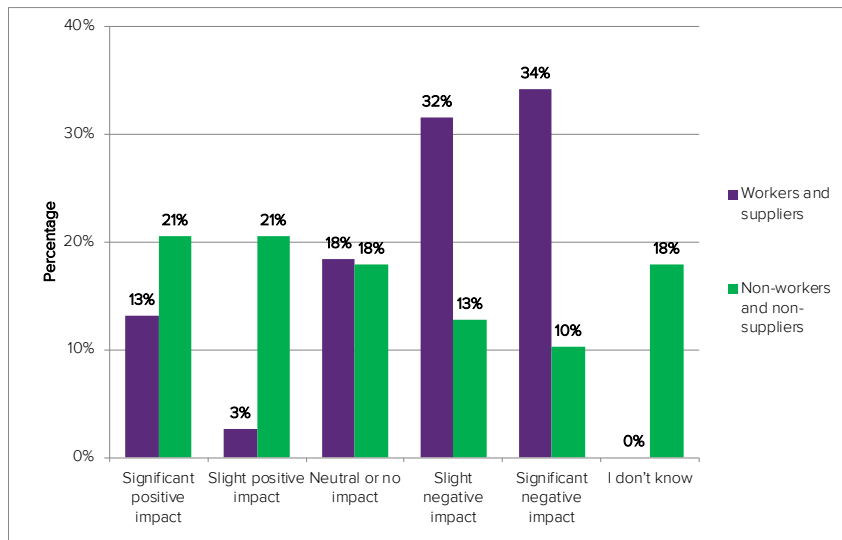


n=97

Workers and suppliers

66% of workers and suppliers responded to this question with negative Likert scale ratings, compared with 23% of non-workers and non-suppliers (Figure 161).

Figure 161: Impact on community cohesion by – comparison by workers and suppliers

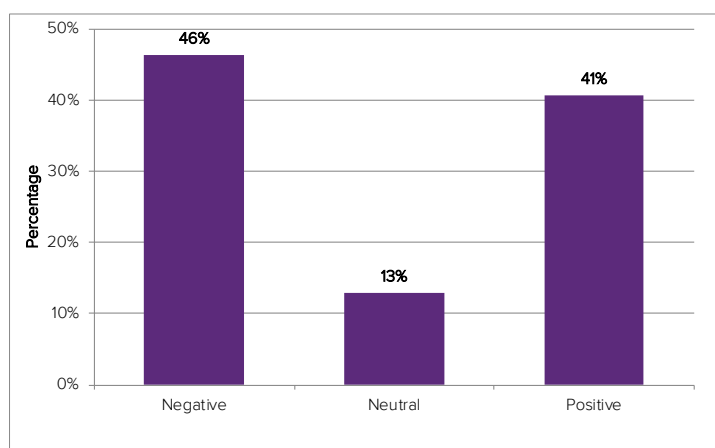


n=77

7 Survey results - cumulative social impacts

Survey respondents were asked to provide any comments on cumulative social impacts of the Mount Pleasant Operation and the Mount Pleasant Optimisation Project. Supporting text explained that cumulative social impacts are positive or negative compounding impacts on communities, the economy, and the environment. The impacts of the Mount Pleasant Optimisation Project can be considered in combination with the impacts from other mining operations, industries and activities, resulting in cumulative impacts. Comments were analysed and assigned a positive, neutral, or negative sentiment and the results are shown in Figure 162.

Figure 162: Respondent sentiment - cumulative social impacts



$n=54$

This analysis showed a split between people who welcome the jobs and opportunities the mine is anticipated to deliver and those who see it as a destructive force in the community. Only 13% of comments were deemed neutral, which may reflect the self-selecting bias of the survey. Responses to this question were general in content, rather than addressing cumulative social impacts. Where they did, comments noted the existing effects would be compounded through mine expansion, e.g. noise and dust.

Positive comment

"The extra employment keeps people in Muswellbrook and fosters associated industries."

Neutral comment

"MTP does not add exceptionally to the current level of cumulative impact."

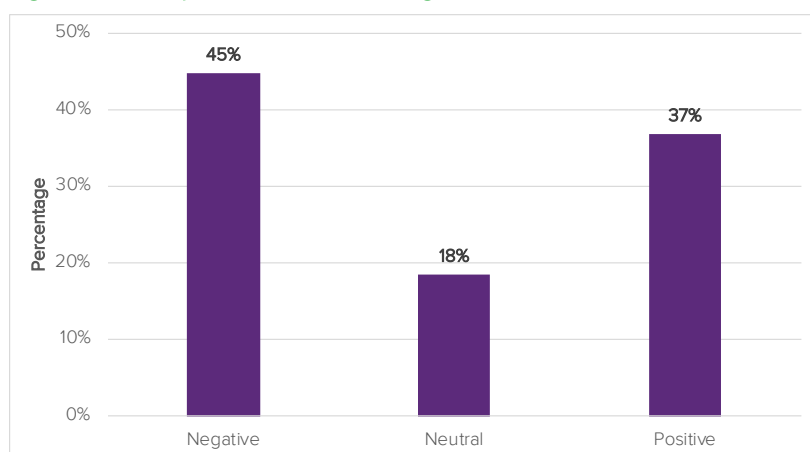
Negative comment

"More dust equals worse air quality more respiratory complaints impacting on our already overloaded health care system."

8 Survey results - other things to consider in the SIA

Survey respondents were asked to note anything else that should be considered as part of the Social Impact Assessment. Comments were analysed and assigned a positive, neutral, or negative sentiment and results are shown in Figure 163.

Figure 163: Respondent sentiment - general feedback



$n=38$

The responses to this question, reflected the split in sentiment in the responses to the previous question on cumulative social impacts. Of the respondents provided, 37% provided a positive comment and 45% provided a negative comments. Comments broadly reflected the themes of comments from the previous question on cumulative social impacts and comments made elsewhere in the survey. Dust, noise, impacts on the local environment, and wider environmental and climate change concerns make up the comments for which a negative sentiment was assigned. Positive sentiment is reflected in respondents' comments around jobs and growth.

Positive comment

"Mining is good for the local economy and employment."

Neutral comment

"Ensuring that employees are local to the region instead of the BHPOS model of employing people through a head office and having then dido or fifo.... Make a commitment to employ people who will live in the local area.."

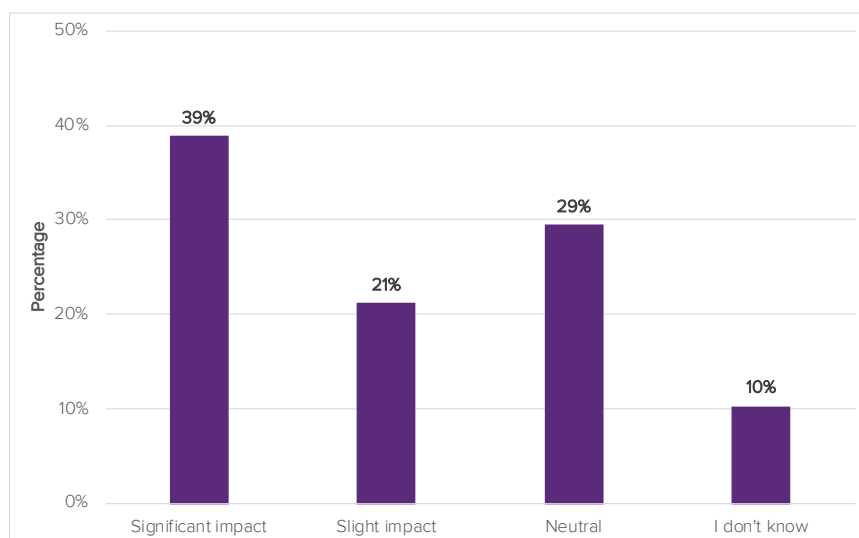
Negative comment

"People will not support this project unless they can see a significant change in dust suppression and mining practices."

9 Conclusion

Survey responses indicate strong division between the views of some respondents, with 39% of Likert scale ratings assigned to either significant positive impact or significant negative impact (Figure 164). At 29%, neutral ratings were higher than for slight negative impact or slight positive impact at 21%. Only 10% of responses indicated “I don’t know”.

Figure 164: Respondent sentiment across all responses



n=3,030

Where comments have been provided for neutral ratings, for some questions it indicates crossover with positive sentiment towards Mount Pleasant Operation’s existing operations and proposed expansion, whereas for others it indicates negative sentiment. For example, a neutral rating in regard to impact on water resources will primarily be viewed as positive, compared with a neutral impact on local employment which will primarily be viewed as negative.

The survey question on the impact of the current Mount Pleasant Operation on the living environment received 44 comments, the highest number for any question and is reflective of other questions in this survey section, assessing the impact of the current operation, in that negative ratings were more likely to be supported by comment.

Sentiments expressed throughout the survey broadly fit into key social and environmental themes:

Noise, dust, and light impacts

Respondents providing negative feedback indicate these key environmental impacts have a negative impact on their lives.

Wider environmental impacts

The survey questions focus on local impacts, however some respondents raised climate change or carbon emissions as a concern within comments across a range of questions.



Changes to the landscape

Many respondents' viewed the change over time from a rural landscape to an industrial landscape and a negative impact.

Housing and accommodation

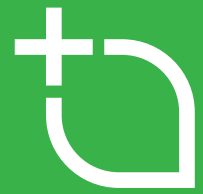
Respondents have mixed views shaped by personal experience. Because of mining's perceived effects on the environment and employment, some respondents indicate housing prices are depressed, while rental prices are elevated. This has positive impacts for some and negative for others.

Employment and the economy

Comments favourable to the current and proposed Mount Pleasant Operation focus on the employment and economic growth it brings the area. Some negative comments indicate concern about the transient nature of the workforce; the lack of local benefit both in terms of jobs and where wages are spent, and the effects a transient workforce has on housing and community cohesion.

Community

Respondents' sentiment towards their local area is mainly positive and focusses on the community. Mining is seen to strengthen the community through employment or weaken it by causing division.



Attachment A

SIA Community Survey

Community survey - Mount Pleasant Optimisation Project

Questions about you

This section of the survey asks some questions about you. We will use the information to compare responses across different age groups, genders, ethnicities and geographical areas.

* 2. Please select your age group

- ☐ Under 20 years
- ☐ 20 – 29 years
- ☐ 30 – 39 years
- ☐ 40 – 49 years
- ☐ 50 – 59 years
- ☐ 60 years and over

* 3. Do you identify as:

- ☐ Male
- ☐ Female
- ☐ I don't wish to identify as male or female

* 4. Do you identify as Aboriginal or Torres Strait Islander?

- ☐ Yes
- ☐ No
- ☐ I would prefer not to say

* 5. In what area do you live?

- | | |
|---|---|
| <input type="radio"/> Muswellbrook Local Government Area | <input type="radio"/> Lake Macquarie City Local Government Area |
| <input type="radio"/> Upper Hunter Local Government Area | <input type="radio"/> Maitland City Local Government Area |
| <input type="radio"/> Singleton Local Government Area | <input type="radio"/> Mid-Coast Local Government Area |
| <input type="radio"/> Central Coast Local Government Area | <input type="radio"/> Newcastle City Local Government Area |
| <input type="radio"/> Cessnock City Local Government Area | <input type="radio"/> Port Stephens Local Government Area |
| <input type="radio"/> Dungog Shire Local Government Area | <input type="radio"/> Greater Sydney Region |
| <input type="radio"/> Other (please state) | |

Community survey - Mount Pleasant Optimisation Project

Questions about you (continued)

* 6. In what area do you live within Muswellbrook Local Government Area?

- | | |
|--|---|
| <input type="radio"/> Bengalla | <input type="radio"/> Kayuga |
| <input type="radio"/> Castlerock | <input type="radio"/> Muswellbrook town |
| <input type="radio"/> Denman | <input type="radio"/> Wybong |
| <input type="radio"/> Other (please state) | |

Community survey - Mount Pleasant Optimisation Project

Questions about you (continued)

* 7. In what area do you live within Upper Hunter Local Government Area?

- ☐ Aberdeen
- ☐ Scone
- ☐ Merriwa
- ☐ Murrurundi
- ☐ Other (please state)

Community survey - Mount Pleasant Optimisation Project

Questions about you (continued)

8. On what road, street, close, way or avenue do you live? This question is optional but will help identify more specific geographical perspectives.

9. Briefly describe how you feel about the area and community in which you live. This question is optional.

* 10. Do you work at the Mount Pleasant Operation?

☐ Yes

☐ No

Community survey - Mount Pleasant Optimisation Project

Questions about you (continued)

* 11. Do you own or work for a business that is a supplier to the Mount Pleasant Operation?

- ☐ Yes
- ☐ No

* 12. In what industry do you work? (this list is based on the Australian and New Zealand Standard Industrial Classification)

- | | | |
|--|---|---|
| <input type="radio"/> I am not currently working | <input type="radio"/> Construction | <input type="radio"/> Professional, scientific, and technical services |
| <input type="radio"/> Agriculture | <input type="radio"/> Education and training, e.g. childcare centre, early education, primary, secondary and TAFE. | <input type="radio"/> Rental, hiring and real estate services (e.g. car or machinery hire and real estates) |
| <input type="radio"/> Horse breeding or racing | <input type="radio"/> Electricity, gas, water and waste services | <input type="radio"/> Retail trade, including car sales, petrol stations, supermarkets, furniture and electrical goods, sporting equipment, clothing, and hardware. |
| <input type="radio"/> Viticulture | <input type="radio"/> Financial and insurance services | <input type="radio"/> Transport, postal and warehousing |
| <input type="radio"/> Mining and associated industries | <input type="radio"/> Health care and social assistance e.g. hospital, medical services and residential care services | <input type="radio"/> Wholesale trade e.g. material wholesaling, machinery and equipment wholesaling, grocery, and liquor wholesaling |
| <input type="radio"/> Accommodation and food services (e.g. cafes, restaurants, takeaways, and pubs) | <input type="radio"/> Information media and telecommunications | <input type="radio"/> Not for Profit organisation |
| <input type="radio"/> Administrative and support services (e.g. employment services, travel agents, cleaning, pest control, and gardening) | <input type="radio"/> Local, State or Federal Government including fire, ambulance, police, and public servants. | <input type="radio"/> Other services e.g. automotive repair and maintenance, hairdressing and beauty services, funeral services. |
| <input type="radio"/> Arts and recreational services | <input type="radio"/> Manufacturing | |
| <input type="radio"/> Other industry not listed, please describe | | |

Community survey - Mount Pleasant Optimisation Project

The Mount Pleasant Operation

This section of the survey asks you to indicate, within the area in which you currently live, your thoughts on the degree of overall positive, neutral, or negative impact from the current Mount Pleasant Operation.

The Mount Pleasant Operation is an open cut coal mine located west of Muswellbrook and north of Wybong Road. Mining operations are largely undertaken by the contractors Thiess and Sedgman. Approximately 400 people work at the mine, with the majority living in the Upper Hunter region.

The questions cover ten subjects and each question includes the opportunity to provide further supporting information.

* 13. **Water:** This includes impacts on surface water (including the Hunter River) or groundwater.

What overall impact has the current Mount Pleasant Operation had on water resources within the area in which you live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact
 ☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)

* 14. **Quality of the living environment:** This includes impacts on the liveability of an area, such as noise, odour, vibration, artificial light, and air quality.

What overall impact has the current Mount Pleasant Operation had on the quality of the living environment of the area in which you live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact
 ☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)



* **15. Visual amenity:** This includes impacts on the visual outlook or landscape.

What overall impact has the current Mount Pleasant Operation had on the visual amenity of the area in which you live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **16. Access:** This includes impacts on transport systems such as road, rail, public transport, and parking.

What overall impact has the current Mount Pleasant Operation had on access within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **17. Housing:** This includes impacts on purchase and rental costs and the availability of housing.

What overall impact has the current Mount Pleasant Operation had on housing within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **18. Community services:** This includes impacts on the availability, accessibility, and cost of services, e.g. healthcare, education, childcare, and other support services.

What overall impact has the current Mount Pleasant Operation had on community services within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)



* 19. **Culture:** This includes shared beliefs, customs, values and stories, connection to land, water, and place for Aboriginal and non-Aboriginal people.

What overall impact has the current Mount Pleasant Operation had on the culture of people living within your area?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* 20. **The local economy:** This includes impacts on local businesses.

What overall impact has the current Mount Pleasant Operation had on the economy within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* 21. **Employment:** This includes impacts on the local employment.

What overall impact has the current Mount Pleasant Operation had on the employment within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)



* 22. **Community cohesion:** This includes impacts on social networks and people's relationships with others in the community.

What overall impact has the current Mount Pleasant Operation had on community cohesion within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

Community survey - Mount Pleasant Optimisation Project

The Mount Pleasant Optimisation Project

This section of the survey asks you to indicate, within the area in which you currently live, your thoughts on the degree of overall positive, neutral, or negative impact from the Mount Pleasant Optimisation Project, if it proceeds.

If the Mount Pleasant Optimisation Project is approved, the life of mine will be extended from 2026 to 2048 and the amount of coal to be mined will progressively increase from 10.5 million tonnes per annum to 21 million tonnes per annum. The mine will remain open cut, with mining moving to the west. Activity will remain within the current Mining Lease Area.

There will be an increase in the number of people working at the site. At the moment there is approximately 400 people working at the Mount Pleasant Operation. It has been estimated that there will be a peak monthly construction workforce of 410 people, which would coincide with the operational workforce of 560 people.

The average operational workforce throughout the life of the Project (i.e. from 2023 to 2048) has been estimated to be approximately 600. The operational workforce is estimated to peak at 830 in 2041. It is expected that the majority of workers will already live in the Upper Hunter region or will relocate to the region.

The questions cover ten subjects and each question includes the opportunity to provide further supporting information.

* 23. **Water:** This includes impacts on surface water (including the Hunter River) or groundwater.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on water resources within the area in which you currently live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact
 ☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)

* 24. **Quality of the living environment:** This includes impacts on the liveability of an area, such as noise, odour, vibration, artificial light, and air quality.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the quality of the living environment of the area in which you live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact

☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)

* 25. **Visual amenity:** This includes impacts on the visual outlook or landscape.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the visual amenity of the area in which you live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact

☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)

* 26. **Access:** This includes impacts on transport systems such as road, rail, public transport, and parking.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on access within the area in which you currently live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact

☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)

* 27. **Housing:** This includes impacts on purchase and rental costs and the availability of housing.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on housing within the area in which you currently live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact

☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)



* **28. Community services:** This includes impacts on the availability, accessibility, and cost of services, e.g. healthcare, education, childcare, and other support services.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on community services within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **29. Culture:** This includes shared beliefs, customs, values and stories, connection to land, water, and place for Aboriginal and non-Aboriginal people.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the culture of people living within your area?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **30. The local economy:** This includes impacts on local businesses.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the economy within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)



* 31. **Employment:** This includes impacts on the local employment.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the employment within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* 32. **Community cohesion:** This includes impacts on social networks and people's relationships with others in the community.

If the Mount Pleasant Optimisation Project proceeds, what overall impact will this have on the community cohesion within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

Community survey - Mount Pleasant Optimisation Project

The Mount Pleasant Optimisation Project (continued)

This section of the survey asks you to indicate, within the area in which you currently live, your thought on the degree of overall positive, neutral, or negative impact if the Mount Pleasant Optimisation Project does not proceed.

If the Mount Pleasant Optimisation Project does not proceed, the mine will cease operations in 2026 and the site will be rehabilitated to meet conditions in the environmental approval. Employment at the site will decrease as the amount of work to be undertaken decreases.

The questions cover ten subjects and each question includes the opportunity to provide further supporting information.

* 33. **Water:** This includes impacts on surface water (including the Hunter River) or groundwater.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on water resources within the area in which you currently live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact
 ☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)

* 34. **Quality of the living environment:** This includes impacts on the liveability of an area, such as noise, odour, vibration, artificial light, and air quality.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the quality of the living environment of the area in which you live?

- ☐ Significant positive impact
 ☐ Slight positive impact
 ☐ Neutral or no impact
 ☐ Slight negative impact
 ☐ Significant negative impact
 ☐ I don't know

Supporting comment (optional)



* **35. Visual amenity:** This includes impacts on the visual outlook or landscape.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the visual amenity of the area in which you live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **36. Access:** This includes impacts on transport systems such as road, rail, public transport, and parking.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on access within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **37. Housing:** This includes impacts on purchase and rental costs and the availability of housing.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on housing within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* **38. Community services:** This includes impacts on the availability, accessibility, and cost of services, e.g. healthcare, education, childcare, and other support services.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on community services within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)



* 39. **Culture:** This includes shared beliefs, customs, values and stories, connection to land, water, and place for Aboriginal and non-Aboriginal people.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the culture of people living within your area?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* 40. **The local economy:** This includes impacts on local businesses.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the economy within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)

* 41. **Employment:** This includes impacts on the local employment.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the employment within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)



* 42. **Community cohesion:** This includes impacts on social networks and people's relationships with others in the community.

If the Mount Pleasant Optimisation Project does not proceed, what overall impact will this have on the community cohesion within the area in which you currently live?

- ☐ Significant positive impact ☐ Slight positive impact ☐ Neutral or no impact ☐ Slight negative impact
☐ Significant negative impact ☐ I don't know

Supporting comment (optional)



Community survey - Mount Pleasant Optimisation Project

Cumulative social impacts

This section of the survey focuses on cumulative social impacts. These are positive or negative compounding impacts on communities, the economy, and the environment. The impacts of the Mount Pleasant Optimisation Project can be considered in combination with the impacts from other mining operations, industries and activities, resulting in cumulative impacts.

43. Please provide any comments on cumulative social impacts of the Mount Pleasant Operation and the Mount Pleasant Optimisation Project.



Community survey - Mount Pleasant Optimisation Project

Additional comments

44. Is there anything else that we should consider as part of the Social Impact Assessment?

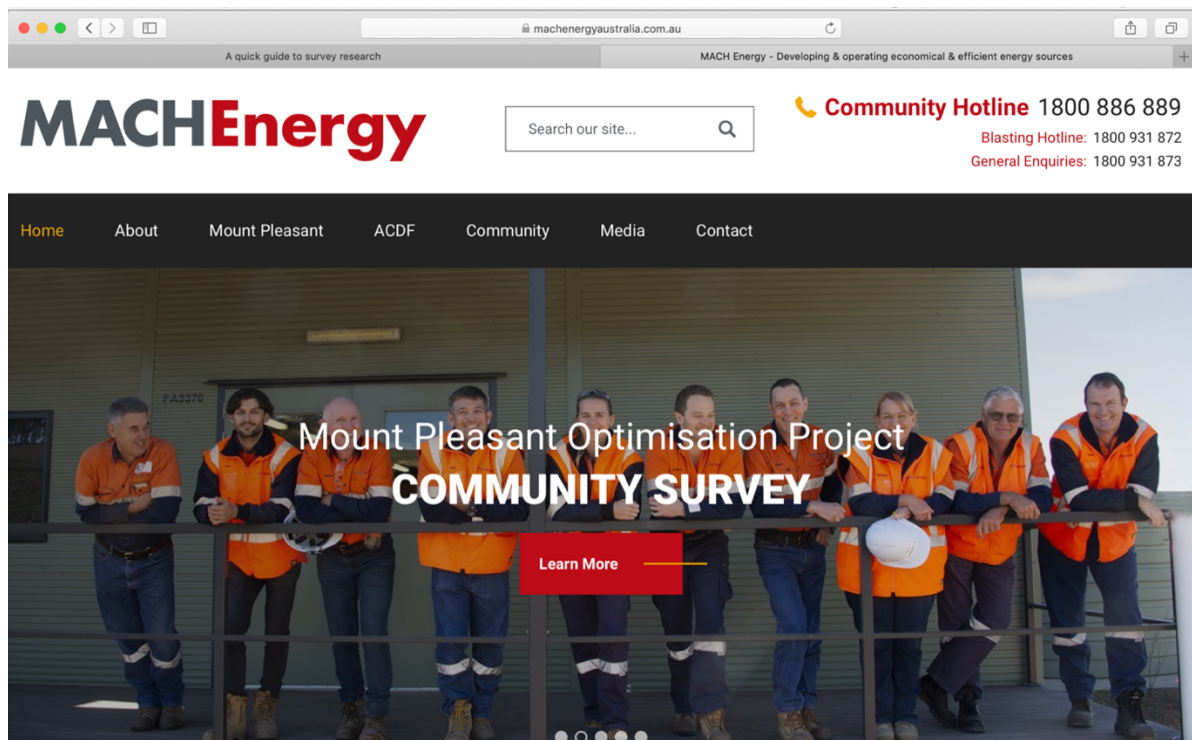


Attachment B

Advertisement of SIA Community Survey



MACH Energy website home page



Hunter River Times Advertisement

Note the same advert was also sent as SMS/email to people on MACH's consultation database.

Mount Pleasant Optimisation Project COMMUNITY SURVEY



Mount Pleasant Operation




MACH Energy completed the acquisition of its first asset, the **Mount Pleasant Operation** in August 2016. First coal was railed in December 2018.

To enable the continuation of the Mount Pleasant Operation past 2026 we are required to submit a State Significant Development proposal.

As part of the social study for this proposal, we invite you to participate in the Mount Pleasant Optimisation Project community survey.

The Optimisation Project would provide the community certainty for continuation of mining in the region and includes:

- Staged increase in production within the Mount Pleasant Mining Leases;
- Increase in average operational workforce to approximately 600 people;
- Increase in peak operational workforce to approximately 830 people;
- Continued rehabilitation and management of environmental impacts;
- Continuation of the Mount Pleasant Operation through to 2048; and
- Continued support for local community groups and suppliers.

To complete the community survey, please scan the QR code or visit the MACH Energy website for more information on the Optimisation Project and a link to the survey:
<https://machenergyaustralia.com.au/>



If you have any questions about the Optimisation Project or the community survey, please contact the MACH Energy Community Hotline on 1800 886 889 and ask to speak to Ngaire.

DL Flyer that was letterbox dropped

MACHEnergy

Mount Pleasant Operation

Mount Pleasant Optimisation Project COMMUNITY SURVEY

MACH Energy completed the acquisition of its first asset, the Mount Pleasant Operation in August 2016. First coal was railed in December 2018.



The Mount Pleasant Optimisation Project proposes extraction of additional coal reserves within Mount Pleasant Operation Mining Leases and an increase in the rate of coal extraction without significantly increasing the total disturbance footprint. The extraction of additional Project coal reserves would be supported by the use and augmentation of existing approved infrastructure.

If you have any questions about the Optimisation Project or the community survey, please contact the MACH Energy Community Hotline on 1800 886 889 and ask to speak to Ngaire.



MACH Energy

Mount Pleasant Operation

What does the Optimisation Project include?

- Mining of additional coal reserves, including lower coal seams in North Pit;
- Staged increase in extraction, handling and processing of run-of-mine (ROM) coal up to 21 million tonnes per annum as mining moves west, away from Muswellbrook;
- Increase in average operational workforce to approximately 600 people, with a peak of approximately 830 people;
- Giving up part of the approved disturbance area to compensate for new disturbance areas;
- Rail transport of up to approximately 17 million tonnes per annum of product coal to domestic and export customers;
- Use of innovative mine landform design to provide topographic relief and more natural exterior appearance of waste rock emplacement landforms;
- Development of new water management and coal reject dewatering infrastructure;
- Construction and operation of new ancillary infrastructure; and
- Continuation of the Mount Pleasant Operation through to 22 December 2048.

**We welcome you to participate
in our Community Survey**

To complete the community survey, please scan the QR code or visit the MACH Energy website for more information on the Optimisation Project and a link to the survey: machenergyaustralia.com.au





Mount Pleasant Operation



**Mount Pleasant
Optimisation Project
COMMUNITY
SURVEY**

MACH Energy completed the acquisition of its first asset, the *Mount Pleasant Operation* in August 2016. First coal was railed in December 2018.



Mount Pleasant Operation

Visit the MACH Energy website for more information on the Optimisation Project and a link to the survey:
<https://machenergyaustralia.com.au/>.

If you have any questions about the Optimisation Project or the community survey, please contact the MACH Energy Community Hotline on 1800 886 889 and ask to speak to Ngaire.

The Optimisation Project would provide the community certainty for continuation of mining in the region and includes:

- Staged increase in production within the Mount Pleasant Mining Leases;
- Increase in average operational workforce to approximately 600 people;
- Increase in peak operational workforce to approximately 830 people;
- Continued rehabilitation and management of environmental impacts;
- Continuation of the Mount Pleasant Operation through to 2048; and
- Continued support for local community groups and suppliers.



MACH Energy



Mount Pleasant Optimisation Project

Workforce Survey Report

December 2020



Prepared by

Just Add Lime Ltd

Review History

	Revision	Date	Prepared by	Reviewed
1	Draft for client review	28 August 2020	Claire Wannamaker	Julie Boucher
2	Final for release	6 December 2020		Julie Boucher



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Attachments

Attachment A: SIA Workforce Survey



Executive Summary

The purpose of the Mount Pleasant Operation Workforce Survey was to gain baseline information about the workforce and their participation in and impacts on the community in three local government areas (LGAs) Muswellbrook Shire Council, Singleton Shire Council and Upper Hunter Shire Council. The survey also aimed to identify impacts on the workforce if the Project proceeds and if it does not. This information is to be used for the social impact assessment of the Mount Pleasant Optimisation Project.

The online survey was open for three weeks from 8 July 2020 to 31 July 2020. Current employees of MACH, Thiess and Sedgman at the Mount Pleasant Operation were encouraged to participate in the survey. 153 members of the workforce completed the survey. It is important to note that as a volunteer sample, this survey is not statistically representative of the current Mount Pleasant Operation workforce.

The survey results provide demographic information to help understand characteristics of the Mount Pleasant Operation workforce for the social impact assessment. This information also enables the SIA to create a baseline description of the ways the workforce interacts with, participates in and contributes to the Muswellbrook Shire Council LGA and surrounding LGAs of Singleton and Upper Hunter. The Muswellbrook, Upper Hunter and Singleton Council LGAs are collectively termed “local” in this report. The report also includes findings relating to other LGAs where impacts are suggested.

The survey focused on economic contribution through levels of spending in the local economy, levels of use of local education and health services, and contribution to the community through participation in and support of community and activities and groups. The survey also sought to identify the proportion of workforce who live locally and those who maintain two residences, driving in and out for their scheduled workdays, and how drive-in drive-out (DIDO) respondents may participate in the community differently to local residents.

To assess likely impacts to the workforce if the Project goes ahead or not, respondents were asked to describe the positive and negative impacts to themselves, their families and friends under both scenarios.

This report provides the collated survey results and interprets these to provide findings about the demographics of the respondents and explore links between living and working arrangements and local spending patterns. The findings provide levels of use of local education and health services to inform the SIA how the workforce might support the need for and provision of these services in the community or create pressure on providers. The survey provides information about respondents' contribution to the community through participating in community groups and activities that may inform the SIA about the level of social capital the workforce brings to the local community.

The key conclusions of the workforce survey are:

- Locals appear to be more financially invested in the local economy through home ownership.
- Some drive in drive out (DIDO) respondents say they would look to relocate closer to the mine if the Project proceeds.
- Local residents spend fairly consistently across the Muswellbrook, Singleton and Upper Hunter Shire Council LGAs even though they mostly live in Muswellbrook. This suggests that businesses and services in all three LGAs benefit from their patronage. Spending by DIDO respondents is also spread across the three LGAs but is lower.



- Education and health services are accessed mostly by local residents in the Muswellbrook, Singleton and Upper Hunter Shire Council LGAs, and DIDO respondents use health services more than education.
- The majority of participation in local community groups and activities is through sports clubs and hobby or interest groups, and mostly in the Muswellbrook Shire Council LGA. Few respondents participate in churches, environmental groups, community service organisations and volunteer emergency response in the three LGAs.
- The most prominent concern raised in the survey about the Project proceeding or not proceeding is the loss of employment, of income and resulting inability to support the employee's family and household.
- Locals tend to be concerned about having to move their family or work away from family (i.e. becoming DIDO workers for a different employer) and about people leaving town and living standards declining in the community. Locals value being able to stay in town and spend money locally to support the local businesses and have their children attend the local schools. More locals are concerned about the impact of the Mount Pleasant Operation on the local environment than DIDO respondents.
- DIDO people's concerns centre around impacts on family life and of living away from their families. A couple of participants would consider moving their families closer to the mine if the Project proceeds, or looking for a job closer to home if it does not. This, and responses from locals indicate that the Project not proceeding may not reduce the number of people driving in and out for work, but possibly change who is doing it and where they are travelling from and to.
- Most respondents in both groups did not see any positive impacts if the Project does not proceed.

The survey results, findings and conclusions from this report will be used in the Social Impact Assessment to provide understanding and a baseline for social impacts on the workforce at the Mount Pleasant Operation and the Project.



1 Introduction

1.1 Context

The main aim of the Workforce Survey was to understand the demographics of the current Mount Pleasant Operation workforce and provide baseline information about the workforce for the Social Impact Assessment (SIA).

1.2 Purpose of this report

The purpose of this report is to provide the background, data and findings and conclusions of the Mount Pleasant Workforce Survey.

1.3 Structure of the Report

This report is structured in four sections.

The survey background describes the context and purpose of the survey, explaining how the survey was implemented and the limitations and assumptions that apply to survey results.

The survey results section provides the survey responses. Questions are presented in this report in the order they appeared in the survey. Results include demographics, working and employment information, living and family arrangements, local spending, use of education and health services and community group participation. A summary is provided of feedback themes for the respondents' perceived positive and negative impacts if the Project goes ahead or if it does not.

The survey findings section compares responses from different questions to provide a deeper understanding of the survey results. In particular the findings seek to understand how community impacts and participation may be different for respondents who live locally, and those who DIDO.

Finally, conclusions are presented.

2 Background

2.1 Purpose of the survey

The workforce survey was undertaken as part of the SIA for the Project.

The purpose of including the workforce in the SIA is two-fold:

- To further understand and report on the social baseline/existing social environment as the existing workforce forms part of the existing social environment, and
- To clarify the potential positive and negative social impacts of the Project and if it proceeds or not based on the experiences of the existing workforce.

2.2 Survey audience

The audience for the Workforce Survey is the workforce at the Mount Pleasant Operation. This includes full time, part time and casual employees of MACH, Thiess and Sedgman working at the Mount Pleasant Operation.

2.3 Survey design

2.3.1 Sampling strategy and testing

A volunteer sampling (a non-probability sampling) method was used to undertake the survey as it gave workers the choice to participate. This needs to be considered when the data is interpreted and utilised (see section 2.5 on limitations).

Respondents participated anonymously allowing their privacy to be respected and in recognition of their potential reluctance to participate given they may not be living locally in accordance with MACH's policy preference for workers to live locally.

The survey was piloted by representatives for each employer at the Mount Pleasant Operation: MACH, Sedgman and Thiess, and the survey was updated based on their feedback.

2.3.2 Survey content

The survey introduction provided information about the Project with a link to the MACH Mount Pleasant Optimisation Project website and information about the SIA and how the workforce survey would contribute to it. The survey questions were presented in sections:

- Consent – to ensure people understand what they are completing and what the information will be used for.
- Demographic questions – to identify gender, age, ethnicity, duration of employment and work schedule for the Mount Pleasant Operation workforce who participate in the survey.
- Living situation and locations of residence – at this point the survey diverted into two paths – one set of questions for those who maintain one local residence and one set for those who

maintain two residences – living away from their normal family home while scheduled on for work (DIDO).

- Questions about spending, use of local services and community participation to baseline current Mount Pleasant Operation workforce expenditure, use of education and health services, and participation in the community in the Muswellbrook, Singleton and Upper Hunter Shire Council LGAs.
- Perceived positive and negative impacts if the Project proceeds, for the workforce, their family and friends.
- Perceived positive and negative impacts if the Project does not proceed for the workforce, their family and friends.
- Respondents were then thanked for their participation.

2.4 Survey dates

The SIA Workforce survey was open from 8 July 2020 through to 31 July 2020.

The workforce was initially notified of the survey and invited to participate through existing MACH and contractor internal communication channels, with follow up reminders.

2.5 Limitations

Volunteer sampling creates a voluntary response bias, this is when responses are only from people who voluntarily choose to participate, as opposed to targeting specific target audiences and taking a random survey of those people which can then be used to generalise across the population the same was taken from. To try and counter for voluntary response bias, the survey avoided leading questions, broke down the different concepts (baseline, current operation, if the Project proceeded and did not proceed), and offered a range of responses using Likert scales, so both positive and negative responses could be captured.

The volunteer sampling method means results can only be interpreted for those people who participated and should not be generalised to represent the complete workforce. The results of this survey represent the Mount Pleasant Operation workforce members who responded.

Digital inequity may have influenced survey results as the survey was made available online only, it is acknowledged that not everyone who wanted to participate in the survey may have been able to because they did not have access to a computer or tablet connected to the internet or a smart phone.

By allowing the survey to be completed anonymously, some respondents may also not feel obliged to provide accurate, honest answers.

2.6 Assumptions

We have assumed that all respondents provided honest answers in the survey.

3 Survey results

3.1 Completed surveys

157 members of the MACH workforce undertook the survey. This is just under half of the existing workforce of 380 people. Question 1 asked the participants' consent and one respondent opted out through this question. Three others answered yes to the consent question but did not answer any further questions. The remaining 153 respondents completed the demographics and living arrangement sections of the survey. Ten respondents did not complete the expenditure section. Of those ten, four skipped the expenditure section and resumed answering the following sections about community participation and positive and negative impacts if the Project proceeds or does not proceed.

3.2 Demographics

3.2.1 Age

Questions 2 – 4 asked people's age, gender and whether they identified as Aboriginal or Torres Strait Islander. The majority of the workforce who completed the survey were male and between 30-39 years of age (Figure 1 and Figure 2). 5% of the workforce who completed the survey identified as being Aboriginal or Torres Strait Islander (Figure 3).

Figure 1: Age distribution (n = 153)

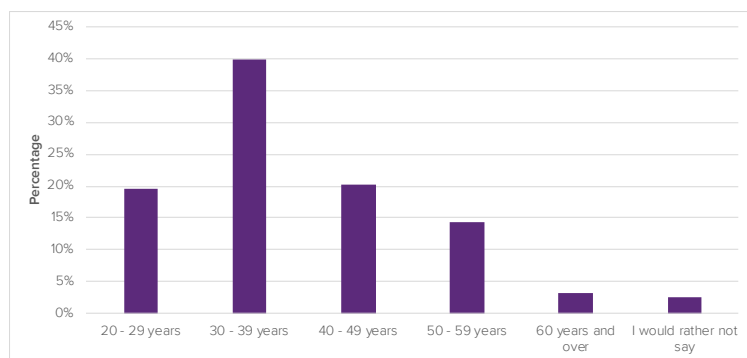


Figure 2: Gender (n = 153)

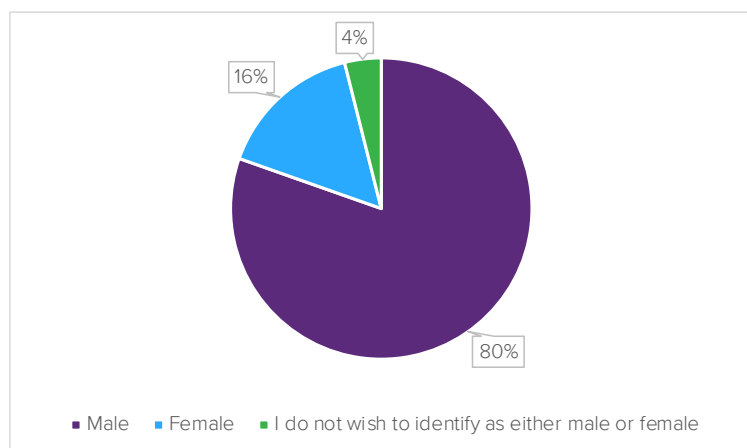
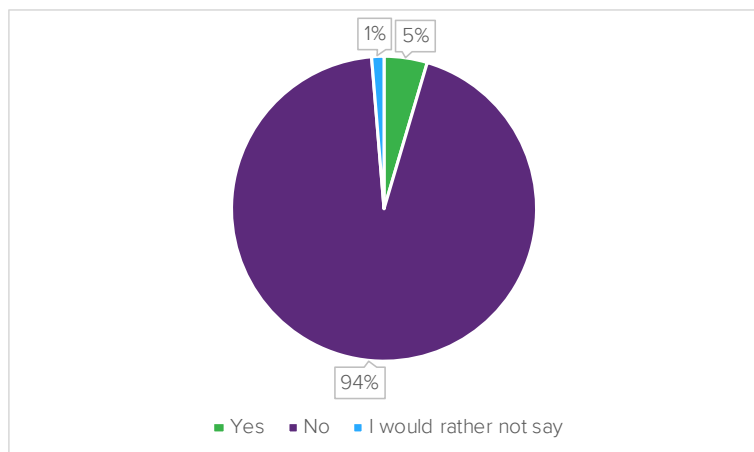


Figure 3: Aboriginal and Torres Strait Islander (n = 153)



3.3 Employment and work schedule

Questions 5 – 7 asked people about their employment at the Mount Pleasant operation. Overall, of the workforce who completed the survey, almost 50% worked at the site for 1 year or less (Figure 4). Most of the workforce is on a roster arrangement (62%), however there is a reasonable proportion (33%) who work a Monday — Friday work week (Figure 5). Very few are on a variable or casual contract or work part time. Of those who answered “other” in the survey, two advised in the comments that they were part time, two were on roster and two worked Monday to Friday.

Figure 4: Length of employment (n = 153)

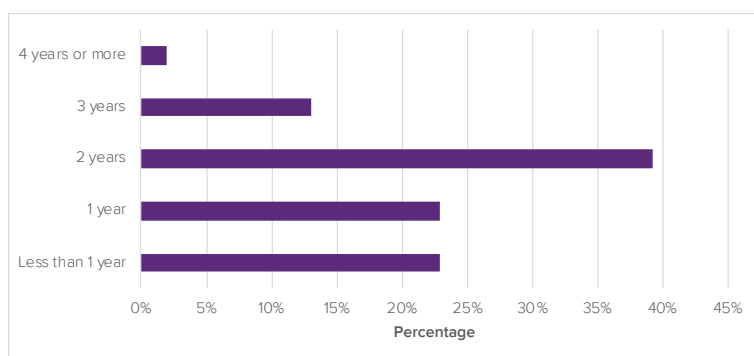
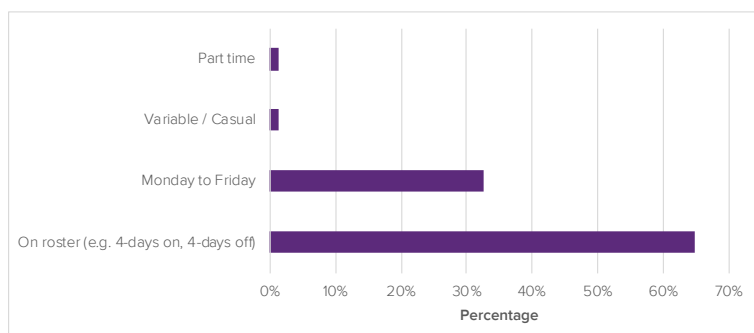
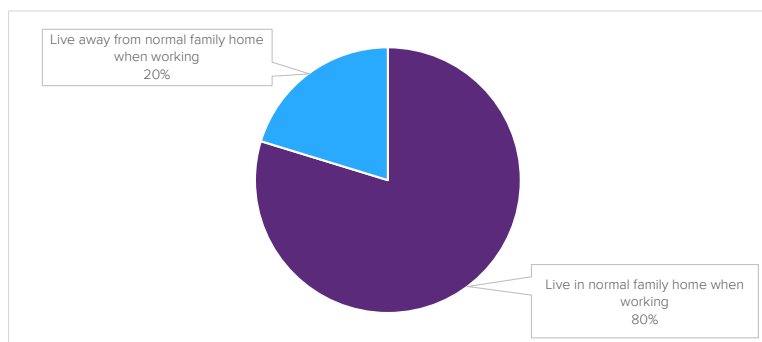


Figure 5: Work Schedule (n = 153)



As shown in Figure 6, most respondents (80%) live in their normal family home during their work period.

Figure 6: Living situation while working (n = 153)



3.4 Residential arrangements

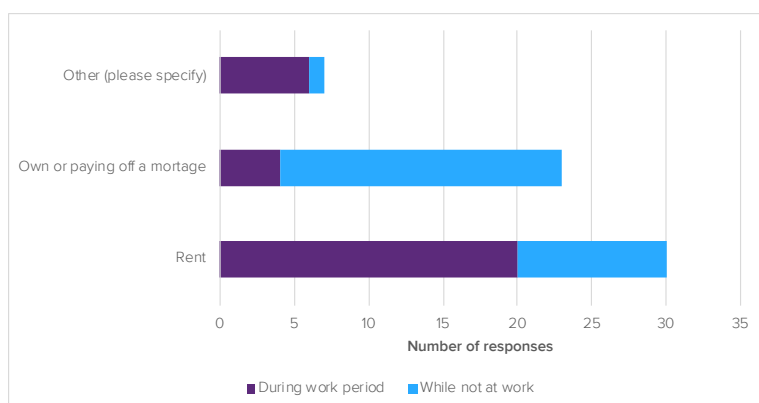
Based on the response to their living situation while working (Figure 6), respondents were presented with different questions to answer. The 20% of respondents who indicated they live away from their normal family home while working have been classified as DIDO, with the 80% classified as permanent local residents. Results from each of these groups are presented below.

3.4.1 Drive in Drive Out

Of the 20% (31) respondents who live away from their normal family home during their work period (i.e. DIDO), 87% lived in the Muswellbrook Shire Council LGA with 23 in Muswellbrook and one each in Denman, Mangoola and Sandy Hollow. Of the remaining four respondents, they lived in Aberdeen, Scone, Singleton, and Newcastle. One person did not respond to this question.

As shown in Figure 7, a considerable proportion of the DIDO workforce rents during their work period (67%), with 13% noting they stay in a house they own indicating they may operate two dwellings. The remainder indicated other arrangements including staying with other family or friends. For the majority of DIDO workers their usual permanent residence is their own home. One respondent (3%) indicated they live with extended family.

Figure 7: Tenure of residence for DIDO workers (n = 30)



The majority of the DIDO workforce share accommodation during their work period (Figure 8) with some staying by themselves and others staying with family. When not at work they tend to live with their partner and children.

Figure 8: Living arrangements for DIDO workers (n = 30)

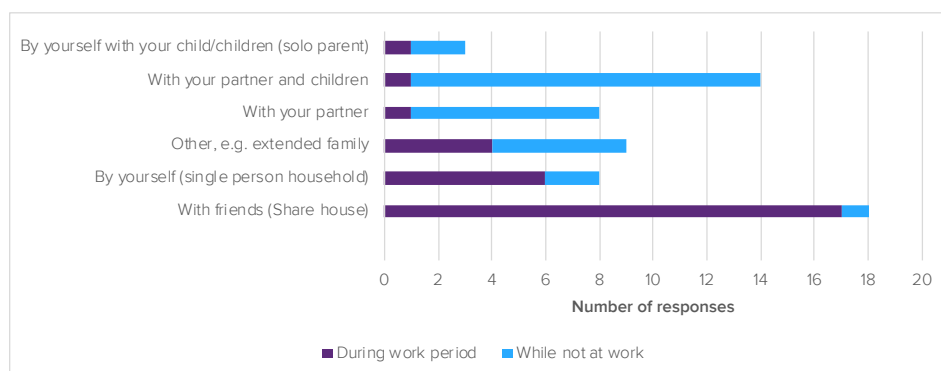


Figure 9 shows that most DIDO workers live in New South Wales, and a few travel in from other states including from Western Australia (Perth), Queensland (Brisbane and Gold Coast) and Victoria (Melbourne). Two respondents indicated they lived in Muswellbrook and Scone which indicates possible misunderstanding of the question. Those responses have been removed from the data in Figure 9.

Of those who reside permanently in NSW, most come from the area between the Central Coast and Newcastle as shown in Figure 10.

Figure 9: Location of normal permanent residence (n = 28)

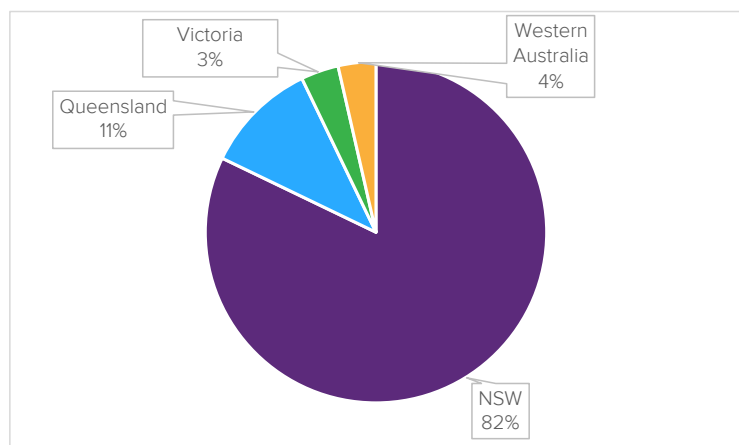
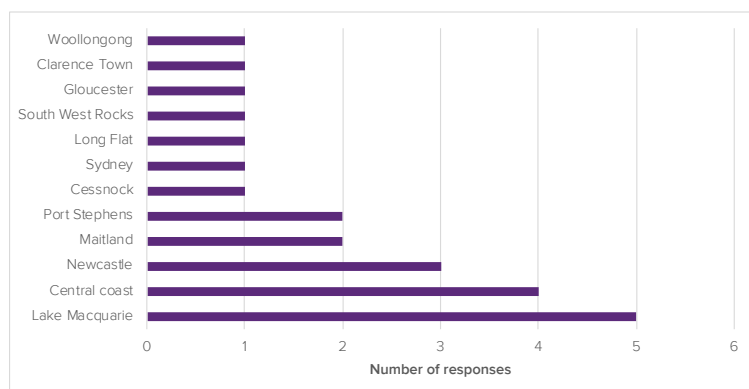


Figure 10: Location of permanent residence for NSW DIDO workforce (n = 23)



3.4.2 Permanent local residents

Of the 153 respondents that provided living arrangements data, 122 of those noted they lived locally on a permanent basis.

Figure 11 maps where people reside in the local area. Of these, 88% reside within the Muswellbrook, Upper Hunter and Singleton Council LGAs with roughly half each in Muswellbrook and Upper Hunter and Singleton. One respondent maintains a single residence in Newcastle and reported that they work from a Newcastle based office. One respondent lives permanently in Brisbane and works part time from there – this person's location has not been included in the map or table below. There may be other respondents who work for the Mount Pleasant Operation but from a remote office. Table 1 provides numerical data from the survey.

Figure 11: Location of residence

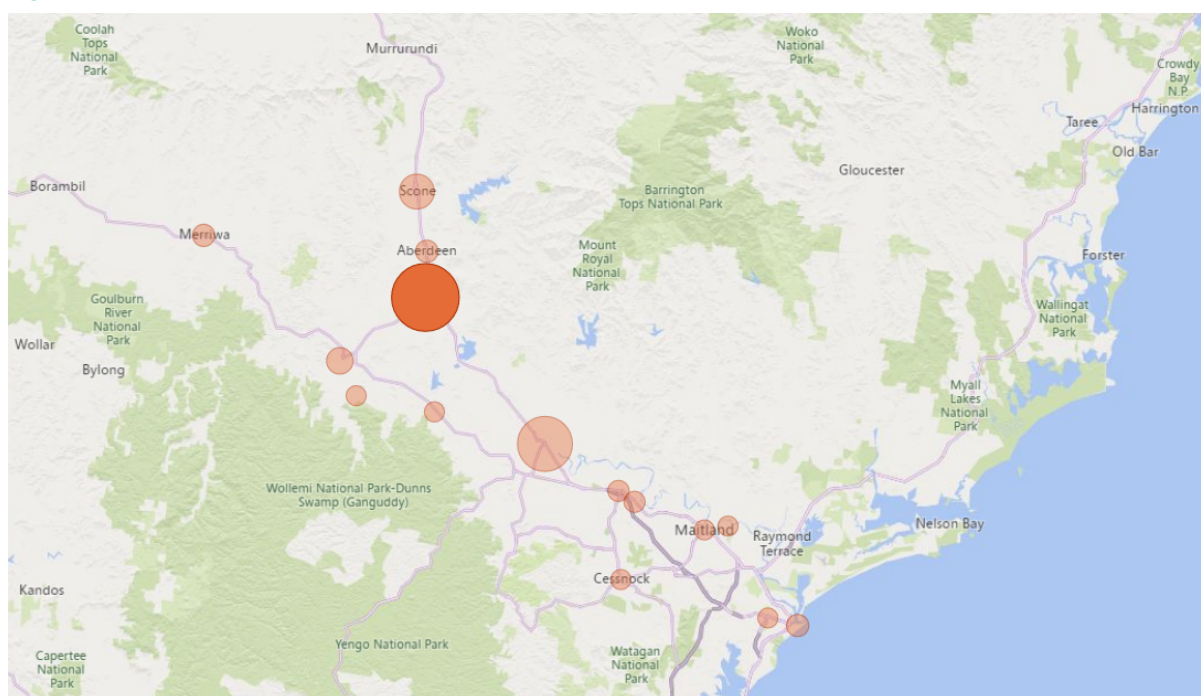
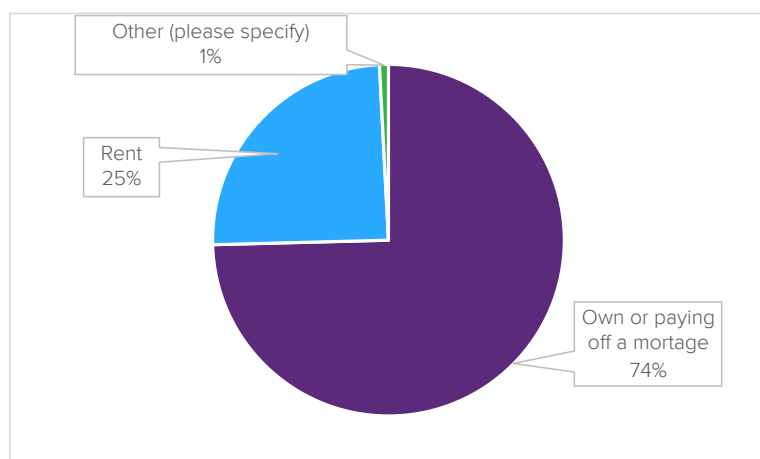


Table 1: Location of residence

Place of residence	Number of responses
Muswellbrook	46
Singleton	34
Scone	15
Denman	7
Aberdeen	3
Merriwa	3
Newcastle	3
Branxton	2
Greta	2
Bureen	1
Cessnock	1
Jerry Plains	1
Lambton	1
Maitland	1
Raworth	1

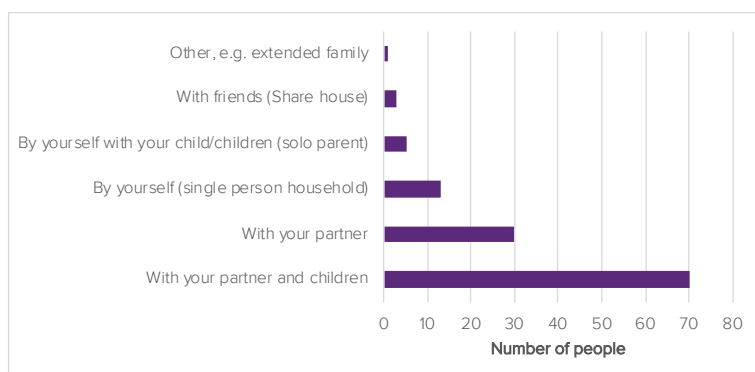
The majority of local resident workers own their own homes as shown in Figure 12.

Figure 12: Tenure of residence (n = 122)



As shown in Figure 13, over half of the local resident workers live with a partner and child/children, a quarter live with a partner and roughly one in ten live alone. The balance live with a child/children as a solo parent or with friends or extended family.

Figure 13: Living arrangements (n = 122)



3.5 Local spend

Survey participants were invited to answer questions relating to local spend with 140 participants answering these questions.

To assess the Mount Pleasant Operation workforce's spending in each LGA economy questions 17 – 22 of the survey asked participants roughly what percentage of their after-tax income is spent in each LGA. Participants were offered four possible responses for their spending in each LGA and then asked to specify what type of businesses they usually purchased from:

- 0 – 25%: No to little spending
- 25 – 50%: Some spending
- 50 – 75%: Most spending and
- 75 – 100%: Almost all to all spending.

As shown in Figure 14, the Muswellbrook Shire Council LGA has the highest proportion of spend with 31% spending 50% or more in the area.

Of the 140 who responded they identified 656 spending places across all three LGAs with 45% of the spend in Muswellbrook, 34% in Singleton and 21% in Upper Hunter. Figure 15 shows that most of the spend in the Muswellbrook area is at supermarkets / grocery stores and hardware. The spend in all three areas generally reflects the availability of the type of stores available. The proportion of spend in each area is also directly related to where people usually live.

Figure 14: Spending in Muswellbrook, Upper Hunter and Singleton Shire Council LGAs (n = 140)

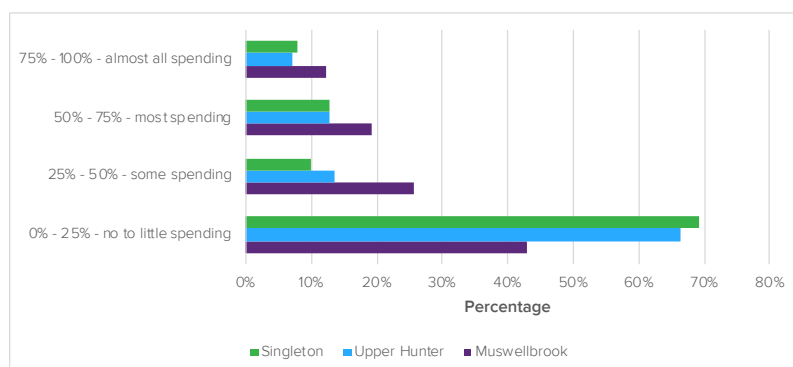
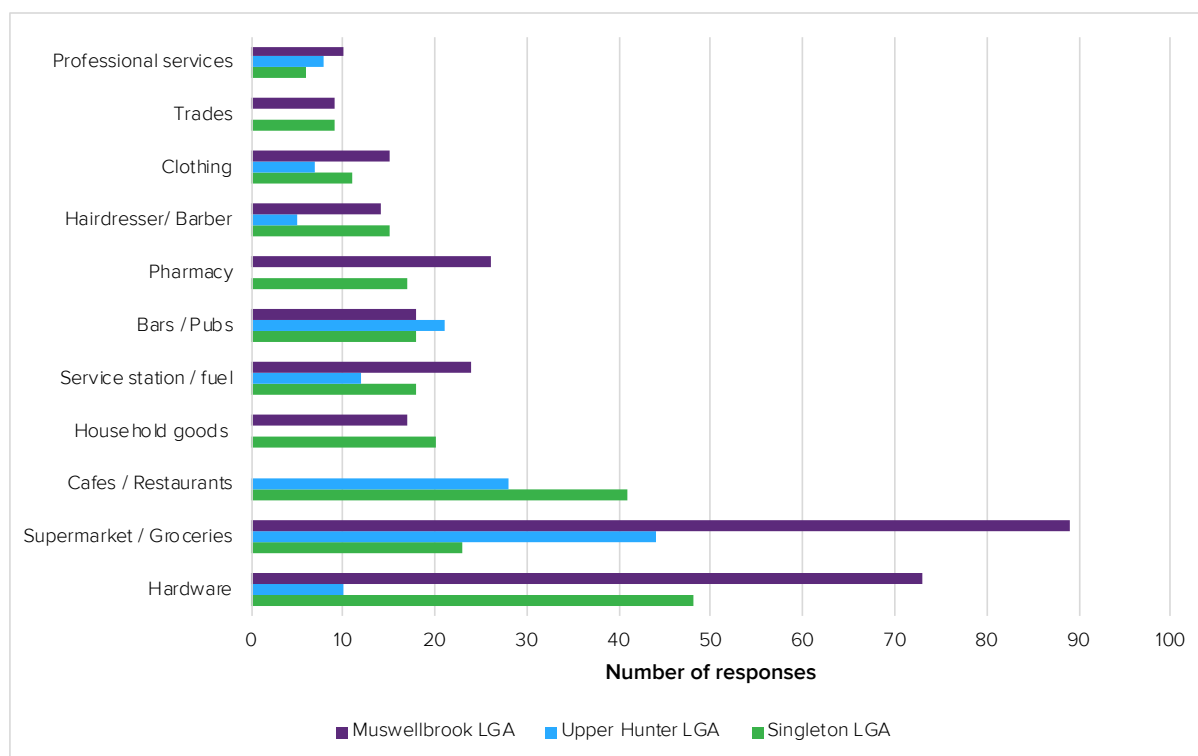


Figure 15: Spending in Muswellbrook, Upper Hunter and Singleton Shire Council LGAs (n = 656)

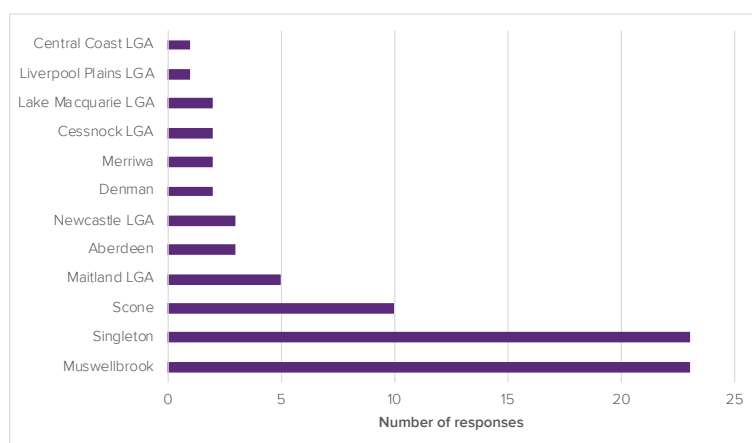


3.6 Use of local services

3.6.1 Education

Of the 140 respondents, 66 (47%) do not have school aged children. Of the 77 who do, most of their children attended school, early childhood education or TAFE in mostly in Muswellbrook Shire Council LGA (Muswellbrook or Denman) or Singleton (Figure 16). There are 15 children attending education facilities in the Upper Hunter Shire Council LGA (Scone, Aberdeen and Denman). There were three respondents who selected other (not shown in Figure 16), one is home schooled, one is in Perth, WA and one in Abermain, NSW.

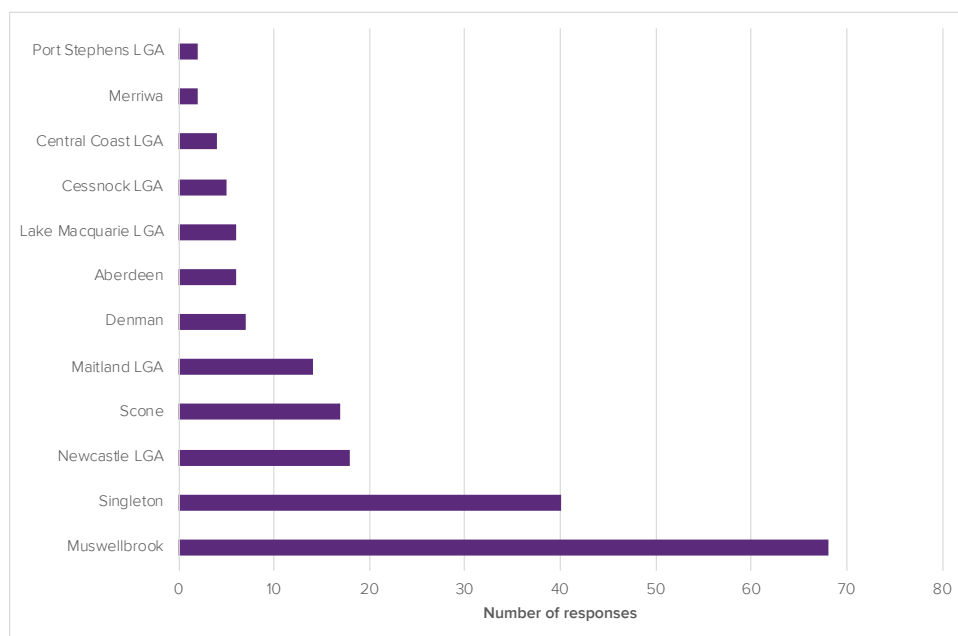
Figure 16: Location of education facilities (n = 77)



3.6.2 Health services

The survey asked respondents where they and their family regularly access medical and health services, with an invitation to select as many locations as relevant. As shown in Figure 17, 189 responses were made by 140 people. Figure 17 shows most use health services in Muswellbrook followed by Singleton. Smaller numbers (under 7%) use health services in Maitland, Newcastle, Cessnock, Lake Macquarie and Central Coast LGAs and in Queensland. There was one response each for Dungog LGA, Greater Sydney Region, Gloucester and Perth which are not shown in Figure 17.

Figure 17: Location of medical and health services accessed (n = 189)

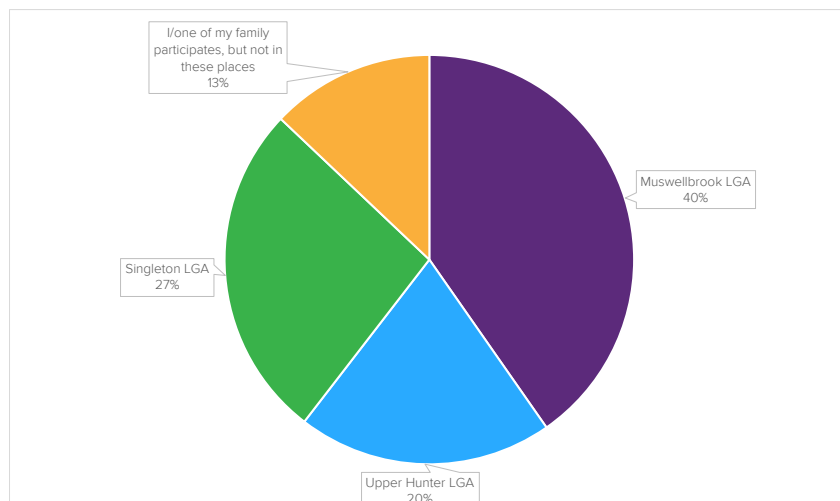


3.7 Community Participation

591 individual responses were made by 139 participants to question 25 which asked, “Which community groups do you or your family members participate in and where?” Five types of community groups were provided for participants to select from (sports, church, environmental, community service and voluntary emergency response) and four location options (Muswellbrook, Singleton, and Upper Hunter Shire Council LGAs and other).

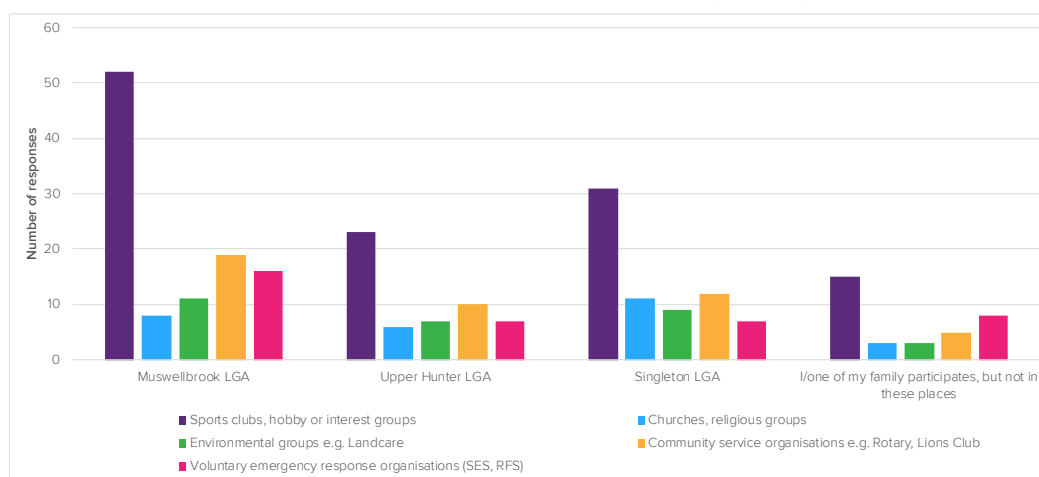
As shown in Figure 18, of those that do participate in a sports club, hobby or interest group, most do so within the Muswellbrook Shire Council LGA.

Figure 18: Location of those who participate in sports, hobbies or interest groups (n = 106)



The types of community groups the workforce and their families participate in across the Muswellbrook Shire Council, Upper Hunter, Singleton and other Local Government Areas are shown in Figure 19. The majority of community groups across the four geographical areas are sporting, hobby or interest groups.

Figure 19: Types of community participation in different areas (n = 591)



3.8 Social impacts of the Project

The final section of the survey asked participants to provide their perceived impacts to themselves, their families and their friends under two scenarios – if the Project proceeds or not. The survey asked participants to consider both positive and negative impacts for both scenarios.

3.8.1 Social impacts if the Project proceeds

Respondents were asked what they thought the positive and negative impacts would be if the Project goes ahead. The responses were given in an open text field and have been collated into themes.

The most frequently raised positive impact was staying employed. From this, sub-themes emerged around being able to continue to care for and provide for one's family or household. Another strong theme was being able to stay and support the local community and have their children attend local

schools. Longer term negative impacts also featured strongly in responses, with concern about long term employment prospects, health and prosperity for their towns. Table 2 shows the number of responses for each of the impact themes.

Table 2: Positive impacts if the Project proceeds (n = 138)

Positive impact	Number of responses
Stay employed, keep job, job security	81
Continue to care for or plan for family/household	31
Stay here, support local community, schools	31
Future employment, health and wealth for family and friends and town	29
Continue to support local economy	21
Income, financial	18
Maintain friends, hobbies, lifestyle	9
Maintain career path/development	7
Non-specific positive impact	5
House prices	5
Travel – work is close to home	3
I can relocate/settle permanently close to mine	2
Cheaper electricity/energy security	2

Table 3 shows the number of responses for negative impacts. Of the 136 people who replied to this question 46% (62) said they anticipated no negative impacts if the Project proceeds, and 27% (37) said they weren't sure. 15% (20) respondents had concerns about having no money or job as an impact, which suggests they may have mis-interpreted the question. A few identified negative environmental impacts or a negative effect on house prices.

Table 3: Negative impacts if the Project proceeds (n = 136)

Negative impact	Number of responses
No negative impacts	62
Not sure	37
Loss of job or income	20
Environmental concerns	7
Have to move	4
House prices	3
Keep working night shift/living away from family	2
Non-specific negative impact	1
Reduced state revenue	1
Higher electricity prices	1

3.8.2 Social impacts if the Project does not proceed

Respondents were then asked what they thought the positive and negative impacts would be if the Project does not go ahead.

Table 4 shows positive impacts nominated by the respondents if the Project does not proceed. Over half (53%, 71 respondents) said there would be no positive impact for them and a further 30% (40 respondents) were unsure. Several appear to have mis-interpreted the question, with 11 stating job losses (not a positive impact from their perspective) and 5 stating more jobs as positive impacts. Some saw an opportunity to spend more time with family and be closer to home, the reduction of environmental impacts from the mine, and the opportunity to seek new challenges or a job elsewhere.

Table 4: Positive impacts if the Project does not proceed (n = 133)

Positive impact	Number of responses
No positive impacts	71
Not sure	40
Lose job, job losses	11
More jobs, security, lifestyle	5
More time back home/with family, closer to family	5
No income, fun or play	4
Environmental benefits	4
People leave town	3
Non-specific positive	1
New job, challenges elsewhere	1

Table 5 shows the negative impacts nominated by the respondents if the Project does not proceed. The dominant feedback of losing jobs and income and having to move away from their town to find new employment. 12% were not sure what negative impacts would be in this scenario while others were concerned for the future of their towns and how a lack of jobs would affect the community and living standards, local businesses and house prices. Table 5 provides the number for each impact theme.

Table 5: Perceived negative impacts if the Project does not proceed (n = 134)

Negative impact	Number of responses
No job/employment	59
Have to move away/people will leave	39
No money or income	32
Not sure	16
Uncertainty for town – decline in jobs, community, living standards	14
Local businesses/economy will suffer	11
House prices	7
Personal uncertainty, stress	6
Move away from family, less time with family	6
Lifestyle reduced	1

Negative impact	Number of responses
Non-specific negative	1
Less royalties for State	1
Higher electricity prices	1

4 Survey findings

This section compares the survey results from DIDO and local residents in the categories of:

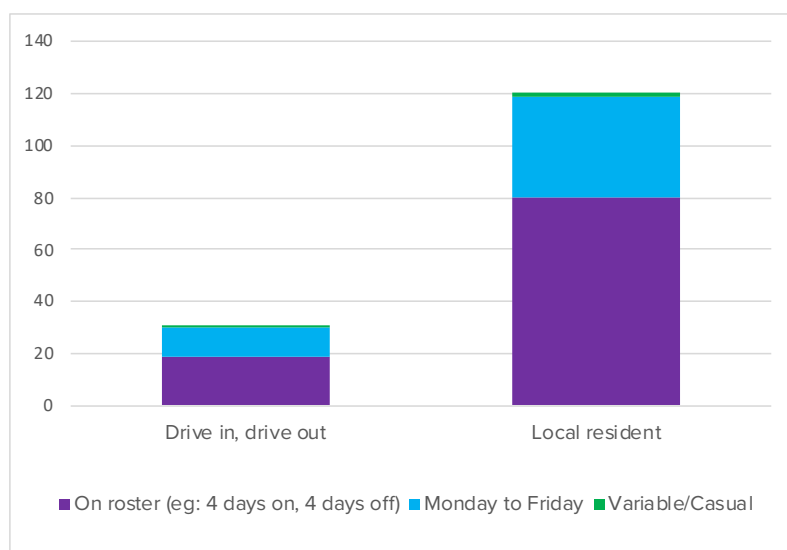
- Baseline
 - Living and travelling
 - Spending
 - Use of health and education services and
 - Community participation and support.
- Social impacts

4.1 Baseline

4.1.1 Work schedule and living arrangement

Figure 20 shows the split of the Mount Pleasant Operation Workforce who completed the survey based on DIDO and local residents and work schedule. The proportions of those who maintain two residences (DIDO) and those who maintain one residence are consistent across both roster and Monday to Friday workers. Roughly one third of local residents and one third of DIDO workers work Monday to Friday and 2/3 of each of these groups are on roster. This suggests there is no connection between whether a staff member works Monday to Friday or on a roster and whether they choose to live locally or DIDO.

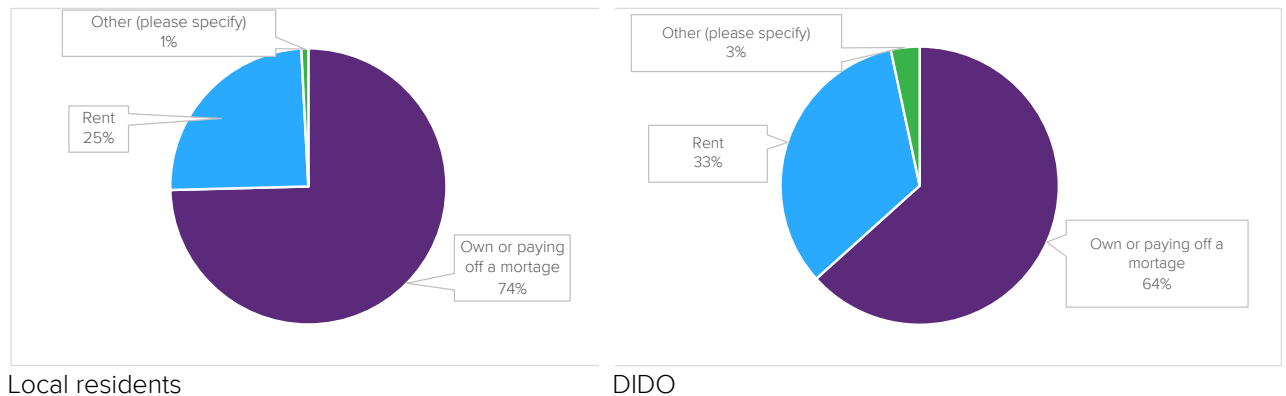
Figure 20: Comparison of work schedule for DIDO and local residents (n = 140)



4.1.2 Work schedule and tenure of local residence

As shown in Figure 21, of the people who completed the survey, there is a difference in their tenure of local residence. Local home ownership between staff who DIDO (64% own or pay a mortgage on their local residence) is a lot lower than those who maintain one residence (74% own or pay a mortgage on their residence).

Figure 21: Comparison of DIDO and local resident tenure of local residence



4.1.3 Work schedule, residence location and travel

Figure 22 shows that the majority of people who completed the survey live in the Muswellbrook Shire Council LGA, followed by Singleton and Upper Hunter Shire Council LGAs. Workers are commuting from as far as Newcastle, Cessnock and Maitland with the majority DIDO workers having a secondary residence (renting or temporary accommodation) in Muswellbrook.

Figure 22: Location of local residence for DIDO and local residents

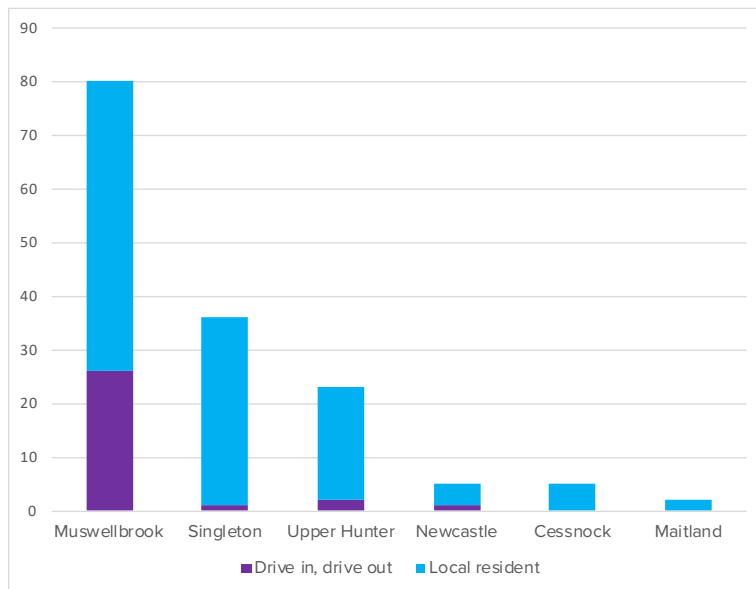


Figure 23 shows residential locations of respondents who maintain one local residence. One response from a part time worker based in Brisbane has been omitted from the map and table. Table 6 provides numbers of workers who live in each location.

Figure 23: Map of local residents' residential locations

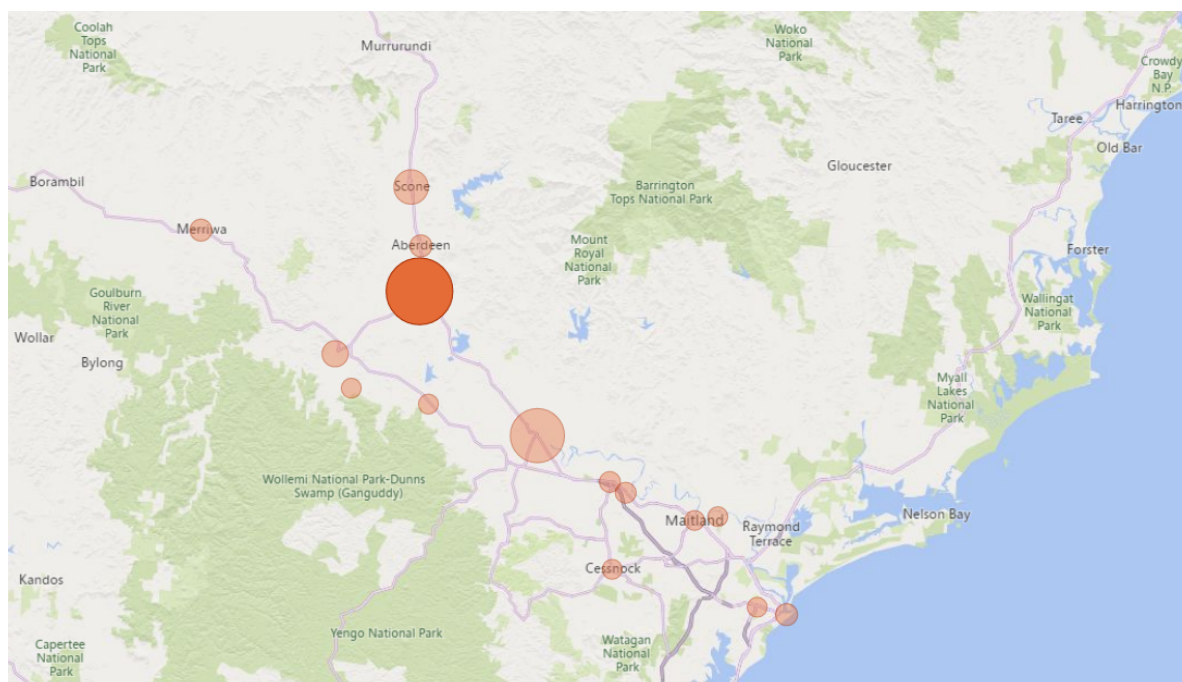


Table 6: Local residential locations

Location	Number of people
Muswellbrook	46
Singleton	34
Scone	15
Denman	7
Aberdeen	3
Merriwa	3
Newcastle	3
Branxton	2
Greta	2
Bureen	1
Cessnock	1
Jerry Plains	1
Lambton	1
Maitland	1
Raworth	1
Total	121

Figure 24 shows the residential locations of respondents that DIDO – orange is where they live while working (rostered on) and blue is the location of their permanent residence (rostered off). Table 7 provides the numerical data for these locations.

Not shown on the map are one permanent residence in Perth, two in Queensland (one in Brisbane, one in Gold Coast) and one in Victoria (Melbourne). While we cannot assume that these four respondents travel weekly to the Mount Pleasant Operation, it is more likely that those with home residences throughout New South Wales probably do.

Figure 24: Map of DIDO residential locations on and off schedule

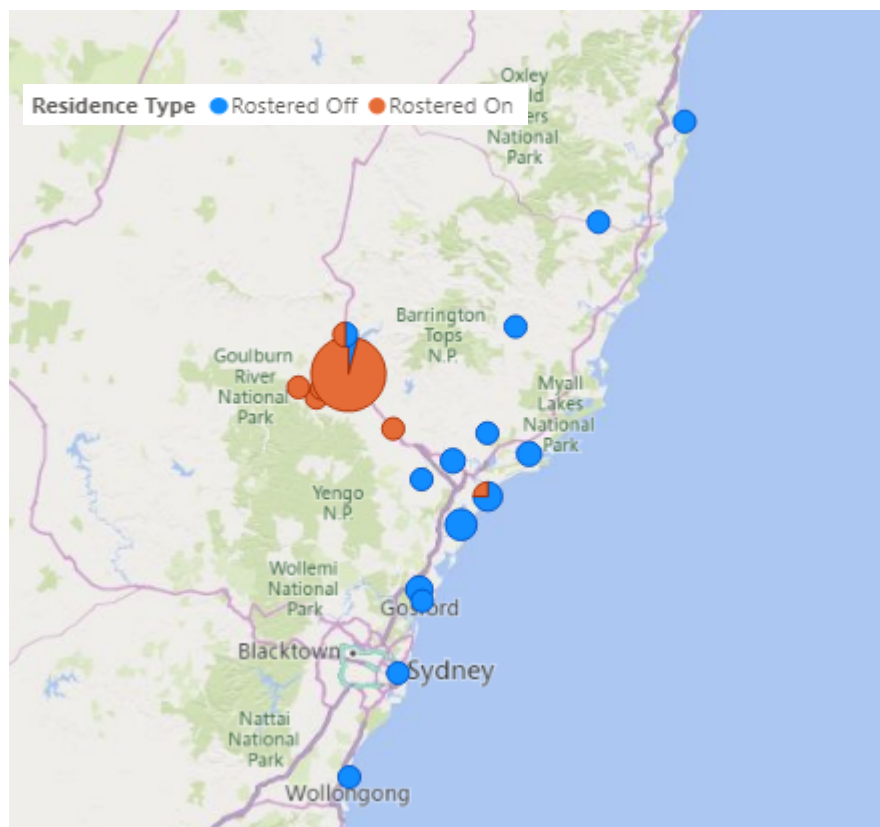


Table 7: DIDO residential locations

Area	Location	Number of people
Local	Scone	1
	Muswellbrook	1
NSW	Lake Macquarie	5
	Central coast	4
	Newcastle	3
	Maitland	2
	Port Stephens	2
	Cessnock	1
	Sydney	1
	Long Flat	1
	South West Rocks	1
	Gloucester	1

Area	Location	Number of people
	Clarence Town	1
	Wollongong	1
Queensland	Gold Coast	1
	Brisbane	2
Victoria	Melbourne	1
Western Australia	Perth	1
Total		30

4.2 Spending

The Mount Pleasant Operation workforce who completed the survey contribute to the local economy when they spend their wages locally. This section compares the contribution to the local economy of local residents and DIDO respondents.

4.2.1 Local residents

Of those local residents who completed the Workforce Survey:

- 15% (17 respondents) spend (75 – 100%) almost all to all of their income in Muswellbrook, 9% (11) spend almost all of their income in each of Singleton LGA and in Upper Hunter Shire Council LGAs.
- 23% (27) spend most (50 – 75%) of their income in Muswellbrook, with 15% (18) spending this proportion in Singleton and 15% (17) in Upper Hunter Shire Council LGAs.
- 24% (28) spend some (25 – 50%) of their income in Muswellbrook, with 10% (12) in Singleton and 15% (17) in Upper Hunter LGAs.
- 38% (45) spend nothing to little (0 – 25%) in Muswellbrook Shire Council LGA, 65% (76) spend little to nothing in Singleton Council LGA and 62% (73) spend little to nothing in the Upper Hunter Shire Council LGA.

Figure 25 shows the breakdown of local resident's spending across the three LGAs. Table 8 provides the numerical data from the survey.

Figure 25: Map of local residents' average spending by LGA (n = 117)

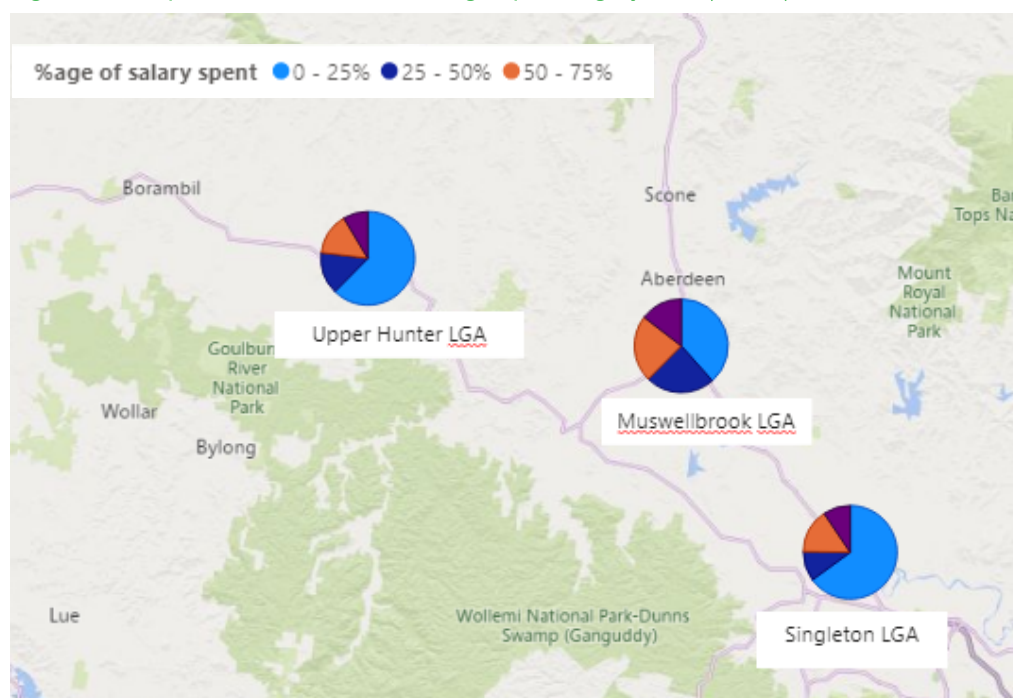


Table 8: Local residents' average spending by LGA

LGA	Percentage of average spend				Total
	0 – 25%	25 – 50%	50 – 75%	75 – 100%	
Muswellbrook	45	28	27	17	117
Singleton	76	12	18	11	117
Upper Hunter	73	17	17	10	117
Total	194	57	62	38	351

4.2.2 Drive in drive out

Of those DIDO workers who completed the Workforce Survey:

- One person (1%) who lives in Aberdeen on roster, (Newcastle normally), reports spending on average 50-75% in the Upper Hunter LGA and 25 – 50% in Muswellbrook Shire Council LGA.
- 35% (8 respondents) of DIDO respondents spend 25 – 50% in Muswellbrook Shire Council LGA and 9% each in Singleton and Upper Hunter LGAs.
- 65% (15) of DIDO respondents spend 0 – 25% in Muswellbrook Shire Council LGA and 21% and 20% in Singleton and Upper Hunter LGAs respectively.

Figure 26 shows the breakdown of DIDO's spending across the three LGAs, and Table 9 provides the numerical data from the survey.

Figure 26: Map of DIDO average spending by LGA (n = 23)

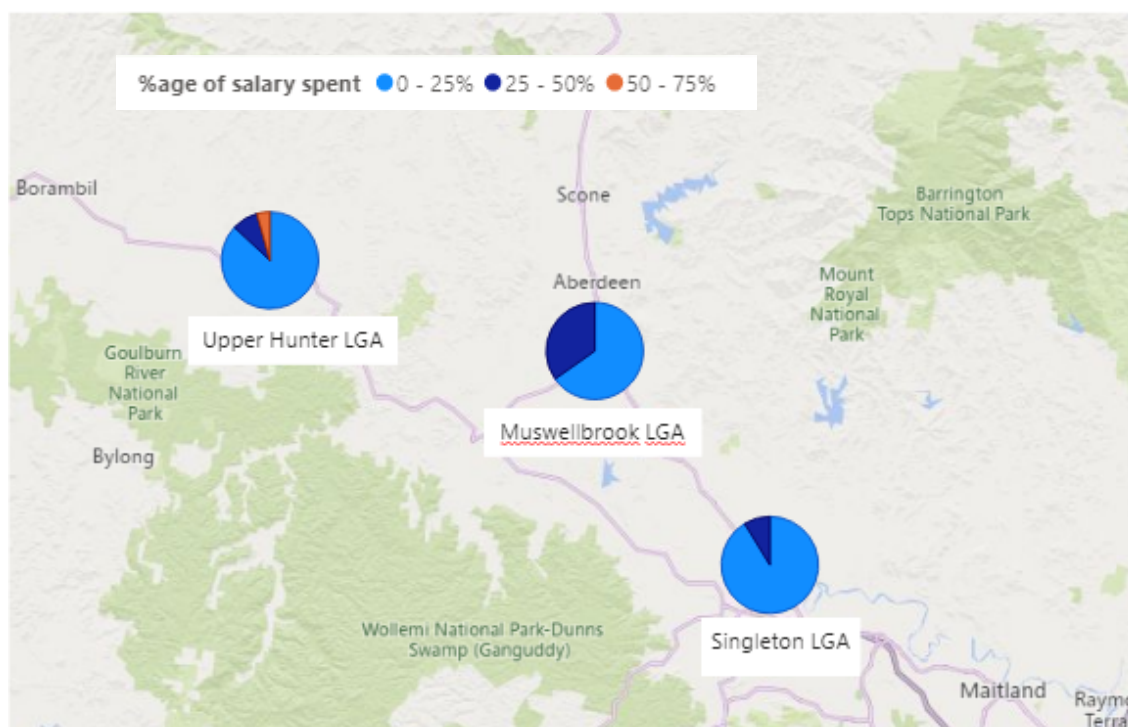


Table 9: DIDO average spending by LGA

LGA	Percentage of average spend			Total
	0 – 25%	25 – 50%	50 – 75%	
Muswellbrook	15	8		23
Singleton	21	2		23
Upper Hunter	20	2	1	23
Total	56	12	1	69

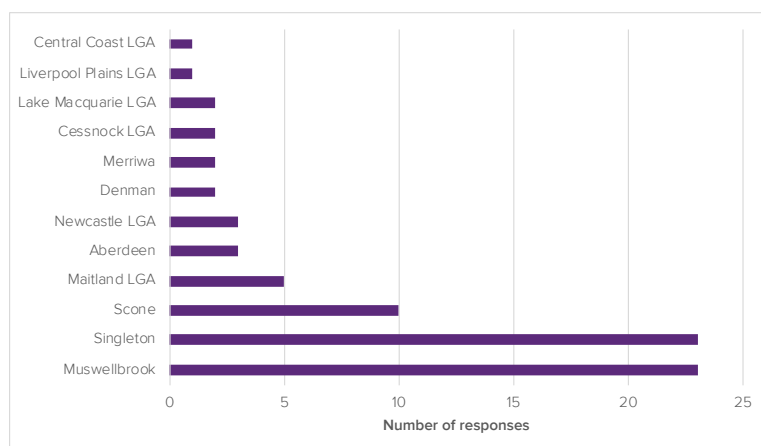
Compared with DIDO respondents, those who live locally are more likely to spend most to all of their income in one of three LGA areas, compared with DIDO respondents who are most likely to spend 0 – 25% of their income in the three LGAs. This supports the perception that workforce members that live locally support the local economy to a greater extent than those who DIDO. It is noted that local residents spend fairly consistently across the three LGAs even though they mostly live in Muswellbrook, which may reflect shopping preferences and facilities.

4.3 Use of education and health services

4.3.1 Education

Similar proportions of local residents (43%) and DIDO respondents (48%) don't have school aged children. Local residents' children mostly attend education in the Muswellbrook Shire Council LGA with significant proportion attending educational institutions in Singleton and Upper Hunter Shire Council LGAs (as shown in Figure 27). Three DIDO workers reported that their children attend educational institutions in Maitland Shire Council and Newcastle City Council LGA.

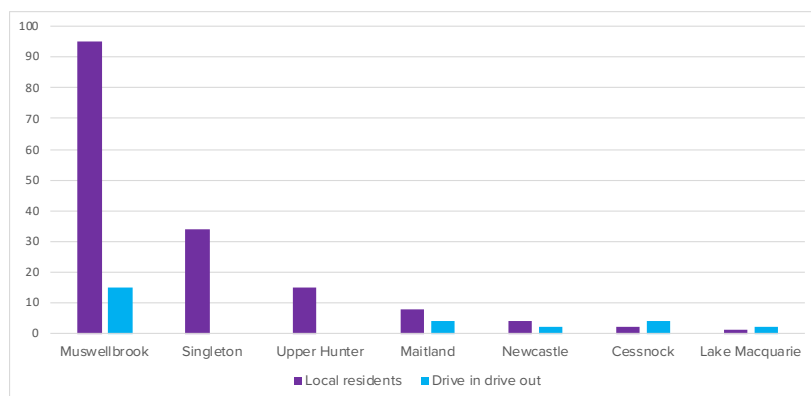
Figure 27: LGA where children attend education (n = 77)



4.3.2 Health

Figure 28 shows where DIDO and local residents access health and medical services including doctors, dentists, physiotherapists and counsellors locally. While some DIDO respondents use medical and health services in Muswellbrook Shire Council LGA, it is possible that the few who report using services in Maitland, Newcastle and Cessnock LGAs actually live there. Local residents mostly use local services in the Muswellbrook Shire Council LGA and also use services in Singleton and Upper Hunter Shire Council LGAs.

Figure 28: LGA where medical and health services are accessed (n= 137)



4.4 Community participation

Survey results indicate that sports clubs, hobby and interest groups are the main beneficiaries of community participation with 44% active in the Muswellbrook Shire Council LGA. Figure 29 and Figure 30 compares community participation for local residents and DIDO respondents and show much greater contribution to community activities, groups and events by local residents. Survey results indicate that sports clubs, hobby and interest groups are the main beneficiaries of community participation across both groups with smaller numbers of each group participating in church, environmental, community service and voluntary emergency response groups.

Figure 29: Local residents' participation in community groups and activities by LGA (n = 122)

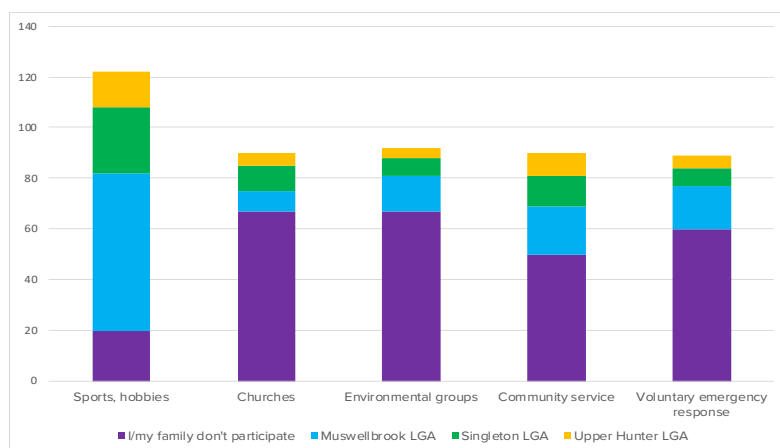
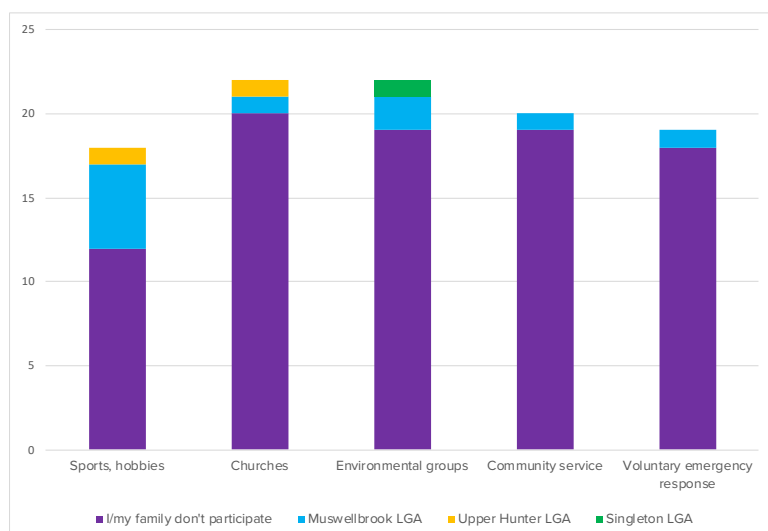


Figure 30: DIDO participation in community groups and activities by LGA (n = 25)



4.5 Social impacts

4.5.1 Local residents

Impacts if the Project proceeds or does not proceed are overall consistent with the findings reported for all respondents in Section 3.8. The biggest concern is maintaining employment and income and being able to continue to support their family and household.

Feedback from local residents shows a stronger sentiment of being part of the local community – positive impacts if the Project proceeds are supporting local businesses and having their children attend local schools. There is more mention in this group of security beyond employment in terms of housing, lifestyle and planning for the future. A couple of local resident respondents point out the contribution of the mine to the community through sponsorships and events.

Negative impacts perceived by local residents if the Project proceeds uncover more environmental concerns with specific mentions of dust and air quality.



Higher house prices if the Project proceeds are seen as a negative impact by some, and lower house prices if the Project does not proceed are seen as a negative impact by others.

When asked about positive impacts if the Project does not proceed, many locals said there were none.

"There aren't any positives. Loss of jobs, more people will leave town". Worker at the Mount Pleasant Operation

A few saw possible opportunities if the Project does not proceed.

"Have to look elsewhere" Worker at the Mount Pleasant Operation

"I may find other work with less travel," and "I'd be forced to expand my horizons". Worker at the Mount Pleasant Operation

Some locals mentioned positive environmental impacts if the Project does not proceed. Specific mentions were made of greenhouse gas impacts, that the mining area would be rehabilitated sooner, and effects of environmental effects would be reduced.

Negative impacts if the Project does not proceed were mostly around having to move their family or move away from family for work. Some were concerned about numbers of people leaving town and the impact on house prices, living standards and the broader community.

4.5.2 Drive in drive out

Impacts described by drive in drive out respondents are consistent with combined results reported in Section 3.8.

The most significant impact is on employment, income, and resulting ability to care for family and household. Time to spend with family and household is also mentioned several times as a negative impact (i.e. reduced time) if the Project proceeds and a positive impact if it does not, or in one case if it does proceed and the respondent is able to relocate their family closer.

One DIDO respondent stated a positive impact if the Project proceeds is the,

"Possibility of relocating my family closer to my workplace once the future of the pit is known." Worker at the Mount Pleasant Operation

This suggests that if the Project proceeds, some DIDO staff would consider a more permanent living arrangement in Muswellbrook. Another gave a negative impact of the Project proceeding as being away from family home more,

"I will be living away from my home and family through the week". Worker at the Mount Pleasant Operation

Positive impacts if the Project does not proceed include



"I wouldn't be staying away for work" Worker at the Mount Pleasant Operation

"I would search for a job closer to home and family". Worker at the Mount Pleasant Operation

Conversely, one respondent said,

"I don't think there would be a positive for myself or family as I'll be unemployed and with how the world is at the moment, I would have no idea how hard it'll be to gain employment in the same industry again". Worker at the Mount Pleasant Operation

Another stated,

"I may have to move even further away from family and home to find work," and another, "I may have to move interstate to stay in the industry directly as jobs for my role are quite scarce". Worker at the Mount Pleasant Operation

5 Conclusions

The following conclusions have been derived from the results of the Workforce Survey and the findings reported in Sections 3 and 4.

- Locals appear to be more financially invested in the local economy through home ownership.
- Some DIDO respondents say they would look to move more permanently close to the mine if the Project proceeds.
- Local residents spend fairly consistently across the Muswellbrook, Singleton and Upper Hunter Shire Council LGAs even though they mostly live in Muswellbrook. This suggests that businesses and services in all three LGAs benefit from their patronage. Spending by DIDO respondents is also spread across the three LGAs, but is lower.
- Education and health services are accessed mostly by local residents in the Muswellbrook, Singleton and Upper Hunter Shire Council LGAs, although DIDO respondents use health services more than education.
- The majority of participation in local community groups and activities is through sports clubs and hobby or interest groups, and mostly in the Muswellbrook Shire Council LGA. Few respondents participate in churches, environmental groups, community service organisations and volunteer emergency response in the three LGAs.
- The most prominent concern raised by respondents if the Project did not proceed was the loss of employment, of income and resulting inability to support family and household.
- Locals tend to be concerned about having to move their family or work away from family (i.e. becoming DIDO workers for a different employer) and about people leaving town and living standards declining in the community. Locals value being able to stay in town and spend money locally to support the local businesses, and have their children attend the local schools. More locals are concerned about the impact of the mine on the local environment than DIDO respondents.
- DIDO workers concerns centre around impacts on family life, of living away from their families and maybe moving their families closer if the Project proceeds or looking for a job closer to home if it does not. Responses from locals and from DIDO employees indicate that the Project not proceeding may not reduce the number of people driving in and out for work, just who is doing it and where they are travelling from and to.
- Many respondents in both groups saw no positive impacts if the Project does not proceed.



Attachment A

SIA Workforce Survey

Survey of the Mount Pleasant Operation Workforce

MACH Energy is seeking approval from the New South Wales (NSW) Government for the Mount Pleasant Optimisation Project.

The Mount Pleasant Optimisation Project proposes to extend the life of the Mount Pleasant mine from 2026 to 2048 and increase the amount of run-of-mine (raw) coal from 10.5 million tonnes per annum to 21 million tonnes per annum.

This workforce survey will inform the Social Impact Assessment for the Mount Pleasant Optimisation Project. The Social Impact Assessment is one of the technical reports for the Environmental Impact Statement.

The results of this survey will help identify the potential positive and negative social impacts of the Mount Pleasant Optimisation Project either proceeding or not proceeding.

The Social Impact Assessment report will be published on the NSW Department of Planning Infrastructure and Environment project webpage, once the Environmental Impact Statement has been accepted by the NSW Government.

Just Add Lime is conducting this survey to understand how workers at the current Mount Pleasant Operation and their families interact with communities in Muswellbrook, Aberdeen, Scone, Denman, Singleton and beyond. The survey is also being undertaken to understand the impact on you and your family if the Optimisation Project proceeds or not.

MACH will also use the data to understand the broad characteristics of its workforce and to describe its workforce to others.

The survey should only take 5 -10 minutes to complete.

If you have any questions or concerns about the workforce survey, please contact Rachel Maas at Just Add Lime on 0418 728 895 or rachel.maas@justaddlime.com.au

- * 1. To protect your privacy and allow for responses to be provided anonymously, we will not be asking for your name or the company you work for.

By completing this survey you are providing consent to Just Add Lime to:

- a) use the results in the Social Impact Assessment Report for the Mount Pleasant Optimisation Project.
- b) provide the raw data to MACH for its use.

Please select a checkbox below:

- ☐ Yes, I consent - complete the survey
- ☐ No, I do not consent - exit the survey

Survey of the Mount Pleasant Operation Workforce

This section of the survey asks some questions about you. We will use the information to understand the demographics of the existing workforce and make demographic estimates of the future workforce if the Mount Pleasant Optimisation Project proceeds.

*** 2. Please select your age group**

- ☐ Under 20 years
- ☐ 20 – 29 years
- ☐ 30 – 39 years
- ☐ 40 – 49 years
- ☐ 50 – 59 years
- ☐ 60 years and over
- ☐ I would rather not say

*** 3. Do you identify as:**

- ☐ Male
- ☐ Female
- ☐ I don't wish to identify as male or female

*** 4. Do you identify as Aboriginal or Torres Strait Islander?**

- ☐ Yes
- ☐ No
- ☐ I would rather not say

Survey of the Mount Pleasant Operation Workforce

This section of the survey asks some questions about working at the Mount Pleasant Operation. This information provides a broader understanding of the context of responses.

* 5. How long have you been working at the Mount Pleasant operation?

- ☐ 4 years or more
- ☐ 3 years
- ☐ 2 years
- ☐ 1 year
- ☐ Less than 1 year

* 6. Do you predominantly work:

- ☐ On roster (eg: 4 days on, 4 days off)
- ☐ Monday to Friday
- ☐ Variable/Casual
- ☐ Other (please specify)

Survey of the Mount Pleasant Operation Workforce

This section of the survey asks some questions about where you and your family live. We will use this information to understand where the workforce currently lives and estimate where the future workforce and their families may live, if the Mount Pleasant Optimisation Project proceeds.

* 7. Do you live away from your normal family home for the time you are working or on roster?

☐ Yes

☐ No

Survey of the Mount Pleasant Operation Workforce

* 8. During your working week/on roster, where do you live?

- | | |
|--|---------------------------------|
| <input type="radio"/> Muswellbrook | <input type="radio"/> Scone |
| <input type="radio"/> Denman | <input type="radio"/> Singleton |
| <input type="radio"/> Aberdeen | <input type="radio"/> Merriwa |
| <input type="radio"/> Other (please specify) | |

* 9. During your work week/on roster, do you live in a home you:

- ☐ Own or paying off a mortgage
- ☐ Rent
- ☐ Other (please specify)

* 10. During your working week/on roster, do you live:

- | | |
|---|--|
| <input type="radio"/> By yourself (single person household) | <input type="radio"/> By yourself with your child/children (solo parent) |
| <input type="radio"/> With your partner | <input type="radio"/> With friends (share house) |
| <input type="radio"/> With your partner and child/children | <input type="radio"/> Other, e.g. extended family |

* 11. When not at work, where do you live?

- | | |
|--|--------------------------------------|
| <input type="radio"/> Murrurundi | <input type="radio"/> Maitland |
| <input type="radio"/> Liverpool Plains | <input type="radio"/> Port Stephens |
| <input type="radio"/> Tamworth | <input type="radio"/> Newcastle |
| <input type="radio"/> Dungog | <input type="radio"/> Lake Macquarie |
| <input type="radio"/> Cessnock | <input type="radio"/> Sydney |
| <input type="radio"/> Other (please specify) | |

* 12. When not at work, do you live in a home you:

- ☐ Own or are paying off a mortgage
- ☐ Rent
- ☐ Other (please specify)

* 13. While not at work, do you live:

- | | |
|---|---|
| <input type="radio"/> By yourself (single person household) | <input type="radio"/> By yourself with child/children (solo parent) |
| <input type="radio"/> With your partner | <input type="radio"/> With friends (share house) |
| <input type="radio"/> With your partner and child/children | <input type="radio"/> Other, e.g. extended family |

Survey of the Mount Pleasant Operation Workforce

* 14. Where do you live?

- | | |
|--|---------------------------------|
| <input type="radio"/> Muswellbrook | <input type="radio"/> Scone |
| <input type="radio"/> Denman | <input type="radio"/> Singleton |
| <input type="radio"/> Aberdeen | <input type="radio"/> Merriwa |
| <input type="radio"/> Other (please specify) | |

* 15. Do you live in a home you:

- ☐ Own or paying off a mortgage
- ☐ Rent
- ☐ Other

* 16. Do you live:

- | | |
|---|---|
| <input type="radio"/> By yourself (single person household) | <input type="radio"/> By yourself with child/children (solo parent) |
| <input type="radio"/> With your partner | <input type="radio"/> With friends (share house) |
| <input type="radio"/> With your partner and child/children | <input type="radio"/> Other, e.g. extended family |

Survey of the Mount Pleasant Operation Workforce

This section asks where you spend your income. We are asking this question so we can estimate how much workers at the Mount Pleasant Operate support the local economy. We will also use this information to estimate how the future workforce may support the local economy, if the Mount Pleasant Optimisation Project proceeds and the loss to the local economy if the Mount Pleasant Optimisation Project does not proceed.

* 17. In a typical month, roughly what percentage of your after-tax income is spent in the Muswellbrook LGA, including Denman?

- ☐ 0% - 25% - no to little spending
- ☐ 25% - 50% - some spending
- ☐ 50% - 75% - most spending
- ☐ 75% - 100% - almost all to all spending

* 18. What businesses do you regularly buy from in Muswellbrook LGA, including Denman?

(eg: financial, legal, professional services, hairdresser/barber, cafes, restaurants and bars, groceries, clothing, hardware, household goods, pharmacy, and trades)

* 19. In a typical month, roughly what percentage of your after-tax income is spent in the Upper Hunter LGA, including Aberdeen and Scone?

- ☐ 0% - 25% - no to little spending
- ☐ 25% - 50% - some spending
- ☐ 50% - 75% - most spending
- ☐ 75% - 100% - almost all to all spending

* 20. What businesses do you regularly buy from in the Upper Hunter LGA including Aberdeen and Scone?

(eg: financial, legal, professional services, hairdresser/barber, cafes, restaurants and bars, groceries, clothing, hardware, household goods, pharmacy, and trades)

* 21. In a typical month, roughly what percentage of your after-tax income is spent in the Singleton LGA?

- ☐ 0% - 25% - no to little spending
- ☐ 25% - 50% - some spending
- ☐ 50% - 75% - most spending
- ☐ 75% - 100% - almost all to all spending

* 22. What businesses do you regularly buy from in the Singleton LGA?

(eg: financial, legal, professional services, hairdresser/barber, cafes, restaurants and bars, groceries, clothing, hardware, household goods, pharmacy, and trades)

Survey of the Mount Pleasant Operation Workforce

This section asks questions about community services you and your family may use. We will use this information to understand the social environment and predict the changes in demand for community services if the Mount Pleasant Optimisation project proceeds or not.

* 23. If you have children attending early childhood education, primary or secondary school or TAFE, where do they go? (Select as many as relevant)

☐ I don't have school aged children

☐ Muswellbrook

☐ Denman

☐ Aberdeen

☐ Scone

☐ Singleton

☐ Merriwa

☐ Murrurundi

☐ Liverpool Plains LGA

☐ Tamworth LGA

☐ Dungog LGA

☐ Cessnock LGA

☐ Maitland LGA

☐ Port Stephens LGA

☐ Newcastle LGA

☐ Lake Macquarie LGA

☐ Central Coast LGA

☐ Greater Sydney Region

☐ Other (please specify)

* 24. Where do you and your family regularly access medical and health services – e.g. doctor, dentist, physiotherapist, counsellor? Select as many as relevant.

☐ Muswellbrook

☐ Denman

☐ Aberdeen

☐ Scone

☐ Singleton

☐ Merriwa

☐ Murrurundi

☐ Liverpool Plains LGA

☐ Tamworth LGA

☐ Dungog LGA

☐ Cessnock LGA

☐ Maitland LGA

☐ Port Stephens LGA

☐ Newcastle LGA

☐ Lake Macquarie LGA

☐ Greater Sydney Region

☐ Other (please specify)

Survey of the Mount Pleasant Operation Workforce

This section asks a question about which community groups you and your family participate in. We will use this information to understand the social environment and predict the changes if the Mount Pleasant Optimisation project proceeds or not.

* 25. Which community groups do you or your family members participate in and where?

	Muswellbrook LGA	Upper Hunter LGA	Singleton LGA	I/one of my family participates, but not in these places	I/my family don't participate
Sports clubs, hobby or interest groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Churches, religious groups	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental groups e.g. Landcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community service organisations e.g. Rotary, Lions Club	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Voluntary emergency response organisations (SES, RFS)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

Survey of the Mount Pleasant Operation Workforce

This section asks about how you, your family and your friends will be affected if the Optimisation Project proceeds, that is the mine keeps operating until 2048.

26. If the Optimisation Project proceeds, what would the **positive** impacts be on you, your family and friends? If you're not sure, just say "not sure."

27. If the Optimisation Project proceeds, what would the **negative** impacts be on you, your family and friends? If you're not sure, just say "not sure."

Survey of the Mount Pleasant Operation Workforce

This section asks about how you about how you, your family and your friends will be affected if the Optimisation Project does not proceed, is that is mining ceases in 2026.

28. If the Optimisation Project does not proceed, what would the **positive** impacts be on you, your family and friends? If you're not sure, just say "not sure."

29. If the Optimisation Project does not proceed, what would the **negative** impacts be on you, your family and friends? If you're not sure, just say "not sure."



Appendix H

SIA Stakeholder Case Studies



MACH Energy Mount Pleasant Optimisation Project

Social Impact Assessment

Stakeholder A

Date	9 July 2020
Organisation	Stakeholder A
Location	Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development)
Just Add Lime	Rachel Maas, Principal Social Scientist

Changes since Scoping SIA

Any changes since the Scoping SIA have been clouded by Covid 19.

The two largest race days of the year for the Muswellbrook Race Club did not occur in March because of the Covid 19 restrictions. The Racecourse continued to operate to conduct race meetings however the club was significantly impacted by decreases on non-race day revenue (back to zero) and race day revenue was reduced by as much as 50%. There are plans to increase/expand the non-race day services such as functions and community events as restrictions ease.

There haven't been significant job losses of note in the racing industry, the demand for skilled workers e.g. track riders seems to be increasing.

Horses use to freely and frequently travel between Queensland, New South Wales and Victoria, however this is very much restricted now. New South Wales are the leaders in horse racing and breeding and the industry is able to operate within New South Wales. The Thoroughbred Breeding industry has suffered as horse sales have been restricted due to the Covid-19 which has also seen a decline in the horse sale market through auction houses.

Current impacts of Mount Pleasant Operation

The impacts of Mount Pleasant will be like Bengalla. Over the last 22 years, the impacts from the neighbouring Bengalla Mine have decreased as they have progressed west and established a land buffer between them and the town. Obviously with the introduction of Mt Pleasant, the impacts from mining have increased again and will continue until their bund wall has finished and they progress away from the township.

When you drive down Wybong Road you can see the difference and effort in the rehabilitation on the overburden/bund wall, it looks good with the green grass and tree stumps re-positioned.

With each new mine, the environmental conditions get tighter, so expect this to occur for Mount Pleasant.

Cumulative impacts of mining

The cumulative environmental impacts of mining should not increase on current levels. The cumulative impacts should remain the same and in fact decrease as all three local mines progress away from the Muswellbrook township and progressive environmental controls are introduced.

Impacts if the Project proceeds

Hopefully more people will live locally, not sure why people would want to drive 30 minutes to 1 hour at the beginning and end of each shift/roster. Nobody knows how many people or percentage of people who work at Mount Pleasant, Bengalla and Mount Arthur live locally or commute. However, it's important to know this, to have a baseline so people know if there is a difference moving forward.

It would be good if MACH had a Facebook page, similar to Bengalla to provide people with information and engage with the community through social media.

Given that there are three mines in close proximity to the town of Muswellbrook, the community perception is that the town does not enjoy sufficient funding from State and Federal Government as a result of taxes derived from mining to improve services and infrastructure.

Impacts if the Project does not proceed/ Closure/transition

There would be a significant impact on employment if the Project did not proceed. The impact of this employment in the Muswellbrook LGA is unknown, dependent on the number of current local workers actually living in the local area.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Stakeholder B

Date	2 July 2020 and 14 July 2020
Organisation	n/a
Location	Meeting held online via Microsoft Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development) (Meeting on 2 July only)
Just Add Lime	Rachel Maas, Principal Social Scientist

Changes since Scoping SIA

Drought

The drought has broken and after four years of continuous drought conditions the dams are finally full. Beef producers have experienced an increase in demand leading to an increase in price. This contrasts with the drought when there was an oversupply and a substantial reduction in sale price due to producers selling some or all their herds because they were unable to feed and water them. For some small producers, it is harder to get back into the market because of the increased competition and prices to restock. Some producers who were able to keep all or part of their herd through the drought are relying on natural increases.

Covid 19

Covid 19 has led to changes in daily life, for example we only went to town once a week to shop and we didn't stay to socialise or have a cup of coffee. There was and still are people who have a genuine fear about Covid 19.

A number of businesses (small and large) in town have closed down due to Covid 19 restrictions and not being able to operate. Muswellbrook doesn't look like a prosperous town at the moment.

Current impacts of Mount Pleasant Operation

MACHEnergy is named after the owners four children, but Mt Arthur is also known as MAC (short for Mount Arthur Coal). People get confused between the two and I wonder how much MACHEnergy and their Mount Pleasant Operation trade off Mt Arthur and their relationship with the community. People think Thiess is the owner of Mount Pleasant, but they only have the contract to mine the site – on behalf of MACHEnergy.

Is the existing fines emplacement dam a prescribed dam and if so, does it meet the engineering design requirements? Fines emplacement means dirty water from washing coal – it is salty and toxic and MACHEnergy are applying to extend it.



MACHEnergy has been advertising on our local radio station, 2NM for the past two years saying “what we take out we put back into the community”. Just like the other mining companies, MACHEnergy does give donations to local schools, Indigenous groups and community organisations, they have site tours for school kids, they kind of indoctrinate the kids into mining, showing them that it is ok. But this doesn't tell the story of the neighbouring landholders and what they are going through.

It's been hell since the start of the MACHEnergy Mount Pleasant Operation, it all started with the entry to the mine right outside our gateway. There was no consideration given to us and what we were experiencing. They had their approval and just did it. We don't see many of the MACHEnergy people, only during the CCC meetings, which are four times a year. I don't think they like us because we have differing views. We don't bother about complaining because it's not worth it. If there is a problem, we just tend to fix it ourselves e.g. fixing broken boundary fences.

There are still a lot of traffic and congestion on the roads, especially on shift change and going through Singleton, it's still a real bottleneck.

There seems to be less noise at the weekend, there could be various reasons for this, but it is noticeably less at the moment. The export thermal coal spot price Ex Newcastle Port is at US\$38/ton, A\$54.

Cumulative impacts of mining

Bengalla is moving west and can really feel the vibration from blasting and smell the nitrogen dioxide when it's released.

We have acquisition rights with a number of mining companies and it feels like they are waiting for us to sell or die, but we were here first, before any of the mines. We know what the country was like before mining and we've seen the mining companies permanently change it. Since the construction of the Liddell Power Station in the late 1960's and early 1970's, the government has slowly allowed the Upper Hunter region to become the industrial area for the state. This included the expansion of the Glenbawn Dam for the Liddell/Bayswater Power Stations. The purchase of Water trading licences enabled the spread of coal mines up the Hunter Valley. The Upper Hunter is now known as an industrial area, not a farming area.

There has been a lot of productive land lost to coal mining and its associate infrastructure in the Upper Hunter region. The productive farming is nearly all gone. There are still some properties along the Hunter River flood plain but they are not being used as productively as they use too. Most of the fodder farms are gone (purchased by the mining companies), there are only three dairies left and there are a few horse studs. Most of the river flat land isn't productive because you need a water licence to make it productive.

People do not retire in or retire to Muswellbrook. People move away for mainly health reasons including breathing issues and asthma. People want to live a healthier lifestyle away from the dust. The Mayor of Muswellbrook is focused on education, the Council is trying to keep younger people in the area. The whole way apprenticeships are organised is different but there needs to be jobs to keep the young people here. What apprenticeships do MACH and Thiess offer?

Impacts if the Project proceeds

There seems to be a lot of flexibility in what MachEnergy can do on the site, for example being able to put the coarse coal rejects within the mined out void, in out of pit emplacements and use it to build walls of the fines emplacement area. Where is the certainty in that for us?

If there is a low strip ratio, does this mean there will be less blasting? At the moment we feel the blasting from Mount Pleasant and they are only going to get closer as the mine moves west.

Terminology changes all the time, for example in the Rio Tinto 2010 EIS they refer to an environmental dam and MACHEnergy refer to the same dam as a mine water storage dam – are they storing the same water?

Need to consider the impact of dam failure, of all the dams on the Mount Pleasant mining lease, but in particular the Fines Emplacement Dam, which is to be extended. The existing and proposed dams are upstream of



agricultural properties and homes so if there is a dam failure the coal fines and water will go downstream on to them. The only tributary that was on the Mount Pleasant mining lease went into Bengalla's mining lease and now that is gone.

The CHPPs will be ongoing and are high maintenance because of the corrosive nature of the water created when washing the coal. In order to keep the water 'clean' to wash the coal, this water needs to come from somewhere and part of it will be from the Hunter River. This will impact on the number of licences and how much people/companies will pay for high and low security water; to buy, sell and trade their water licences. The mining companies are buying up all the water licences and only trade when they don't need them rather than when others need them. Properties along the Hunter River need access to water licences for them to be viable, particularly in the drought.

MACHEnergy are proposing to purchase waste mine surplus water from Bengalla and Dartbrook Mines, but we know that mining companies are in competition with each other, why would Bengalla and Dartbrook (even though Dartbrook is not operating at the moment) sell their water to MACHEnergy for their operation, especially in dry years? It doesn't seem right that a foreign owned company can purchase water licences and take away that water from local people – people who rely on water to operate their properties but cannot compete with what the mining companies can offer to pay for a high security licence. We had rain earlier in the year, however the rain did not fall in the catchment of the Glenbawn Dam, it is only at 38% so we're not out of the woods yet. Muswellbrook is still on water restrictions. Local dairy farms (which there are only three left) only received 25% of their allocation under general security water licences, which makes operating an agricultural business a lot harder, particularly when you see what the mines can afford to buy.

Drought has meant that Mount Pleasant hasn't had to deal with surplus mine water yet. They say it will be discharged into the Hunter River (or its tributaries) in compliance with the Hunter River Salinity Trading Scheme and their Environmental Protection Licence, but apparently this involves Bengalla building a dam on their mining lease – is this really going to happen?

Does doubling the amount of coal being mined mean doubling the blasting and the impacts of that – the noise, dust (PM 2.5), exposure to the nitrogen dioxide and fuming? There has been an increase in the number and frequency of earthquakes in the region, is there a link between this and the blasting at the mines? Has anyone looked at the impacts and risks of the ammonium nitrate trucks going through town to the site?

The CO² footprint of not only the mine and the transport of coal but also the burning of the coal needs to be taken into consideration, whether it is being burnt overseas or in Australia. The burning of the coal also needs to be taken into consideration, its contribution to carbon dioxide emissions and sea level rise.

What is most concerning is that no matter what is approved with this application, if MACHEnergy want to change it, they just put in an application and we have to go through the whole process again – nothing is certain.

Impacts if the Project does not proceed/closure

Need to have a third scenario, not only if the project proceeds and if it does not proceed, but what if the project is approved, constructed and then goes into care and maintenance. There are lots of reasons why the project may go into care and maintenance, despite what the strip ratios are, e.g. what if MACHEnergy's parent company goes broke or no longer wants to be in the thermal coal market? The commercial viability of the project needs to be looked at.

If the mine is sold and there is a new owner, what does that mean for the neighbours and existing workforce?

The land is being mined not a cattle property – you can't just sell and walk away with minimal impact on the land – they'll already going to leave a big hole and a large hill.

When mining is finished, whether it's in 2026 or 2048 or later, the land will be buggered. What will someone do with it? The land won't be productive again.

There has been no successful rehabilitation of land in the Upper Hunter Valley. Since New Hope bought into Bengalla, their Acland Pastoral Company have been farming their river land. The river land has not been mined



so isn't rehabilitated, it was an unsustainable dairy farm because it didn't have a workable and cost effective water licence from the Hunter River allocation. The property was purchased under acquisition rights during the initial stages of Bengalla Mine start up.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Stakeholder C

Date	22 July 2020
Organisation	Stakeholder C
Location	Phone
MACH Energy	n/a
Just Add Lime	Rachel Maas, Principal Social Scientist

Social baseline/existing trends

Muswellbrook a regional country town, it has everything you need and if you want something else it's just down the road at the next town.

There are more transient people in town and less long term families and that has an effect. The transience is associated with mining as well as low-income families who are moving to Muswellbrook because of the social housing and St Heliers Correctional Facility.

People of Muswellbrook are visually impacted by the mines. From my house, I have a 190° view and can see Mt Arthur and Bengalla, Mount Pleasant is just out of view. I have seen Bengalla being built, we lived here before Mangoola and watched how the town of Wybong was desolated with the construction and operation of Mangoola. Mining is slowly moving up from Ravensworth. My house has been on the market for six months and I wonder if mining has anything to do with the time it is taking to sell.

Current impacts of Mount Pleasant Operation

I have heard people complaining about the noise coming from Mount Pleasant in the wine estate. I am worried about the impacts on the use of water from the Hunter River and run off.

Cumulative impacts of mining

I wonder about the potential health impacts of having more diesel trains coming through town, at the moment there is one every 10 – 15 minutes and this will only increase with an increase in the amount of coal coming out of Mount Pleasant.

Impacts if the Project proceeds

I wonder how viable the project is given the drop in coal price and the continued impacts on the use of water from the Hunter River and run off.



Impacts if the Project does not proceed/closure

MACH need to participate in the transition process whether the mine is going to close in 2026 or later on, its everyone has to play their part in the transitions process.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Stakeholder D

Date	7 July 2020
Organisation	N/A
Location	Meeting held online via Microsoft Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager)
Just Add Lime	Rachel Maas, Principal Social Scientist

Changes since Scoping SIA

Not much has changed since the Scoping SIA.

Muswellbrook made it through Covid 19 with little impact because of the mines, they lessened or insulated the impact by keeping local people working and spending money locally. Don't think housing prices have changed due to Covid 19.

Muswellbrook is dying a slow painful death because it's too easy for people who work at the mines to live elsewhere. They drive in for work and then drive out to somewhere more attractive, away from the dust and the noise. The people that drive in and out for work don't spend their money here, they spend it where they live.

We chose to live here because our work is here and our family lives in Muswellbrook. We chose to buy this property because it's our dream property at the right price; it just happens to be near Mount Pleasant and Bengalla.

Current impacts of Mount Pleasant Operation

Noise has been ok, although over the past 6 weeks it seems to be getting worse. We just put the pillow over our heads and try to get back to sleep, there's no point in complaining.

There seems to be more dust now, despite the rain. The house and our cars are getting dirtier. Our cars are getting dirt on them even when the garage door is closed. We need to wipe the wire on the clothes line before we can hang the washing out, which we have never had to do before.

There hasn't been the hot days and there is grass on the ground so it can't be ground dust. Not sure who is responsible for creating the dust, all I know is that it is getting worse and there is no way to insulate from it like you can with noise.

At the moment the waste rock emplacement bund is still a dirt hill. The waste rock emplacement bund is the biggest bug bear for people in town – they just see a dirt hill. Everyone on the western side of Muswellbrook



can see it. If it was green, had grass growing, Mount Pleasant wouldn't have had the push back they have had. It would have been good if Mount Pleasant had made rehabilitating the hill a higher priority.

[Chris from MACH explained the context of the rehabilitation MACH has undertaken, delays due to the court case with Bengalla and the number of attempts to seed the area during the drought].

The context of what has happened is important to know, however the general resident doesn't really care when they are looking at a dirt hill for so long. People want to see a green hill not a mine.

Impacts if the Project proceeds

Don't think the population of Muswellbrook will explode, Muswellbrook will stay as it is, the population numbers will stay static. People would rather live more attractive places like Singleton or Maitland, so their populations might increase if the Project goes ahead.

For our personal situation, we expect the noise to decrease over time. We are concerned with the dust as the pit moves north and the prevailing winds. I am not sure how you can insulate from dust. We will need to learn to live with what the impacts are.

Impacts if the Project does not proceed

If the project does not proceed we will experience less noise and dust, however the town will suffer and our family has a business in town. Will Muswellbrook survive if the workers are no longer living in town?

Regardless of whether the project proceeds or not, we have a working relationship with MACH and we want to be happy neighbours.

**Mt Pleasant Optimisation
Social Impact Assessment
Denman Aberdeen Muswellbrook Scone Healthy Environment Group
(DAMS HEG)
July 2020**

Introduction

Denman Aberdeen Muswellbrook Scone Healthy Environment Group (DAMS HEG) is a grassroots organization that facilitates community meetings and forums around environmental and health issues and lodges submissions to the IPC process from those perspectives in the Upper Hunter. We, along with the vast majority of scientists, fear the social, environmental and economic costs of intensifying global warming and feel the environmental and social consequences on the ground in our local communities of the over exploitation of coal.

In the local context, increasing the rate of production and the duration of production will necessarily also increase negative local impact, particularly, dust, noise and the scale of landscape destruction. These impacts are on top of those already being experienced by the community from adjacent coalmines and coal fired power stations and have significant health costs, both physical and mental.

Covid 19 provides all of us with the opportunity to look at how we can do things sustainably. Expanding coal production is insanity. Now is the time to shift to renewables not intensify coal mining. Expanding coal operations is in contradiction to the goals of the Paris Agreement. Many of the big mining companies are getting out of thermal coal, Rio Tinto sold Mt Pleasant, BHP is selling Mt Arthur. If we are still burning coal in 2040, the world is in big trouble.

Recent catastrophic events in Australia with a climate change signature include the floods in North Queensland where 500,000 head of cattle were lost, the floodwaters ran off and the country went back to drought. The massive fish kills in the Darling River, the most extreme drought and bushfires in NSW and more flooding are providing a background of one event overtaking another. It is these social impacts along with food insecurity that cannot be relegated irrelevant for the Mt Pleasant Optimisation Project. To be applying for a project that will run from 2026 until 2048 is to flagrantly ignore the climate emergency and if approved, put NSW and Australia as international pariahs, willing to take our biosphere beyond its capacity for habitable equilibrium.

This case study is based on the NSW Social Impact Assessment Guideline Checklist of what the project will mean for people and the natural environment using its headings Amenity, Access, Built Environment, Heritage, Community, Economic, Air, Biodiversity, Land and Water and the checklists sub-headings.

The first section deals with social impacts if the project goes ahead and the second if it does not.

Section 1: Project accelerated and extended.

Amenity

1. Acoustic

Neighbours to Mt Pleasant no longer enjoy the quiet of a rural lifestyle, rather the constant industrial background drone. Farmers on Blairmore Lane complain that the noise levels already disturb their sleep. This can be expected to intensify and increase as the mine expands.

Blasting creates a noise and vibration impact and this will increase with the increase of mining at the site.

The frequency of noise from the trains will increase, day and night, with the increased rate of mining at the site.

Infrasound – the health impacts of low frequency sound will necessarily increase.

2. Visual

For those of us who live here, the rapid development of Mt Pleasant has been shocking and heartbreaking. Its proximity to town makes for a high visual impact (eyesore) on the landscape, from all approaches to Muswellbrook and it is a real loss for those who live, looking West across what were restful floodplains, horse paddocks and rolling hills and is now mega scale industrial mining complex and attendant filthy skies.

Mt Pleasant coal overburden is already changing the image of the Upper Hunter Valley, even without breaking through the Castlerock Rd Ridge. It is seen from Aberdeen.

Prior to mining and since colonisation, Muswellbrook environs were used for agriculture. Since then there has been an “industrialisation” of the landscape and this can be seen all the way to Singleton. It is particularly evident when driving into Muswellbrook from out west, from Scone or Singleton.

For long-term residents, the landscape is no longer recognisable.

The natural features and landmarks are no longer there. Mt Pleasant is essentially ‘moving the hills further east’ from where they were pre-mining.

We condemn the intergenerational impacts for people who have grown up in the area, who lament what their children and grandchildren will no longer be able to see.

“The house I grew up in and where my children had Sunday dinners with their grandparents and Christmas parties with their cousins, will be in the final void.”

The Mt Pleasant and other mines are in your face 24 hours a day.

During the day you can see the dust in the air and on buildings. It makes the area look dirty, there is a “ruination of the landscape”.

You can see the different layers of pollution, layers of nitrous oxide (brown/yellow) from the power stations and bottom layers of dust from the mines.

You can see the dust inside homes making them look and feel dirty.

During the night there are impacts from the lights used to support 24 operations:

Can see the lights from the Mt Pleasant CHPP.

Cumulatively the lights from the mines means “the sky isn’t dark anymore”.

People living on the northern and western side of Muswellbrook can see the Mt Pleasant mine during the day and its dust and they can see their lights at night. The view used to be an asset for these properties, now it is a liability. Owners would expect the price of properties to decrease because of it.

Castlerock Road is quite extraordinary. It provides an opportunity for people to see the escarpment and bushlands, you can see the interlocking mountain ranges, and the three towns; Scone, Aberdeen, Muswellbrook; plus hundreds of historic working farms, and prehistoric sites. It could have been a crowning tourism feature for the area. It could still be, if the mine stayed well south of this ridge. People in the area value and need not only the road but also the view it provides. It is the only elevated place where you can see up and down the Hunter Valley – that view would be lost for everyone, forever, just for a patch of coal north of the road.

Because the ridgeline would be gone, the mine would be ever more visible from Aberdeen and Scone. The ridge carrying Castlerock Road protects Aberdeen and Scone from the worst visual and environmental impacts of this mine.

I don’t think people in Aberdeen and Scone are aware that MACH has permission to mine through the Castlerock Road and the ridge it runs along.

3. Microclimate

The loss of all vegetative cover reduces the variety of microclimates across the site. This loss will add to the capacity of that bare earth to absorb heat. In the hotter months this will lead to a loss of potential for soil flora and fauna to recolonise and consequently inhibit the re-establishment of natural biodiversity. Some invasive weeds may flourish. This sterility and additional heat make for a less pleasant place for humans and less habitable for the bulk of species, which could be ordinarily expected to live in this area.

Access

1. Access to property

People who live along Castlerock Road will have to travel longer to access Muswellbrook because they will have to drive along Dorset Road rather than Castlerock Road. The length is less of a problem than the ugly trajectory, and steep terrain, of the road itself.

Access to the overwhelmingly beautiful views, and lookouts, picnic spots, walks, would disappear completely. That cannot be rectified, replaced or compensated for. It is a public loss.

2. Utilities and public transport

Increased coal trains on the rail corridor will by definition necessitate more track maintenance and therefore disrupt public transport for rail users. The train is a far superior way to commute to Newcastle and Sydney than by replacement buses. The train allows more people to travel, read, write, walk about, use the toilet and just spread out. The train is also typically faster, as buses need to contend with road traffic and longer routes.

These impacts will affect:

- The independence of people who use public transport, whether they use it because of a disability, legal requirement, affordability or as a preferable way of travelling.
- People commute by train from the Upper Hunter for medical appointments, work, school and university.
- The attraction of the Hunter for intending residents and for visitors relying on public transport.
- Tourism in the Hunter by rail.

3. Road and rail

Road traffic is greatly affected at the change of shift, at coalmines and power stations in the Upper Hunter. Whether it is the high speed use of back roads or the bottlenecks either side and through Singleton regular users know the delays and added risk of driving at these times.

Mt Pleasant acknowledges that it tries to employ locally but is not able to verify workers stay living locally. Drivers completing long shifts may well be commuting more than an hour to Maitland or Newcastle. One of our member's families has experienced the grief from a car accident with one such shift working miner and his "undiagnosed narcolepsy".

An increased Mt Pleasant workforce would mean more-vehicles travelling between Newcastle, Maitland and Muswellbrook. (Muswellbrook and Singleton's air pollution makes them less attractive places to live and raise a family. More traffic would create even more delays when driving through Singleton. Currently, it can take up to an hour to get through Singleton on shift change. We expect this would get worse with more people in Mt Pleasant workforce.

It would be disruptive during and after construction of alternate roadways, for people living along and using Dorset and Castlerock roads.

As per previous comments for rail.

Built Environment

1.Public Domain

The parks, rivers, pathways and quality of experience in a town are essential distinctions of any town. Muswellbrook's main park now has an ugly concrete wall to screen it from the noise of adjacent coal trains. The noise, frequency and screechy brakes of coal trains impact so much of the town.

As you go up the main hillside of Muswellbrook, the view of the opposite rise becomes more and more revolting, because of the rising overburden from Mt Pleasant Mine. This mine takes much of the distance and the horizon. Space is the public domain. The mine is taking our space.

2. Public Infrastructure

The public domain includes the view from train windows, and from the tourists' driving roads. Mines are in the process of wiping out the original, natural appearance of hills, bushland, farms and wildlife viewing for which the Hunter Valley was famous. Visitors are now shocked.

Employment

The current outbreak of Covid 19 in Victoria has shown the danger of having a casual and itinerant workforce. Sick people without sick leave are inclined to go to work.

We have observed considerable loss of good services and tradespeople who gravitate to better paid jobs at the mines, leaving the local community short of their capacity to provide their service, experience, teaching capacity. This is leaving towns without servicing and quality work, and it is making a two-tier economy. There is a lack of data in research and media, about what previous jobs and what training backgrounds the supposedly new "Jobs in Mining" are filled from. Mines don't employ the unemployed. What they do is create a skills and services shortage wherever they go.

Automation of tasks needs to be taken into consideration when developing employment numbers in mines.

Increasing the number of jobs available at the Mt Pleasant mine only further increases the imbalance in the local and regional economy. Those that work at the mine earn good wages for long hours and it takes away from the potential for local businesses to employ similar trades.

There needs to be an assessment of the skills shortage in the local and regional area because of mining.

Assessment should include the numbers of farm workers who no longer have work because the farm they used to work on has been acquired by the mines and isn't operating any more. If those skilled farm workers move away, it can lead to a skills shortage for the remaining farms in the area.

Heritage

1. Natural

The Grassy Box Woodland on the Mt Pleasant site is in good condition and it will be destroyed. The offset area is a different ecosystem, so it is not a like-for-like replacement.

There are endangered flora communities on the site.

The Great Eastern Ranges Initiative (<https://www.ger.org.au/home>) defines a corridor for plants and animals to migrate due to the impacts of climate change the existing mines already threaten the continuity of this narrow and vulnerable corridor along the Hunter Valley.

Weeds are not being managed on the Mt Pleasant site, e.g. African boxthorn, Galenia, and St John's Wort. Neighbouring landowners need to complain before MACH Energy does anything about the weeds. The weed plan needs to be followed as part of conditions of consent.

There has been an increase of feral animals, particularly pigs since Mt Pleasant acquired so much land.

This has meant the neighbouring landowners have to invest more time and money in managing weeds and pests.

MACH Energy doesn't manage its agricultural properties or hold to account the people who lease their agricultural properties:

They allow the agricultural infrastructure such as water infrastructure to deteriorate impacting on the agricultural viability of the landscape.

They allow overstocking on grazing properties, which leads to an increase in erosion and runoff.

The final void will become toxic over time and will never look natural. Mt Pleasant's toxic void/s will add to the total of about 30 toxic voids left in the Hunter Valley landscape after mining has stopped.

Rehabilitation – Last years plantings quickly died over summer, as did many more established local native species. Our summers have become hotter and last year was the third of the most intense drought recorded. Climate scientists warn us to expect evermore extremes, which makes MACH's promise of effective rehabilitation unfortunately dubious.

2. Cultural

European history

The old farming communities, including Kayuga have been wiped out. The land has been bought, the homes, including Berrywood, mostly demolished and the people dispersed. The history was recorded and then so much of previous land use and lifestyle was destroyed. The local culture belonged to the people who led those lives.

That eradication by mining continues in a big way with the proposed extension to break into the immediate view of the Upper Hunter valley itself.

Culture, particularly in Muswellbrook, centres on performing arts, and fine arts. It holds an Eisteddfod, and many concerts. A new music-based school is soon to complement the Conservatorium. The Art Gallery holds regional exhibitions including the Archibald Prize, which are the focus of special train trips. Photography and natural landscape painting and drawing are very much part of the cultural scene. Dancing and playing of instruments in Muswellbrook is already impacted by dust and pollution from mines and from Power Stations. Mining dust, noise and vibration do not belong in that context.

3. Aboriginal cultural

There are so many artifacts scattered across the country, it is clear the land was significant to Aboriginal people providing natural access between coastal areas and the far west.

4. Built

Mt Pleasant Mine contractors have demolished many homes including older/heritage homes that Rio Tinto had renovated. This is an insult to the Built aspect of our cultural heritage.

The integrity of the mining operations is dismal with respect to property protection. The recommendations of the Mt Pleasant mining lease Heritage study were ignored, with so much heritage destroyed as a result.

Visitors are always hungry for history, beauty and heritage. MACH has destroyed so much already. This destruction of heritage and landscape reduces the potential for tourism and diminishes local pride in the area.

Much housing stock has been demolished. Including homes that might have been relocated or rented.

Mt Pleasant has taken too much now. Many more sites and items are destined for destruction if this project proceeds.

Community

There are documented physical and mental health issues associated with shift work. The individuals themselves, their families and the broader community all have to wear the cost.

Shift work has already had a major impact on the community – workers cannot easily volunteer/support their children's activities such as sport. Many find it difficult to get to school parent teacher nights.

The peer pressure, the divided population and the two-tiered economy have distorted the community existing before the incursion of major coalmining, around the town of Muswellbrook.

Muswellbrook has lost so much heritage and historical value. The scenery was lovely but is now seriously scarred. The visual impacts of the mines, starting with Bengalla, then Mt Arthur and now Mt Pleasant have taken over Muswellbrook, all but overshadowing its other features. This advance is now clearly visible from the top of Graeme St, Aberdeen.

We live in a community that is becoming engulfed by mines but is not part of the decision making process, even at local government level. We are a strong community however we are surviving on the edge: that is different from a happy prosperous community. And so far, the Government has got away with not wanting to know the local social impacts.

1. Health

MACH have developed the Mt Pleasant coalmine knowing full well it is 3km NW and upwind of the center of Muswellbrook. That the state government or commercial enterprise is prepared to do this to the township beggars belief. Muswellbrook's most frequent and strongest winds come from the north-west. Doctors for the Environment work tirelessly to improve environmental health for us all. The World Health Organisation says there are no safe levels of particulate matter. Muswellbrook did not receive the equivalent number of Health Alerts with respect to dust as Singleton because the other close mines (Mt Arthur and Bengalla) are not up wind of the town. Now we have MACH Mt Pleasant, a few kilometers north west and up wind of Muswellbrook we get the health alerts at a similar frequency to Singleton.

We have seen the early signatures of climate change with unprecedented drought, fish kills, seasonal temperature records and last Spring/Summer the tragic bushfires.

No more mining can occur in the Hunter Valley without endangering further the mental health of many residents. Even people who have benefited from mining have said they know we need to have a plan to diversify and it is too close to town. People are experiencing both mental and spiritual anguish of knowing that the mines take away basic physical rights and are adding to the swift decline of the natural world. We are already watching the essential spiritual refreshments remaining for our comfort, like walking in the bush land, fishing in the local river, being eroded towards a dismal end by the environmental degradation associated with depopulation, weed invasion and mining.

Add to that the deep frustration and horror at the prevailing absence of justice and common sense in the government prioritising foreign profit and quick revenues, before the ongoing wellbeing of people and land. People are deterred from participating in the environmental approval process because they do not trust the process or the decision makers. The ultimate decision makers, those who decide what is and is not “acceptable” do not live next to the mine or experience the negative social impacts associated with the development.

The usual analytical divisions (amenity, access, the built environment, heritage, community, economic, air, biodiversity, land and water) can result in each aspect for each Mine project being knocked off separately, as just one more increment on an expanding problem, to be ignored or addressed with ‘conditions’, because people have survived so far. But ‘cumulative impacts’ is a simple concept, which a company can easily assess before embarking on a major project. Their pursuit of profit at the expense of community health is reprehensible.

People impacted by the noise, dust and visual pollution of mines have an increased mental burden. Solastalgia, grief, shock, frustration, anger, visceral disgust, fear and profound loss lurk not far below our collective consciousness. We, in seeing the disembowelling of the Earth, get the vaguest appreciation of how clearing and fencing the landscape may have felt for the Aboriginal people, who managed healthy diverse ecosystems for more than 40,000 years.

Country might come neatly under ‘heritage’ or ‘cultural’, but what the impact on country means to Aboriginal people needs to be taken into consideration.

Health, both measurable and unmeasurable must be included. When people are inhaling the dust and losing tangible history, heritage and livelihoods, losing the stars and the blue sky, losing the water on their land, losing the prospect of healthy careers for their sons and daughters, they are also dying of cancer early. It is not only the health impacts of this project but also the cumulative impact on health that needs to be taken seriously.

The dust impacts from mining have seriously intensified in Muswellbrook since Mt Pleasant started mining a few kilometres NW and upwind of the town. The southerly and sou-easterly winds carry this pollution onto Scone and Merriwa.

The north-westerly winds are becoming more frequent and intense with climate change.

There is a lot of frustration in Muswellbrook due to the dust. People are worried about the impacts of dust as was evident by the number of people and their questions at the air monitoring station open day at the dust monitor in Muswellbrook, 22 October 2019.

People in Muswellbrook have had enough of Mt Pleasant’s dust and are concerned that a major increase in the size of the mine will consequently increase the dust impacts they will experience.

Some people have been advised by their doctors to leave Muswellbrook because of the impacts on their respiratory system, skin and or eyes.

The Minister of the Uniting Church had to leave the Newcastle due to impacts on his health (<https://www.newcastleherald.com.au/story/3632456/time-to-act-on-air-pollution-says-man-who-became-canary-in-the-coalmine/>)

The Australian Institute of Health and Welfare Australian Health Report 2018 show the impact on air pollution on heart, disease, stroke etc (<https://www.aihw.gov.au/getmedia/cfd6abd4-32fb-4995-835f-5e94dac7a827/aihw-aus-221-chapter-4-1.pdf.aspx>)

What are the impacts on people who rely on rainwater for drinking when the roofs are covered in dust? These residents need to have the water tested. Some people filter their water because of the pollution. When water restrictions are in place due to drought, people can't wash dirt and dust pollution from their roof, to clean their tank water, or from other surfaces people touch and play on.

Living in a dirty, dusty and polluted area has had an Impact on people's mental and physical health. Since Mt Pleasant started, Muswellbrook is now with the most polluted LGAs in Australia.

2. Safety

Shift work traffic adds to risk on road, as previously mentioned

Coal trains can start fires in extreme heat waves. Coal trains started a grass fire 12 November 2019 near Whittingham, which was fortunately extinguished before reaching the nearby petrol station. The New England Highway was closed between Range Road and the Golden Highway. A second coal train fire started south of Muswellbrook on the same catastrophic fire risk day. Coal trains need to stop running in extreme and catastrophic fire risk conditions.

Safety for miners and for the public when people working 12 hour shifts are then driving home.

3. Services and Facilities

It can take up to 6-8 weeks to see "your doctor" rather than a locum. Some people travel to Newcastle or Sydney for medical treatment. Doctors don't want to live near mines either.

4. Cohesion, Capital and Resilience

Coal mining can be quite divisive in the community. For example there was a lot of intimidation with the lobbying for Drayton South, with men in high visibility clothing going as a group, into businesses and charities, to collect signatures on their petition, signs at preschool and large billboards with advertisements to “Tell the PAC” to approve the Drayton South seem to be in complete contravention of due process. While people working for Mt Pleasant may be for the mine many find its addition a tragic blight on the landscape.

The depopulation has decimated the Kayuga and similar small communities breaking cohesion and leaving remaining residents feeling isolated.

Blairmore Lane community is still intact despite the impacts of mining (Dartbrook and Mt Pleasant). The community is on the floodplain of Dartbrook and Hunter Rivers. Dartbrook farms rely on irrigation and used for crops (lucerne), dairying and some cattle grazing.

The Dorset Road community has mostly gone due to Mt Pleasant depopulating the area. There were 11 houses on Dorset Road, now there are three, eight have been destroyed. The Kayuga community is greatly diminished and will be further impacted.

Properties on the western side of the Mt Pleasant mine are mainly used for cattle grazing and lifestyle blocks. They will be impacted by the noise, dust and light pollution from Mt Pleasant coal mine.

It is important to recognise the diversity of the agricultural community in the area as they will be impacted differently, but will all lose by their proximity to this mega mine and its devastating impact on the surrounding environment, visual, dust, and noise.

There have been too many small rural communities in the Upper Hunter region lost to mining, e.g. Ravensworth, Wybong, Kayuga and Bulga.

Where a community has been decimated by mining there are usually people “left behind”. Those who are on the wrong side of the arbitrary lines marking zones of affectation and acquisition. It is these people who are left to experience the impacts of mining and unable to sell at a price that would buy them a comparable property in a now more desirable location.

Muswellbrook as a town is denigrated by the proximity of mines to residential areas. When someone asks, on the Muswellbrook Community Facebook page, if they should move to Muswellbrook some responses are positive but the majority people recommend not to move and call it a “shithole”.

Muswellbrook, Singleton and Upper Hunter Shires and communities host a diverse range of music and art events, with support from local mines. In fact local residents have wonderful and affordable access to some world-class events. Part of the Shires brief here is to help stimulate and strengthen our community making for an attractive region in which to live and belong. Unfortunately the devastated landscape facing

Muswellbrook and encroaching on Aberdeen sends the signal of towns in their death throws.

Economic life is kept tense by the two-tier economy pushing rents up for low-income people. There is high youth and long-term unemployment.

Drive in/ drive out workers commute long distances to distant homes and spend their pay outside the afflicted zones.

People have left Muswellbrook to live in Maitland or closer to the coast because of the environmental impacts of mining. The commute to work is possible from those places, but driving distance presents risks and costs to themselves and Upper Hunter communities alike. The Singleton bottleneck can take more than an hour to clear around change of shift times.

Both previous mining and the Mt Pleasant operation have caused and maintain a division between the residents of Muswellbrook. There are felt divides between those who work in the mines and who benefit from the mines financially versus those who experience only the cost of mining.

The Minerals Council of NSW doesn't help with the false propaganda they spread, e.g. letterbox drop prior to the most recent State election stating that the Greens were "going to take away all the mining jobs". There can be "vicious attacks" on people who have an anti-mining or alternative-to-mining stance, on the Muswellbrook Community Page on Facebook.

Some schools and childcare centres are being sponsored/supported by mining and some promote a pro-mining perspective to the children/students ahead of the need for a healthy environment.

The mines impact Scone, indirectly. It has been a refuge dormitory for many years, up and down with the mining, but stabilised by its still surviving nearby industries. Pollution and economic impacts are felt increasingly in Scone, and Aberdeen. Mt Pleasant Extension would blight the valley views, affecting tourism all up the valley, thus spreading the Muswellbrook problems to Scone, and killing other industries in the process.

5. Housing

After the 2012/2013 downturn, house prices in Muswellbrook dropped because of the decreased demand. This meant they became more affordable. People on lower incomes moved into the area to take up the opportunity for cheaper housing. A housing development on the south east of Muswellbrook didn't get completed due to the downturn. Many of the houses in the development are now owned and managed by Compass Housing. There is now a lack of housing in Muswellbrook and a significant number of people displaced in the community.

The prices of houses in Muswellbrook (with mining impacts) are lower than in Scone (few mining impacts.) We would expect to see a large drop in property values in Muswellbrook, especially in mine-impacted areas, and disastrously for owners of those

properties left 'stranded' between mines, just outside the compensation or compulsory purchase zones.

People who work for the mining companies live in Scone, because they want to live locally but do not want their families to experience the impacts of mining. Sadly the dust from the Muswellbrook mines is already in the Upper Hunter and this expansion project would bring other impacts by crashing through the ridge: impacting views, with blast disturbance, vibration and noise. Clearly this results in a loss of ambience and reputation.

Mining companies' move towards having a contract/casualised workforce means people don't have the confidence in their job security to apply for a mortgage and buy in the local area; particularly when limited economic diversity makes it hard for mine workers to shift industries if there is another downturn in the coal market.

Houses on the Mt Pleasant site have been demolished when they could have been relocated within the area. That is an insult to our heritage, a loss of character for the town, and a waste.

The depopulation of Dorset Rd, Castlerock Rd, Lane Kayuga and Kayuga Rd from Kayuga Rd to Wybong Rd and along Wybong Rd and the demolition of the houses has reduced available housing stock close to Muswellbrook. These houses were not offered for relocation, or their materials for re-use or recycling.

Economic

1. Natural Resource Use

The mines in the area are adding to global warming and Mt Pleasant is "adding fuel to the fire".

There are impacts on properties and businesses, which rely on surface water downstream from Mt Pleasant's dams.

There will be impacts on the Hunter River itself, which is already dying "a death of one thousand cuts".

2. Livelihood

Local miners and mining support businesses get their livelihood from the mine.

The number of people working on the floodplains of the Hunter River has decreased with the mines and Mt Pleasant Mine owners buying up properties.

The diversity of the economy and within the agricultural economy is being reduced and replaced with an increasing dependency on mining.

The cost of living in Muswellbrook is increasing with the perception that it is a mining town. It is no longer an agricultural town. People now have to pay mining prices for rents, goods and services.

3. Opportunity Cost

Opportunity cost

Locally we have increasingly felt the direct impact climate change. We can no longer use or depend on being able to access our natural places (e.g. national parks) in summer and even spring because of the risk of fires. Burning coal contributes to climate change and we are in a climate emergency. Some of the impacts of climate change include the longer hotter summers, earlier hotter springs and extended bushfire seasons. Many people no longer look forward to summer as a time of fun, barbeques and outdoor activities because of the extreme discomfort and risk higher temperatures bring. This is a negative commercial result for those invested in farm stays, rural accommodation, and eco tourism.

The profits from mining the Mt Pleasant by MACH go overseas, all the heavy equipment and fuel are imported. The Australian people are left to work out what to do with toxic final voids and landscapes at best, set to be vegetated by invasive species such as Galenia and Coolatai grass.

NATURAL ENVIRONMENT

1. Air

Doctors for the Environment warn constantly of the cost to individuals and the health system due to air pollution, particularly Particulate Matter. The dust from coalmines is typically more from the PM10 fraction, however particulates from the trucks and carbon monoxide are known carcinogens. Dust is also a daily nuisance.

2. Biodiversity

The orchids, *Praso petillum* and *Diuris tricolor* may be found on the site. *Praso petillum* is listed under both the federal EPBC and state Biodiversity Conservation Acts.

It is listed twice under the EPBC Act because Muswellbrook has a population distinct from other populations of *Praso petillum* and is Critically Endangered (as *Praso* sp. Wybong).

Diuris tricolor is listed twice as

(2.1) a Vulnerable Species

(2.2) an Endangered Population in the Muswellbrook LGA

In the state Biodiversity Conservation Acts

And *Prasophyllum aff petillum* is listed as an Endangered species under the name '*Prasophyllum petillum*'

Off sets

Offsetting cannot undo the disruption and break in continuity of wildlife corridors.

3. Land

There will be a final void and spoil dump. The landscape has already been changed forever. We need to see an accurate visual representation and modelling that reveal the full visual impact of the overburden from all directions and at distances from where the mine will be visible. The idea that the mines height and depth might be mitigation for noise and dust, they being the 'real impacts', is not credible. The visual impact is already way beyond 3 km from the site.

The large final void and kilometers of overburden high above local natural landform 3km northwest and upwind of town is already a disgrace. In

The well known term applying to the emotional impact on people, of the totality of the degradation and permanent changes to the landscape, is "solastalgia". At the moment there is no beauty associated with the Mt Pleasant site, and fear of more of that ugliness causes great dread.

We have no guarantee that the final landforms will be natural in appearance, or suitable for relevant land uses.

Is it possible to rehabilitate the site back to good agricultural land?
Inevitably altered landscape is prone to weed infestations, and costly to remediate.

The overburden dumps represent loss of productive food producing land, loss of the landscape, uncertainty about the remaining farms' water supplies, effects on the weather and rainfall due to thermals rising from the huge cavity, and possibly, ongoing fires in the mine seams which have plagued other mines in the Hunter.

4. Water and Water availability

Glenbawn Dam has risen from 39 to 44% capacity since the drought broke locally this year, 2020. Glenbawn Dam water is kept for Bayswater power station while irrigators and towns move to water restrictions. Glenbawn Dam cannot be seen as a secure supply to the mines in times of drought.

Surface water for farms downstream is not clearly guaranteed to those farmers.

There will inevitably be disruption to natural flows to adjacent farms and absorption into water table. There will also be disruption and comingling of water tables

We want to know what pressures and limits the existing and proposed project will put on the Hunter River Salinity Trading Scheme.

We believe water availability for towns and agriculture in a warmer climate will require human water use take priority over mines wanting only to wash coal.

The post mining impacts of water use and storage are feared to have effects on salinity in the Hunter.

People who rely on their roof to catch their drinking water are not being offered first flush systems, water testing opportunities or guidelines. No one is taking responsibility for the cumulative impact of air pollution settling on the roof to be flushed into the water tanks when it rains.

Influence and corruption; Morale

- We are surrounded by pro-mine propaganda, refer to COALFACE, and the new Hunter River Times, for example "Rejoice over Resources' article on the \$8.25M to Muswellbrook and Singleton from the NSW Government (<https://hunterrivertimes.com.au/rejoice-over-resources/>)
- Mining companies are going into the local high schools and trying to recruit senior students for their apprenticeship programs, and they can do this without the permission of the parents. (direct information)
- Young people are not finishing year 12 because they can earn good wages in the mines as a result – they are taking the money rather than fulfilling their potential to do something else.
- This must contribute to "anti-intellectualism" in the local and regional area. The impression delivered by THE COALFACE newspaper, (or now, the Hunter River Times) is that if you support mines, you'll be in the gang, get the grants, be very happy, win the football. You're in the winning team... you can wear orange, and attend IPC meetings in significant numbers feeling safe. There are positive ideas in all this but it is not sufficient as an ethos.
- The "Community Investment" within public education and community groups through mine gifts and splendid TAFE graduations (which other fields cannot afford) twists public perception.
- The corruption is in the lie. That life is not experienced as a whole, but rather in isolated bits; that impacts can be reduced to separate aspects like air, noise, dust.
- Corruption is in the continual blindness to cumulative impacts.
But life is cumulative. Truth is cumulative:
 - * The truck that makes the noise makes the dust, takes drivers from building jobs, and hides the horizon forever.
 - * The train, which squeals, also lets off clouds of coal, which sticks to my white paint in Scone, and divides land.
 - * The high-money jobs also uproot families, deprive towns of tradies, and kill tired shift workers and others, on the roads.
- The cessation of the project in 2026 would restore people's hope in the Governments and the democratic system; currently it's dead. The influencing,

pressure, and domination of the town from all the miners is unnatural, and produces a twisting effect on the peaceful coexistence and wellbeing within society.

Section 2. Project Concluded 2026. If the Project does NOT proceed:

- 1. SPIRIT quality of life and health, environment, survival of earth and people,**
- 2. SOCIETY community, influences/ ethics, economy, interactions, tourism**
- 3. SUBSTANCE heritage, man-made features, resources use, access, safety.**

1. SPIRIT:

QUALITY OF LIFE: air, nature, health,

ENVIRONMENT: continued survival of biosphere and people

Quality of Life

*Cessation of the project in 2026 not only saves what is left of the Upper Hunter Valley physically. It would restore people's hope, and pride.

*Australia is contributing more than other nations per capita, to Earth's demise. So cessation will give this locality confidence that we are slowing our carbon emissions, and prolonging our biosphere.

*Aberdeen will still see the results of Mine Phase 1 in its view. But it will be far less affected than it would have been by the extension project, which would have been closer, higher in the view therefore.

*Cessation would preserve the entrancing Castlerock Road ridge. From it, the northern Hunter Valley can be seen in a huge panoramic view. It is a wonderful attraction for all residents and for visitors. This ridge is clearly seen from Scone only 19 km away.

*Cessation would relieve pressure on the Bicentennial National Trail, an Australian national treasure.

*The view from Kayuga's hill will not become ugly, filled with a new and close mountain. This Kayuga Road is one of the great scenic drives within the Hunter Valley. Mining spoils that even now, but cessation would rescue it from a far worse blight.

*The noise of the Phase 1 mine will eventually abate, and Valley people can rest, to enjoy better health if all mines in the area turn to cleaner investments.

*Locals will have the pleasure of seeing a fresher town, their homes freer of dust, and breathing cleaner air.

Air

*After 2026, with rehabilitation across all the mines, west winds won't dust the lungs of Muswellbrook people, and south winds won't bring dust north up the valleys.

*Coal dust will still pollute in Scone, from trains and working mines. But if this extension stops at 2026, people who remember fresh air in the Hunter Valley may be

alive to sample more of it year round. (Currently even after rain, finest coal dust still lines the floor of clean rainwater buckets in Scone.)

*The houses in Muswellbrook will no longer be covered in dust inside and out.

*This mine is already creating wide respiratory illness in Muswellbrook, cessation would relieve this.

*Upper Hunter will have fewer blast pollution events.

Biodiversity

*The biodiversity corridor will hopefully hold together much better, if more land remains unspoiled, allowing continuity for original bushland species along the escarpment edge.

Public domain

*With cessation, *solastalgia* will stop intensifying. The public domain includes the beauty of the countryside. If this vast mine stops in 2026, with all rehabilitation fulfilled, the perception of the public domain will improve, and with it, the reputation and self-esteem of the town. That will assist the recovery of the important main streets, and the attraction of Muswellbrook in general.

*Australia needs to reduce its burden on the Public Domain of the World; cessation releases that burden.

Land

*The topography is valuable: **only if the north pit does not proceed, will the integrity of the main landform remain anything like the natural landform we inherited.** Already the first phase is a shocking invasion into this delicate ridge landform. We have only seen 2 years of an 8 year incursion of phase 1. We have not been shown what the final landform looks like from all angles. Not having to fear will, itself, bring relief and confidence.

*Habitation and roads surround the site closely. Everyone coming to and through the Hunter Valley sees this site. It will be wonderful to see preserved, what little natural land still remains intact, next to the town of Muswellbrook.

*The renowned fertile Hunter Valley supports high return primary production which also draws a significant tourist industry, for example the vineyards, horse studs, dairies, farms. People also come for recreation, retirement, education, and the National Parks. This diversity is enhanced if Mt Pleasant does not proceed to dominate the landscape of Muswellbrook and beyond, by crashing through the Castlerock Ridge.

*The degree of rehabilitation with cessation need not be so vast and expensive as it would if MACH had to fulfil its rehabilitation duty to the north as well as to the east.

2. SOCIETY: COMMUNITY, CULTURE, INTERACTIONS, INFLUENCES/CORRUPTION, ECONOMY, TOURISM

*Cessation would boost morale and stability in all three affected towns, supporting tourism and farming jobs. Farmers can plan for their future, and make the site land productive again as part of their plans.

*Our horizons are remarkable for the vistas, which are background to our understanding of the nature of our life in the Upper Hunter Valley. **Only if the project does not proceed to extension, does that degree of significance have a chance of remaining.**

*Kayuga village will remain and reinvent itself with new confidence in the future of farming and tourism.

*Local culture and tourism has yet to benefit from the important landscape feature of the northern panorama of three mountain ranges and valley, from Castlerock Road near Mt Pleasant summit. Cessation would allow this opportunity to be explored.

*Although coal is on the decline, the mine could increase production if it had to, without destroying this ridge and the land north of it.

*The farms on the subject lands now abandoned, sold and vacated, can be taken up again, sold back to new owners, and rehabilitated for continuation of farming the slopes of the Castlerock ridge.

*The farms up towards the Castlerock Peak itself will be able to carry on in peace, and transport their produce down the ridge road.

*The local schools can play instruments in greater peace, and the Music School will benefit.

*High Schools can offer students wider choice of futures if mining in the area makes an orderly transition to positively beneficial energy and industry, as soon as possible, so cessation in 2026 would be part of that.

Aboriginal cultural

*The local First Nations people like everyone else, may be able to take a break from being pressured by mining through grants and job offers.... as if we all have no better alternatives in life. It's patronising.

*There must be a tremendous wealth already, of unique First Nations evidence on that ridge. Much of it could remain if the mine stops at 2026. That gives the opportunity to ensure that new land ownerships are subject to the findings and recommendations of the Archaeological exploration of this heritage, under the management of the First Nations people.

Livelihood

*Cessation allows MACH Energy to modernise, and diversify investment in the growing trend of investment in renewable energy and technologies. That will provide new pride and jobs, alleviating health pressures.

*Skills shortages left by this mine's plans to hire more workers from other jobs as usual would reverse. Skills and service would again be reliable as local people stay in jobs they were trained for, teaching what they're good at, rather than wasting Australia's fine training to go for more wages.

*Cessation would free the workers and students to choose healthy jobs, return to former needed work. They could look forward to turning climate change around for their families' future.

*Working morale: Opportunities are offered as a result of mining expansion. But they are not worth as much as safe, healthy opportunities which will endure, keep families happy, and bring pride.

3. SUBSTANCE:

HERITAGE, ANCIENT AND MODERN, NATURAL AND BUILT

BUILT ASSETS, PHYSICAL FEATURES BUILT BY MAN

RESOURCES, PHYSICAL ACCESS. AND SAFETY, which is often related to access.

The built assets:

*There is a wealth of heritage on the Mt Pleasant extension site, some of which is listed in past Heritage Studies in detail, with recommendations. This will be a good textbook for the treatment of heritage.

*Some of this heritage is natural and unique, irreplaceable. Dorset Road has picturesque creek crossings where ancient gum trees shelter the roadway, making unique and unforgettably picturesque scenery. With cessation, these would remain for the future enjoyment of residents and tourists, and for their own sake.

*Existing crossings, roads, gates; public infrastructure, can remain, maintained, in full and peaceful use.

*More features of the Bicentennial National Trail will remain. It features heritage as a major attraction.

The use of resources:

*The drainage patterns of the existing creeks would be undisturbed.

*Runoff and groundwater for nature, farming and for human use would remain. Long term, only if coal mines retreat can we retain our water for life giving purposes.

*With cessation, the next round of invasive and costly pipes, drains, interventions and interferences with natural and farming land will not be necessary. That allows much easier farming continuation, and less contamination potential. The entire, costly process of necessary rehabilitation to N and NW will be unnecessary.

* With cessation, the Hunter River will have more chance to run clean and full.

Access, safety, road and rail

*Without the invasive mine extension, Dorset Road will continue as is, uninterrupted and intact. So those access patterns are unchanged.

*Castlerock Road too will remain intact, with all the advantages outlined.

*SAFETY for all will increase after 2026 without the extension. The roads will be safer. So will the ex-miners who sleep proper hours, and are not forced to drive home from work exhausted in the small hours.

*Without the extension of the mine, Rail traffic on the Ulan line will not be burdened by the projected increase in usage, with maintenance troubles and timetabling difficulties.

**In short,*

If the expansion of Mt Pleasant Mine does not proceed, the Upper Hunter and its ecology will be saved much terminal loss and suffering, life will have more beauty, joy and hope for many thousands here and elsewhere; and a clean, satisfying economy will continue locally, based on an orderly transition to sustainable, healthy land use.

End of notes.

11 August 2020
160 Turanville Road
SCONE NSW 2337

Friends of the Upper Hunter Inc.

Ms Rachel Maas
Social Impact Assessor
Mt Pleasant Mine Optimisation Project

Dear Rachel

Thank you for the opportunity to contribute to the social impact assessment you are preparing for the Mount Pleasant Mine Optimisation Project west of Muswellbrook in the Upper Hunter.

Friends of the Upper Hunter is a conservative community organisation based in the Upper Hunter Valley. Our members are business people, farmers, landowners, doctors, teachers, grandparents and parents. Many of our families have lived and worked in the Upper Hunter for up to six generations, others have chosen the area for its natural beauty, agricultural and tourism opportunities and its easy proximity to Sydney.

We are not activists, nor are we anti mining but we are pro-balance and we feel that the Upper Hunter cannot safely sustain additional coal mining at this time without detrimental impacts to the health, wellbeing and long term prosperity of our community.

We believe our community needs to invest urgently in economic diversification and that we need to preserve remaining mining-free land and water to support this diversification.

We and our members have consulted extensively within our community since forming in March 2019 and our position is informed by that consultation.

We and our members are deeply concerned regarding the cumulative impacts being experienced across the Upper Hunter due to the activity of the existing extensive coal mining operations in the district, including the existing Mount Pleasant operation which is producing 10.5M tonnes of ROM coal per annum less than 3km west of the town of Muswellbrook.

We are also troubled by the six new coal mining expansions and developments in various stages of approval within the Muswellbrook and Upper Hunter Shires despite the price of coal being below the cost of production. Each of these six proposals diverts the attention of local people from their own businesses in order to oppose them and contributes to investment uncertainty for residents and non-mining industries.

To contemplate doubling the production of the Mt Pleasant mine would be to significantly exacerbate the already unacceptable impacts of this mine.

It is our view that the significant negative impacts of this proposal will outweigh the positive economic impacts that this expansion may deliver.

To focus our comments to social impacts, it is our view that the negative impacts of this proposal will include the following:

SIA Guideline Impact	How this relates to Mount Pleasant Expansion
1. Way of life	<ul style="list-style-type: none"> - Continued over-reliance on mining prolongs boom and bust cycles - Continued two-speed economy - Continued issues created by a large DIDO workforce and well-known 'gaming of the system' by DIDO workers - Ongoing pollution impacts choices for residents - Deepening resentment from non-mining members of the community at the ongoing impacts from mining - Ongoing pollution negatively impacts investment by other industries - Ongoing burden for residents participating in the planning and legal processes required to oppose this expansion
2. Community	<ul style="list-style-type: none"> - Continued loss of long-time residents - Deterrent to young families wishing to return to the area to live near grandparents in Muswellbrook or Aberdeen - This combined with large DIDO workforce impacts rates of volunteerism, participation in sport etc. - Supports a concentration in tertiary study on mining-related trades and skills - skills which won't be needed as the world transitions away from coal
3. Access to and use of infrastructure	<ul style="list-style-type: none"> - Issues with traffic on shift changes - Issues with availability and affordability of housing - Issues with access to social infrastructure.
4. Culture	<ul style="list-style-type: none"> - Continued industrialisation of the local landscape causes many residents to state that Muswellbrook isn't the town they grew up in. - Connection to local landscape, villages and history is eroded with physical destruction of homes and landscapes.
5. Health and wellbeing	<ul style="list-style-type: none"> - Known and perceived impacts of coal-linked air pollution on health - Mental health impacts created through the cumulative stress of so many mining projects in the same place and fears regarding climate change impacts of continued mining
6. Surroundings	<ul style="list-style-type: none"> - Impacts on the availability of water in a river system which is already subject to restrictions during times of drought and where groundwater systems have already undergone significant detrimental changes linked to mining (as evidenced by the Hunter Bioregional Assessment). - Will certainly contribute to additional air quality exceedances over the NEPA guideline - Impacts the availability of land not impacted by mining - Likelihood that the community will be adversely impacted by the creation of a stranded asset

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7. Personal and property rights	<ul style="list-style-type: none"> - Residents of the area are unable to plan for the future as further expansions contribute to the sense that no land is safe from mining - This mine has been strongly resisted by local residents since the 1990s. Despite this, there is a strong sense that Government is not listening and will push this extension through despite the ongoing objections of local landowners and residents whose property values are being impacted. - Impacts the ability of local food and tourism businesses to promote a brand associated with a clean, green, beautiful local environment
8. Decision making systems	<ul style="list-style-type: none"> - Sense that the NSW Government has abandoned the Upper Hunter community, its residents and its long-standing locally owned industries such as agriculture in favour of coal mining with no end in sight. - Well documented history of corruption associated with mining approvals, current clear pro-mining stance of political leaders including John Barilaro and the clear influence of lobbyists such as the Minerals Council in relation to NSW Government policy (such as the hastily called review into the IPC) - all impacting confidence in the good governance and fairness of the approvals process for mining
9. Fears and aspirations	<ul style="list-style-type: none"> - All of the above cause residents of the Upper Hunter to fear that we will lose the opportunity to capitalise on our natural assets (water, fertile land, natural beauty and proximity to Australia's largest consumer market) by investing in sustainable existing industries - Further, it causes residents to feel that their health and way of life is being placed second to the profits of international coal investors - Finally causes residents to fear that the Australian and NSW Governments are not committed to meeting our Paris commitments or to combatting dangerous climate change, and that this in turn will endanger our security, prosperity and way of life.

Without this expansion, this mine would close in 2026, creating the opportunity for our community to make the critical transition to a diversified and resilient economy and allowing our local environment to recover - easing the pollution that compromises the health of local people and negatively impacts their plans for the future.

Of course, the closure of this mine would require significant rehabilitation to be completed and a clear transition plan to be put in place for the staff contracted to the mine, a percentage of which are permanent residents of the local area.

We have reason to believe, however, that closure of this mine would result in a positive economic impact on new as well as existing sustainable industries such as agriculture, tourism and horse breeding and would create employment opportunities that would offset the impact on Mt Pleasant's local workers.

We would appreciate you incorporating these concerns into your Social Impact Assessment. Please feel free to contact Secretary, Kirsty O'Connell, should you have any queries regarding this submission.

Sincerely

Doug Robertson
President
Friends of the Upper Hunter Incorporated

1



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Neighbouring landholder

Date	24 August 2020
Organisation	Glen Eden Holsteins Pty Ltd John and Catherine Raphael
Location	Phone
MACH Energy	-
Just Add Lime	Rachel Maas, Principal Social Scientist

Introduction

The Glen Eden Holsteins Dairy has been operated by the Raphael family since 1982. It is the premier dairy in the Hunter Valley. The Dairy currently milks 1,000 Holstein Friesian dairy cows, producing close to 10,000,000 litres of milk annually, making it one of the largest dairies in New South Wales.

The business is owned and operated by brothers John and Douglas Raphael. John and Douglas and their families are second and third generation dairy farmers and were recently nominated for the Weekly Times Coles Farmer of the Year Awards. John and Douglas live on the properties associated with the dairy with their families. They are passionate about producing high quality and profitable milk and firmly believe that the dairy industry has a future for their children.

Their ecosystem management practices maximise sunlight and water harvesting to produce pasture and fodder for optimum milk production. The Dairy is in the top 10% industry wide, in all areas of milk production. Glen Eden is a sustainable and profitable production system where the owners care for the land and their livestock. (<http://glenedenholsteins.com.au/>).

Glen Eden Holsteins directly employs nine (9) employees with two employees living on site and one living on leased premises which are owned by MACH. The Dairy also contracts a local farming contractor (who employs three (3) employees) to undertake work on the properties, including ploughing, harvesting corn for silage or bailing hay.

Current impacts of Mount Pleasant Operation

We have several properties which are all used to run the Dairy which are either next to or in close proximity to the Mount Pleasant mine. They are properties on MACH's Landholder List with the numbers 86, 202, 204, 241, with 242 being a pump site and 290 being a shed where fodder is stored. There are occupied homes on properties 86, 202, 204 and 241.

We experience a range environmental impacts since the start of the mine in 2017. They are described below.

- Dust impacts from mining

- Dust accumulates on all the homes on the properties, both on the inside and outside.
 - We get a layer of grey/brown dust every day that requires daily cleaning. You can feel it under your feet on the tiled floors.
 - We undertook repairs on the house on property 241 in April 2020. This included having the ceiling painted. After having the windows open all day to let the paint dry, the floor was covered in black dust. Haven't noticed it that bad before because we don't usually have the house all open like that.
- Impacts from blasting - vibration
 - In April 2020 we had repairs carried out to the house on property 241 for cracks in the gyprock. They are now starting to appear again. We believe the cracks are due to the vibrations from blasting.
 - We are also concerned of the impacts blasting may have on our underground pipework used for irrigation.
 - We are concerned of the impacts blasting may have on the concrete floor slabs and footings of a number of dwellings and other improvements on our properties.
- Impacts from blasting - smell
 - Can smell when there is a blast.
- Noise impacts from mining
 - We can hear the dull background noise, like drum rolls and then there is the sound of machinery and blasting on top of that.
 - Can hear the machinery scraping the ground at night
 - MACH stays within their noise conditions but that doesn't mean we're not impacted.
- Impacts from night works - light
 - Lights from the mine shine into every home on the farm and also into the dairy yard where cattle are yarded at 2am. The lights are set up not to shine towards Muswellbrook, but we are north/west of the mine, not west like Muswellbrook.
- Visual impacts from overburden, dust and blasting
 - We've been watching the overburden being built. We no longer have a view of the natural landscape but rather look directly into the overburden.
 - We also see the dust and blasts. We can see the dust come off the overburden or out of the mine and settle on the surrounding areas.
 - The rural landscape has changed dramatically.
- Impacts on cattle
 - The dust settles on the crops, particularly when there is a heavy dew and the cattle don't want to eat it.
 - Noise and light – they are skittish animals and easily spooked when there is unexpected noise (like blast) or light. They have repeatedly broken fences and got out on the highway when spooked. Others have jumped barbed wire fences and torn their udders.
 - We have cattle grazing within 400m of the boundary with Mount Pleasant. I have asked to be notified of upcoming blasts, which MACH do, and I move the cattle. However, not only is it an inconvenience to our farm operations but it is also a time consuming and costly exercise and at times, can be for nothing as the blast gets cancelled after we have carried out the work to shift the cattle which effects production.
- Impacts on the business
 - Extra cleaning of the dairy and equipment to keep it up to health standards.
 - Stainless steel in the dairy is cleaned weekly instead of quarterly. These are all added costs to the business.
 - Management practices are being impacted by mine operations – such as costs of moving cattle, cost of cleaning infrastructure and equipment for health and hygiene.
 - Concerns of the impacts of blasting on a number of our improvements including underground irrigation infrastructure and building floor slabs.
 - Milk production down due to "spooked" cows.

Douglas and his family have always planned to build a house on property 86, however they won't be able to do this because Council won't give them an approval because of the impacts from MACH/Mount Pleasant.

When we make complaints to MACH always have an answer such as the wind was blowing in a different direction or they are operating within their approval. How do we prove that we are being impacted? There is increased dust and increased noise impacts on our daily lives – in addition to blasting impacts. They are all a consequence of MACH mining across the road from us. We used to complain to the Council, and they asked us to send in photos. Various Politicians have visited our dairy over the years and observed the impacts. But again, nothing has changed.

Dwelling 86 and 202 have been identified for additional noise mitigation measures on request, however we do not want to enter into a mitigation agreement at this point in time because we feel it will affect our ability to negotiate with MACH in the future. Despite all the various impacts on us, our properties and our business, we have not been identified as having “acquisition on request” rights. This leaves us in the position of living with all the environmental impacts, costs and other inconveniences of the mine without having a leg to stand on to enforce the mine to deal with us, reduce impacts upon us or compensate us for the disruptions to our lifestyle and livelihood.

Example of visual and dust impacts (overburden in the background)



Example of visual impact of blasting



The land surrounding our properties is owned by MACH or Bengalla, so we're essentially landlocked and cannot expand. MACH have bought the majority of land around us – including most of the land opposite us along Kayuga Road. We do lease land from MACH, however we feel this puts us at a disadvantage when making complaints or negotiating any future agreements. We've had to purchase land elsewhere in the region in order to maintain, support and build our dairy business but that land is some distance from our existing operations.

To grow feed for the cattle (using irrigation) and run the dairy we are reliant on both well water and water from the Hunter River. MACH are impacting our water as well. They have bought all the available water. MACH can afford to pay more for water than can farmers. We used to be able to temporary transfer water from other farmers in our area, however MACH has since bought a large number of those licenses. The aquifers have not recharged after the rain earlier in the year, we've had two wells run dry.

To get some certainty for our futures, in response to MACH/Mt Pleasant making an approach to purchase our property, we have entered into without prejudice discussions/negotiation with. This process has taken considerable time and cost and is expected to continue to cost us time and money. It is a slow process and is quite frustrating. We don't want to leave, and we want to keep running our business. We are worried of what will become of our livelihood and our children's futures as the cost today to set up a large, profitable dairy operation such as ours is significant. Our farm, Glen Eden, is a very valuable rural business and the cost to replace it with a farm of similar scale operation and potential is unlikely to be possible without relocating. Our farm is on the fringe of Muswellbrook and within 1.5 hours of Newcastle and three hours of Sydney. We just want certainty.

Based on previous and current valuations, our properties have decreased in value and this can, in part, be attributed to mining operations at Mount Pleasant. The property value completed by Mt Pleasant does not take into consideration the value of the business, which is also impacted. No one else will want to buy our properties because of the proximity and environmental impacts of the mine.

MACH have agreed to negotiate to purchase our properties, but any purchase agreement will be conditional and only if the SSD Application is approved. This makes us feel like we can't complain or object to the SSD application. We feel that they feel they are doing us a favour by buying us out if the SSD is approved. It all builds up to us feeling like MACH has all the power and we have none, we and our business are at their discretion.

Between the ongoing denials of environmental impacts and lifestyle impacts, the purchase of surrounding land and water, reductions in the value of our properties as a consequence of mining, the added costs to our



business in dealing with existing mining impacts, concerns of the cost of future mining impacts and the delays in negotiating a purchase of our properties, we are feeling very frustrated with where we find ourselves. Through no fault of our own, after forty years successfully operating our business, producing premium milk and milk products, employing local people and raising our families on Glen Eden, we find ourselves in jeopardy of losing our business, our lifestyle and our families' future. We feel as if we are being squeezed out. But MACH won't give us certainty by buying us outright, in advance of the SSD approval, so we are stuck, trying to make the best of a situation that is getting worse and that we have no control over.

We are not against mining, we just want certainty to plan for our future. We have missed out on opportunities because of this uncertainty. It feels like our hands are tied.

Kayuga village is basically gone, MACH owns most of it. It used to be a thriving village, known for its dances at the Kayuga Hall. But they don't happen anymore. John grew up on the farm and he had friends at Kayuga, our girls used to ride their horses with friends at Kayuga.

We feel as one of the closest and largest neighbour to Mount Pleasant; and given the impacts we experience, MACH should be sitting down with us and working out a way forward for both of us. We find out information for ourselves or from other people. We only found out about MOD 4 two days before submissions closed. We only found out about this SIA through a friend.

Cumulative impacts of mining

We can see the overburden from Mt Arthur, Bengalla and Muswellbrook Coal and now we look directly across the road to the overburden from Mount Pleasant. We wonder what the overburden is doing for the local environment, is it changing how the wind moves around, the amount of dust in the air and the impact upon temperature.

Impacts if the Project proceeds

MACH have approached us and said they will enter into without prejudice negotiations with us to purchase our properties, but purchase is conditional upon the SSD being approved. This approach does not provide certainty for use. As well as putting on hold our plans for the future, it places us at a disadvantage in our discussions with MACH.

Impacts if the Project does not proceed

If the SSD is not approved, then we can continue to run our business and potentially purchase some surrounding land and water to expand locally.



MACH Energy Mount Pleasant Optimisation Project

Social Impact Assessment

Neighbouring landowner

Date	18 August 2020
Organisation	Jim Lonergan, Kayuga
Location	Phone
MACH Energy	-
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

My family has lived in the Kayuga and Castlerock area for multiple generations. My grandparents first bought land when they moved to the Castlerock area in the 1880s followed by further purchases as land became available. The land my family still owns that was purchased in 1905. There was a time, when no one in the area thought about mining. We knew there was coal, people found it when they were digging for wells, but no one thought much of it. The only thing we had to worry about was farming.

People used to live off the land, there was more people on the land than in town. There was no need to go into town. You can still see where the old homesteads used to be, just need to look for a grove of old pepper trees. Many of the houses are long gone now but the trees are still there. People would have made their living by having a small herd of dairy cattle, about 20 of them. People knew the country, kids would walk to school through the paddocks and people would know the best and easiest way to get through the hills. Back then the Hunter River didn't run all the time, so there was no real benefit being in the hills or on the flood plain.

My dad went to the Kayuga school in the 1920s and at one point there were 80 kids enrolled and two teachers. The Lonergans could field a whole cricket team at the Kayuga Cricket Club. Over time things changed and Muswellbrook started to grow, people started to move into town. The school closed in the 1970s and kids went to school in either Aberdeen or Muswellbrook.

But that was before mining. In the mid-1980s it all changed. Mining started with Dartbrook and has grown since then. We've all been impacted by mining. People have had their land purchased and left the area or have been impacted by the dust, the noise the traffic. Most of the old families have gone now. They have either sold to the mining companies and moved away or passed on. There aren't any young people in Kayuga anymore. The town is dying with just a few people left. Dartbrook was the start of the end of Kayuga.

At the moment, depending on what is going on at a mining company, I can easily spend 3-4 days a month dealing with them. It takes time. It's not just the meetings and reading all the materials, you can be in the middle of the paddock and stop and realise something, it's always on your mind. It's hard to keep up with the mines and what they are up too. It's getting even harder with everything going online as we don't have the internet. The loss of our local newspapers makes things harder and changes what we chat about. We'd often say, "did you see In the newspaper" to our neighbours or friends, we can't do that anymore.



The worst part about mining is, it annihilates everything in its path, the houses, the productive land, the people and what does it leave behind? The mining companies say they are or are going to rehabilitate but how can they? They have taken so much out of the land and moved it around so much, it can never go back. You can see that from the attempts to rehabilitate the overburden. There just isn't enough top soil to cover it – it's simple mathematics.

All the hills in the pre-mining landscape, that we used to think were tall are now dwarfed by the overburden of Bengalla and Mt Arthur. My brother lives on the hill in Muswellbrook and he used to be able to see Mount Dangar out near Merriwa, where my mum came from. He can't see it anymore, he looks out at Bengalla's overburden instead. It feels like, between Mt Arthur, Bengalla and Mount Pleasant, Muswellbrook is going to have a wall of overburden around on the southern and western sides of it. It's going to make so hot in town.

You used to be able to drive from Muswellbrook to Singleton with paddocks on either side of the road. Now there are trees that block the view of the mines. The mining companies plant out the side of the overburden that you can see from the road, but they do nothing on their side, you can see that when you drive past and get a glimpse into the pits.

Miners don't see the land like farmers do. Most are not from here so don't have a connection to this land. They don't feel the permanent damage they are doing. Everything they do is big, big equipment, big holes in the ground and big hills of overburden. Miners are pushing all the time and there is constant pressure. They operate 24 hours a day, 7 days a week, but why? It's all about the money, they have got themselves in a position where they cannot afford to stop. The mine workers live a completely different lifestyle to the farmers. They don't have freedom or flexibility we have. They do however earn a lot more money and I think because of this, some of them think they are better than us.

Mining in the area has changed, it used to be small and underground, they used to operate Monday to Friday. The mines would shut down for two weeks off over Christmas and the miners and their families would go away for their holidays. The miners used to be part of the community, they would play sport on the weekends and volunteer but now with the 12 hour shifts and the rosters, the mine workers are separate to the community. One of my sons works on roster at Mangoola and I don't know when to call him. I can't call in the evening because he goes to bed early after spending precious time with his family, and I can't call him during the day because he's not allowed to have his phone on him at work. The hours and shift work keep mine workers from their friends and family, unless their friends and family are working those hours too.

The hours also effect how they can volunteer, e.g. in the sporting team and the RFS. They aren't always available to do train, maybe every second weekend. The mining companies do support their workers to be a part of the RFS, they make generous donations, however they are restricted unlike the farmers. We were going to support MACH to undertake cultural burn, however it wasn't able to happen because it was too wet.

Current impacts of Mount Pleasant Operation

At the moment, the biggest thing is the uncertainty. I don't know what the impacts are going to be and how bad they are going to be, it worries me.

What are we going to do? What should we do? Do we stay or do we go? If we go, where do we go and what will we do? This land is our home. We know this land, it's people, its history.

The mine is getting closer, we are currently impacted by the noise but this will get worse and we'll start to experience more dust. Once MACH are in the northern end of the pit, they will be 25 yards from my boundary. They'll be close.

Impacts if the Project proceeds

The noise is only going to get louder as the mining gets closer. I have one son who lives on a higher part of our property and another son in Aberdeen, they both hear the mine more than me at the moment, I think that is because they are on higher ground.



As MACH build the overburden at the northern end of the lease, the dust impacts are going to be challenging, look at what has happened at the Wybong road end. With the inversion, will the dust sit on my property? You can shine a spotlight into the night sky at the moment see all the dust particles that have risen on the warm air during the day, falling with the cooler night air. The weather has a lot to do with the noise and dust impacts, and who knows what is going to happen to the weather in the future.

MACH may not be using the land to the west anymore and they are mining deeper, however that means that the overburden on the north/eastern side will be getting higher. I have looked out my window to the west and seen the same hills all my life. When we get a storm from the west, I can tell what it's going to do by where it comes over the hills. I won't be able to see those hills anymore, the overburden will block that view. MACH can make it look as natural as they like but it's not natural because it wasn't there before.

This mine, like other mines in the area will continue to permanently change the landscape. The landscape that I grew up with is different to what the next generation experiences and the ones after that won't be able to experience what I did – it just doesn't exist anymore.

I am not sure how blasting will impact on my underground irrigation. I have fibro pipes which are quiet strong when they are installed correctly and they are protected by the ground around them, but I am not sure how they are going to go when there is a blast and the ground vibrates. It may crack or break the pipes and I'll lose all the water that I've had to pay for. Availability of water from the Hunter River is a big issue for people and how the mine may impact the current water licenses is another unknown. The mines have the money to outbid farmers for water, we just can not compete.

As a neighbouring landowner we have high levels of uncertainty regarding the Castlerock and Dorset Roads. Whether the roads will be moved or not; and if so, the extent to which the move will effect our farming operations.

As mining progresses towards the village of Kayuga, we are extremely concerned about the bad effects the dust and noise from this overpowering mountain of rubble will have on those still living in the village. We feel there is not future for us here.

Impacts if the Project does not proceed/closure

I would cheer and life would go back to normal.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Muswellbrook Chamber of Commerce and Industry Inc.

Date	9 July 2020
Organisation	Muswellbrook Chamber of Commerce Industry Inc. Michael Kelly, President
Location	Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development)
Just Add Lime	Rachel Maas, Principal Social Scientist

Changes since Scoping SIA

Membership in the Muswellbrook Chamber of Commerce and Industry (MCCI) has increased from 130-140 members in November 2019 to 160 – 170 in July 2020. The Chamber is now representing more businesses from the local area.

We are now seeing improvement from the economic downturn associated with the drought. With the rain in the first quarter and follow up rain in the second quarter, effects of the drought have reduced and the economic shock has reduced.

Covid 19 is still very relevant. The Muswellbrook area has experienced a higher level of economic stability compared to other areas because of the relatively lower reliance on retail, tourism and hospitality. Accommodation hasn't been affected like in other areas because accommodation is mainly used by the mining industry rather than tourism.

In response to Covid 19, MCCI has received support for the past three months from:

- BHP Vital Resources Fund - MCCI has received funding to support the Member Services Manager.
- BHP/C-RES Local Buy Foundation and BHP Futures Fund – videos for local businesses to bounce back from COVID 19.

Many small businesses (e.g. engineering) in the area were considered an essential service because they supported mining and power stations that were able to remain operating. They may be eligible for government support such as tax rebates and tax reductions in the future. If so, this will strengthen the businesses.

The real estate market is changing with investors looking to come back into the market. Rents have decreased but are now on the way back up again, but nothing like the boom. No one wants another boom, the highs are too high and the fall is too great.

There is a skills shortage in the local area, which is why BHP (Mt Arthur) employees/contracts people from outside the Muswellbrook area. They have long term contracts with certain hotels in Muswellbrook to accommodate these workers while on shift.

The mines and support industries are competing for skilled workers. The workers who are skilled are ageing, and there aren't the skilled young people coming through.

Current impacts of Mount Pleasant Operation

The rehabilitation and vegetation on the bund wall plus the easing of the drought has reduced the dust impacts.

Cumulative impacts

Need to take into consideration:

- the planned closure of Liddell Power Station 2023 – 2024 and the loss of local economic support and
- what could happen with the sale of Mt Arthur, no one knows what the policies of the new company will be and if or how much they will support the local economy.

The Liddell Closure Committee has been set up to transition from the power industry and identify the future land use. There have been a number of discussions over the past 3 – 4 years, however there isn't a new industry yet. It is unknown if and how the new industries, e.g. solar, wind and pumped hydro will be able to fill the economic gap (local employment and purchasing) left by Liddell.

In November 2019, 2026 was identified as going to be a big year, but now it maybe 2023 with the potential approval of Mount Pleasant happening in 2023 and the closure of Liddell Power Station.

There is concern about what will happen to the support from BHP and Mt Arthur as Mt Arthur is for sale and whether the new owners (if sold) will have the same corporate and site level of support.

Impacts if the Project proceeds

Cumulative impacts of the increased train movements through town. ARTC are going to upgrade the two railway bridges in town. ARTC have built some sound attenuation barriers in town. However, with the increased number of movements there will be increased noise and coal dust in town.

Where the workers for the Mount Pleasant Optimisation project come from and where they live will influence the economic impact. Having people live in Muswellbrook should be explored and company housing maybe one option. The economic benefits of having 830 FTE in town would provide huge benefits.

Impacts if the Project does not proceed/ Closure/transition

If the Project does not proceed and Mount Pleasant ceases to operate in 2026, there is nothing to replace the economic gap (local employment and purchasing). There are no planned or scheduled large projects that would be an alternative source of employment or local purchasing.

There may be employment and contracts for the rehabilitation phase of the closure, but this will be minor in comparison to the economic opportunities if the project proceeds.

When Drayton closed, Mt Arthur and Bengalla were ramping up and Mount Pleasant was being discussed, the three mines replaced the business and employment opportunities that were lost with Drayton.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Near Neighbour

Date	9 July 2020
Organisation	GILGAI Jonathan and Elisabeth Moore
Location	Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development)
Just Add Lime	Rachel Maas, Principal Social Scientist

Current impacts of Mount Pleasant Operation

You actually see mining getting closer. There is more dust and more noise. Since October 2019, the noise has been 24 hours a day. You don't hear it as much during the day with all the other noise, but you can hear it at night. We comment on the noise at night when we sit down to have dinner, watch the news or go to bed. We have noticed that we're commenting on the noise more and more. We think most of the noise is from the CHPP and are concerned that this is going to continue for the foreseeable future.

We thought we would be impacted by the noise when the mine was proposed by Coal & Allied but did not sign the mitigation agreement because a clause in the Agreement said if mitigation was provided, the cost would be deducted from the sale price, if Coal & Allied purchased the property. Chris Lauritzen explained the context of the clause and that MACH didn't have this clause in their mitigation agreements. Chris encouraged Jonathan and Elisabeth to contact MACH if they would like to discuss noise or dust mitigation options for their property.

We can see the effects of all the hard work that has gone into the shaping and rehabilitation of the overburden. There are patches of green now and it looks pretty impressive. As we live so close, we see it every time we go to town and back again.

Impacts if the Project proceeds

Our biggest concern continues to be our health. Jonathan is now on asthma medication and will need to continue on the medication. We experience a higher level of anxiety because of the impacts of mining on our daily lives. We may get to the point where we will have to sell and move because of the impacts on our health, but we don't want to. We are active members of our community and we want to stay. We have invested emotionally and financially in our property and since the rain, we have renewed energy and excitement about working our property.

We would prefer it if the Additional Mine Water Storage Dams, in the south western corner of the Project Area, were not built at all as we rely on the runoff from the Sandy Creek Catchment to fill our stock watering dams. If the northern, or upstream, Additional Mine Water Storage Dam is constructed, it will impact greatly on the amount of surface water available on GILGAI. How much our water availability is impacted will depend on the design of the dam, e.g. the use of deviation banks so runoff can still enter GILGAI and into the dams on our



property. MACH is focusing on the design and construction of the northern dam at the moment but will also have approval for the southern or downstream dam. This means that they are able to build it also when approval is provided for the construction of additional Mine Water Dams.

We are pleased that Chris will provide us with a letter saying what MACH is intending to do regarding the construction of the northern dam and, we believe, that MACH is not intending on building the southern dam. But what happens once Chris is gone? Once again, it is left to the neighbouring landholders to provide the information to the mining company.

Impacts if the Project does not proceed/closure

If the Project does not proceed, we won't need to worry about the impacts of the Additional Mine Water Storage Dams to the viability of GILGAI and noise, dust impacts would decrease. We would still get dust from Bengalla, which is moving closer. We would have far less Mt Pleasant traffic going past our gateways. How much is hard to say though as we don't know how many people from Mount Pleasant live in Muswellbrook and how many people / vehicles drive in and out. Traffic noise would decrease especially from the early morning stream of work force arrivals.

However, the impacts on Muswellbrook would be enormous, there would be a lot less people living in town, so less people spending locally, sending their children to school, participating in sporting teams etc. The social impact would be great, even if the other mines continue to operate. The visual outlook from Muswellbrook, over time, would improve because of the rehabilitation and there would be less dust impacting on people in town. There would also be a financial impact on all organisations that receive donations from MACH – they would no longer receive the money.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Muswellbrook Shire Council

Date	9 July 2020
Organisation	Muswellbrook Shire Council Sharon Pope, Executive Manager Environmental and Planning Services Kim Manwarring, Community Partnerships Coordinator
Location	Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development)
Just Add Lime	Rachel Maas, Principal Social Scientist

The following response to the Mount Pleasant Optimisation Project is based on the NSW Department of Planning and Environment Social Impact Assessment Guideline for State significant mining, petroleum production and extractive industry development.

Changes since November 2020

Way of life

- Access to adequate housing

As mining has continued through the Covid 19 restrictions/isolation, there is still pressure on affordable housing in the area.

Housing NSW are reviewing their housing strategy, changing to a demand model, however they are only at the start of this process.

There is increasing interest from developers at present to proceed with new residential subdivisions in Muswellbrook and Denman.

- How people work

Muswellbrook Shire Council continued their operations during Covid 19 implementing strategies to meet the NSW Health Regulations. Council has had to approach their delivery of services in innovative ways to ensure the continuum of services.

Anecdotally Council has observed that a few local shops and cafes haven't reopened after the first impact of COVID 19. Of these premise that have reopened, some are on restricted hours and service delivery has been modified due to the requirement to deliver services within the peramiters of the NSW Health Regulations.

It's unknown at this point how many people in the retail and hospitality industry have lost employment, in particular, given the hospitality and service industry has more casual employees.

Community including composition, cohesion, character, how it functions and sense of place

Covid 19 has placed additional pressure on families during isolation. Community Service Providers have provided feedback that the consumption of alcohol and other drugs has increased and this has placed additional stress on family units. The impact of Covid 19 on families is just starting to be assessed as service providers start to re-engage with people.

Access to and use of infrastructure, services and facilities

The Hunter Valley News and Muswellbrook Chronicle are no longer being printed in a paper version. Muswellbrook Chronicle is publishing local news online and via social media. A new free fortnightly newspaper, the Hunter River Times, has started circulation.

Council has received funding as part of the drought relief and other programs. The following community facilities are going to be improved or upgraded:

- Hunter Beach Project;
- Sustainability Hub and Animal Shelter building;
- Entertainment and Conference Centre project;
- Muswellbrook Aquatic and Fitness Centre Upgrade.

Council's draft Local Strategic Planning Statement is currently on public display and one of the strategies contained in the documents is the development of a Housing Strategy for the Shire which focuses on the local housing demand, housing preferences, affordability trends and demand projections etc.

Surroundings

Landholders are still recovering from the drought and there is a low level of confidence that rain will continue. Landholders are still absorbing the financial impact of the drought. The rain earlier this year did not fall in the Glenbawn Dam catchment area here and the region is still on water restrictions.

Through various consultation mediums, Council is hearing feedback from community members that the MACH Energy rehabilitation works on the overburden emplacement area facing Muswellbrook is being well received.

Social impacts if the project proceeds

Refer to the Muswellbrook Shire Council Case Study in the Scoping SIA.

Social impacts if the project does not proceed/closure

Way of life ; Access to adequate housing and how people work

The economic environment surrounding coal (e.g. coal price, demand, mine commencement, mine closure) has flow ons for the economic environment of the local (and state) economy. Employment is a key factor in setting demand for housing and property prices. The Shire is very dependent on mining for employment. Council has recognised the need to diversify the employment base in the Shire to lessen the impacts that will result as mines close in the future.

Community; including composition, cohesion, character, how it functions and sense of place

The Shire is very dependent on mining for employment. Council has recognised the need to diversify the employment base in the Shire to lessen the impacts that will result as mines close in the future. Council has also recognised the need for more recreational, education and retail activities, plus general improvements to amenity, to attract people to live in the Shire. Mines can assist this by provision of funds for community facilities while operating, and by preparing for best practice mine closure planning a minimum of 5 years before the end of coal extraction on a site.

Access to and use of infrastructure, services and facilities

Mines can assist with upgrades to and maintenance of infrastructure while operating. Thomas Mitchell Drive has been constructed on the southern side of town to take many of the required heavy vehicle movements,



and mine traffic more generally, away from the urban areas in Muswellbrook. The planned Muswellbrook Bypass will have a similar role for traffic on the northern side of town. Closure of the mines would result in less traffic in the Shire.

Mines require water for on-site activities while operating, but even after closure will have impacts on local water availability through surface water redirection to voids and control structures, and long-term impacts on aquifers.

Mines manage waste generation with minimal impact on Council facilities and services.

Culture

Muswellbrook Shire Council is working with the local Aboriginal Community on two significant projects that are aimed at building capacity in the local community:

- Aboriginal Treaty Project;
- Aboriginal Oral History Project.

Surroundings

Mining generates amenity impacts for residents through generation of noise, dust, light spill, train and traffic movements and loss of existing vegetation. Rehabilitation activities reduce some of the visual and dust impacts if completed well.

Personal and property rights

Mines have had to purchase a number of farms/lifestyle properties to accommodate mines and manage the impacts of mining. Replacement properties are hard to source within the Shire, some people have had to relocate to other areas to find comparable farms/properties.

Decision-making systems

It is important to invest in a transition process, need to consider the impacts more broadly than just the Muswellbrook Shire area. Maitland see themselves as a dormitory suburb for the Upper Hunter with many mine workers and their families living in Maitland and the worker travelling to and from the mines. Impacts on Maitland will be considerable if mining ceases in the upper hunter.

Cumulative impacts

The area is currently preparing for transition with the eventual closure of the Liddell and Bayswater Power Stations and the cessation of mining. It is important to develop a transition plan.

Other major developments – Wind Farm, Hunter gas Pipeline, solar farms, pumped-hydro, Regional Entertainment and Conference Centre are being planned.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment NSW Rural Fire Service – Hunter Valley Rural Fire District

Date	22 July 2020
Organisation	Damian Honor, District Officer – Infrastructure – Fire Investigation - Work Health & Safety Rep Hunter Valley NSW Rural Fire Service
Location	Phone
MACH Energy	n/a
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline/Existing Social Environment

The Hunter Valley Fire District covers the Muswellbrook Local Government Area and the Singleton Local Government Area. It includes 32 brigades and 1,185 volunteers and five permanent staff. The five permanent staff are employed by the NSW State Government. The stations, equipment and trucks are vested in the Local Council.

The brigades closest to the Mount Pleasant operation are the Kayuga (to the east), Wybong (to the west) and Edinglassie (Muswellbrook town and south to Singleton). Dartbrook Brigade is to the north and in the Upper Hunter Fire District.

	Kayuga	Wybong	Edinglassie
Classification	Rural brigade	Rural brigade	Village 2
Estimate of Active members	17 - 20	15 - 20	95
Estimated membership demographics	3 to 1 male to female ratio Mix of ages	3 to 1 male to female ratio Aging membership	Equal male to female membership Mix of ages
Trucks	1 dual cab	1 dual cab 1 single cab	2 dual cabs 1 single cab
Level of service	Not enough numbers to rotate between 3 teams of 8 over a 24 hour period	Not enough numbers to rotate between 3 teams of 8 over a 24 hour period	Enough numbers to rotate between 3 crews of 8 over a 24 hour period



Once a Triple Zero call is placed, the RFS attend and assess the situation for Threats and Risk to Life and Property, how we assist is dependent on the situation and whether the property owner has the fire under control or not. This includes mines sites, national parks, etc.

RFS volunteers not only fight fires, they also volunteer their time to maintain equipment, run community education programs and to fund raise. Brigade Captains are always on the lookout for new members of all ages from the juniors (14 – 16) to seniors (16 and above). We always need volunteers and the different skills and experience the members bring. There seems to be a trend of people joining as juniors, not being active during their 20s and then becoming active again in mid-30s when they have a young family. There is usually an increase in the interest in RFS membership after bush fires have been on the news, the “Channel 7 effect”. There has been increased interest in the RFS across New South Wales due to the bush fires over this 2019/2020 summer.

There are many benefits of being part of the RFS, but one of the main ones is being part of a crew, the satisfaction that comes from working together and the relationships across the RFS family.

With regards to Bushfire hazards we currently undertake our own assessment of bush fire threats and work with land owners/managers to reduce the threat. We base our initial assessment on local knowledge, fire history and by using online mapping and then validate with on the ground inspections if warranted.

Cumulative impacts of mining

Unless there is a bush fire threat identified on a mine site, we tend not to have much involvement with the mines. There tends to be a culture of the mines not wanting to call Triple Zero.

Where there is mining in NSW, there has been a trend of decreasing RFS volunteer members. This is due to the mining company purchasing a property or properties to mine, and the family/ies who lived on the property usually move out of the area. Rural property owners/agricultural businesses take the responsibility of managing the fire risk on their land seriously, which is why the members of a rural family are more likely to be RFS volunteers. When the family is gone and the mining begins, the membership gap is not usually replaced by the mine workers. If the mine owns properties in the buffer zone around the mine, they usually rent them out to mine workers, but those don't usually participate – they don't have the same level of responsibility to manage the fire risk on the land as much as the previous family or the mining company takes over the responsibility of managing the risk.

Some people who work at the mines do volunteer and their contribution is highly valued. The hardest time to get volunteers is on shift change – they aren't available because they are travelling to or from work. Also shift work can prevent people volunteering, even when they would like too because they are not available to attend in regular meetings or training sessions and this can lead to them feeling like they are missing out on being part of their crew.

Impacts if the Project proceeds

MACH will continue to have the responsibility of managing fire risk and the RFS is available to work with them to identify and manage the risk. Would welcome the opportunity to maintain a working relationship with MACH.

Impacts if the Project does not proceed/closure

If the Project does not proceed, the volunteers who are currently employed at the Mount Pleasant Operation could potentially leave and Hunter Valley Fire District and we will lose those members. Depending on the final land use, the Hunter Valley Fire District main gain members.

Need to consider the rehabilitation from a fire management perspective, if MACH are no longer the owners, who is going to manage?



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Scone Chamber of Commerce and Industry

Date	23 July 2020
Organisation	Scone Chamber of Commerce and Industry Steve Guihot President of Scone Chamber of Commerce and Paddock to Pantry
Location	Phone
MACH Energy	n/a
Just Add Lime	Rachel Maas, Principal Social Scientist

Social baseline/existing trends

Scone Chamber of Commerce (SCCI) represents businesses in Scone. There are other organisations representing businesses in Aberdeen, Merriwa, Murrurundi, Muswellbrook and Denman.

The Scone area has received some rain and there is water in the dams and feed for stock. The three to four years of drought was tough and now to have Covid 19 it's really hard for some businesses. Coupled with this is a newly opened Bypass of the town - been a tough time for all. There has been the threat of Covid 19 up here, it's a bit like a dog where at the moment, the bark appears to be worse than the bite. We were expecting something to occur with everyone travelling during school holidays, but so far so good.

SCCI support the Upper Hunter Shire Council's vision for "A Quality Rural Lifestyle in a Vibrant, Caring and Sustainable Community" and Position Statement on Coal Mining and Coal Seam Gas. We would like to see sustainable businesses in Scone, ones that add to the existing mix and are in keeping with the vision articulated above, not ones that literally leave a big hole.

There had been a decrease in SCCI membership over the last two years with the drought, but this year there has been an increase. SCCI increased the services to non-members, recognising the need to have a broader community focus rather than just membership focus during the Covid pandemic. SCCI has members who provide goods and services to the mining industry. Some businesses are very happy to supply the mines and there are others who do not supply them at all.

Scone is an area that tends to hold its own no matter what is going on in the world. Scone is a traditional town with traditional country values in the main. There are families from large pastoral holdings who have been in the area for many generations. There are the horse studs; the area has been known for its horses since the Boer War. Aberdeen is a unique and very proud village with a great sense of community. Muswellbrook is more of an industrial town surrounded by mines. There are some fantastic people in Muswellbrook; they too are very proud of where they are from. There just seems to be too many mines to close to town.

We have many families who live in Scone away from the workplace (mines) and we welcome them. There are many more that travel into the mines from the lower hunter. We need to make a clear distinction between the mines and the people who work for them. Mining families are an important part of our community. It does not



matter who you work for or where you work – it's whether you're part of the community or not. It's about people, all people making an effort and it's the same in business. Businesses need to make an effort to be part of the community.

Current impacts of Mount Pleasant Operation

I used to drive to the markets in Sydney & Newcastle a couple of mornings a week and during these trips I saw the scar begin and then grow to what is Mount Pleasant today. You can see what is going to happen, you just need to look at Mt Arthur and Bengalla, Mount Pleasant will be the same.

Scone is far enough away, so we shouldn't hear the noise and blasting, or be effected by the dust. But, in certain environmental and atmospheric conditions, who knows. Regardless of whether there are one or six mines, the total externalities (noise, dust, light etc) borne by the community should not be allowed to exceed a certain limit. Rather than having limits on each of the individual mines (because each mine has its own limits), an area should have cumulative targets. When there is 6 times the dust there is six times the loss of sense of place.

Water is a big thing for people up here. Scone is dependent on water from the Glenbawn Dam and a lot of people operate on groundwater bores in the district. So of course we worry about the impacts on water, surface and groundwater, not only from Mount Pleasant, but from the other mines as well.

Every business has a social licence to operate and MACH are no different. People are a lot more sensitive to the impacts mining has these days. As community standards change, the standard of mining operations should change to meet them. No matter what industry you are in, it only takes the 1% to ruin it for everyone. If MACH were smart, they would be proactive and not reactive. Be upfront and manage impacts, don't wait or rely on complaints. Say you're going to impact and what you're going to do about it, before you do it, not explain after someone complains.

Cumulative impacts of mining

Cumulative impacts are poorly managed in the Upper Hunter, which can be seen by the cumulative impact of the multiple mines when you drive from Singleton, through Muswellbrook and up to Scone. There is a very distinct area of mining and "no matter where you live up here, you travel past it, you experience it each time you transition through it".

The cumulative impacts of mining need to be better managed. There needs to be a limit on how much noise, dust etc for an area and then the mines must stay underneath it. Exceedences on limits and deals between nearby landowners need to be stamped out. If there is going to be a new mine or an expansion then they need to stay under the cumulative limit. There is value in the mines working together to reduce their cumulative impacts.

Consider a model similar to the Water Keepers Act in the United States of America, where polluters pay community groups to monitor the mines environmental performance, rather than the government for breaches. Here, if someone complains to the EPA, the EPA may send someone out to investigate in 2 – 3 days and if the mine is found to have done the wrong thing, they only get a small fine. The size of the fine is not a deterrent. If the community is empowered to keep an eye on the mine, both parties would behave for a common cause.

Impacts if the Project proceeds

What will the impacts on surface and ground water be and how will these effect people who live and work in the Upper Hunter?

It looks like people living and working in Aberdeen south will experience the noise, dust and visual impacts. It's not just Muswellbrook but Aberdeen as well. This will affect their livelihoods, value of their properties and their sense of place.

Due to the location of the mine so close to Muswellbrook and visible from the highway driving into Muswellbrook from Scone, the large number of people from a large geographical area who are already experiencing solastalgia are set to continue and grow (Wybong, Denman and Singleton etc). Even with



rehabilitation, the landscape has changed forever, it won't go back to the way it was, there will always be a void and a 'new' hill that was never there.

Impacts if the Project does not proceed/closure

In the past 25 years we have seen businesses come and go in Scone. The loss of some businesses is greater than others. "Community standards change and all industries need to change/adapt with them." There are many examples of where a business or an industry needs to adapt and change to community standards and expectations. If these businesses or industries don't survive because they don't meet community standards, is this a bad thing? Is it a bad thing that whaling is no longer an accepted practice? What about the widespread use of certain chemicals and the way they are applied in agriculture? It is the same for the coal industry. People have to adapt and the world moves on.



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Edwards Higgens Parkinson – First National

Date	23 July 2020
Organisation	Edwards Higgens Parkinson - First National Tony McTaggart
Location	Phone
MACH Energy	-
Just Add Lime	Rachel Maas, Principal Social Scientist

Existing social environment/baseline

Muswellbrook, Aberdeen, Scone and Denman are four very different places. Each attract different people to live in each of them. It depends on what people are looking for in relation to infrastructure and services, price they are willing to pay etc. In general, property prices have increased over the past 15 years and there has been consistent demand for rentals.

Since the construction of the Liddell Power Station began in the mid 1960s, there has been demand for housing, both as owner occupiers and rentals in Muswellbrook. The demand increased in the 1980s with the construction of the Bayswater Power Station. Since then there has been one large project after another which has kept the demand for rental properties, particularly with the mines, Mount Arthur then Bengalla, Mangoola and more recently Mount Pleasant. The Upper Hunter has always provided a solid return on investment compared to an investment in the city.

Drayton closed around the same time as the GFC and about 500 people lost their jobs. Of those 500 people, only about half lived in Muswellbrook and the other half lived in Singleton. Of the 250 people in Muswellbrook many were nearing retirement or were at retirement age, so quite possibly some might have thought about retiring. There wasn't much of a decline in the housing market, more of a flattening of demand.

Prior to the Global Financial Crisis (GFC) there was a higher percentage of investors and builders in the market. After the GFC there was a trend towards more owner occupiers. In 2014/15 the investors started to return and they are still looking and investing, particularly with decreasing returns in other investments such as the stock market. At the moment there is a small but growing market of people looking for a green change out of the city, people are looking to get away from Covid 19 and its impacts.

There is a fair amount of rental stock in Muswellbrook because there has been consistent demand. The number of new constructions has been slow over the past three to five years. There has been a trend for families to live on the coast or in the Lower Hunter and the worker travelling up for work, especially since the Hunter Expressway opened. If and when the Singleton Bypass is built, it will be even easier for people to commute. This could be because the family has always lived in the Lower Hunter and the workers has travelled to the Upper Hunter as the mines have come north.



There is an issue with affordable housing in Muswellbrook, but this is more do to with the amount of NSW Housing stock in town. NSW Housing has not kept up with the demand for social housing in the area and they have sold some of their older stock in town. Housing NSW outsource the management of their housing to Compass Housing. Most of the NSW Housing stock is in South Muswellbrook and it hasn't expanded since the 1980s.

The GFC rents have decreased since the historical highs of 2012/2013 of \$550 - \$650/week for a four bedroom brick veneer house in town. Now the same property would be rented for \$350 - \$450 which I think is affordable.

So far, despite a lull in April and May 2020, Covid 19 hasn't really impacted the real estate prices in the area. As the coal mines and power stations are essential services, they were able to keep operating. Muswellbrook wasn't really affected by Covid 19 because of the essential services that are provided in the area.

There is some State government investment in Muswellbrook that can make the area attractive for people to relocate too. This investment includes the hospital upgrades and infrastructure improvements. It's important that Local and State Government continue to investment in the area so people are attracted to the area. The Muswellbrook Shire Council is working on the education side of things with the former council chambers becoming the Richard Gill School with a focus on music. They are also trying to develop alternative industries to coal, such as wind and solar farms and pump hydro facility at Bells Mountain near McCully Gap.

Non-state primary schools in the Muswellbrook are investing and expanding, including the Pacific Brook Christian School and St James Primary School.

Current impacts of Mount Pleasant Operation

There have not been any overwhelming significant impacts on the real estate market since the construction and operation of Mount Pleasant. The anticipation of Mount Pleasant helped to buffer the area from the impacts of the GFC and its construction and operation have helped to stabilise the market.

Cumulative impacts of mining

Muswellbrook experiences the cost of mining, the noise and the dust, but it hasn't been receiving the benefits from it through the Resources for Regions Program. The NSW Government needs to be putting the money taken from the town back into the town.

Singleton is one of the most congested areas in New South Wales at shift change, there are a lot of people trying to get to work or to home. Some people are driving up to two hours to get to work, leaving at 4am working a 12 hour shift and then driving two hours home, getting home at about 8pm to turn around and do it again the next day. This is one of the impacts of moving from an eight hour to a 12 hour shift work. When people were working an 8 hour shift they were living locally because they were working for longer rosters. The 12 hour shift means people can get their hours done in four days – so they want to spend their four days off on the coast, with their family.

The 12 hour shifts have changed people's family life and their social lives. They can't volunteer anymore – they are either too tired or the organisations they would like to support e.g. their child's sporting team is set up on a Monday to Friday/weekend structure, e.g. week day afternoon training and playing on a Saturday/Sunday which doesn't align with four days on and four days off. The shifts are not aligned to how a community traditionally works.

Muswellbrook has never been larger in population so should be "rich in people" to participate in community organisations, however this is not the case.

I would like to see mining companies "make" their workforces live as local as possible, more than just "would like" them to live local. In the 1980's Anglo offered a \$25,000 low interest second mortgage/loan to employees to purchase properties in the Muswellbrook area. This had the effect of encouraging workers and their families to live locally and loyalty to Anglo as the workers had to remain working with Anglo to pay the loan back.



Owner occupiers invest more into their communities than those who rent, the owner occupiers are more likely to become part of the social fabric and socially invest, like they economically invested. If someone lives and works locally in heavy industry/mining that impacts on the environment, on their home, they are more likely to be more conscious with what they are doing – they don't want the dust to get on their home or on their washing on the clothes line.

Impacts if the Project proceeds

The size of the town will determine the significance of the impact, e.g. 400 constructions workers coming into Muswellbrook would not be noticed but 400 would be noticed in Denman. The 400 workers would put different pressures on different towns depending on what services are in the town.

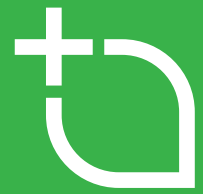
It would be great to see MACH support their workers and their contractors to support their workers to not only live locally but to purchase homes locally and live in the area, becoming part of the social fabric would help to mitigate the social impacts of people commuting on a daily or before and end of a roster.

It would be great if MACH could bring back the eight hour shift but I don't think that is going to happen. It would also be great if some of the money from the royalties that MACH pays the New South Wales government were spent in Muswellbrook so people are attracted to move to and stay in town.

Things are happening in Muswellbrook, people are starting to prepare for the transition with the Liddell Power Station closing, there is talk of alternative power generation with solar farms, wind turbines and pumped hydro projects.

Impacts if the Project does not proceed/closure

Don't think there would be much of an impact on the real estate market given workers live across the Lower and Upper Hunter regions.



Appendix I

Local Supplier Case Studies



MACH Energy Mount Pleasant Optimisation Project

Social Impact Assessment

Blackrock Industries

Date	6 July 2020
Organisation	Blackrock Industries – Steve Fordham, Managing Director
Location	Meeting held online via Microsoft Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager)
Just Add Lime	Rachel Maas, Principal Social Scientist

Information about the business		
1. Name of business	Blackrock Industries	
2. Type of business	A 100% Indigenous owned service company. We provide people and equipment to Mining and Civil projects across the Hunter Valley, and Australia wide.	
3. Location	Muswellbrook	
4. Length of operation	Since 2016	
5. Number of employees	65 – 70 employees. Blackrock Industries encourages employment of people from low socio-economic backgrounds. Blackrock Industries supports all people, especially women and transgender people gaining entry into the mining industry. Through the Second Chance for Change program, Blackrock Industries aims to reduce the rate of Indigenous incarceration by providing skills and support to help ex inmates make positive changes to their lives.	
6. Where employees live	Muswellbrook LGA	98%
	Upper Hunter LGA	0%
	Singleton LGA	0%
	Other LGAs	2%
7. Percentage of local spend	Blackrock Industries purchase as much as possible locally, however certain large mining equipment is not able to be purchased locally.	
	Muswellbrook LGA	95%
	Upper Hunter LGA	0%
	Singleton LGA	0%
	Other LGAs	5%

Information about supplying to Mount Pleasant Operation (MPO)	
8. Products/services supplied	Blackrock Industries supply hire equipment and operators, we have contracts to undertake cleaning, land rehabilitation and specialist fabrication jobs. Through the Second Chance for Change program, inmates from St Heliers Correctional Centre work for Blackrock Industries on release. Blackrock has introduced 39 inmates to a variety of roles across the Mount Pleasant Operation.
9. Length of time MPO has been a customer/client	Since 2016, Mount Pleasant was Blackrock Industries' first client/customer.
10. % of revenue from MPO	75%
11. Benefits of having MPO as a customer/client	MACH supported Blackrock Industries from the start. MACH want to see real change not put in a token effort. MACH didn't see the risk, they saw and still see the opportunities of working with local companies and want to see them grow and be sustainable. Both parties are proud of the relationship between MACH and Blackrock. MACH have the systems in place to support local businesses: <ul style="list-style-type: none"> • longer contracts that allow businesses to invest in themselves • payment terms that support cash flow • mentoring to assist local businesses into the mining industry.
12. Downsides to supplying MPO	There is a belief that Indigenous people do not support mining, this is not the case.

Information about impacts of Mount Pleasant Optimisation Project	
13. Positive and negative impacts if Project proceeds	Positive impacts: <ul style="list-style-type: none"> • Ongoing opportunities for employment and flow on to local businesses, particularly for the construction sector. This project is private, not one of the infrastructure projects being created by the government to fill the gap created by Covid 19. • Ongoing opportunities for women to access employment and the well paid wages in the mining industry. • Ongoing opportunities for people with various education and skills to enter into well paying employment. You don't need a university degree to work at a mine, just a good work ethic. • Ongoing opportunities for scholarships – the jobs are here for people to come back to once they have their degrees. • Ongoing support for the Aboriginal Community Development Fund and the programs they fund, e.g. Gundi Program. • The multiplier effect of giving one person a job, the impact on their family and the local businesses they support, not only with wages but the workers self-esteem and self-worth. • Opportunities to employ the youth in Muswellbrook. • Opportunities for Mount Pleasant to continue their support for local businesses. Mount Pleasant don't just select the lowest price, they support a range of businesses supplying the same service.
14. Positive and negative impacts if Project does not proceed	Negative impacts: <ul style="list-style-type: none"> • It would be scary.

	<ul style="list-style-type: none"> • Need to remember and learn from the experiences of the Drayton closure, the suicides, long term resident families leaving town, local businesses struggling or closing down. • Without diversification from mining, there aren't the jobs in the local area at the moment.
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General business trends	
15. General business trends	There is a reliance on the mining industry in Muswellbrook. There isn't much diversification.



MACH Energy Mount Pleasant Optimisation Project

Social Impact Assessment

Supply Solutions Group

Date	6 July 2020
Organisation	Supply Solutions Group – Troy Martin
Location	Meeting held online via Microsoft Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager)
Just Add Lime	Rachel Maas, Principal Social Scientist

Information about the business		
1. Name of business	Supply Solutions Group.	
2. Type of business	A 100% Indigenous owned industrial supply company.	
3. Location	Muswellbrook.	
4. Length of operation	Since 2016, started with a contract with Thiess at Mount Pleasant.	
5. Number of employees	5	
6. Where employees live	Muswellbrook LGA	100%
	Upper Hunter LGA	0
	Singleton LGA	0
	Other LGAs	0
7. Percentage of local spend	We get our vehicles serviced locally, purchase office supplies and uniforms locally. Essentially what we buy for ourselves we buy in town, and what we sell to others we generally buy out of Sydney and Melbourne.	
	Muswellbrook LGA	10%
	Upper Hunter LGA	0%
	Singleton LGA	0%
	Other LGAs	15%

Information about supplying to Mount Pleasant Operation (MPO)	
8. Products/services supplied	PPE vending machines, industrial and safety supplies, hygiene and hospitality equipment.
9. Length of time MPO has been a customer/client	Thiess only at this stage
10. % of revenue from MPO	20%
11. Benefits of having MPO as a customer/client	Excellent communication, ongoing opportunities for growth, reliable payment of accounts
12. Downsides to supplying MPO	We have had no negative experiences

Information about impacts of Mount Pleasant Optimisation Project	
13. Positive and negative impacts if Project proceeds	<p>Positive impacts:</p> <ul style="list-style-type: none"> • A balance between the economic, social and environmental impacts and opportunities. • Opportunity to further grow our business and employ more locals. <p>Negative impacts:</p> <ul style="list-style-type: none"> • None.
14. Positive and negative impacts if Project does not proceed	<p>Positive impacts:</p> <ul style="list-style-type: none"> • None <p>Negative impacts:</p> <ul style="list-style-type: none"> • Significant loss of business income, possible job losses.

General business trends	
15. General business trends	A much greater emphasis on the "spend local" message.



Appendix J

Aboriginal Community Development Fund (ACDF)



MACH Energy Mount Pleasant Optimisation Project Social Impact Assessment Aboriginal Community Development Fund (ACDF)

Date	8 July 2020
Organisation	Aboriginal Community Development Fund (ACDF)
Location	Teams
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager)
Just Add Lime	Rachel Maas, Principal Social Scientist

History of the ACDF

MACH Energy Australia oversees commitments relating to the Aboriginal Community Development Fund (ACDF). The Fund was amongst community benefits identified in 2005 as part of a Native Title Agreement with the Wonnarua People, as represented by Victor Perry. MACH Energy welcomes the opportunity to make meaningful contributions to the sustainability and well-being of Aboriginal communities in the Upper Hunter Valley.

Established in 2006, the ACDF had a starting fund of \$500k, which is indexed against CPI each year. Since then, the Fund has invested more than \$4M into projects that benefit Upper Hunter Valley Aboriginal communities. Funds not allocated at the end of each calendar year are transferred to a Future Fund. The existing Fund expires in 2026. The ACDF committee continues to meet regularly to review submissions made for funding support and monitor the progress and benefits of existing partnerships. MACH Energy representatives form part of the committee to administer funds and manage partnerships.

The Fund seeks to support partnerships that target issues, needs and opportunities which are priorities for local Aboriginal communities in areas such as health; economic development; cultural and community development and education.

Fund is lead by and decisions on funding are made by members of the ACDF. MACH supports the ACDF by providing an executive officer. The executive officer does not have any decision making role with the ACDF.

The objective and vision of the ACDF

The objective of the ACDF is to provide funds to community-identified and driven projects that will assist in developing the vision of the Upper Hunter Valley Aboriginal Community (UHVAC). The ACDF's vision is to achieve equivalent access and outcomes in education, training, employment and economic participation as enjoyed by the community as a whole as well as retaining the unique heritage and traditions of the UHVAC.

The Vision for the ACDF is to also include a biennial Cultural Spectacular, an event open to all to come together and celebrate Aboriginal Culture in our community. The first Cultural Spectacular was held in 2017 in Singleton with the second in Muswellbrook in 2018. The Committee then made the decision to hold the event on a

biennial basis with the next event to be held in Singleton in 2020, however, due to Covid-19 the event has been postponed until May 2021.

The ACDF Committee attends an annual Strategic Planning Day to ensure the goals and objectives of the ACDF are being followed and also to discuss the funds allocated to the Future Fund and how they would best serve the Upper Hunter Aboriginal Community.

ACDF funded projects

A summary of the 2019 ACDF funded projects is provided below.

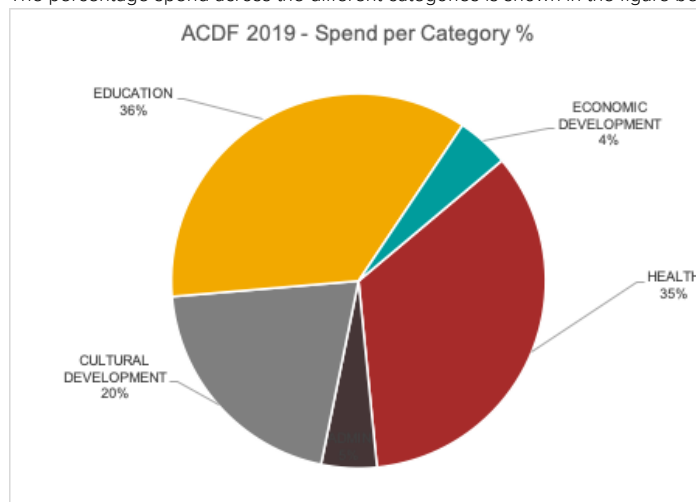
Category	Application Title	Application Details
Economic Development	Wonnarua First Nation Aboriginal Corporation	CEO and strategic planning. ACDF Funding was provided to the CEO of the Wonnarua First Nation Aboriginal Corporation to enable him to carry out the goals and objectives of the Corporation.
Education	Graham (Polly) Farmer Foundation	The Graham (Polly) Foundation program in Muswellbrook is "Muswellbrook Follow the Dream". The program has been operating since 2012 and caters for approximately 35 students from the Muswellbrook High School. The program is based at the Muswellbrook TAFE and includes tutoring for junior and senior students, visiting speakers, cultural and leadership activities. Participating students have the opportunities to: <ul style="list-style-type: none"> visit universities in Newcastle and Sydney; take part in interstate camps focusing on science and culture and cultural visits to significance local sites. (source: https://pff.com.au/programs-locations/locations/new-south-wales/muswellbrook/muswellbrook-follow-the-dream/)
	Singleton Girls Academy Partnership Agreement	The Singleton Girls Academy develops and empowers Aboriginal girls through leadership training, mentoring, sport and extra-curricular programs. The Academy's goal is to create an environment where the girls receive the support needed to help them realise their full potential. (source: https://singleton-h.schools.nsw.gov.au/events/2019/2/girls-academy-info-sessions.html)
	Muswellbrook South Public School Warrae Wannu Preschool Program	The Warrae Wannu Centre (Warrae Wannu means little people in Wanaruah language was named by the local Wanaruah Lands Council). This Centre provides a: - - "Prior to School Program", 5 days a week between the hours of 9.30 am to 2.30 pm during the school term from a small onsite demountable building located on the grounds of Muswellbrook South Public School (MSPS). - 35 Aboriginal or disadvantaged children are enrolled in this program. This number varies (increases) as no Aboriginal child is turned away. The program is divided into two groups: - Joey Group - 2 days per week - children aged 3-4 years. Children attending this age group automatically transition into the Goanna group – enabling children to consolidate their learning over a two-year period. - Goanna Group - 3 days per week - children aged 4-5 years. Children will transition to Kindergarten the following year; On average the children receive a minimum of 10 hours education per week, in some instances this increases to 15 hours per week to cater for individual learning needs or where welfare concerns have been identified.

Category	Application Title	Application Details
		<p>This program offers engaging and varied activities to support students to engage in a range of school readiness activities adapted from the National Early Years Learning Framework (NEYLF) and the Australian Professional Standards for Teachers. The program not only prepares children for Kindergarten but also improves relationships between the children, their families and the school community.</p> <p>Our aim is to provide a "solid foundation for future learning", whilst also enhancing personal and social skills in preparation for school and lifetime accomplishments.</p> <p>The program will be delivered by one full time Early Childhood Trained Teacher and one (1) part-time Aboriginal Staff Learning Support Officer (SLSO)</p> <p>The Program will be provided free of charge to participants, who are not accessing any other form of early childhood education.</p> <p>The Warrae Wannu program was developed in consultation with local Elders, the Lands Council and the Aboriginal Education Community Group (AECG).</p>
	Upper Hunter Conservatorium of Music	<p>The project is a partnership between the Upper Hunter Conservatorium of Music and the Sydney Conservatorium of Music to partner in a project that aims to encourage school students' literacy and numeracy capabilities through creative and collaborative engagement, specifically in the area of music. This is an ARC Linkage project titled "Augmenting Indigenous" adolescent identity and aspiration through creative arts and ePortfolio" (*project for both Indigenous and non-Indigenous students). The project aims to encourage reflection on learning to improve literacy in a digital space as students build an ePortfolio. Through interaction with local Aboriginal creative artists, students collect evidence, design portfolio pages, and write reflections on who they are and what they learnt. Development of reflective writing skills has shown to enhance metacognition through complex thinking which can lead to enhanced 'sense of self' and self-recognition. As an ARC project, the grant requires some local financial input, of \$2500 per year for 3 years - \$7500 in total.</p>
Cultural Development	NAIDOC Week Celebrations 2019	<p>A variety of activities were held in Singleton and Muswellbrook. The Sponsorship from the ACDF went towards the NAIDOC Week Art Awards, open to children and adults in the Upper Hunter. Sponsorship also assisted with entertainment, catering and a variety of activities.</p>
	NAIDOC Celebrations 2019 Welcome to Country	<p>The ACDF was involved in various NAIDOC Week activities in Muswellbrook and Singleton, including the Welcome to Country by Wanaruah Elder Glenford Morris (Uncle Bing) at Mount Pleasant Operation.</p>
	NAIDOC Week Painting 2019	<p>The ACDF Committee supported the commissioning of a piece of art to celebrate NAIDOC Week 2019. The artwork depicts the Wanaruah Eagle painted by a local Aboriginal artist.</p>
	Muswellbrook Oral History	<p>The aim of the Aboriginal Oral History Project is to preserve the stories of Aboriginal people who make up the fabric of the Upper Hunter Aboriginal Community by recording, collating and publishing their stories in written/print and multi-media format. This Project is in partnership with the Muswellbrook Shire Council.</p>
	Singleton Learning Community, Singleton Heights Public School - Aboriginal Dance Instructor	<p>To provide Aboriginal and Torres Strait Islander students in the Singleton area with access to creative cultural immersion activities and generate positive exposure of these students to enhance their feelings about their culture.</p> <p>The dance and art instruction will be equitable and consistent across the high school and the primary schools, providing supportive transition procedures for the students. The program</p>

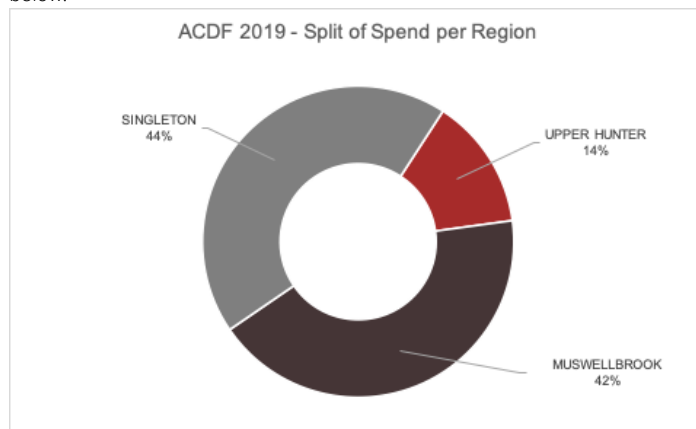
Category	Application Title	Application Details
		has been running with ACDF support over the previous two years and has proven extremely successful in achieving its goals. The funds will also support professional learning opportunities for staff within each school to access high quality lessons and resources to support cultural immersion across the entire school.
	Gundi Program Partnership Agreement	<p>The Gundi Program is based at St Heliers Correctional Facilities in Muswellbrook and aims to:</p> <ul style="list-style-type: none"> • Educate and Mentor participants to become "Job Ready" • Build participants resumes to become employable • Create Skill Development through Building Projects within the St Heliers Correctional Facility. We give the participants a better learning environment through the assistance of TAFE. • Business Engagement with goals of creating employment opportunities. • 6 months Post Release Support to help participants gain and maintain employment. <p>Building on the support received from stakeholders, the success of the program is increasing each year. Since 2013 the program has seen 45% of participants gain and maintain employment opportunities. The recidivism rate for Aboriginal men is 81% The Gundi Program has a recidivism rate of 41% which is a massive achievement for the program.</p> <p>(Source: https://acea.org.au/wp-content/uploads/2017/10/Gundi-Presentation-2015-.pdf)</p>
Health	Ungooroo Aboriginal Corporation	<p>Ungooroo Aboriginal Corporation has worked to empower our Indigenous community since 1994. Ungooroo Aboriginal Corporation works with their Indigenous community to:</p> <ul style="list-style-type: none"> • ensure access to essential services • improve the health of Indigenous people • increase skills, training, education and employment • help our community members to achieve personal and financial goals • ensure social justice and social equality • maximise participation in all aspects of community life • develop and grow sustainable Indigenous businesses. <p>Ungooroo Aboriginal Corporation also works with our broader community to:</p> <ul style="list-style-type: none"> • generate respect for the oldest living culture on Earth • raise awareness of the employment needs of Aboriginal people and • increase training, education and employment opportunities. <p>Ungaroo Aboriginal Corporation have strong industry and community relationships that allow us to assist the Upper Hunter Indigenous community to achieve their goals. Ungooroo Aboriginal Corporation is a not-for-profit organisation and all income streams are returned to the Indigenous community through a range of constantly evolving programs and services. In this way the community as a whole benefits from the work done at Ungooroo.</p> <p>(Source: https://www.ungooroo.com.au)</p>
	Beyond Blue Fundraiser 2019	<p>The ACDF Committee voted to hold a fundraiser to give back to the Community. The organisation "Beyond Blue" was selected and an event was created. Held at a venue in Singleton, unfortunately bush fires, extreme heat and strong winds meant the event had to be held inside the venue and attendee numbers were lower than expected. The day raised approximately \$4,000 for the Beyond Blue Charity.</p>

Category	Application Title	Application Details
	Dental Program	The ACDF Committee identified a need for adult (18years+) Aboriginal people to be able to attend a local dental practice for minor dental work for free. A Singleton dentist was willing to be part of the program which was launched in October 2018 and carried through 2019 with the last funds allocated by the Committee in March 2020. A total of \$40,000 was allocated to the Program. Alternative sources for adult Aboriginal people in the Hunter Valley to attend a local dental facility are being investigated.
	Advertising	The ACDF Committee asked that the profile of the ACDF be raised within the Upper Hunter Valley Aboriginal Community. A Facebook Page was established and is maintained by MACH Energy. Regular advertising is placed in local newspapers and magazines highlighting the Projects and outcomes of the ACDF. Radio interviews featuring the ACDF Chairperson have also been organised at various times since 2018.

The percentage spend across the different categories is shown in the figure below.



The percentage spend across the Muswellbrook, Upper Hunter and Singleton LGAs is shown in the figure below.



Future of the ACDF

If the Mount Pleasant Optimisation Project is not approved, the ACDF will cease to exist and at the moment there are limited or no alternative funding sources to the ACDF. This means individual people and organisations who run small projects (e.g. making a possum cloak for Elders) and large organisations e.g. Ungooroo Aboriginal Corporation, Graham (Polly) Farmer Foundation and the Singleton Girls Academy and the Gundi Program will miss out on a source of funding and may not be able to provide a level of service or continue the service they currently provide. The impact on the people who experience positive impacts from direct or indirect funding of the ACDF need to be taken into consideration.

If the Mount Pleasant Optimisation Project is approved, MACH Energy will continue to support the ACDF.

Impacts of Mount Pleasant Operation

There are environmental impacts of mining, however there are also benefits to the community, everything has a cost and the cost of employment and business opportunities is, we need to live with the dust and noise. We understand why the people next to the mine object, but others shouldn't. Mining has and will continue to provide the infrastructure that the region needs to diversify.

The ACDF has only had positive experiences working with MACH Energy and their contractors. No sign of racism, everyone has been friendly and helpful.



Appendix K

Offset Management Plan

MACH Mount Pleasant Optimisation Project

Social Impact Assessment

Social impacts of the Offset Management Plan

This high level assessment was undertaken prior to the MACH Offset Management Plan and Re-Establishment Plan being 'approved' by the Commonwealth Department of Agriculture, Water and the Environment in October 2020. A copy of the 2020 Offset Management Plan and Re-establishment Plan is available on the MACH Energy website at <https://machenergyaustralia.com.au/mount-pleasant/documentation/>

Introduction

The Mount Pleasant Operation includes the management of biodiversity offsets under an Offset Management Plan. This case study identifies the social impacts of the Offset Management Plan. Information from this case study will be used in the Mount Pleasant Optimisation Project (the Project) Social Impact Assessment to describe the social baseline (which includes the Mount Pleasant Operation) and to identify the social impacts in two scenarios, if the Project proceeds and if it does not proceed.

The assessment of social impacts is high level and a rapid assessment only, and included a review of MACH's 2015 Offset Management Plan¹, review of information provided by MACH, and meetings with the MACH Land and Property Superintendent. Interviews were held with a BMA licensee and local supplier however their participation in the case study was not able to be completed. There are limitations to the case study as a full social impact assessment was not undertaken and the findings may be different if a more thorough assessment was undertaken.

Biodiversity Management Areas, Offset Management Plan and Mount Pleasant Operation

Coal & Allied² was granted approval for development of the Mount Pleasant Project by the Commonwealth Minister for the Environment, in February 2012 under provisions of the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), approval reference 2011/5795. Under this approval, Coal & Allied were granted permission to clear no more than 2,591 hectares of native vegetation from the proposed disturbance footprint for mining activities. To offset the impact of vegetation clearing, 12,875 ha of land comprising similar ecological communities and habitat quality are to be managed for biodiversity offsets. The lands to be offset (the Offset Areas) occur within the Biodiversity Management Areas (BMAs) which total 15,590 ha of land. The BMAs include areas managed as agricultural enterprises as well as the 12,875 ha of offset areas. Condition 2 of approval 2011/5795 requires a legally binding conservation covenant to be registered over the BMAs to provide enduring protection for the relevant matters of national environmental significance listed in Condition 2.

An Offset Management Plan was developed by Coal & Allied in 2015 in accordance with the requirements of Condition 3 of approval 2011/5795 to provide "the framework for integrated management of the BMAs to achieve balanced management outcomes for improved biodiversity, economic and social factors for the local rural communities." (Coal & Allied 2015:10).

According to the Offset Management Plan , the Offset Areas will:

¹ A copy of the 2015 Offset Management Plan was available on the MACH website and has since been replaced with the 2020 Offset Management Plan and Re-establishment Plan.

² Coal & Allied was managed by Rio Tinto Coal Australia.

- Significantly increase the area of Box Gum Grassy Woodlands within the protected area estate in Australia.
- Provide the largest known area of contiguous Box Gum Grassy Woodlands managed principally for conservation in Australia.
- Contribute regional strategies for improved catchment health and function administered by Local Land Services.
- Protect at least 8,475ha of verifiable habitat for the Swift Parrot, Regent Honeyeater, Spotted-tail Quoll and Greater Long-eared Bat.

Prior to being purchased by Coal & Allied, the BMAs were productive farming properties. Under the 2015 Offset Management Plan the properties were planned to be managed agricultural enterprises, with conservation as the principle outcome. The intention was to demonstrate the ability to sustain a viable agricultural enterprise while protecting and enhancing biodiversity values. Coal & Allied developed the Offset Management Plan to provide the framework for an integrated management approach.

Since the purchase of the Mount Pleasant Project from Coal & Allied in 2016, MACH Energy has become the owner of the properties making up the BMAs and has continued to implement the Offset Management Plan and its intention of demonstrating the ability to sustain a viable agricultural enterprise while protecting and enhancing biodiversity values.

Offset Management Plan stakeholders

There are a number of stakeholders with roles and responsibilities under the Offset Management Plan, as outlined in Table 1.

Table 1: Offset Management Plan Roles and stakeholders

Role	Responsibility	Stakeholder
Regulator	Approval conditions for EPBC Act and Minister to approve plans: <ul style="list-style-type: none"> • Offset Management Plan • Weed Project Plan • Woodland Birds Project Plan • Woodland Re-establishment Plan 	Department of Agriculture, Water and the Environment.
Regulator	Control of noxious weeds	Upper Hunter Weeds Authority and Gunnedah Shire Council.
Regulator	Control of pest animals	Hunter Local Land Services and North West Local Land Services.
Project proponent and landowner	Prepare plans and operational documents. Supervise management of BMAs, review monitoring reports and adapt management	MACH Energy MACH Energy has a Land and Property Superintendent whose role is to ensure the BMA properties are managed to meet or exceed the requirements of the Offset Management Plan.
Advisory Committee	Provide advice on the management of the BMAs and review plans	Consisting of qualified government and community members with an interest in key aspects of the Offset Management Plan including weed management, birds, land care and cultural heritage.

Role	Responsibility	Stakeholder
Licensee	Day to day management of the BMAs, adhere to Offset Management Plan and prepare monthly reports	Some of the properties, while owned by MACH Energy, are still managed by the original owner, refer to Table 2.
Biodiversity auditor	Monitor the Matters of National Environmental Significance and improvement in extent and condition of the biodiversity values	As appointed by MACH Energy.
Agricultural auditor	Monitor the strategic grazing and other agricultural matters and prepare quarterly reports	As appointed by MACH Energy.

Source: Offset Management Plan information provided by MACH Energy

Information is shared between the stakeholders through the Biodiversity Offsets Portal. The Portal was designed to centralise and share information and includes spatial data, an image library, reports, non-spatial data, project management and safety information. The Portal enables transparency of management and monitoring activities and ensures data security and integrity in the cases of data being lost due to staff turnover and using superseded information.

MACH provides updates on the Offset Management Plan to the Community Consultative Committee (CCC). The updates include reports on repairs and maintenance, improvements, renovations on the BMA properties and results of reporting and auditing. The October 2019 CCC meeting was held in the Merriwa CWA Hall and included a visit of the BMA properties.

Biodiversity Management Areas (BMAs)

The BMAs are located near Merriwa and Cassilis in the Upper Hunter Valley and near Gunnedah. A map of the BMAs is provided in Attachment A and summarised in Table 2.

Table 2: BMA Property Details

BMA	Local Government Area	Property	Previous owner to current licensee
Merriwa East	Upper Hunter	Blackrock	Same
		Brigadoon	Different (licensee the same as Blackrock)
		Clare Park	Different
		Gum Ridge	Different (previous owner was an absentee landowner)
Merriwa West	Upper Hunter	St Antoine	Different (previous owner was an absentee landowner)
		Wahrane (previously part of Llangollen)	Different ((licensee the same as Burnbrae)
		Burnbrae	Same
Namoi	Gunnedah	Warrawoona	Same

Source: Information from MACH Energy and Rio Tinto (2015) Offset Management Plan

The licences to operate the properties within the BMAs were issued by Coal & Allied after the Offset Management Plan was approved by the former Department of Environment on 18 June 2015.

The implementation of the Offset Management Plan is a key condition of the licences to operate the properties. Coal & Allied negotiated long licences in order to foster a partnership approach between Coal & Allied and the licensees and to protect and conserve the biodiversity values of the BMAs. Licensees responsibilities are focused on the day to day management of the properties, including grassland monitoring, livestock management and implementation of on-ground works. The presence of licensees is to ensure security of the properties, and offset areas, provide a deterrent to illegal activities, including clearing of firewood or hunting. To enhance the licensee's ability to protect the biodiversity areas, training and support is provided in native plant and animal identification, identification of weed species and sustainable grazing management.

All homesteads on the properties are occupied except for Lawlerville³. People living on the properties are either an owner or manager and their immediate families, or are tenants with the leases managed by a property management company located in Merriwa.

MACH's local spend on BMA properties

MACH's net (after tax) local spend on BMA properties for the 2018/2019 and 2019/2020 financial years is set out in Table 3. Local suppliers included trades people, agricultural supplies, property management services, fencing specialists and specialist pumping equipment.

Table 3: Net local spend on BMA properties 2018 - 2020

Financial Year	Net Spend
2018/2019	\$263,101
2019/2020	\$286,277

Source: Information provided by MACH

In recent years, MACH has invested in major renovations of the Bellview and Lawlerville (both on Gumridge Station), Brigadoon and Blackrock homesteads. These renovations were undertaken by a local builder.

Over the past three years, MACH has also invested in the restoration of the shearing shed on Wahrane. The shearing shed was restored based on feedback from the local community that the shearing shed was of historical significance. It was restored for community groups to use as a meeting venue and to hold community events. The restoration was undertaken by a local builder.

Identification of social impacts

Based on information provided by MACH, the potential social impacts of MACH implementing the Offset Management Plan are set out below⁴.

1.1.1 Way of life

The BMA properties have supported and maintained the way people live and work on the properties and in some cases, increased the opportunity for housing, employment and business opportunities in the local district.

³ Lawlerville Homestead is not currently occupied due to COVID-19.

⁴ Assessed using the categories of social impacts identified in the NSW SIA Guideline, plus a category of socio-economic impacts.

1.1.2 Community

By allowing previous owners to continue to live on the properties (if they would like to) and increasing the number of people living on the properties⁵, the BMA properties have enhanced the community composition, cohesion and character of the local district. This includes supporting local businesses and services, such as schools and the Rural Fire Service.

1.1.3 Access to and use of infrastructure, services and facilities

By maintain and having a small increase in the population of people in the district through the provision of housing and employment on the BMA properties, there has been a small increase in the number of people using local services and facilities. This also enables the continuation of support for the local schools, and local community/volunteer based groups, including the Rural Fire Service.

1.1.4 Culture

By having a small increase in the population of people in the district and MACH continuing to manage the properties as agricultural businesses, the BMA properties are continuing to contribute to the local agricultural culture.

1.1.5 Surroundings

As the BMA properties are working agricultural businesses they continue to use of local and regional ecosystem services including the use of water, however they also manage fire risks, weeds and pests, plus achieve the biodiversity outcomes of:

- Significantly increasing the area of Box Gum Grassy Woodlands within the protected area estate in Australia.
- Providing the largest known area of contiguous Box Gum Grassy Woodlands managed principally for conservation in Australia.
- Contributing to regional strategies for improved catchment health and function administered by Local Land Services.
- Protecting at least 8,475ha of verifiable habitat for the Swift Parrot, Regent Honeyeater, Spotted-tail Quoll and Greater Long-eared Bat.

1.1.6 Socio-economic impacts

As the BMA properties are working agricultural businesses, they continue to contribute to the economic livelihoods of the licensee and the people they employ. They also contribute to the economic livelihoods of people in local district though the local spend of people who live and work on the properties and MACH's local spend.

1.1.7 Decision making systems

The BMA properties are managed under the Offset Management Plan, which has a number of stakeholders. This can create tensions between the different ways biodiversity outcomes can be achieved. However, on a daily basis, there is a mutual working relationship between the licensees and the MACH Land and Property Superintendent.

1.1.8 Fears and aspirations

Licensees and the local community are keen to see the BMA properties kept as working agricultural properties/businesses. There is a fear that if the Project is not approved, and MACH is no longer the owner of the land, the next owner may lock them up (i.e. all of the land would be dedicated purely for conservation, at the

⁵ Where the previous owners were absentee landowners and there are now families living on the properties.

exclusion of all agricultural production) and the impact this will have on the district environmentally, economically and socially.

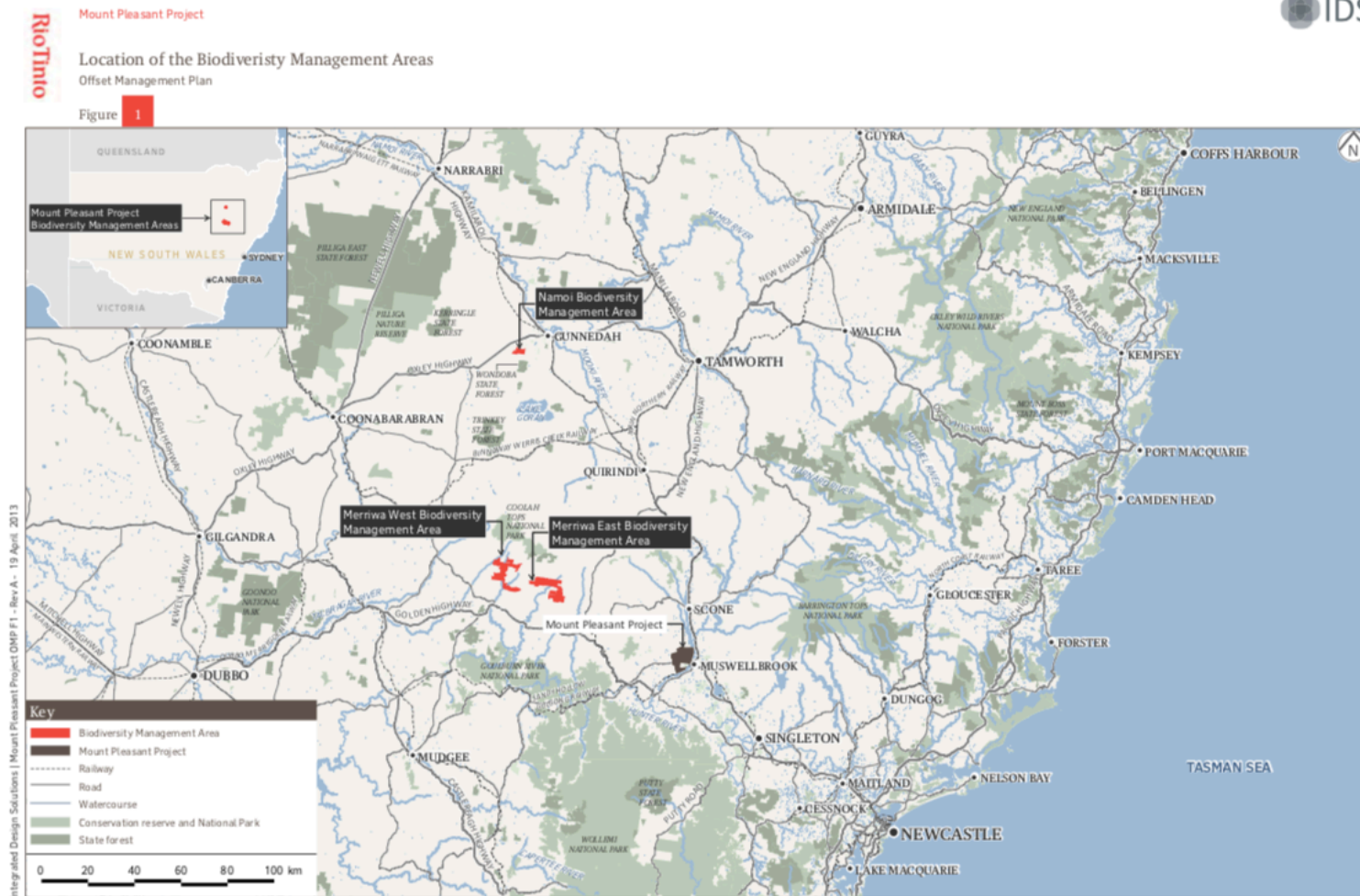
Conclusion

This case study is a high level/rapid assessment of the social impacts of the Offset Management Plan as implemented by MACH.

If the Project proceeds, the offsets would continue to be managed as per the Offset Management Plan. This includes the continuation of the social impacts identified in this case study.

If the Project does not proceed, the offsets would continue to be required. However, it is unknown at this point in time how the BMAs including the offset areas would be managed and whether they would continue to include some agricultural production.

Attachment A -Map of BMAs



Source: Rio Tinto (2015) Offset Management Plan



Appendix L

Letters received

To: Rachel Maas, Just Add Lime

2 pages.

From: **People For Heritage, Upper Hunter Inc.**

27.7.2020

Re: **MACH Energy's 'Mount Pleasant Optimisation Project' 2026 - 2048.**

This letter, co-written by members of People For Heritage UH Inc. will contribute to the impact data towards an Impact Statement within the Application.

The mine is called "Mount Pleasant". It currently stops short at the south edge of Castlerock Road. This project aims to remove the remains of Mount Pleasant, and the road.

PFH Upper Hunter Inc. objects to this optimisation project.

All of its new proposed phases are damaging, especially and fatally, the first one.

We object to the extremely long time-frame of this project; all phases right up to 2048 are being applied for at once. Approval should be sought only in stages, in case of unforeseen adverse impacts from earlier phases.

The project strongly impacts the following:

* Natural landscape heritage, which is unique and top quality:

This mine currently has a very significant visual impact, already.

Mount Pleasant itself is already threatened. The first phase of the mine already dominates Muswellbrook even after 2 years. Being only 5 kilometres away from the town, it is already visible from the north. It will be much higher and larger after its 6 more approved years.

The destruction of the only ridge across the Hunter Valley has great consequence, it is the only trafficable road to the escarpment, and the only lookout point with such a view: of over 300 degrees panorama. People have regarded this ridge as supremely important for millennia. We have seen no deference by MACH to the inevitable ancient occupation.

The Ridge has been shown by MACH's own studies, to have important functions in funnelling winds in the Hunter Valley. While MACH states it will monitor this issue, the current impact of the ridge topography's influence on wind patterns, and the impact of any changes on residents and on land use, has not been described. There is no provision for correction of problems arising from removal of this ridge from the landscape.

* Economic impacts:

Economic benefit is missed out, due to loss of potential enjoyment and tourism exploitation, of this unique heritage. The failure to encourage use, enjoyment and tourism in this beautiful and unique place, under Mining ownerships, is noted.

* Heritage from human occupation and farming, to be removed:

Referring to previous Heritage Reports which MACH will have, we have seen previous heritage recommendations disobeyed. There has been demolition of structures eg eminent old farmhouses, reported as worthy of retention in situ. The surveys show hundreds of heritage items marked on affected lands within the mining lease boundary.

* Natural heritage, Water:

Excavating the dividing ridge may well affect farming to the north, surely breaking a logical barrier between two aquifers. Yet MACH claims the water use situation to be 'unchanged' in its table showing all supposed changes.

The impact of for example, linking two aquifers, could have irreversible and business-closing impact for many land users, in a community emerging from unprecedented drought conditions. A mine is temporary. Surrounding ongoing landuses should be protected.

* Natural heritage, Air, quietness and peace:

Additional impacts from dust and noise. Already, local health is impacted by local mining. See the size of the proposed pit by 2048, compared to the size of the existing Bengalla pit, and of the two towns on their map. Even the existing levels of dust, noise and vibration from phase 1 are unacceptable.

* Overall:

We are concerned that the strong impacts all up the Hunter Valley do not seem to have been understood. The communication to the population, of calculated impacts, has not happened. Most people don't know about this project, especially north of Aberdeen.

The Upper Hunter needs far more time to comprehend and respond to this gigantic, destructive proposal.

Impacts should be treated acknowledging their cumulative effects.

Viewed cumulatively, the impact of all the mining projects in the Hunter Valley and the adjoining Central West is already enormous. Our heritage, natural, and arising from human history, is being lost, and with it goes the meaning and culture which enrich our lives.

The globe too is our heritage. Planet A.

Responsible Miners need to know that now is time to stop; to protect our Earth from projects which destroy our locality and economies, but which also hasten the demise of life itself.

For people living in the Hunter, more coal mining is bringing shame, loss and misery.

People for Heritage, Upper Hunter Inc. expresses the gravest objection to this extension of an already damaging mine.

sincerely,

Bev Atkinson, President,
for all members of PFH UH Inc.

29/7/2020

Rachel Maas
Just Add Lime

Re: 2026 - 2048. MACH Energy's '**Mount Pleasant Optimisation Project**'

Hi Rachel,

I am appalled to think that the project is stated Optimisation Project-2048 . How can this be possible! 28 years in advance!

The Mt Pleasant mine, the amenity and visual effects has already destroyed the countryside from the beautiful rural land to a massive mine effecting the farming, horse industry and rural pursuits.

The natural landscape heritage is gone and with the expansion nothing will ever be the same, let alone the Aboriginal culture and Socio-Economic soil, water and land features all destroyed.

All communities including Upper Hunter Shire and town of Aberdeen 5 klms and Scone 17 kilometres North, have the effect of dust, coal dust, atmospheric pollution all which is departmental to the living environment including health, especially the asthmatics and both young and aged residents.

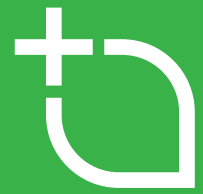
Water, with the optimisation project till 2048 where will the water be available from for the working expansion for the mine? The diminishing underground water already effected and Glenbawn Dam, Hunter River cannot support the towns, the mines, the farming already established along the valley with domestic and rural requirements. The past drought has wrought havoc for land owners of Singleton Shire further down the valley, this past year, how will everyone exist?

The photos, please go back out and do an up to date collection and show the real picture! Mt Pleasant, the land scared by all the earth moving the destruction of land forms near and far. Show the real picture! We have magnificent landscapes valleys and mountains e.g "Castle Rock" a local tourist attraction.

MACH do they care? Only for their advantage, and by the projection of money into the Muswellbrook Shire! Who will follow up on the future proposed project 2048 NO ONE. Once the paper work is done and stamped the future living community has no say!

The heart, the lungs and blood of the countryside once it's removed it is dead!

Mrs Carol Ray
SCONE SHIRE NSW



Appendix M

Social Baseline Study

Part A Social Area of Influence

Table of Contents

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1 Introduction

The Project's social area of influence has been identified based on a 'whole of project' approach. This includes the mine site, workforce, transport of coal via rail to Newcastle, the Biodiversity Offset Areas and the Aboriginal Heritage Conservation Area associated with the approved Mount Pleasant Operation.

The Project's social area of influence identified in the SIA Scoping Study has been reviewed and updated based on the findings of the SIA.

2 Different social groups currently impacted likely to be affected

Based on an understanding of the existing social environment, SIA engagement, the current social impacts and desktop research, social groups presently impacted by the Mount Pleasant Operation and likely to be affected by the Project (whether it proceeds or not) are considered to be:

- Near neighbours
- Surrounding rural communities:
 - Dorset Road community
 - Blairmore Lane
 - Collins Lane community
 - Residents of Muswellbrook who live in the flood plain of the Hunter River
 - the Racecourse Road community
 - Wybong community and
 - Castlerock community
- Aboriginal people who have a connection to the land and waters within and connected to Mount Pleasant Operation and associated organisations (such as Wonnarua Nation Aboriginal Corporation and Wanaruah Local Aboriginal Land Council)
- Surrounding villages and towns:
 - Kayuga¹
 - Muswellbrook
 - Denman
 - Aberdeen
 - Scone
 - Singleton and
 - Merriwa
- Local Governments:
 - Muswellbrook Shire Council (MSC)
 - Upper Hunter Shire Council (UHSC) and
 - Singleton Council
- Community service providers:

¹ Kayuga is known locally as a village although it is not a 'village' under the Muswellbrook Shire Council Local Environment Plan

- Health and wellbeing including medical and mental health
- Schools and childcare
- Emergency services (police, fire and ambulance, State Emergency Service [SES]) and
- Voluntary organisations (community and sporting)
- Agricultural industry
- MACH workforce (including contractors) and their families
- MACH suppliers and their associated workforces and families and
- Other business and industries (e.g. hospitality and retail) in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs.

Table 1 below sets out the different components of the current Mount Pleasant Operation or the Project that will cause social impacts and which groups of people currently, or are likely, to experience the impacts.

Table 1: Social groups likely to be affected (positive and/or negative social impacts) if the Project is approved

Stakeholder	Mine	Mine workforce	Northern Link Road	Coal transport	Mine Local spend	Community contributions	BMAs	Aboriginal cultural heritage
Near neighbours	x		x	x			x	
Aboriginal stakeholders	x	x		x			x	x
Surrounding villages and towns								
• Muswellbrook	x	x		x	x			
• Denman		x			x			
• Aberdeen		x			x			
• Scone		x			x			
• Singleton		x			x			
• Merriwa					x		x	
Local Governments								
• Muswellbrook Shire Council	x	x	x			x (VPA)		
• Upper Hunter Shire Council		x						
• Singleton Council		x						
Community services providers								
• Health and wellbeing including medical and mental health		x				x		
• Schools and childcare		x				x		
• Emergency services (police, fire (RFS) and ambulance, SES)	x	x				x		
• Voluntary organisations (community and sporting)		x				x		



Stakeholder	Mine	Mine workforce	Northern Link Road	Coal transport	Mine Local spend	Community contributions	BMAs	Aboriginal cultural heritage
Agricultural industry	x		x	x			x	
MACH workforce (including contractors) and their families		x						
MACH suppliers and their associated workforces and families	x	x	x	x	x			
Other business and industries (e.g. hospitality and retail) in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs	x	x			x			

3 Places of social value or importance

Places of social value or importance, including built and natural features located on or near the Project site or the surrounding region were identified based on stakeholder engagement and desk based research and listed in Table 2.

Table 2: Socially significant built and natural features

Feature	Significance	For who
The Hunter River and its tributaries e.g. Sandy Creek catchment	Culturally significant for Aboriginal people who have a connection to the land and waters of the Hunter River and its tributaries. As a water source. As a place to camp.	People in the Upper, Central and Lower Hunter Valley. The Hunter River supplies water (once treated) to Muswellbrook, Denman and Sandy Hollow (MSC 2015b). For homes/businesses who rely on water licences to pump from the Hunter River (e.g. irrigation). Homeless people who camp along the river.
Castlerock Road	The unique views of the Upper Hunter Valley, being able to see Scone to the north, Aberdeen to north/east and Muswellbrook to the south east.	People who have a connection to the landscape impacted by the mine
Remaining homesteads on or surrounding the ML	Historical context for where people grew up -either themselves, their family or friends.	People who grew up in the area and understand the history and social context of the properties.
Main Street of Muswellbrook (Bridge Street (New England Highway)	The main street is the 'social barometer' for a rural town. Traditionally it is the place where people go to shop and socialise.	For the residents of Muswellbrook and surrounding areas this is an indicator of the town's economic health.
Childcare centres in Muswellbrook	Young children are considered vulnerable and the centres allow parent/s to be employed outside the home.	Families, particularly when two incomes are required or a single parent who has to work.
Primary schools in Muswellbrook	Children are considered vulnerable. Educational opportunities.	Families from Muswellbrook.
High schools in Muswellbrook	Youth are considered vulnerable. Educational opportunities.	Families from Muswellbrook and surrounding areas.
TAFE in Muswellbrook	Educational opportunities.	Students from Muswellbrook, Upper Hunter and Singleton Shire Council LGAs.
Aged Care facilities	Older people are considered vulnerable.	Residents and their families
Areas with a higher proportion of lower income households	People with lower incomes are considered to be more vulnerable.	Residents on Collins Lane, Wollombi Road and the floodplains in Muswellbrook.
Muswellbrook Racecourse and training	Location of country races and social events such as the Melbourne Cup.	People who attend the races or social events at the racecourse.

Feature	Significance	For who
area on Racecourse Road	Known area for training racehorses in the area.	Trainers, jockeys and other workers associated with horse racing.
Muswellbrook Showground	Place for local and regional events (e.g. Upper Hunter Regional Show and Upper Hunter Christmas Spectacular). Free camping with toilet/shower facilities	People who organise and attend local events. Travellers and homeless people who camp and wash.
Local, regional and federal road network	Provides access to other regional and urban areas for social networks, goods and services.	People who have access to private vehicles.
Rail line	Provides access to other regional and urban areas for social networks, goods and services.	People who do not have access to private vehicles or who prefer to travel by train.
Thoroughbred and Viticulture Critical Industry Clusters	Areas of concentrations of highly productive industries within a region that are related to each other, contribute to the identity of that region and provide significant employment opportunities (DPIE 2018).	Owners, employees, contractors and suppliers to the thoroughbred and viticulture industries.

4 Geographical Social Area of Influence

The social area of influence (from a geographical perspective) has been defined as the areas shown in Figure 1. The social area of influence has been determined by considering:

- current Mount Pleasant Operation and the Project which includes:
 - Mine site and associated workforce
 - Rail (transport of coal from site to port)
 - Biodiversity Offset Areas and associated licensees, employees, their families and local contractors and
 - Aboriginal Heritage Conservation Area.
- information contained in Stakeholder Case Studies (from the Scoping SIA and the SIA)
- information collected as part of the SIA Community Survey
- information collected as part of the Workforce Survey
- properties identified for mitigation on request for previous Modifications (see Appendix E) and
- known workforce data (as at March 2020, this contains data on operational and construction workforces for MACH, Thiess and Sedgman).

The Mount Pleasant Operation has and the Project (whether it proceeds or not) would have, a differential distribution of social impacts (positive and/or negative) on a geographical area from Murrurundi in the north, to Newcastle in the south-east and to Merriwa in the west.

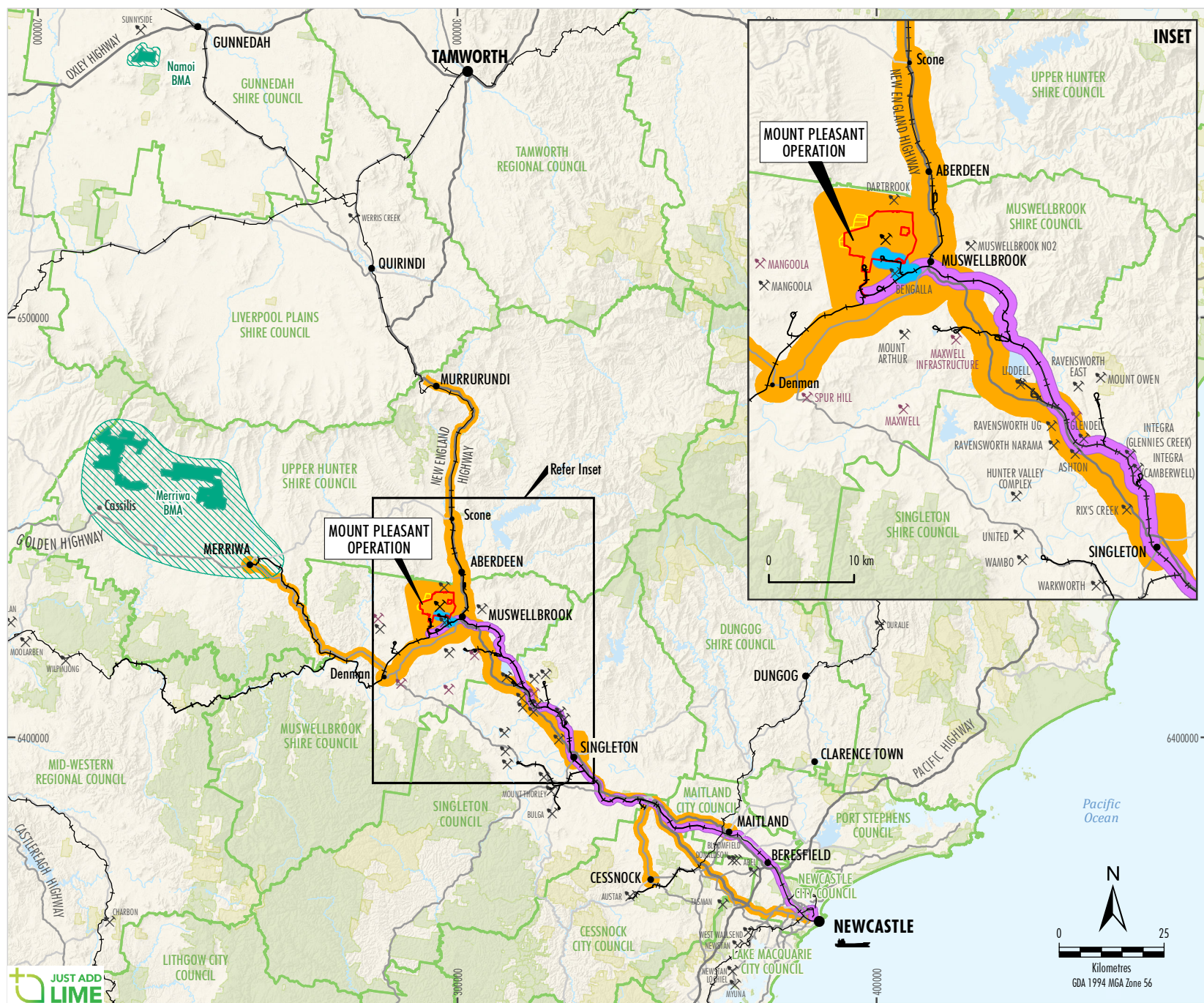


Figure 1

Other communities who are likely to be interested

Based on a review of submitters to previous Modifications and submitters to the recent approval applications in the area (e.g. Dartbrook Mine and Maxwell Underground Project), other stakeholders/organisations who may be interested in the Project but are outside the geographical area shown in Figure 1 are:

- Lock the Gate Alliance
- Hunter Environment Lobby and
- Climate Action Newcastle.

5 Existing social environment

This section provides an overview to the history of coal mining in the Upper Hunter and identifies the values, aspirations and challenges of people living in the area surrounding the Mount Pleasant Operation. This section was originally published as part of the Scoping SIA and has been updated to include information collected as part of the engagement for the SIA.

5.1 History of coal mining in the Upper Hunter

Coal mining has been a part of the Upper Hunter since deposits were discovered 200 years ago (Boutilier and Black 2013). Underground coal mining has occurred since the 1870s, with distinctive mining villages built close to the pitheads of the underground mines (Cottle 2013). The Muswellbrook Coal Mine was established as an underground coal mine in 1907. As the Newcastle coalfields were 'mined out' in the late 19th and early 20th centuries, the lower Hunter Valley, particularly around the growing town of Cessnock, became the most productive coalfields. From the last decades of the 19th century up until the early 1950s, underground coal mining in the Hunter Valley provided the major source of energy for industry, transport and economic development in urban NSW (Mcmanus 2009).

By the 1960s the Cessnock coalfields had declined and were superseded by mainly open-cut mines in the Upper Hunter around Singleton and Muswellbrook (Mcmanus 2009). Workers from Cessnock relocated to Singleton and Muswellbrook with the mines (see Appendix G). Coal mined at this time was used to fuel state-owned power stations and the BHP steel works in Newcastle until the 1980s (Cottle 2013).

In 1981, the Fraser federal government, with the support of the NSW government, presented Hunter Valley coal as an investment open to Australian and foreign capital. Existing state infrastructure of railways, roads, port facilities and coal loaders became the integrated coal chain to 'service' the exported coal. As Hunter Valley thermal coal became a valued export commodity, underground coal mining and its pattern of settled coal townships was largely abandoned. In the late 1980s, coal (with iron ore) became the dominant resources of a prolonged export mining boom (Cottle 2013). In the early 2010s nearly 95% of Australia's thermal coal exports were derived from the open-cut mines in the Hunter Valley. The majority of the coal is transported to the East Asian markets in Japan, South Korea and Taiwan and demand for NSW coal is expected to increase (Cottle and Keys 2014). In the 1990s employees of the Hunter region's open-cut mines working hours were changed from eight to 12 hour shifts (Cottle and Keys 2014 and Carrington *et al* 2011).

At the time of the original EIS for the Mount Pleasant Operation in 1997, there were four operating coal mines in the Muswellbrook area:

- Bayswater No 2, which became part of the Mt Arthur Coal Mine
- The former Drayton Mine, which went into care and maintenance in 2016, sold by Anglo American to Malabar Coal in 2017 and is now known as the Maxwell Infrastructure
- Muswellbrook No 2, which is still operating as Muswellbrook Coal Mine and
- Dartbrook Mine which went into care and maintenance in 2006, purchased by Australia Pacific Coal from Anglo American in 2015.

Mt Arthur Coal Mine has been operating since the 1960s under various names and is now the largest open cut coal mine in the Hunter Valley. Large-scale open cut coal mining started to the west of Muswellbrook in 1998 with the Bengalla Mine. Mangoola Coal began operating in 2010 and currently has a State Significant Development application with DPIE to expand. Mount Pleasant Operation began construction in 2016 and mining commenced in 2017. The development of coal mines to the west of Muswellbrook has formed a recognised 'coal mining precinct' that is evident in land ownership and local government documentation.

5.2 Mount Pleasant Operation near neighbours and surrounding rural communities

5.2.1 Property purchases within Mount Pleasant Operation and surrounding area

Information regarding the property purchases within the Mount Pleasant Operation and surrounding area is provided in Section 3.1 of Appendix E.

5.2.2 Near neighbours – privately owned residences

Information regarding the privately owned residences in the vicinity near the Mount Pleasant Operation is provided in Section 3.2 of Appendix E.

5.2.3 Land use of near neighbours

There are a number of people living and working on properties surrounding the current Mount Pleasant Operation. Information from the Scoping SIA and SIA Stakeholder Case Studies indicates that there are a number of small rural geographic communities surrounding the Mount Pleasant Operation. Although the term community is used, it does not necessarily reflect a consistency of views, values or experiences of the people living in the geographic area.

The communities include:

- to the north, Dorset Road community
- to the north-east, Blairmore Lane and residents living at Kayuga
- to the east, Collins Lane community and residents of Muswellbrook who live on the floodplain of the Hunter River
- to the south-east, the Racecourse Road community
- to the south-west and west, Wybong community and
- to the north-west, the Castlerock community.

In its SIA Scoping Case Study, MSC described proximal and surrounding landowners as having:

“... a strong attachment to their properties from an ownership and sometimes historical aspect. They are usually individuals and families that have resided in the area for numerous years and have social and community connections in the area.

There are reduced options for landowners to attract buyers if the community members want to sell. Often landowners feel powerless through acquisition processes and are resigned to the fact that they feel like they do not have a choice due to the aggregation of environmental impacts such as noise, dust, ground water and blasting.” (MSC, Scoping SIA)

Land use of the area surrounding the Mount Pleasant Operation varies, and is linked to the specific environment. For example, Blairmore Lane, locality of Kayuga, and Collins Lane community are located adjacent to the floodplain of the Hunter River. The alluvial soils of the floodplain support smaller agricultural properties used for dairying, lucerne cropping, lifestyle blocks, and horse training. The Dorset Road community, Wybong community and the Castlerock community are on higher ground with different soils to the floodplain, the properties are larger compared to those on the floodplain and are mainly used for cattle and sheep grazing. Racecourse Road includes a residential area, stables and horse training facilities.

5.3 Surrounding villages and towns

5.3.1 Overview

There are a number of villages and towns surrounding the Mount Pleasant Operation including Kayuga, Muswellbrook, Aberdeen, Scone, Denman and Singleton. A demographic snapshot of the people living in the villages and towns in 2016 is provided in Table 3.



Table 3: Summary of villages and towns in proximity to the Mount Pleasant Operation

Town or village	Kayuga	Muswellbrook	Aberdeen	Scone	Denman	Singleton
Short description	Village	Mining town	Agricultural village	Horse capital of Australia ²	Thoroughbred/ Tourism focused village	Mining town
Distance from mine site	1km	3 km	5 km	17 km	18 km	50 km
Direction to the mine site	North-East	North-west	South-southwest	South	North-east	North-west
Population (2016)	57	10,404	1,894	4,956	1,311	13,214
Males/Females (2016)	58.5%/41.5%	50.2%/49.8%	50%/50%	48.8%/51.2%	48.9%/51.1%	49.7%/50.3%
Median Age (2016)	45	35	37	40	41	35
Families (2016)	20	2,682	499	1,248	339	3,442
Private dwellings (2016)	38	4,895	856	2,267	659	5,638
Median weekly household income (2016)	Not available (area too small)	\$1,284	\$1,286	\$1,274	\$1,068	\$1,506
Median monthly mortgage repayment (2016)	Not available (area too small)	\$1,608	\$1,578	\$1,733	\$1,600	\$1,733
Median weekly rent (2016)	Not available (area too small)	\$240	\$240	\$250	\$260	\$280

Source: ABS (2019a, b, d, e and g)

² As described by UHSC on their website <http://upperhunter.nsw.gov.au>

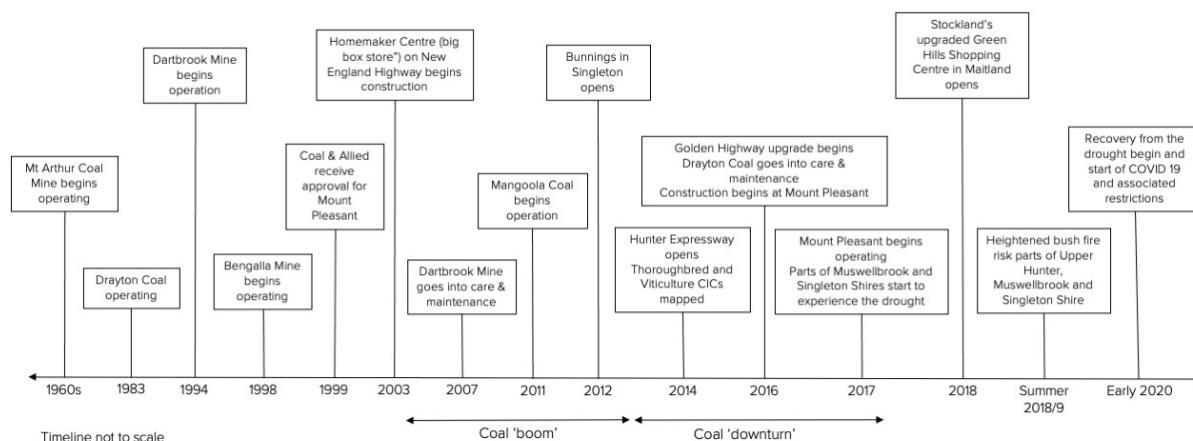
The 2016 Census was undertaken during the downturn in the coal industry in the Upper Hunter, and it is unclear if the impacts of the Maxwell Infrastructure (former Drayton Coal mine) going into care and maintenance are reflected in the data in Table 3 (i.e. approximately 500 people losing their jobs at the site). The data is also four years old so it is expected that the 2020 population (to date) of the towns and villages may have changed.

Based on the Stakeholder Case Studies (Scoping SIA and SIA), there are a number of factors influencing people living in the villages and towns surrounding the Mount Pleasant Operation:

- The existing Mount Pleasant Operation causing reported environmental, economic, social and cumulative impacts to occur (positive and negative).
- Other mines in close proximity to the Mount Pleasant Operation (i.e. the Bengalla Mine, Mt Arthur Coal Mine and Dartbrook Mine) causing social and cumulative impacts to occur. Figure 1 shows the geographical proximity of the Bengalla Mine, Mt Arthur Coal Mine and Dartbrook Mine to the Mount Pleasant Operation and Muswellbrook.
- The Upper Hunter region is starting to recover from three years of drought causing negative social impacts separate to the mines in the area (e.g. decreased or no income) and cumulative negative environmental impacts cumulatively with the mines in the area (e.g. dust).
- The area has experienced unprecedented levels of bush fire risk and this is expected to continue.
- Major road infrastructure either completed (e.g. Hunter Expressway and Golden Highway upgrade) or under construction (e.g. Scone Bypass and upgrade of the Scone airport) causing social and cumulative impacts to occur (both positive and negative).
- Regional development, retail development and population growth in the lower Hunter Valley (e.g. “Big box” shopping precincts, Green Hills Shopping Centre in Maitland and Bunnings in Singleton) drawing people and their economic spend away from the Upper Hunter region, or encouraging people to remain living in the lower Hunter rather than relocating to the Upper Hunter.
- Change to 12 hour shifts (in late 1990s) and the more recent casualisation of mining contracts (i.e. reduction in permanent employees and increase in casual employees).
- Future closure of the Liddell Power Station in 2022 and Bayswater Power Station in 2035.
- The current and unknown future impacts of social and economic impacts of COVID 19.

These factors are shown on a timescale in Figure 2.

Figure 2: Timescale of significant local and regional events



5.3.2 Kayuga

Jim Lonergan, a resident of Kayuga described the history and his connection to Kayuga:

My family has lived in the Kayuga and Castlerock area for multiple generations. My grandparents first bought land when they moved to the Castlerock area in the 1880s followed by further purchases as land became available. The land my family still owns that was purchased in 1905.

My dad went to the Kayuga school in the 1920s and at one point there were 80 kids enrolled and two teachers. The Lonergan's could field a whole cricket team at the Kayuga Cricket Club. Over time things changed and Muswellbrook started to grow, people started to move into town. The school closed in the 1970s and kids went to school in either Aberdeen or Muswellbrook.

But that was before mining. In the mid-1980s it all changed. Mining started with Dartbrook and has grown since then. We've all been impacted by mining. People have had their land purchased and left the area or have been impacted by the dust, the noise the traffic. Most of the old families have gone now. They have either sold to the mining companies and moved away or passed on. There aren't any young people in Kayuga anymore. The town is dying with just a few people left. Dartbrook was the start of the end of Kayuga. (Jim Lonergan, Kayuga, SIA)

Residents of Kayuga who completed the Community Survey described the area as:

Great Farm Land (Kayuga resident, Community Survey)

I love the area in which I live. For me it is a daily visual feast. (Kayuga resident, Community Survey)

I love the area, the community is greatly diminished as houses have been bought and evacuated, then demolished to make way for coal mining. (Kayuga resident, Community Survey)

5.3.3 Wybong

Residents of Wybong who completed the Community Survey described the area as:

A beautiful area. The community has been dislocated by mines (Wybong resident, Community Survey)

I really like the area, and my particular residence. (Wybong resident, Community Survey)

Love it (Wybong resident, Community Survey)

The natural environment surrounding is largely old growth, pristine, wild and undisturbed ie who would live anywhere else. (Wybong resident, Community Survey)

5.3.4 Castlerock

Residents of Castlerock who completed the Community Survey described the area as:

It is a rural area and in recent years people have left the area due to properties being purchased by mines. It is still a wonderful area in which to live in but we are definitely affected by open cut coal mining. The air quality is our main concern. It is not as clear as it used to be. (Castlerock resident, Community Survey)

It is a wonderful little community where everyone looks out for and helps each other. (Castlerock resident, Community Survey)

I've lived here in our beautiful valley for 59 years and I am watching it being destroyed by dust, noise and visual destruction. (Castlerock resident, Community Survey)

5.3.5 Muswellbrook

5.3.5.1 History

According to MSC (2015a), the Muswellbrook area was once occupied by the Wanaruah Aboriginal people and possibly the Kamilaroi Aboriginal people. Muswellbrook was established as a farming centre in 1833 based on its rich soils. The first railway was completed in 1869 and the town experienced significant expansion within this period. The first coal mine in the area was established in the 1890s. The boundaries of the Muswellbrook Shire were officially defined in 1907, when the Shire was created from within the Wybong Shire area. Within their Stakeholder Case Study, the Mount Pleasant CCC described Muswellbrook as changing over the past 40 – 50 years, from a rural community to a mining/industrial community (Appendix H).

5.3.5.2 Description of Muswellbrook

From Stakeholder Case Studies (Scoping SIA and SIA), Muswellbrook is described as follows:

“A large proportion of people who live in Muswellbrook and surrounding areas have made a lifestyle decision to live in a community that has connectivity and relaxed pace. This lifestyle choice has been compromised by mining activity.” (MSC, Scoping SIA).

“Muswellbrook was once a vibrant town but approximately 15 to 20 years ago it dramatically changed due to the rapid increase of open cut coal mines. The main street used to be full of shops, and it was a great community to live and work in. People were very happy to live here and to also retire here. Nowadays people do not want to live in Muswellbrook anymore, due to the massive dust problem that is accumulated by the very close proximity of the open cut coal mines. Just about everyone we know these days, when they retire they move away to the coast where they can have a healthier lifestyle. Muswellbrook is now known as the ‘drive in and drive out’ town where people who work in the open cut coal mines travel here to work but live elsewhere down the valley, including Maitland, Port Stephens, Newcastle and Central Coast. Some coal miners even live further afield. That is why a number of shops are struggling or closed in Muswellbrook.” (Stakeholder B, Scoping SIA).

*“Muswellbrook is known as a mining town.”
(ACDF, Scoping SIA)*

“Muswellbrook used to be a small country town with a strong sense of community. There is no sense of community anymore.” (Wanaruah Local Aboriginal Land Council, Scoping SIA)

Muswellbrook as a town is denigrated by the proximity of mines to residential areas. When someone asks, on the Muswellbrook Community Facebook page, if they should move to Muswellbrook some

*responses are positive but the majority people recommend not to move and call it a "shithole".
(Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)*

A full list of quotes from Muswellbrook residents who completed the question in the Community Survey asking them to describe where they live is provided below.

A bit sad that it is so dominated by coal mining now. Great for jobs, but not so good for our health or the planet. (Muswellbrook resident, Community Survey)

Before major expansion of mines c. 30 years ago Upper Hunter was a nice area with vineyards, studs, dairying, etc with a rural environment. Now totally dominated by coal mines, it is heartbreaking to watch the changes. (Muswellbrook resident, Community Survey)

Boring town, not many opportunities (Muswellbrook resident, Community Survey)

*Can't complain, I have lived, schooled and now have my own business all thank to this town
(Muswellbrook resident, Community Survey)*

Clean (Muswellbrook resident, Community Survey)

Dirty and dusty (Muswellbrook resident, Community Survey)

Doesn't feel like a country town. It seems too many people are here for a short length of time and for work only and rarely by in to the town (Muswellbrook resident, Community Survey)

Good (Muswellbrook resident, Community Survey)

Good town but slowly being surrounded by mining (Muswellbrook resident, Community Survey)

great coal mining town (Muswellbrook resident, Community Survey)

Great little country town. Mining is great for local economy and the nation (Muswellbrook resident, Community Survey)

Great upper hunter town. fantastic work opportunity (Muswellbrook resident, Community Survey)

High dust area. Dust through everything (Muswellbrook resident, Community Survey)

*I don't have any problems with the local area. Coal is an important part of our local community and we would not be as well off in our retirement if my husband had not worked in the mines.
(Muswellbrook resident, Community Survey)*

The mines provide a lot of support for the local community and local organisations enabling our town to have some great infrastructure and opportunities for locals. (Muswellbrook resident, Community Survey)

I have lived here for 25 years (Muswellbrook resident, Community Survey)

I like living and working in mining in muswellbrook. I believe council needs to recognize the significant benefits of mining and stop trying to bite the hand that supports all residents by bringing prosperity to the town. (Muswellbrook resident, Community Survey)

I moved here from Sydney 20 years ago and this is now my home. My kids were born here and i have strong business and personal ties to the community (Muswellbrook resident, Community Survey)

I think Muswellbrook is a nice community. (Muswellbrook resident, Community Survey)

I've lived in Muswellbrook near all my life I love my town (Muswellbrook resident, Community Survey)

It's a great place to live (Muswellbrook resident, Community Survey)

It's a decent area and friendly community. Except for the MAC Energy eyesore that's in our back yard now. (Muswellbrook resident, Community Survey)

It's a good community with many wonderful people but also has its share of anti social people like other towns. The town is desperate for more upgraded facilities, especially sporting facility upgrades and a regional sports stadium. (Muswellbrook resident, Community Survey)

love it (Muswellbrook resident, Community Survey)

Love this rural environment (Muswellbrook resident, Community Survey)

Muswellbrook area is a great community with great family & job opportunities for so many different industries & lifestyles. (Muswellbrook resident, Community Survey)

Muswellbrook is a great town & community to live in. (Muswellbrook resident, Community Survey)

Muswellbrook is a lovely town, with a strong community spirit (Muswellbrook resident, Community Survey)

Ok (Muswellbrook resident, Community Survey)

Ordinary the FIFO nature of the workforce has no positive points except for motels (Muswellbrook resident, Community Survey)

Reasonably content, dust is an issue however... (Muswellbrook resident, Community Survey)
Rural lifestyle area (Muswellbrook resident, Community Survey)

The area I live in is good (Muswellbrook resident, Community Survey)

The community is very divided (Muswellbrook resident, Community Survey)

This is a working town you don't live here, you go live else where (Muswellbrook resident, Community Survey)

We have a very helpful and productive community (Muswellbrook resident, Community Survey)

we live here because of the mines. We would only want to move because of the influence from the goal moving in. Not because of the mines. Yes, it is much dustier in the house than it was 25 years ago that is not a plus and probably the most annoying of anything (Muswellbrook resident, Community Survey)

5.3.5.3 Changing demographics and affordable housing

The Stakeholder Case Study participants highlighted changing demographics of Muswellbrook:

"There has always been an economic gap between people who live in Muswellbrook. There used to be the 'wealthy', the 'workers' and those who didn't work. Now there is a merging between the 'wealthy' and 'workers' due to the higher wages paid by the mines. There is a new group of people who struggle with the increase in the cost of living in Muswellbrook. These people who are working

but not earning mining wages can struggle to pay the prices in Muswellbrook. There are also the people who can/do not work (e.g. welfare dependency).” (Stakeholder D, SIA)

“Some long-term families can no longer afford to live in town and have left, are in the process of leaving, or are forced into staying with other families causing issues with overcrowding. Some families are also forced to live in their cars, sleep on riverbanks and other areas where the homeless survive. The miners who move to town for work do not live here permanently. They only stay in town for their shift and then go back to their families on the coast on their days off.” (Wanaruah Local Aboriginal Land Council, Scoping SIA)

Demographic trends described by SIA stakeholders can be linked to the downturn in the coal industry post 2012 and subsequent availability of stock for social housing. The Muswellbrook Local Environmental Plan (LEP) 2009 Review Discussion Paper (MSC, 2018) states that there has been a “significant fluctuation” in housing affordability in the Muswellbrook LGA and explains that the high levels of stress in the housing market during the 2010 – 2012 period was due to the expansion of the coal mining industry in the Hunter Valley. In the midst of the upturn in 2011 and before the market peaked in 2012, housing stress amongst home renters affected 24% of the rental households in the MSC LGA (MSC 2018).

The coal mining industry then experienced a significant downturn from 2012 with job losses triggering a downturn in the housing market, which resulted in rents falling, vacancy rates rising and clearance rates slowing down. The authors of the Discussion Paper (MSC, 2018) concluded that the issue of housing affordability was closely linked to the fluctuations in the mining industry.

This supports the observation by the Stakeholder Case Study participant Stakeholder D:

“In the mid 2000s there was a mining boom in the region. During the boom people who were working in the mines relocated their families to the area, their children would go to a local school and people would shop locally. There was a high demand for houses for families.

During the downturn, especially with the closure of Drayton mine in 2015, 500 people lost their jobs and there was a glut in the housing market. The prices dropped, housing developments in Muswellbrook south were not completed and those houses that were built had people from lower socio-economic demographic groups moving in because the owners wanted tenants. The area has a bad reputation now. During the downturn people from lower socio-economic demographic groups could also afford to rent in other areas of Muswellbrook where they could not afford previously.”
(Stakeholder D, Scoping SIA)

In the *Community Strategic Plan (2017-2027)* (MSC 2016), MSC states there were over 450 social housing dwellings in Muswellbrook in 2017. In the Plan, MSC explained that people are relocating from across NSW to Muswellbrook to access social housing and gain skills and employment, predominantly in the energy, agriculture and retail services industries (MSC 2016).

This transition from a significant number of people being employed in the mining industry to low income individuals and families was noted by the Stakeholder Case Study participant Stakeholder A:

“The average weekly wage in MSC LGA is less than the state average, which is surprising given the number of people who live and work in the coal industry in the LGA.” (Stakeholder A, Scoping SIA)

The lower average weekly wage may be a reflection of the choice some employed in the mining sector make to live outside of Muswellbrook and drive in and out for work. It could also be a result of the influx of low income individuals and families taking the opportunity to live in social housing in Muswellbrook. Having a significant proportion of the population relocate to take up opportunities for affordable housing would be one explanation for the increased pressure on affordable housing.

Despite the data above and the comments from some of the Stakeholder Case Study participants supporting the data, there are views from other Stakeholder Case Study participants that housing affordability is still an issue within the community.

Access to affordable housing was one of the main issues raised by a number of Stakeholder Case Study participants, with the MSC, Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation all raising concerns about access to affordable housing in their case studies for the Scoping SIA.

"Reduction in the access to adequate rental housing in Muswellbrook and Denman due to demand for rental properties, increase in investors buying properties for high rental return." (MSC, Scoping SIA)

Stakeholder D explained the changing housing and rental market:

"Houses are for sale now and they are continued to be purchased predominantly by investors from outside the area and then charging high rentals which puts a lot of local people out of the rental market."

It's not a boom now, but things are starting to come good again with house prices stabilising but the people living in the houses are different. People are coming to Muswellbrook to work, not to live. There can be 4-5 blokes in one house, just for the week and they are gone on the weekend. They are using the address so they can have a local address on their employment details.

People working in the mines are choosing to be separated from their families, who live closer to the coast. People just come here to work, not to live.

People aren't living here because they don't have to, with the Hunter Expressway they are 1.5 hours from Newcastle and four hours to Sydney. People don't want to live here because of the dust and the associated health impacts." (Stakeholder D, Scoping SIA)

This weekday use of local housing was supported by the Wanaruah Local Aboriginal Land Council in their Scoping SIA Case Study:

"While staying in town, the miners share a rental property with miners or stay in temporary accommodations (e.g. hotels). The owners of the rental properties are raising the rent because they can get more money from a group of miners, rather than a low-income family. This has led to a limited number of rental options for local income families. One example is during the boom when Mount Arthur was being built, a low-income family with five children had their rent increased from \$500/week to \$1,500/week, which they could not afford and had to move out. New houses aren't being built because the permanent population is not growing, leading to a lack of affordable housing." (Wanaruah Local Aboriginal Land Council, Scoping SIA)

In their update for the SIA, MSC noted that as mining continued through the COVID-19 restrictions, there was still pressure on affordable housing in the area. They also reported that Housing NSW are at the start of reviewing their housing strategy and changing to a “demand model”.

MSC, Muswellbrook Chamber of Commerce Inc and Tony McTaggart (Edwards Higgens Parkinson First National) all reported an increasing level of interest from developers.

5.3.5.4 Low income residents

The Muswellbrook Shire explained that most people without access to a private vehicle will try to reside close to the shops so they can walk to the central business district to meet their needs (i.e. work, shopping, doctors, support services etc.), increasing the demand for affordable housing within walking distance of the Muswellbrook’s central business district.

“There is a higher proportion of people with lower incomes living closer to the MACH Energy Mount Pleasant mine, including in the flood plain west of Bridge Street and the area south of Sydney Street in Muswellbrook. These cohorts of the community are experiencing an aggregation of environmental impacts such as noise, dust and blasting this will be further exacerbated by the expansion of the mining operation.” (MSC, Scoping SIA)

In their Scoping SIA Case Studies, the Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation describe how low income families in Muswellbrook are struggling with the cost of living in a mining town, and how the cost of groceries is much higher in mining than non-mining towns.

“Because low income families struggle to get/retain a rental property and the cost of living is high, some individuals and families are living in cars, camping along the river or in tents at the show grounds. Homelessness is a big issue for Muswellbrook. The show grounds is the only place that has public showers. The Lions Club is raising money to pay for a 24-hour shower and laundry providing the ability to charge a mobile phone and a safe place to talk to others. This should not be the role of a service organisation. Specialist organisations and services are required to support the homeless and the current ones are inundated. This should be addressed by council, however, due to the current level of drug problems and vandalism, any public toilets are locked after 6pm forcing the homeless into using bush land or roadsides near their parked vehicles. This creates safety issues for all genders, men can be bashed, and those with a disability are targeted; and women and children run the risk of sexual and physical abuse.” (Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation)

5.3.5.5 Changing Muswellbrook economy

The Muswellbrook Chamber of Commerce and Industry (MCCI) explained in their Scoping SIA that:

“People own and run businesses in Muswellbrook because of the profits that can be made, the return on investment and lifestyle. Lifestyle is the biggest reason, as it allows to live and work within close proximity.”

“There have been some good times but it is harder now. The economy changed in the 1960s with the introduction of coal mines and the power stations. Since then, the economy has gone in five to six-year cycles that match the environmental conditions (e.g. droughts) and the commodity prices (e.g. coal). The current cycle is different to the previous four because:

the economy is not only larger but its more complex;

there is a lack of a skilled workforce and people have to be brought in from the lower and central Hunter region; and

*the downturn happened suddenly off the back of an abnormal boom period.”
(MCCI, Scoping SIA)*

The MCCI stated in the local businesses report that it is increasingly difficult to retain qualified staff due to the competition from the local mines. This results in increased costs for recruitment of new staff and the rapid wage growth for the existing employees, which is often unsustainable.

Since the Scoping SIA, MCCI reported an increase in membership from 130-140 members in November 2019 to 160 – 170 in July 2020. MCCI said they are now seeing improvement from the economic downturn associated with the drought. With the rain in the first quarter and follow up rain in the second quarter, effects of the drought have reduced and the economic shock has reduced.

5.3.5.6 Drought

Various stakeholders were hesitant about the drought being over, despite good rain falling over Christmas 2019 and in the start of 2020. MCCI and Scone Chamber of Commerce and Industry described a more positive outlook and agricultural stakeholders described the new challenges of being able to buy new stock for their properties due to increased competition while still feeling the economic cost of the drought.

SIA stakeholders noted that although it has raised, the water levels in the Glenbawn Dam are low and the area is still on water restrictions (MSC, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group), which will place additional constraints on water use, particularly for those who have water licences associated with the Hunter River.

5.3.5.7 Impacts of COVID-19

MCCI described COVID-19 as still being very relevant. The Muswellbrook area experienced a higher level of economic stability compared to other areas because of the relatively lower reliance on retail, tourism and hospitality. Accommodation has not been affected comparatively to other areas because accommodation is mainly used by the mining industry rather than tourism.

In response to COVID-19, MCCI has received support for the past three months from:

- BHP Vital Resources Fund - MCCI has received funding to support the Member Services Manager.
- BHP/C-RES Local Buy Foundation and BHP Futures Fund – videos for local businesses to bounce back from COVID-19.

MSC reported in their SIA Case Study that they had observed a few local shops and cafés that had not reopened after the first impact of COVID-19. They said that of those that had reopened, some were operating on restricted hours and service delivery needed to be modified to meet the health requirements of the NSW Health Regulations. It is unknown how many people in the retail and hospitality industry have lost their jobs, in particular, given the increased number of casual employees in the hospitality and service industry.

MSC also noted how COVID-19 has placed additional pressure on families during isolation. Community service providers have reported an increase in alcohol and drug consumption placing extra pressure on

family units. The impact of COVID-19 on families is just starting to be assessed as service providers begin to re-engage.

5.3.5.8 Change in local newspapers

MSC explained that since the November 2019 Scoping SIA, the Hunter Valley News and Muswellbrook Chronicle are no longer being printed in a paper version. Muswellbrook Chronicle is publishing local news online and via social media. This has caused some concern for local residents, as noted by Jim Lonergan from Kayuga and the Denman Aberdeen Muswellbrook Scone Healthy Environment Group. A new free fortnightly newspaper, the Hunter River Times, has started circulation.

5.3.6 Regional context

This sub-section provides an overview of the MSC LGA and an introduction to the Upper Hunter and Singleton Shire Council LGAs. The geographical context of the Mount Pleasant Operation in relation to each of the LGAs is shown in Figure 3.

5.3.6.1 Muswellbrook Shire

The Mount Pleasant Operation is located within the MSC LGA (see Figure 3) and a high proportion of the Mount Pleasant Operation workforce reside in the area. A demographic snapshot of the MSC LGA is provided in Table 4.

Table 4: Demographic snapshot of Muswellbrook Shire Council LGA

Indicator	MSC LGA (2016)
Population (2016)	16,086
Males/Females (2016)	51.3%/48.7%
Median Age (2016)	35
Families (2016)	4,095
Private dwellings (2016)	7,267
Median weekly household income (2016)	\$1,346
Median monthly mortgage repayment (2016)	\$1,733
Median weekly rent (2016)	\$250

Source: ABS (2019c)

The Muswellbrook LEP 2009 Review Discussion Paper (MSC 2018) describes the Muswellbrook and larger Upper Hunter district as going through a time of significant change.

“AGL has notified its intentions to close both major coal fired power generators – Liddell and Bayswater in 2022 and 2035 respectively. Over the next 12 years, three of the six operating coal mines will close. There are new approved mining operations likely to commence, and it is likely that others will be proposed, and existing operations modified.” (p. 4)

In 2016, at the time of writing the MSC *Community Strategic Plan (2017-2027)* (MSC 2016), the Shire’s two baseload power stations (Liddell and Bayswater) provided 40% of the State’s baseload energy requirements. The thermal coal industry located in the Shire provided 25% of the State’s total thermal coal exports.

The Muswellbrook LEP 2009 Review Discussion Paper (MSC 2018) described the economy as being “unstable” because it is so reliant on the coal and electricity sectors, and a downturn in these industries and associated loss of jobs would have a major impact on the economy. It found a direct correlation between the downward slide of the coal price and increases in unemployment, and that the unemployment rate is greater in urban areas compared to rural areas within the LGA (see Figure 4).

Figure 3: Location of the Mount Pleasant Operation and the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs

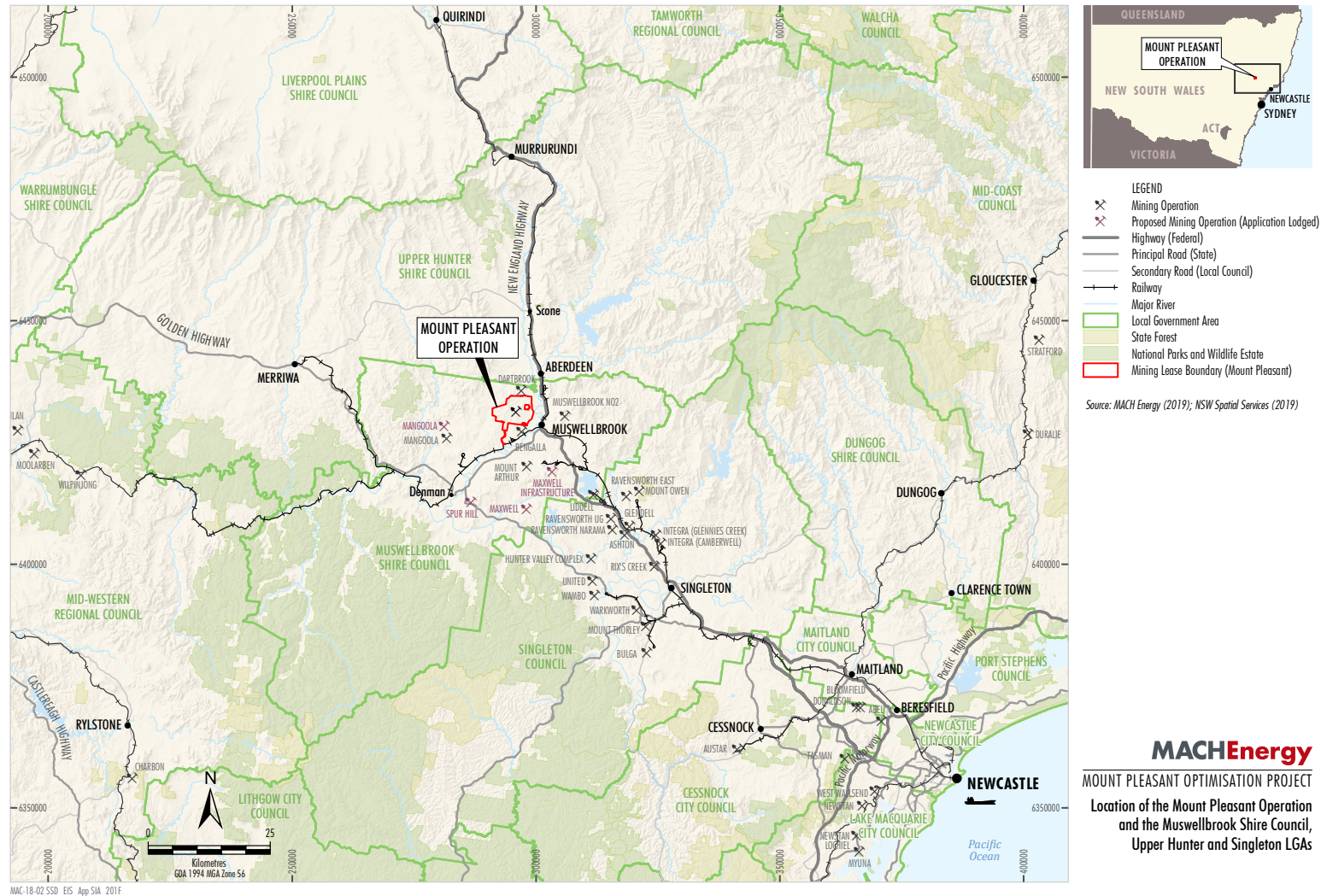
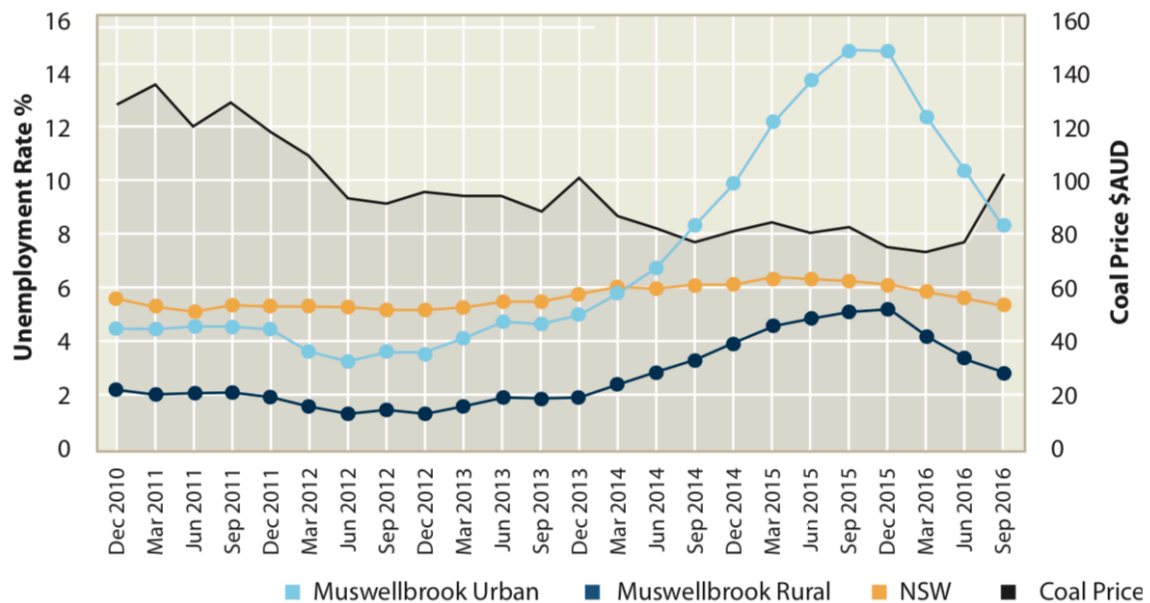


Figure 4: Unemployment Rate and Coal Price



Source: MSC 2018

Given the closure of the Liddell and Bayswater power stations and likely closure of three coal mines, MSC has changed its focus from managing the impacts of the coal mines to job creation, economic diversification and resilience allowing for a transition to a low carbon future, education and skills, and for Muswellbrook to develop and emerge as a Regional Centre (MSC 2016).

During the ‘boom’ of the coal industry in the late 1990s and early 2000s, MSC was focused on managing the impacts of a “rapid tripling in size” of the thermal coal industry – air quality and dust management, visual impacts, and other community impacts including housing supply, childcare and health services. The downturn in the coal industry (post 2012), was experienced in the MSC LGA by “a strong and sustained reversal in the long-term projections for traded thermal coal and substantial local job losses” (MSC 2016). This also coincided with the closure of Maxwell Infrastructure (former Drayton mine) in November 2016. The planned closures of other coal mines will have a substantial impact on the local economy and local employment. However, MSC expects that the loss of local employment will be partially offset by increased employment at the Mount Pleasant Operation.

An analysis of ABS Census data on ‘industry of employment’ from 1991 to 2006 in the Muswellbrook LEP 2009 Review Discussion Paper (MSC 2018) showed that despite the impact of the downturn in the coal industry and an unknown portion of mine workers driving in and out for work, mining was still the dominant industry of employment in the LGA (MSC 2018). As the 2016 Census was undertaken in the downturn in the coal industry in the Upper Hunter, it is unclear if the impacts of the Maxwell Infrastructure (former Drayton Coal mine) going into care and maintenance (i.e. approximately 500 people losing their jobs at the site) are reflected. The data is also four years old so it is expected that there will be some change in the ‘industry of employment data’ for the LGA.

The Stakeholder Case Studies (Scoping SIA and SIA) participants raised their concerns about the lack of economic development in the LGA, despite coal mining continuing near the town, and impacts on the housing market.

"Because the families of the miners are not living here, the money goes out of town and is not spent locally. Town is not benefiting from mining, three pubs and the shoe shop have closed down and so has the bakery, as well as many other businesses and organisations. From 1992 to 2012, the population dropped by over 6,000. A few years ago, there were over 300 empty houses either owned or controlled by the mines for their workers and unavailable for rent." (Earth Connection Indigenous Corporation, SIA)

"One of the concerns of Muswellbrook Shire Council is that the level of employment is not reflected in the advancement of the local economy and in an increase of activity, in particular in the central business district (i.e. lack of business start-ups or people utilising this space). Lack of economic diversification prolongs the vulnerability of the local economy." (MSC, SIA)

In May 2019, MSC commissioned Jetty Research to conduct a random and statistically valid telephone survey of over 500 adult residents living within the LGA. Residents were asked (in an unprompted question) what they believed to be the major challenges for the future of the MSC LGA. Economic diversification was the more frequently mentioned challenge (22%) (Jetty Research 2019). This was followed by job security/unemployment (11%), future of the coal industry (9%), impact of mining (9%) and more retail/entertainment (6%) (Jetty Research 2019). Housing affordability was 2%. A wide range of other challenges were mentioned including roads, rates, infrastructure, facilities for young and old people, drug use and communication with rate payers (Jetty Research 2019).

Residents were also asked to consider major opportunities for the future. Jetty Research summarised responses to this question:

"While a fifth of residents were unsure of future opportunities, a large proportion of those who were able to identify opportunities focussed on energy (with 19% seeing opportunity in coal mining and 7% in renewable energy). Some 18% were vaguer in mentioning opportunities for more business and jobs and 10% in tourism.

Again, a wide range of others were mentioned and included sporting fields and events, a bypass, activities for children and facilities for older people, new roads, maintaining the shopping available, encouraging families to the area and attracting another major event to the region." (Jetty Research 2019)

In addition to the coal and electricity industries, MSC LGA is the home of the two largest thoroughbred horse studs in the southern hemisphere with approximately 40% of the value of thoroughbred bloodstock in Australia being reared within the LGA (MSC 2016). MSC LGA also accounts for some 40% of the Hunter's viticulture and is home to the largest dairy industry in the Hunter. A summary of the thoroughbred and viticulture industries and how they are reportedly currently impacted by mining is provided in Appendix F. Mcmanus (2009) describes the Upper Hunter Valley as being constructed by discursive conflicts, boundary delineations, and material practices of transforming nature into economically viable products. Three of the major industries involved in these constructions are the coal, wine, and thoroughbred breeding industries.

The MSC *Community Strategic Plan (2017-2027)* (MSC 2016), identified a non-exhaustive list of local issues and mega-trends, which are shown in Table 6.

Table 6: Local issues and mega trends in the Muswellbrook Shire Council LGA (2016)

Issue	Description
Local economic prosperity issues	<p>Structural decline or uncertainty in the thermal coal industry, associated job losses, and the need to diversify the Shire's economic base.</p> <p>A rising middle class – particularly in south east Asia, and an associated growing demand for agricultural products.</p> <p>The growth of the knowledge, creativity, and digital economy and a reshaping labour market.</p> <p>The continued growth of the services sector and the concentration of services in Regional centres.</p> <p>A growing visitor economy.</p> <p>The movement from a linear to a circular economy.</p>
Local cultural vitality issues	<p>A variety of opportunities for cultural participation.</p> <p>Opportunity to experience high quality national and international arts and culture.</p>
Local community infrastructure issues	<p>Integrated footpath and cycleways.</p> <p>Improved accessibility to Council's facilities.</p> <p>Maintain and expand infrastructure to support Muswellbrook achieve Regional Centre status.</p> <p>Ageing Water and Wastewater Infrastructure.</p>
Local community leadership issues	<p>Community consultation and participation in council planning.</p> <p>Workforce and asset management.</p> <p>Business Improvement.</p>
Local social equity issues	<p>An aging population and changing retirement patterns.</p> <p>Social disadvantage and social exclusion – particularly in Muswellbrook South.</p> <p>Early childhood education and social advantage.</p> <p>Improving local liveability and amenity.</p> <p>Easily accessible venues to appreciate and participate in arts and culture.</p>
Local environmental sustainability issues	<p>Climate change.</p> <p>Loss/re-establishment/rehabilitation of native vegetation and vegetation connectivity.</p> <p>Poor riparian environments and poor public access to waterways.</p>

Source: MSC (2016)

People living and working in the Muswellbrook Shire are expected to continue to experience environmental impacts of the Mount Pleasant Operation and to have a significant proportion of the workforce located in the town. The workforce is also expected to continue living in the village of Denman and other localities within MSC LGA.

5.3.6.2 Upper Hunter Shire

Although the Mount Pleasant Operation is not located in the UHSC LGA (see Figure 3), a significant number of the current workforce live there. A proportion of the Mount Pleasant Operation workforce are expected to continue to live in the UHSC if the Project proceeds. A demographic snapshot of the UHSC LGA is provided in Table 7.

Table 5: Demographic snapshot of Upper Hunter Shire Council LGA

Indicator	Upper Hunter Shire LGA (2016)
Population (2016)	14,112
Males/Females (2016)	49.4%/50.6%
Median Age (2016)	41
Families (2016)	3,595
Private dwellings (2016)	6,500
Median weekly household income (2016)	\$1,242
Median monthly mortgage repayment (2016)	\$1,688
Median weekly rent (2016)	\$220

Source: ABS (2019h)

The village of Aberdeen, located approximately 5 km north-east from the Mount Pleasant Operation, is expected to continue to experience environmental impacts of the existing Mount Pleasant Operation as well as the Project, along with Australian Pacific Coal's proposed recommencement of underground mining operations at the Dartbrook Mine. A proportion of the Mount Pleasant Operation workforce is expected to continue to live in Aberdeen, Scone and other localities within the Upper Hunter. The UHSC describes itself as "the horse capital of Australia" (UHSC 2019). It is a predominantly rural area with a National Park and nature reserves. Most of the rural area is used for grazing, dairy farming, horse studs and general farming. The Shire is a major cattle, crop, goat, pig, poultry and sheep producer, with an increasing number of vineyards. The area is renowned for its thoroughbred horse industry (UHSC 2019).

The UHSC Community Strategic Plan 2027 (UHSC no date), describes residents' enjoyment of living in the Shire because of its relaxed, healthy rural lifestyle, the community spirit, environment, affordable living and access to other places (UHSC no date). In the future, people would like the UHSC to maintain its rural, beautiful environment, and country lifestyle; to remain quiet, but with improved roads, facilities, services and economy (UHSC no date).

At the time of writing the SIA Scoping Report, the Scone Bypass was under construction and approvals were being sought for the Scone Regional Airport Upgrade. Both of these infrastructure projects will have their own positive and negative social impacts.

There are currently no coal mines operating in the UHSC LGA. The UHSC opposes coal mining within the Shire as reflected in their statement, *Position Statement-Coal and Coal Seam Gas Activities* (UHSC 2015), as shown in Figure 5.

Figure 5: UHSC Position Statement on Coal and Coal Seam Gas



**Position Statement
Coal and Coal Seam Gas Activities
March 2015**

Council Vision:

"A Quality Rural Lifestyle in a Vibrant, Caring and Sustainable Community"

Council is committed to:

- Protecting the Shire's prime agricultural land, surface and groundwater resources and air quality, by opposing coal mining and at this time, Coal Seam Gas (CSG) exploration and extraction activities within the Shire.
- Protecting the Shire's agricultural and equine industries from any negative impact of extractive industries by opposing coal mining and at this time, CSG exploration and extraction activities within the Shire.
- Protecting our unique identity based around "the Horse Capital of Australia".
- Protecting our clean and green identity as a unique point of difference in attracting industry, tourism and residents to the area.
- Protecting the community's health, amenity, social and emotional well-being in keeping with its vision of a "quality rural lifestyle in a caring and thriving community".
- Protecting the wider equine industry and therefore the gazetted Equine Critical Industry Cluster in our region by opposing coal mining developments that have the potential to adversely impact upon those major thoroughbred breeding farms located outside the Shire.
- Providing a certain investment future for all sustainable industries, especially agriculture and the jobs that support and grow our unique reputation and identity.

5.3.6.3 Singleton Council Local Government Area

Although the Mount Pleasant Operation is not located in the Singleton Council LGA (see Figure 3), a significant number of the current workforce live in the Shire). A proportion of the Mount Pleasant Operation workforce are expected to continue to live in Singleton and the wider Singleton Council LGA if the Project proceeds.

A demographic snapshot of the Singleton Council LGA is provided in Table 8.

Table 8: Demographic snapshot of Singleton Council LGA

Indicator	Singleton Council LGA (2016)
Population (2016)	22,987
Males/Females (2016)	50.9%/49.1%
Median Age (2016)	36
Families (2016)	5,962
Private dwellings (2016)	9,329
Median weekly household income (2016)	\$1,682
Median monthly mortgage repayment (2016)	\$1,950
Median weekly rent (2016)	\$280

Source: ABS (2019g)

Members of the ACDF described Singleton within their Stakeholder Case Study as:

Singleton is the link between the Upper Hunter and Central Coast. There is a distinct separation between Singleton and Muswellbrook along the New England Highway at the Liddell and Bayswater power stations.

The main industry in Singleton is mining and mining support. The coal boom led to an increase in the population which led to a reduction in the community feel of Singleton. The increase in population has made accessing the housing market harder due to an increase in demand. Housing on the market sell quickly. It is difficult to find a residential rental property in Singleton.

As Singleton is perceived as a mining town, the cost of retail/commercial rentals has also increased, forcing some speciality shops to close.

As the cost of living has increased, people have moved away to where it is more affordable. (ACDF, SIA)

In its community engagement undertaken to develop the Community Strategic Plan 2017 – 2027 (Singleton Council no date), Singleton Council identified the inspirations and aspirations of people which included improved connectivity to the river, an art gallery and performing arts centre, enhanced natural attractions, activities for young people and planning to transition from mining based economy.

Singleton Council, in its Community Strategic Plan 2017 – 2027 (Singleton Council undated), describes itself as having an economy “*built on the rich natural resources the land provides. Boasting a world class mining industry, internationally renowned wine and food experiences and a long history of agricultural activities, in addition to a strong Defence industry based at Lone Pine Barracks, Singleton is well positioned to continue to diversify the local economy and thrive into the future.*” (Singleton Council no date:6)

5.4 Summary of the existing social environment

Coal has been mined in the Upper Hunter since the early 1900s. Originally coal was mined using underground methods and villages were established at the pitheads. As the coal reserves were depleted in the Newcastle and Lower Hunter regions, the mines and associated workforces moved north into the Upper Hunter. In the early 1980s, mines transitioned from State owned to private owned (usually foreign owned) and coal became international export as well as a source of domestic power. The 1990s saw the transition from underground to open cut coal mines in the Upper Hunter, as the coal reserves were identified closer to the surface. It also saw the transition from eight to 12-hour shifts. In 1998, the Bengalla Mine was the first of the large-scale open cut coal mines to the west of Muswellbrook, followed by the expansion of the existing Mt Arthur Coal Mine.

The Mount Pleasant Project was developed by Coal & Allied Operations Pty Ltd in the mid to late 1990s, gaining approval under State and Commonwealth legislation in the late 1990s and early 2010s. During this time, Coal & Allied Operations Pty Ltd purchased the properties within the MLs. MACH acquired the Mount Pleasant Operation in 2016 and began construction, with mining operations beginning in 2017.

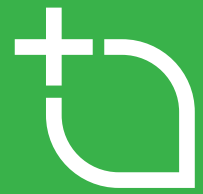
The Mount Pleasant Operation is surrounded by a mix of MACH owned and privately-owned properties. People who remain living in properties (even if sold to MACH) have generally resided in the area for a long time and have strong social connections in the area. Properties purchased by MACH have generally retained their existing land use. Rural communities surrounding the Mount Pleasant Operation are the Dorset Road community, Blairmore Lane and residents living at Kayuga, the Collins Lane community, residents of Muswellbrook who live on the floodplain of the Hunter River, the Racecourse Road community, Wybong community and Castlerock community.

Towns and villages in proximity to the Mount Pleasant Operation are Kayuga (1km), Muswellbrook (approximately 3 km), Aberdeen (approximately 5 km), Scone (approximately 17 km), Denman (approximately 18 km) and Singleton (approximately 50 km). Each town and village have its own unique history and character. Besides mining, other influences on the residents of these towns are the drought, major road developments, development of retail services in the lower Hunter and the change to 12-hour shifts and casualisation of the mining labour force.

Muswellbrook is a town in transition. In the late 1990s to the early 2010s, the coal industry was the dominant industry which employed a significant number of people. With the coal downturn in 2012/2013, mine workers and their families left the town leaving a gap in the housing market which was filled by people on low incomes. Since then the coal industry has continued to impact on Muswellbrook through employment opportunities, local procurement and community support programs but has also impacted the town environmentally with residents experiencing dust, noise, lighting and blasting impacts from open cut mining.

Industries competing with the coal industry for land and/or skilled labour are agriculture, thoroughbreds and viticulture industries. There is a pre-existing social tension between the different industries in the area which could intensify as the landscape becomes more contested.

Economic diversification is considered to be the greatest challenge for the future of MSC LGA, along with other issues associated with the resources sector (i.e. future of the coal industry, impact of mining and air quality), however mining is still seen as the greatest opportunity for the MSC LGA. Transition from coal mining and power generation is considered to be the greatest challenge for the Upper Hunter.



Appendix N

Social Baseline Study

Part B Indicators of Social Impacts

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1 Introduction

1.1 Selection of indicators and data sources

This part of the Social Baseline Study includes indicators for social impacts and data to provide a benchmark for social impacts to be measured against in the future, if the Project proceeds or not.

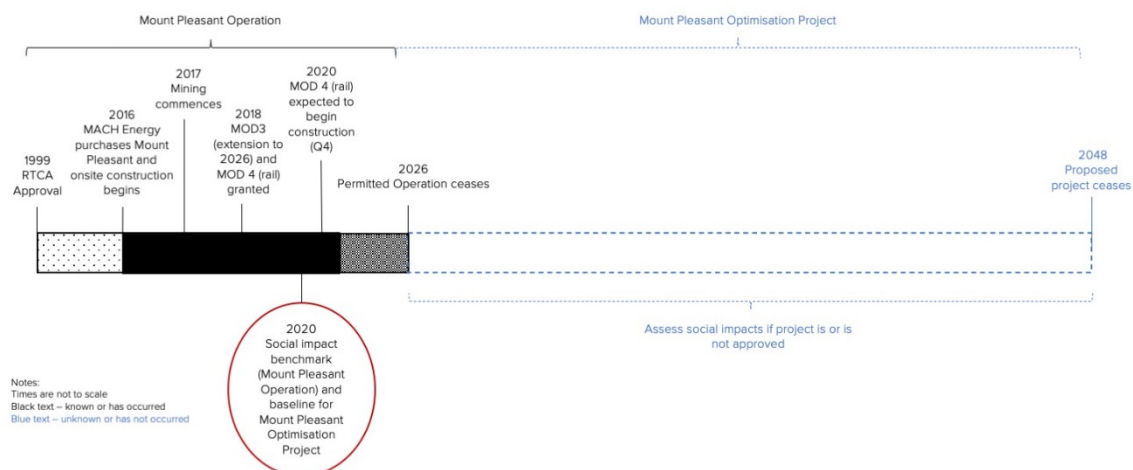
Indicators were selected based on the findings of the Scoping SIA and engagement undertaken for the SIA and are either quantitative or qualitative or a combination, depending on the social impact. Where possible, the most direct indicators for social impacts have been selected and where this has not been possible, proxy indicators have been selected. Data for each impact has been sourced from desktop research and primary data collection. Trend lines have been included, where possible, to show the history of a particular indicator and to provide a benchmark on which potential social impacts can be assessed and any change monitored.

1.2 Scope

The scope and content of the Social Baseline Study is tailored to the social area of influence as described and mapped in Appendix M.

As the Mount Pleasant Operation is currently operating, it forms part of the baseline for the SIA of the Project and the social impacts being experienced have been included, as shown in Figure 1.

Figure 1: Context of the assessment of social impacts of the Mount Pleasant Operation



The Social Baseline Study does not include an assessment of the social environment prior to the Mount Pleasant Operation beginning construction. Potential social impacts of the Mount Pleasant Operation as proposed by Coal & Allied (as the Mount Pleasant Project) were assessed in the original EIS (1997) which included a description of the operational workforce, sources of labour, housing and accommodation and community services and facilities at the time.

2 Way of life - employment

2.1 Indicators for employment

A number of indicators have been selected based on stakeholder participation in the SIA and social impacts identified in the Scoping SIA:

- Mount Pleasant Operation workforce (FTE) and residential location and
- Standard of living (based on salary).

Indicators were selected based on impacts identified by SIA stakeholders.

2.2 Mount Pleasant Operation Workforce

In March 2020, the workforce at the Mount Pleasant Operation had an estimated workforce of 380¹ who were employed or contracted:

- MACH
- Thiess – responsible for operating the mine for five years, from 2017 – 2022 and
- Sedgman – operation of the CHPP.

The place of usual residence of the workforce is shown in Table 1.

Table 1: Workforce residential location

Place of residence	Percentage
Muswellbrook Shire Council LGA	33%
Upper Hunter Shire LGA	16%
Singleton LGA	21%
Cessnock Shire LGA	7%
Maitland Shire LGA	5%
Other NSW	13%
Other Australia	4%

Source: AnalytEcon 2020

It is acknowledged by MACH that these numbers may not fully represent the permanent residential location of the workforce and some may include the temporary residence of workers, who stay in the “local area” while working on shift. This is due to policies for MACH, Thiess and Sedgman to encourage workers at the Mount Pleasant Operation to live locally and allows workers to apply for work and/or potential gain preference for employment if they can show they live “local”.

¹ As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA.

2.3 Standard of living (based on salary)

Earnings are one of the main determinants of standard of living. The ABS releases average weekly earnings across various industries. The most recent data released by the ABS is shown in Table 2.

Table 2: Average weekly earnings per industry, full time, adult ordinary time (May 2020)

Industry	Average weekly earnings
Agriculture	Not included in data set
Mining	\$2,751.30
Manufacturing	\$1,544.60
Electricity, Gas, Water and Waste Services	\$1,971.30
Construction	\$1,695.90
Wholesale Trade	\$1,607.60
Retail Trade	\$1,271.00
Accommodation and Food Services	\$1,145.80
Transport, Postal and Warehousing	\$1,695.50
Information Media and Telecommunications	\$2,079.30
Financial and Insurance Services	\$2,052.50
Rental, Hiring and Real Estate Services	\$1,584.40
Professional, Scientific and Technical Services	\$1,994.90
Administrative and Support Services	\$1,551.50
Public Administration and Safety	\$1,863.00
Education and Training	\$1,897.10
Health Care and Social Assistance	\$1,798.00
Other	\$1,379.60

Source: ABS (2020)

During the Scoping SIA and the SIA, stakeholders referred to the two-tier or two-speed economy of the Upper Hunter, where people who work for the mines are paid more than those who do not². This is supported by the data in Table 2.

2.4 Summary

As at March 2020, there were 380 people working at the Mount Pleasant Operation. As demonstrated above, people who work in the mining industry are paid more in comparison to others who work in non-mining industries.

² Stakeholder D, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc.

3 Way of life - housing

3.1 Indicators for housing

A number of indicators have been selected based on engagement for the Scoping SIA and the SIA:

- Social housing – number of dwellings and wait times
- Building approvals
- Rental prices and vacancy rates
- Asking and sale price
- Housing stress
- Normal family home (Workforce Survey) and
- Perceptions of impacts on housing (Community Survey and SIA Case Studies)

Background information regarding the housing market in the Upper Hunter is provided below for context.

3.2 Housing in the Upper Hunter region

Research by Andrea Young Planning Consultants (2014) for the NSW Minerals Council, undertaken prior to commencement of mining at the Mount Pleasant Operation, explained how the upturn and downturn of the coal industry impacts on housing in the Upper Hunter. The research explains that in an upturn, there is an opportunity to invest and do well out of the housing market (investors are more prevalent). For those on low to moderate incomes and unable to access the private market, there is a strong competition for public/social and affordable housing, with options for many limited to shared or overcrowded housing or living at home. There is also greater difficulty in attracting and retaining workers to local services and businesses.

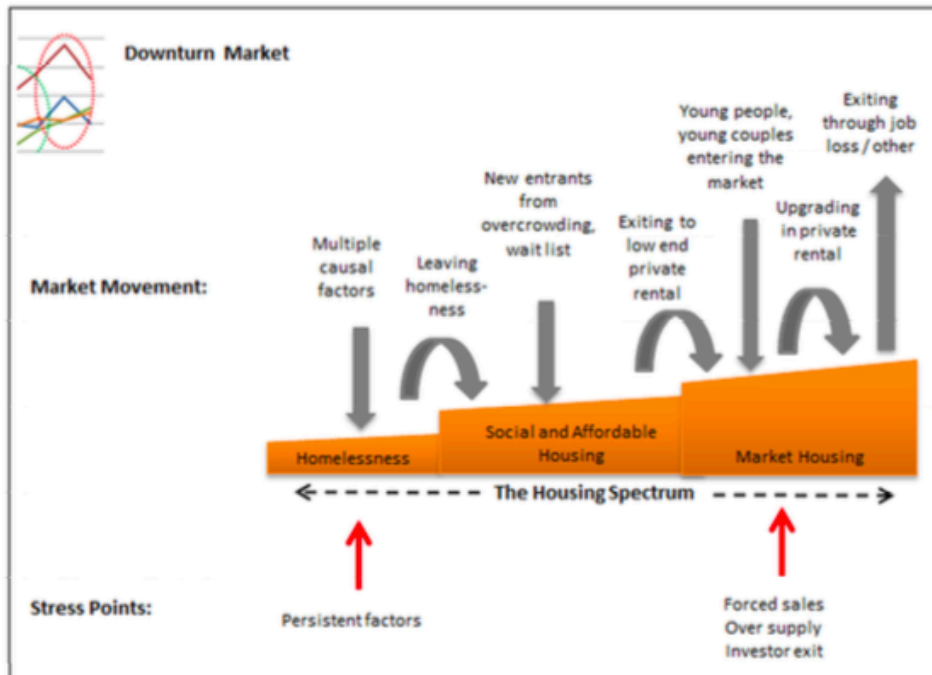
The research explains that in a downturn, there is a greater affordability generating a chain of events as mine and contract workers leave the private market, freeing up housing supply. This results in a lowering of the prices such that households leave public housing to enter the private rental market or upgrade within the private rental market. This in turn frees up the bottle neck that constrains the supply of social housing during an upturn, allowing people to move off the waiting list or out of overcrowded situations or homelessness into social housing. There are others who need to sell their homes due to job loss and enter either the rental market, social housing or even homelessness. Some may also leave the area.

When the market cycles back to an upturn, depending on the scale of the upturn and whether housing supply has been supplemented, the movement of people within the housing spectrum flows back in the other direction, as increased demand leads to increased rents and home purchase prices. People on low to moderate incomes can be vulnerable in this market. Those who gave up public/social housing to enter the private rental market can find it difficult to return, depending on the size of the waiting list. Others on low incomes may return to share housing, overcrowding, living with family or even leave the area. Again, businesses can struggle to attract workers faced with high housing costs, challenging the ability to maintain local service provision.

Andrea Young Planning Consultants (2014) point out that in both markets, homelessness persists. A downturn can accentuate homelessness through loss of job security or stress-related family breakdown.

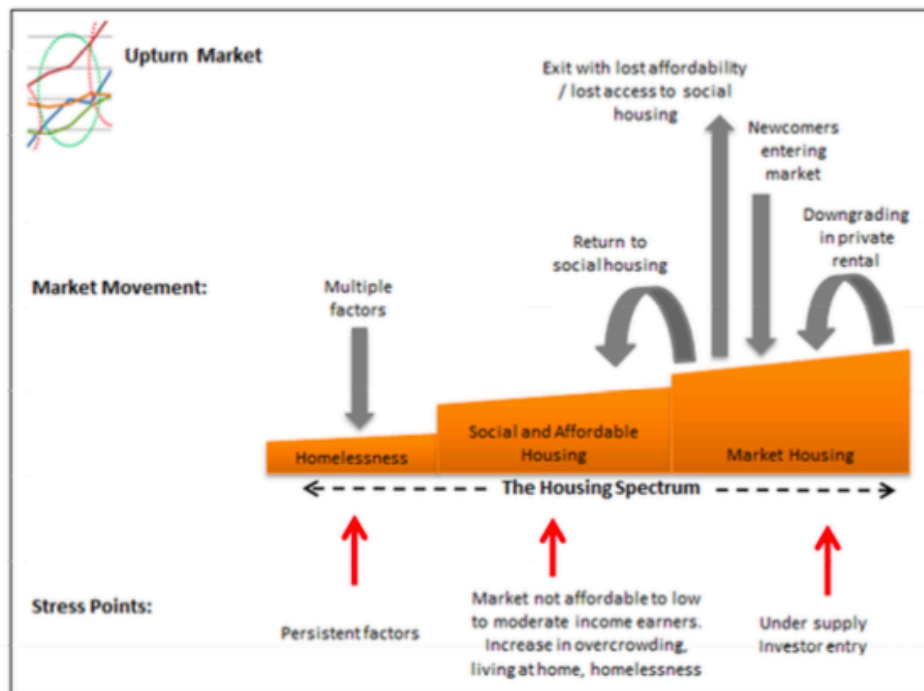
An upturn can do the same through loss of secure housing or the inability of a household to absorb increased housing costs. These trends are shown in Figure 2 and Figure 3.

Figure 2: Housing cycle in the Upper Hunter, downturn in the coal market



Source: Andrea Young Planning Consultants 2014:13

Figure 3: Housing cycle in the Upper Hunter, upturn in the coal market



Source: Andrea Young Planning Consultants 2014:13

Tony McTaggart from Edwards Higgens Parkinson First National, Muswellbrook described the history of the housing market in Muswellbrook:

Since the construction of the Liddell Power Station began in the mid 1960s, there has been demand for housing, both as owner occupiers and rentals in Muswellbrook. The demand increased in the 1980s with the construction of the Bayswater Power Station. Since then there has been one large project after another which has kept the demand for rental properties, particularly with the mines, Mount Arthur then Bengalla, Mangoola and more recently Mount Pleasant. The Upper Hunter has always provided a solid return on investment compared to an investment in the city.

Prior to the Global Financial Crisis (GFC) there was a higher percentage of investors and builders in the market. After the GFC there was a trend towards more owner occupiers. In 2014/15 the investors started to return and they are still looking and investing, particularly with decreasing returns in other investments such as the stock market. At the moment there is a small but growing market of people looking for a green change out of the city, people are looking to get away from Covid 19 and its impacts.

There is a fair amount of rental stock in Muswellbrook because there has been consistent demand. The number of new constructions has been slow over the past three to five years. There has been a trend for families to live on the coast or in the Lower Hunter and the worker travelling up for work, especially since the Hunter Expressway opened. If and when the Singleton Bypass is built, it will be even easier for people to commute. This could be because the family has always lived in the Lower Hunter and the workers has travelled to the Upper Hunter as the mines have come north. (Tony McTaggart, Edward Higgens Parkinson First National)

This was supported by the Muswellbrook Chamber of Commerce and Industry Inc.:

The real estate market is changing with investors looking to come back into the market. Rents have decreased but are now on the way back up again, but nothing like the boom. No one wants another boom, the highs are too high and the fall is too great (MCCI)

3.3 Social housing and wait times

Muswellbrook's housing market is also influenced by the 450 social dwelling houses in the LGA. The Muswellbrook Shire Council's 2017-2027 Community Strategic Plan states the following:

Approximately 30% of tenants coming to live in Muswellbrook's community housing transition out within twelve months. 44% of tenants coming to live in Muswellbrook's social housing were homeless at the time of placement and 94% of tenants are in the highest level of need. The issues of social disadvantage with which the Muswellbrook community presently deals with are more complex and layered than ever before.

This is placing enormous demand on social welfare services as well as on education, health and other social services. There is also evidence that the service provision is less effective because of the instability in the social housing tenancies. (MSC 2017)

There is also a higher demand for social housing in Muswellbrook compared to other towns in the Upper Hunter Region, with a significantly higher number of people waiting for social housing as shown in Table 3.

Table 3: Expected waiting times for social housing

Area	Expected waiting time				# of people waiting	
	Studio/1 bedroom	2 bedroom	3 bedroom	4+ bedrooms	General	Priority
Muswellbrook (NN06)	2 to 5 years	2 to 5 years	5 to 10 years	2 to 5 years	172	6
Denman (NN14)	-	2 to 5 years	Up to 2 years	2 to 5 years	6	0
Aberdeen (NN13)	-	2 to 5 years	Up to 2 years	Up to 2 years	10	0
Scone (NN11)	2 to 5 years	2 to 5 years	Up to 2 years	5 to 10 years	32	4
Singleton (NN12)	5 to 10 years	2 to 5 years	5 to 10 years	2 to 5 years	73	2

Source: NSW Communities and Justice 2019

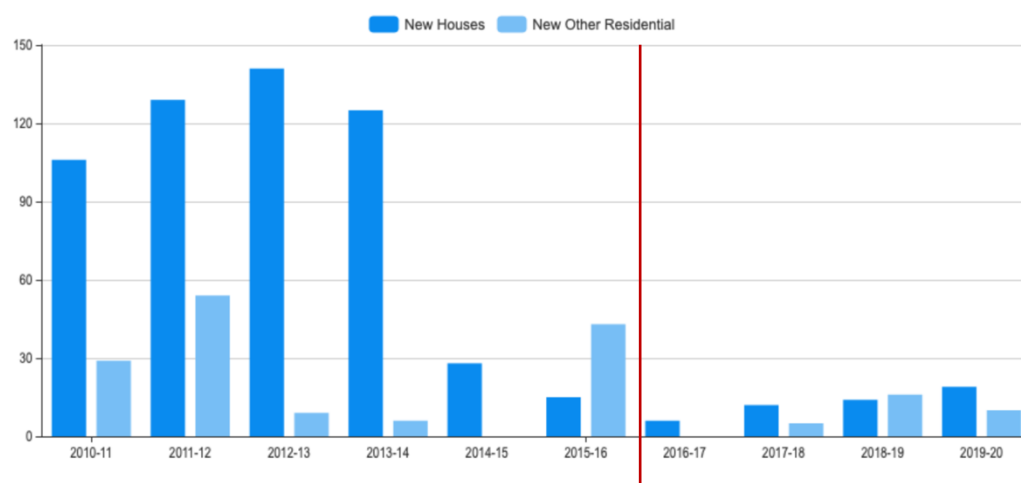
3.4 Building approvals

3.4.1 Muswellbrook Shire Council LGA

The trend of building approvals in the Muswellbrook Shire Council LGA is shown in Figure 4. The number of building consents peaked in 2012/2013, at the same time as the 'coal boom'. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

Figure 4: Building approvals by count, Muswellbrook Shire Council LGA

Building Approvals by Count

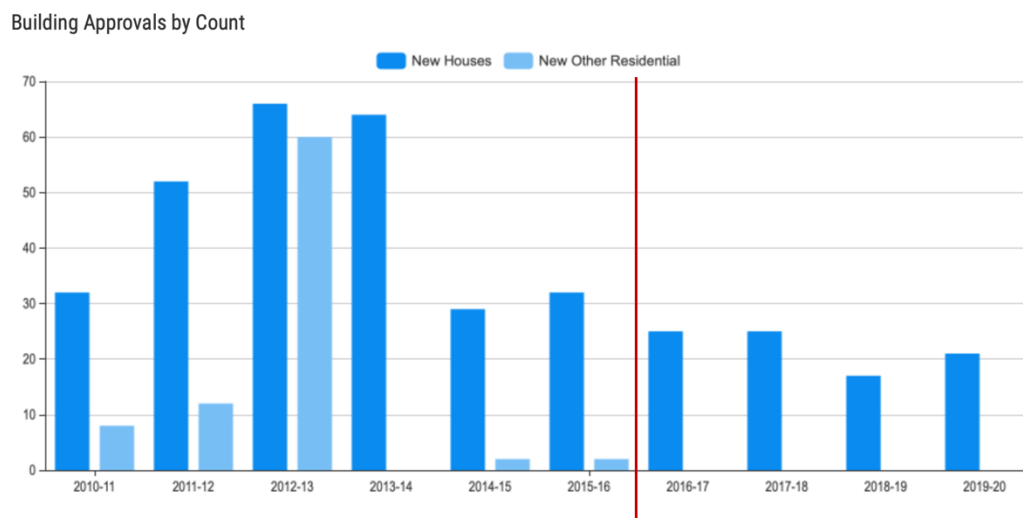


Source: REMPLAN (2020a)

3.4.2 Upper Hunter Shire Council LGA

The trend of building approvals in the Upper Hunter Shire Council LGA is shown in Figure 5. Similar to Muswellbrook, the number of building consents in the Upper Hunter peaked in 2012/2013, at the same time as the 'coal boom'. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

Figure 5: Building approvals by count, Upper Hunter Shire Council LGA

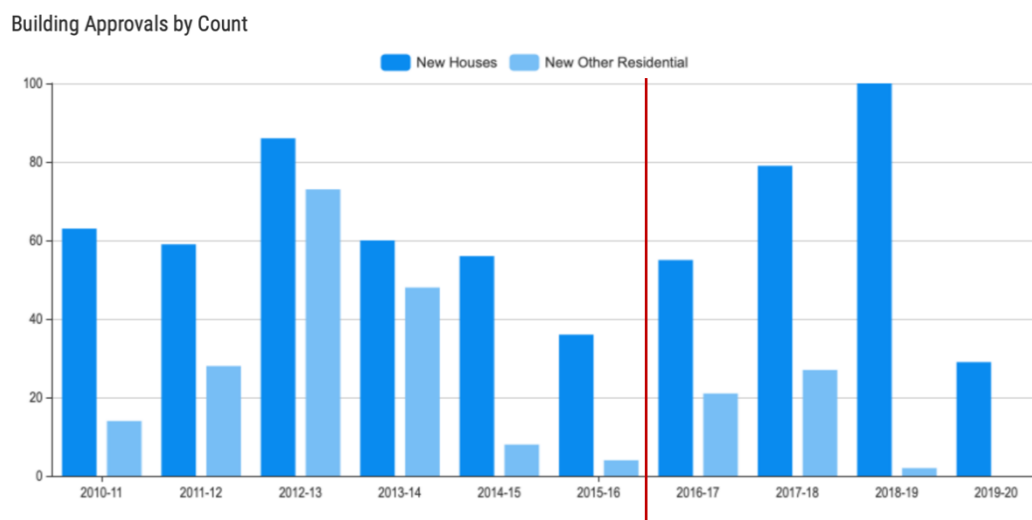


Source: REMPLAN (2020c)

3.4.3 Singleton Shire Council LGA

The trend of building approvals in the Singleton Shire Council LGA is shown in Figure 6. Similar to Muswellbrook and the Upper Hunter, the number of building consents previously peaked in 2012/2013, however, a larger peak has since been experienced in the period 2018/2019. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

Figure 6: Building approvals by count, Singleton LGA



Source: REMPLAN (2020c)

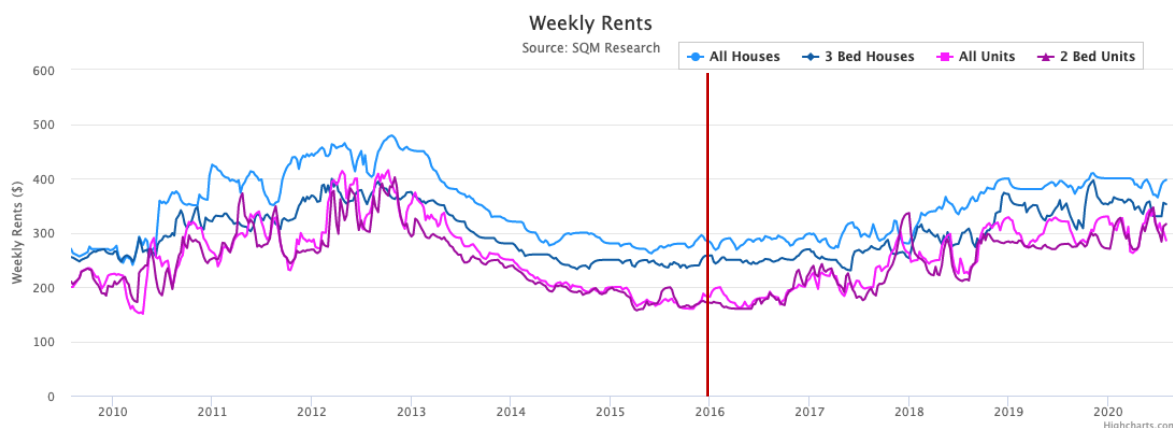
3.5 Rental prices and vacancy rates

Fluctuations in housing markets are a common feature in regions where mining or other major projects lead to a rapid expansion and then reduction in workforce with markets unable to respond quickly to changing demand (Andrea Young Planning Consultants 2014). This is true of the Upper Hunter region where the housing market is largely driven by the mining and electricity industry (MSC 2018).

3.5.1 Muswellbrook

The median asking price for rental properties in Muswellbrook (post code 2333) from 2010 to 2020 is shown in Figure 7. The trend of increasing and decreasing rental prices mirror the upturn and downturn of the coal industry in the area as described in Section 3.2. The increasing rental prices align with the growth of the coal industry from 2010 to 2012 (with a peak of asking rental prices for all housing types being in October 2012 at \$478 per week). The median asking price for all housing types was \$397 in August 2020. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

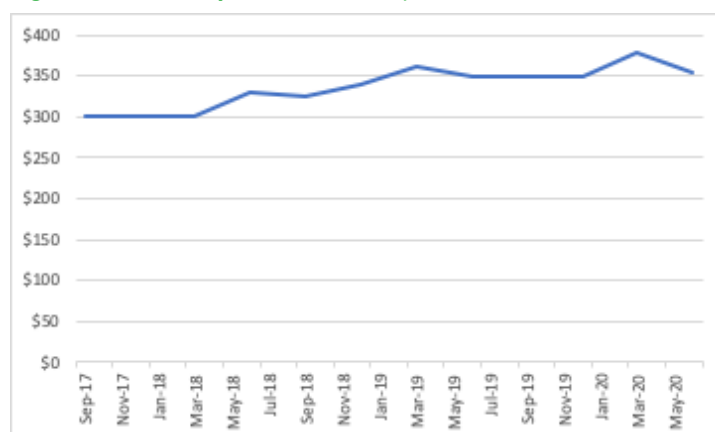
Figure 7: Median asking rental price in Muswellbrook (post code 2333)



Source: SQM Research 2020a

The quarterly median rental prices for all dwellings in the Muswellbrook Shire Council LGA from September 2017 to June 2020 is shown in Figure 8. Based on research by Andrea Young Planning Consultants (2014) and feedback from Tony McTaggart (EHP First National), Muswellbrook's rental market has been driven by large infrastructure and mining projects and while there are these projects occurring in the region, the rental market in Muswellbrook is expected to remain in demand. The start of construction at the Mount Pleasant Operation was in 2016 and predates this data set.

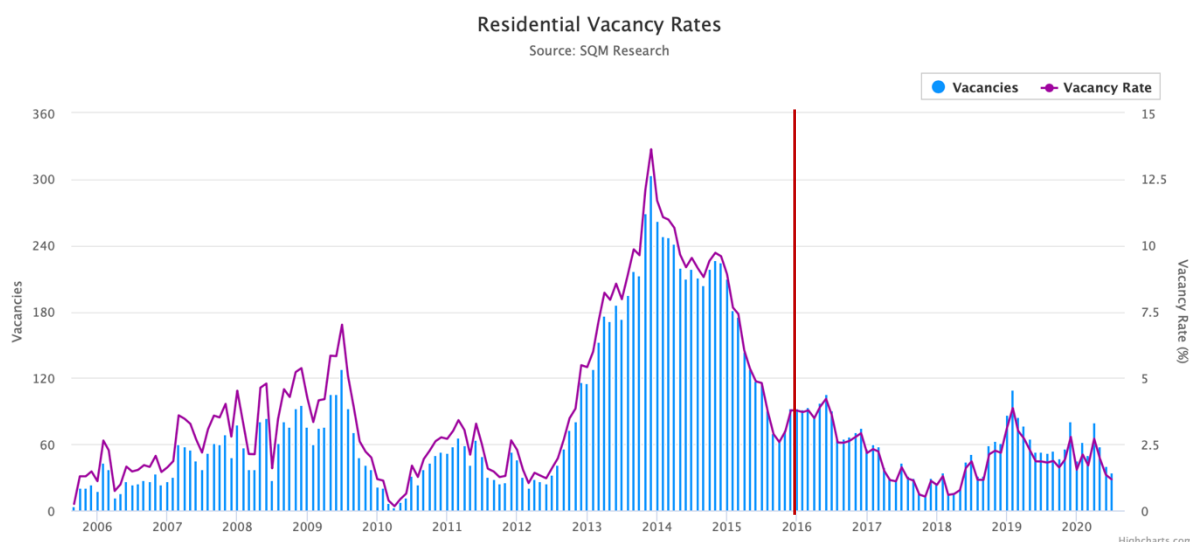
Figure 8: Quarterly median rental price in the Muswellbrook Shire Council LGA



Source: Department of Community and Justice 2020

The vacancy rates in Muswellbrook (postcode 2333) from 2006 to 2020 are shown in Figure 9. The peak of the vacancy rate was in December 2013 with 13.6% vacancy or 304 properties available. The lowest point of vacancy was in April 2010 when there was a vacancy rate of 0.2% or where only 3 properties were available. In June 2020, the vacancy rate was 1.3% equivalent to 40 properties available to rent. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

Figure 9: Residential vacancy rates in Muswellbrook (post code 2333)

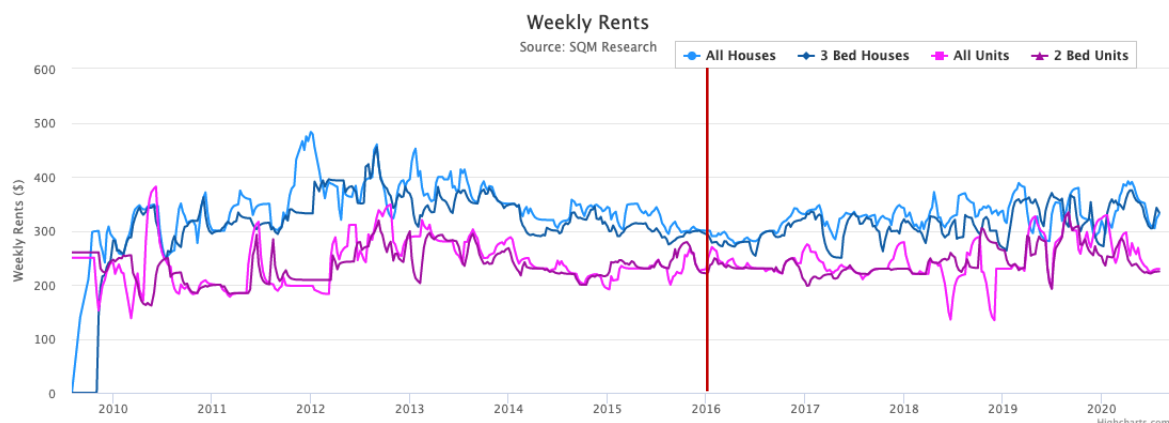


Source: SQM Research 2020b

3.5.2 Upper Hunter

The median asking price for rental properties in the Upper Hunter (postcode 2337) from 2010 to 2020 is shown in Figure 10. There is greater stability in the asking price for rental properties in the Upper Hunter than Muswellbrook, which could be a reflection of its decreased level of reliance on the coal industry. The peak of median weekly rental asking price for all housing types was in January 2012 at \$479. The median weekly rental asking price for all housing types was \$331 in August 2020. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

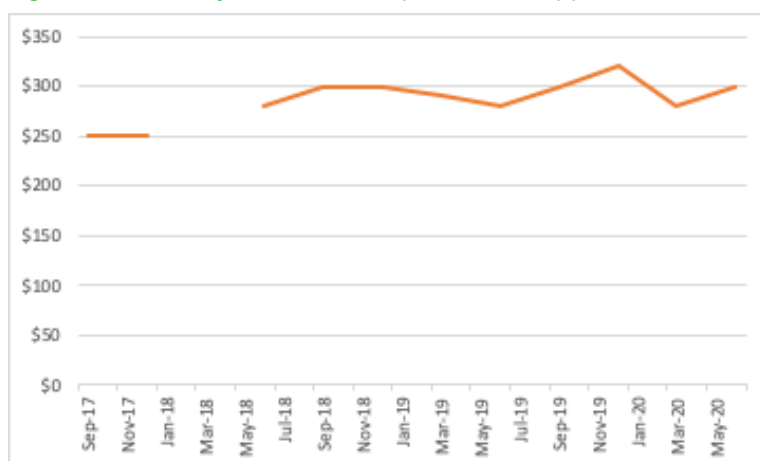
Figure 10: Median asking rental price in the Upper Hunter (post code 2337)



Source: SQM Research 2020c

The quarterly median rental prices for all dwellings in the Upper Hunter Shire Council LGA from September 2017 to June 2020 is shown in Figure 11. Figure 11 shows a generally increasing median rental price in the Upper Hunter Shire Council LGA. Given the area has less reliance on the mining industry and other housing market drivers remaining equal (namely supply and demand), it could be expected that the median rent would continue to gradually increase over time. The start of construction at the Mount Pleasant Operation was in 2016 and predates this data set.

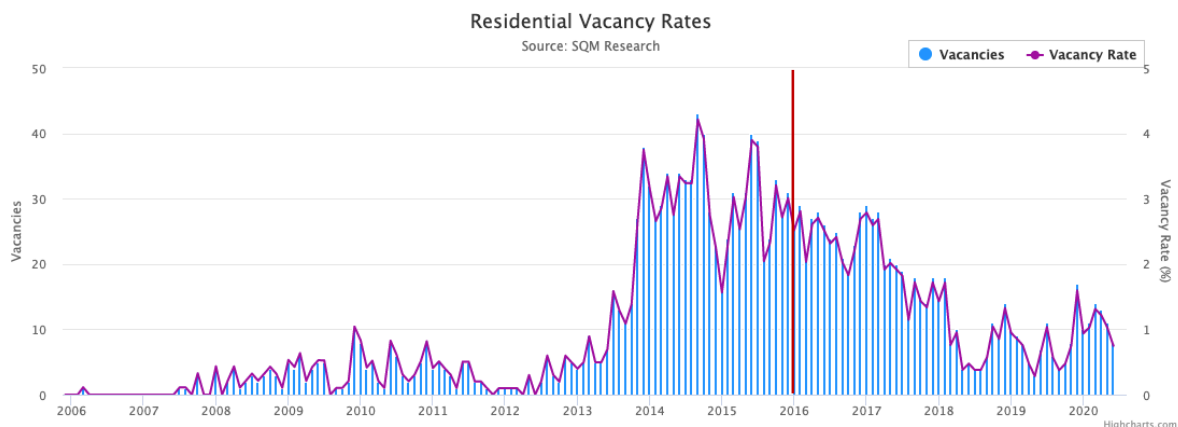
Figure 11: Quarterly median rental price in the Upper Hunter Shire Council LGA



Source: NSW Department of Community and Justice 2020

The vacancy rates in the Upper Hunter (post cost 2337) from 2006 to 2020 are shown in Figure 12. The peak of the vacancy rate was in September 2014 with a 4.2.% vacancy equivalent to 43 properties available. In June 2020, the vacancy rate was 0.7% or 8 properties available to rent. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

Figure 12: Residential vacancy rates in the Upper Hunter (post code 2337)

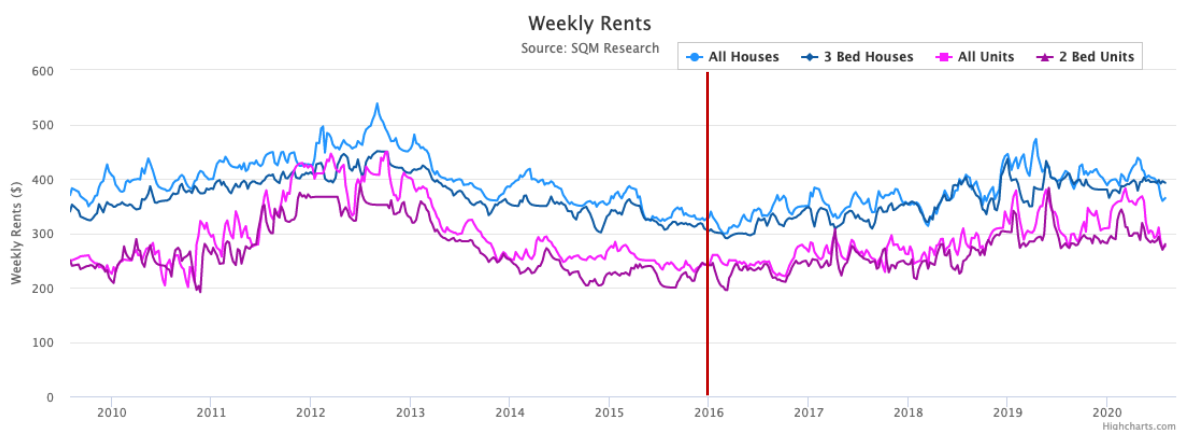


Source: SQM Research 2020d

3.5.3 Singleton

The median asking price for rental properties in the Singleton (postcode 2330) from 2010 to 2020 is shown in Figure 13. With Singleton having a high reliance on the coal industry, a similar trend to the median asking rental price Muswellbrook can be seen, with an increase up till the end of third quarter of 2012, a decrease and then a slow increase. At its peak, the highest median asking weekly rental for all housing types was \$538 in September 2012. In August 2020, the median weekly rental asking price for all housing types was \$365. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

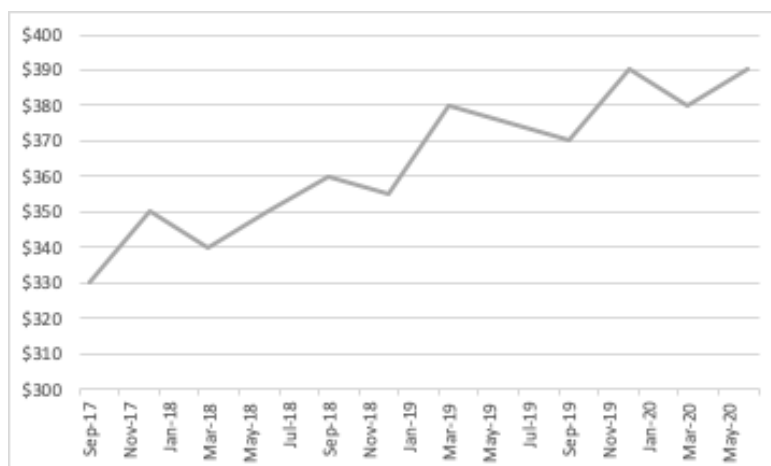
Figure 13: Median asking rental price in Singleton (post code 2330)



Source: SQM Research 2020e

The quarterly median rental prices for all dwellings in the Singleton Shire Council LGA from September 2017 to June 2020 is shown in Figure 14. Figure 14 shows a general increasing median rental price in the Singleton LGA. However, it is unknown if this increase is expected to remain, given the uncertainty in the LGA with the closure of the Liddell power station and COVID-19. The start of construction at the Mount Pleasant Operation was in 2016, and predates this data set.

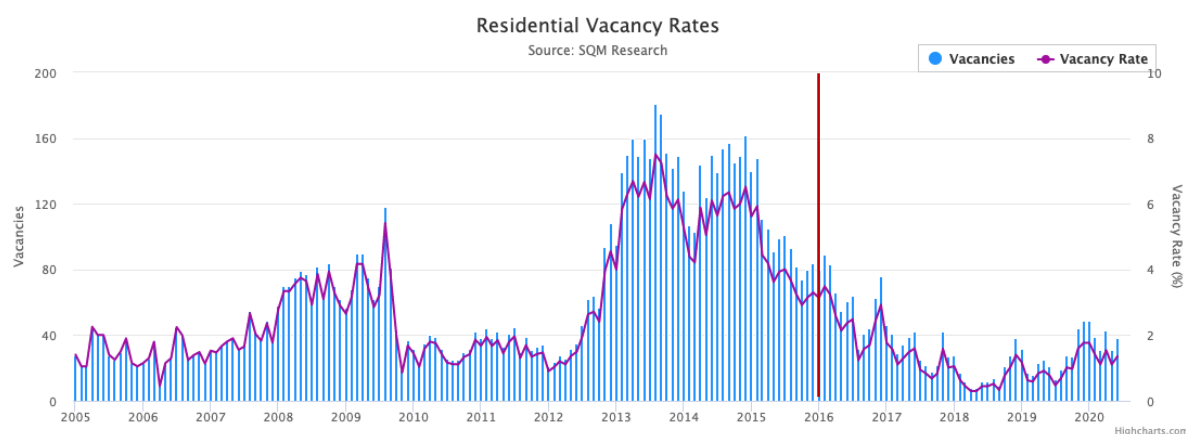
Figure 14: Quarterly median rental price in the Singleton LGA



Source: NSW Department of Community and Justice 2020

The vacancy rates in Singleton (postcode 2330) from 2006 to 2020 are shown in Figure 15. The peak of the vacancy rate was in August 2013 with 7.5% vacancy or 181 properties available. The lowest point of vacancy was in April and May 2020, where the vacancy rate equated to 0.4% with only 8 properties available during both months. In June 2020, the vacancy rate was 1.4% or 38 properties available to rent. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

Figure 15: Residential vacancy rates in Singleton (post code 2333)



Source: SQM Research 2020f

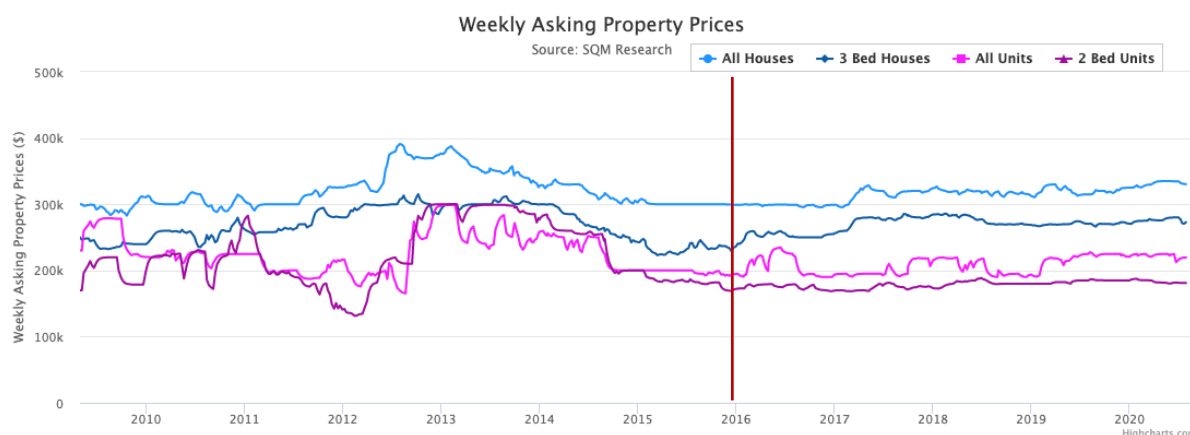
3.6 Asking and Sale Price

3.6.1 Muswellbrook

The median weekly asking price for properties in Muswellbrook (postcode 2333) from 2009 to 2020 are shown in Figure 16. The peak of the median asking property price for all houses was in August 2012 at \$391,088. Since the drop in property prices after August 2012, there has been a gradual increase, which shows there is still demand for properties to purchase in Muswellbrook. Tony McTaggart (EHP First National) explained that during the 'coal boom' it was mainly investors looking to purchase but since the downturn it has mainly been owner occupiers. However, the investors are slowly returning to the market because of more consistent returns compared to inner city areas such as Sydney. Both Tony and the

Muswellbrook Chamber of Commerce noted increasing interest from investors, which may be a sign of an upward cycle in the housing market. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

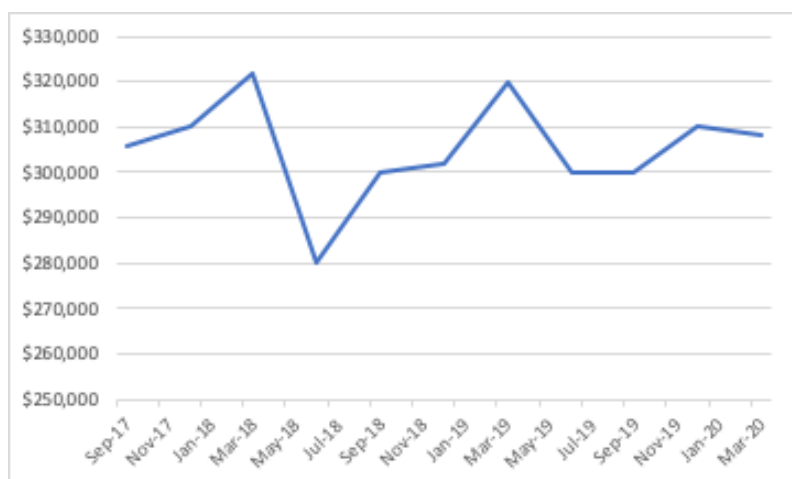
Figure 16: Median weekly asking property price in Muswellbrook (post code 2333)



Source: SQM Research 2020g

The median sale price for all dwellings in the Muswellbrook Shire Council LGA from the September quarter in 2017 through to the March quarter in 2020 are shown in Figure 17. The start of construction at the Mount Pleasant Operation was in 2016, and predates this data set.

Figure 17: Median sale price Muswellbrook Shire Council LGA

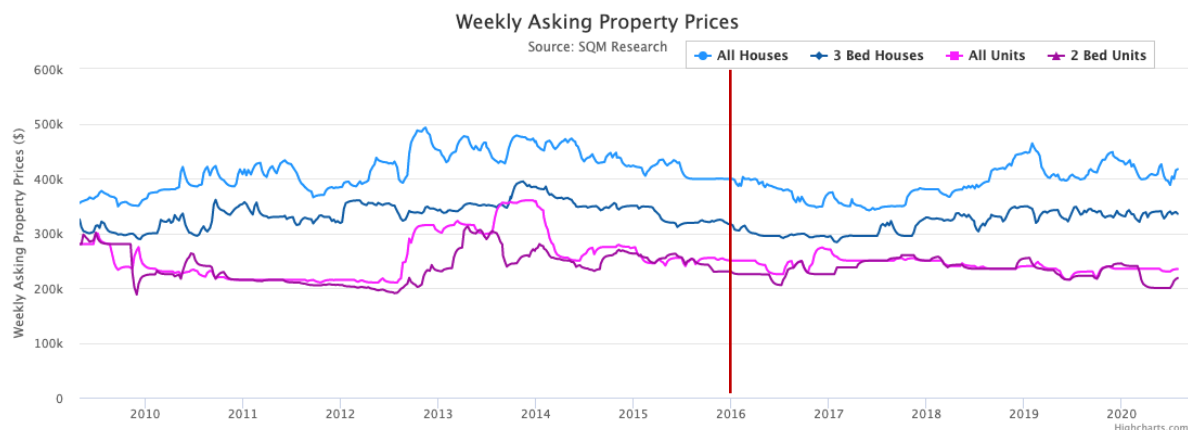


Source: Department of Community and Justice 2020

3.6.2 Upper Hunter

The median weekly asking price for properties in the Upper Hunter (postcode 2337) from 2009 to 2020 are shown in Figure 18. The peak of the median asking property price, all houses was in November 2012 at \$492,657 (rental asking price peaked in January 2012). A red line shows the start of construction of the Mount Pleasant Operation in 2016.

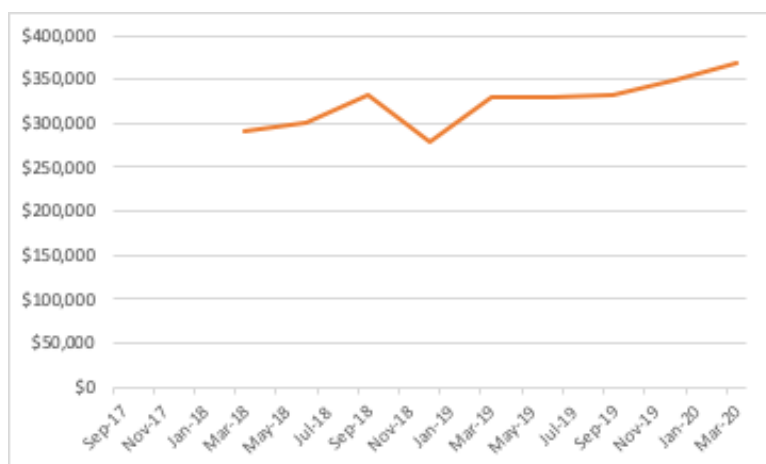
Figure 18: Median weekly asking property price in the Upper Hunter (post code 2337)



Source: SQM Research 2020h

The median sale price for all dwellings in the Upper Hunter Shire Council LGA from the September quarter in 2017 through to the March quarter in 2020 are shown in Figure 19. The start of construction at the Mount Pleasant Operation was in 2016 and predates this data set.

Figure 19: Median sale price the Upper Hunter Shire Council LGA

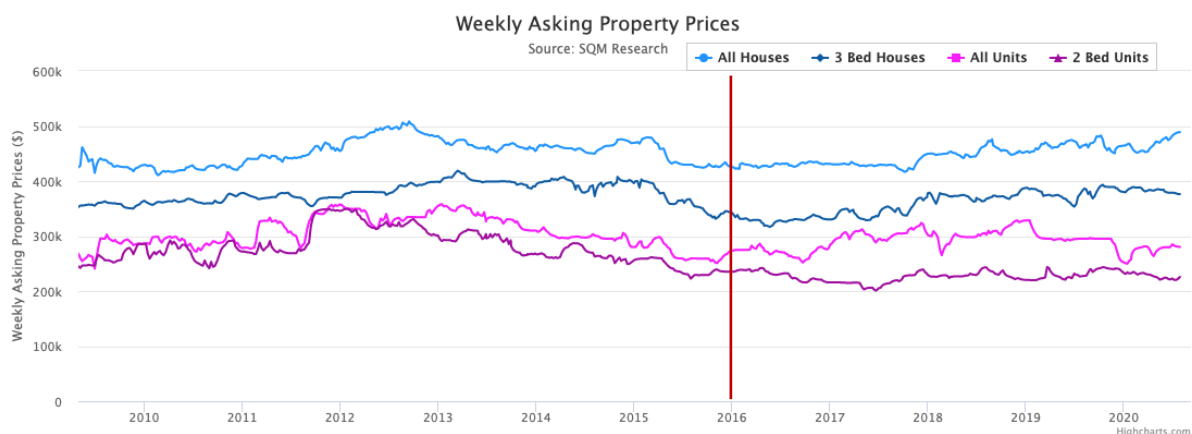


Source: NSW Department of Community and Justice 2020

3.6.3 Singleton

The median weekly asking price for properties in Singleton (postcode 2330) from 2009 to 2020 are shown in Figure 20. The peak of the median asking property price, for all housing types was in September 2012 at \$508,242. A red line shows the start of construction of the Mount Pleasant Operation in 2016.

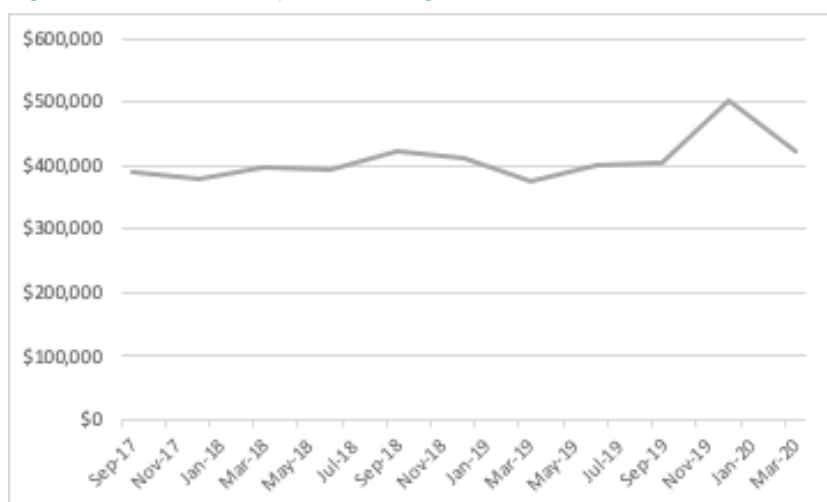
Figure 20: Median weekly asking property price in Singleton (post code 2330)



Source: SQM Research 2020i

The median sale price for all dwellings in the Singleton Shire Council LGA from the September quarter in 2017 through to the March quarter in 2020 are shown in Figure 21. The start of construction at the Mount Pleasant Operation was in 2016 and predates this data set.

Figure 21: Median sale price the Singleton LGA



Source: NSW Department of Community and Justice 2020

3.7 Housing stress

Housing stress for households who rent in the LGAs making up the Upper Hunter region in 2011 is set out in Table 4

Table 4: Housing stress for households who rent, 2011

LGA	% of households who rent experiencing housing stress
Muswellbrook	23.6% (around 1 in 4 households)
Upper Hunter	20.7% (around 1 in 5 households)
Singleton	17.2% (around 1 in 6 households)

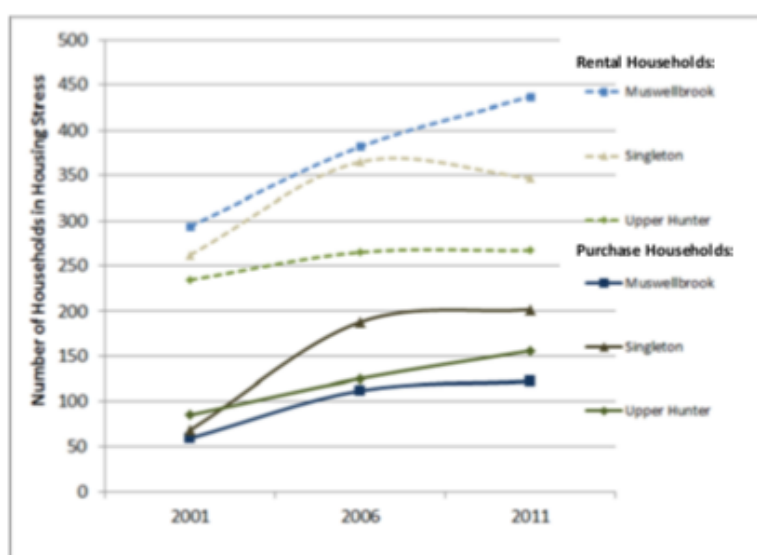
Source: Andrea Young Planning Consultants 2014:6

Figure 22 shows the number of households who were experiencing housing stress in the Muswellbrook, Upper Hunter and Singleton Council LGAs in 2011. Housing stress is more evident for rental households, this is partly because below a certain income level, households do not pass financial institutional thresholds for finance or mortgages. (Andrea Young Planning Consultants 2014:7).

Andrea Young Planning Consultants (2014) stated that housing stress data beyond 2011 was not available at the time, however as rental data showed an initial increase and then decrease since 2011, housing stress levels would also increase and then decrease (Andrea Young Planning Consultants 2014:8).

It is suggested, given the similarities of data from 2011 to 2020, that the number of rental and purchase households experiencing housing stress would be similar.

Figure 22: Number of rental and purchase households in housing stress (2001 – 2011)³



Source: Andrea Young Planning Consultants 2014:8

3.8 Workforce survey

3.8.1 Where does the workforce live while working?

The Workforce Survey⁴ (refer to Appendix G), included a question asking where people lived while working. Of the 153 people who answered this question, 80% (121 respondents) live in their normal family home and 20% (23 respondents) lived away from their normal family home (classified as drivein/drive out [DIDO] and temporary residents).

3.8.2 Workers who are permanent local residents

Of the 121 respondents who live in their normal family home while working, the majority lived in the Muswellbrook, Upper Hunter or Singleton Council LGAs, as shown in Table 5 and in Figure 23.

³ The data used in Figure 22 was a specific data set prepared by the Australian Bureau of Statistics.

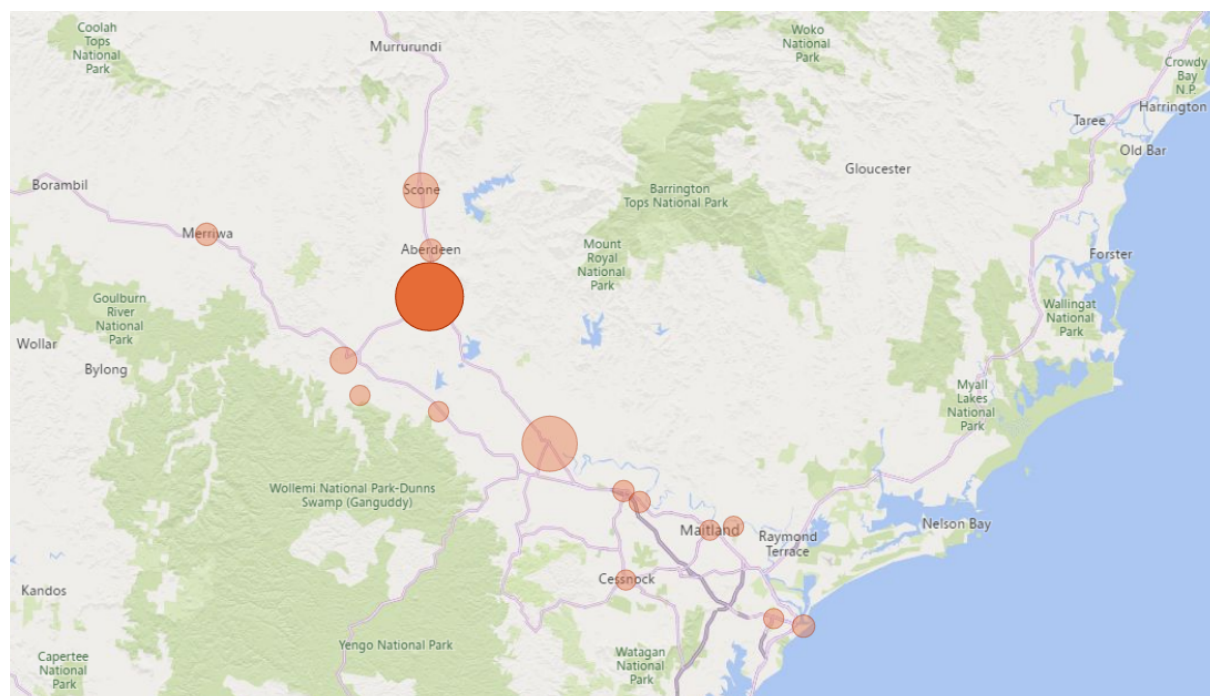
⁴ Only 153 workers completed the Workforce Survey so the results can only be used as a guide rather than a statistically representative sample of the workforce.

Table 5: Location of normal family home while working (n = 121)

Place of residence		Number of responses
Muswellbrook Shire Council LGA		53
	<i>Muswellbrook</i>	46
	<i>Denman</i>	7
Upper Hunter Shire Council LGA		21
	<i>Scone</i>	15
	<i>Aberdeen</i>	3
	<i>Merriwa</i>	3
Singleton LGA		35
	<i>Singleton</i>	34
	<i>Jerrys Plains</i>	1
Other		12
Total		121

Source: Workforce Survey

Figure 23: Location of normal family home while working (n = 121)

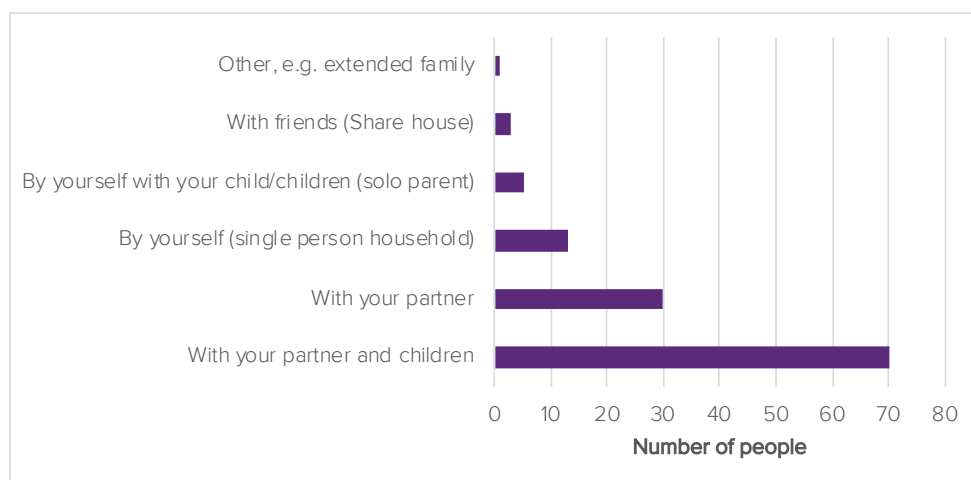


Source: Workforce Survey

74% of the permanently resident workers own or are paying off a mortgage, 25% rent and 1% have another tenure.

As shown in Figure 24, over half of the local resident workers live with a partner and child/children, a quarter live with a partner and roughly one in ten live alone. The balance lives with a child/children as a solo parent or with friends or extended family.

Figure 24: Living arrangements (n = 122)

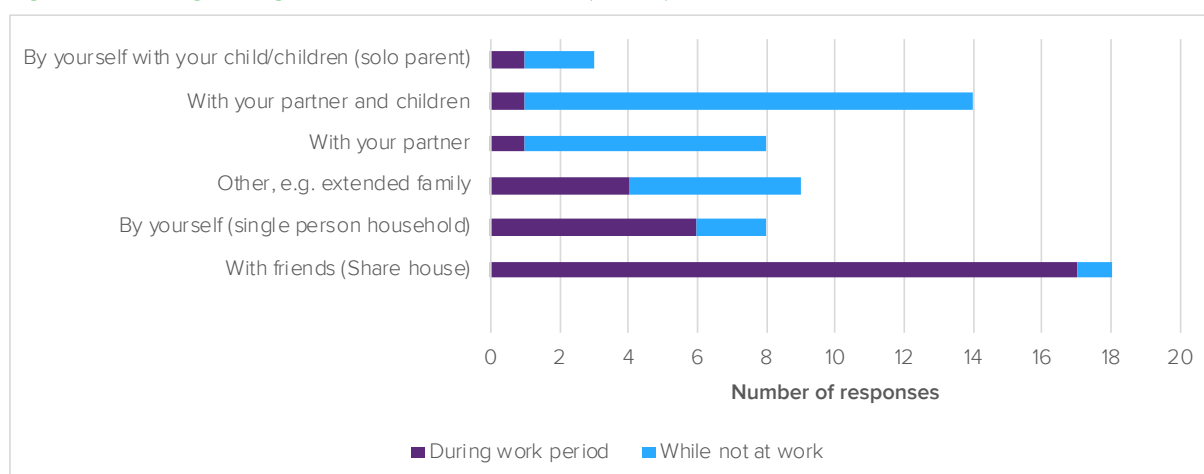


3.8.3 Temporary residents/DIDO workforce

Of the 20% (31) respondents who live away from their normal family home during their work period (i.e. DIDO), 87% lived in the Muswellbrook Shire Council LGA with 23 in Muswellbrook and one each in Denman, Mangoola and Sandy Hollow. The remaining four respondents lived in Aberdeen, Scone, Singleton, and Newcastle. One person did not respond to this question. 67% of the DIDO workforce live in a rental property, 13% live in a house they own or are paying off a mortgage on and the remainder are staying with other family or friends.

The majority of the DIDO workforce share accommodation during their work period with some staying by themselves and others staying with family. When not at work they tend to live with their partner and children, as shown in Figure 25.

Figure 25: Living arrangements for DIDO workers (n = 30)

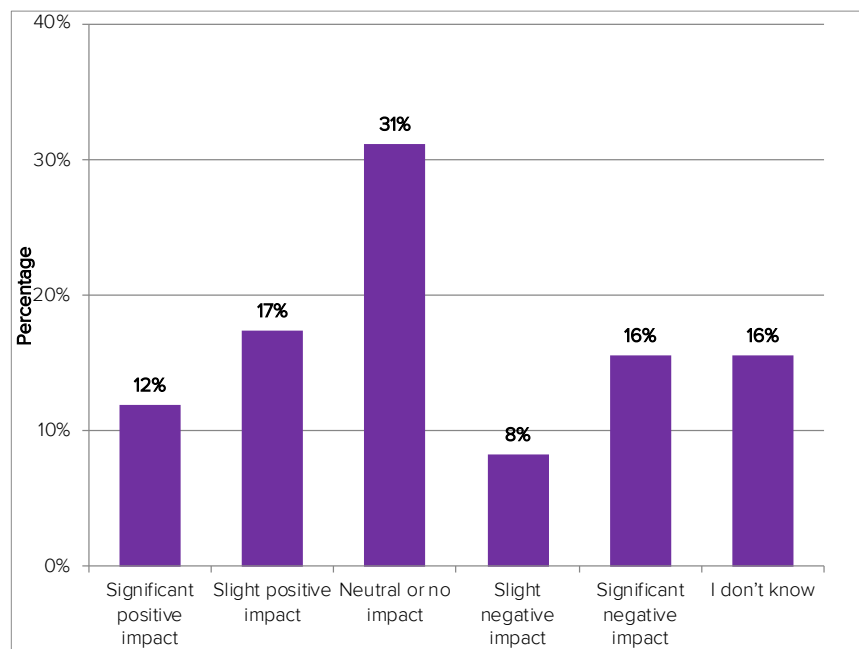


Most DIDO workers live in NSW, a few travel in from other states including from Western Australia (Perth), Queensland (Brisbane and Gold Coast) and Victoria (Melbourne). Two respondents specified they lived in Muswellbrook and Scone which indicates possible misunderstanding of the question. Of those who reside permanently in NSW, most come from the area between the Central Coast and Newcastle.

3.9 Community Survey

The SIA Community Survey (refer to Appendix F) asked about the overall impact the current Mount Pleasant Operation had on housing in the area in which people lived. Housing impacts included impacts on purchase and rental costs and the availability of housing. 109 people responded to the question and the results are shown in Figure 26.

Figure 26: Impact on housing – all responses (n = 109)



Responses to this question were relatively evenly distributed compared to the responses to other questions in the Community Survey. 29% of survey respondents provided a positive Likert scale rating, compared with 24% of respondents who provided a negative Likert scale rating.

Relevant comments⁵ from the community survey are provided in Table 6. Of the comments received, there was a mix of positive and negative comments.

Table 6: Comments on the housing impacts of the Mount Pleasant Operation, Community Survey

Location	Comment
Castlerock	<i>"Unfortunately mining has to remove homes that are in the way. The loss of homes that have become part of our everyday environment affect us when we find they are gone. Along with the homes many families have to move on. Unfortunately, we have to accept that mining does involve the removal of many homes. When the houses go, and the people go, there is a real loss of community."</i>
Wybong	<i>"Mining brings wild uneducated australian born rednecks and pig shooters trashing the surrounds and bidding up home prices with the nee criminal advantage of negatively geared rent-to-self housing."</i>
Kayuga	<i>"I would not recommend a family relocate to Muswellbrook, given the known health risks of PM and that Mt Pleasant has proceeded upwind of town"</i>

⁵ If a comment was more suited to another survey topic, it is reported in the other survey topic.

Location	Comment
	<i>"Reduced housing stock because of properties bought and demolished. Mt Pleasant has probably lowered real estate values as its proximity and high visibility would deter thoughtful investors."</i>
Muswellbrook	<p><i>"Before it was rural acreage close to the town. Now MAC Energy has created a horrible landscape, seen as soon as you arrive in Muswellbrook from Singleton or Aberdeen, viewing is definitely a Negative for valuations."</i></p> <p><i>"brings more people to town"</i></p> <p><i>"Good investment returns, however this dips and flows with the mining industry, Rent is high priced due to this but also ebbs and flows"</i></p> <p><i>"Housing availability is hard to find, due to the FIFO workers"</i></p> <p><i>"I want to sell my house soon, but with the amount of shops that have closed due to workers living outside of area, as it is all casual employment, I think it will be difficult"</i></p> <p><i>"More jobs, more people. It's a buyers market"</i></p> <p><i>"No more than any other mining area. When the mines are finished the homes will be worthless as there is currently nothing else to sustain the area. The dairy industry is gone and any other farming. 50 years down the track the place will be a ghost town."</i></p> <p><i>"Nobody wants to actually live in Muswellbrook. Witness the traffic through Singleton of an afternoon, with people working in the mines and residing outside the mining area."</i></p> <p><i>"Prices have not risen if properties. Suspect this is due to the transient nature of contractors and FIFO workers which provide little to no benefit to the local economy"</i></p> <p><i>"The increase in employment has greatly improved the use of rental properties and hotel/motels in the area. Resulting in less empty properties"</i></p> <p><i>"This depends if you are looking from an investors angle or from a home owner/renters angle"</i></p> <p><i>"This has impacted locals' ability to obtain affordable rental housing in Muswellbrook... due to huge rent increases"</i></p> <p><i>"Very difficult to secure rentals in town now and rent prices have risen accordingly"</i></p>
McCullys Gap	<i>"I have two properties within the Muswellbrook LGA. One is a investment rental property, which has been providing a good returns and growth."</i>
Denman	<i>"Rental occupancy is very strong in Denman."</i>
Parkville	<i>"Some bad subdivisions have been allowed."</i>
Scone	<p><i>"As I own my home ; and do NOT intend to sell ; housing costs do not concern me ."</i></p> <p><i>"Having purchased a house in Scone, the Mount Pleasant Operation has not impacted me personally. The mine does employ locally so more jobs means more demand on housing in Muswellbrook in particular."</i></p> <p><i>"people try to get away from the mines, live here and work there. They rent houses but live elsewhere.. it's disrupted, and the ugliness chases buyers out, depressing prices"</i></p> <p><i>"When I originally moved to Muswellbrook in 2017 the rental housing prices were incredibly low and there were a significant number of properties available to rent. In the three years of living in Muswellbrook I have seen and experienced an increase in rent and a decrease in rental property availability which to me suggests a more healthy market compared to where it was two years ago. These rental prices are still well below what you would pay living close to a city. In terms of house pricing the house prices in Muswellbrook again have picked up in the last couple of years and continuation of projects provides a buffer against housing price volatility."</i></p>
Singleton	<p><i>"Construction and operation has boosted local economy and demand for housing in the area."</i></p> <p><i>"I believe most of the staff now are local, which doesn't necessarily impact rental properties. It does however negatively impact the value of rural properties which are not in the 'have to buy' zone."</i></p>

Note: this table only lists the responses relevant to the potential housing impacts. Further details regarding the Community Survey are included in Appendix F.

3.10 SIA stakeholders

SIA stakeholders made the following comments on the impacts on housing:

Reduction in the access to adequate rental housing in Muswellbrook and Denman due to demand for rental properties, increase in investors buying properties for high rental return. Increased pressure on rental properties has impacted on the ability of families or individuals to buy in the local residential market and inhibiting families to move to the area. The number of investment properties and social housing properties currently exceeds the state average for a regional area of the MSC LGA. Mining industry employees are not buying into the the local housing market and subsequently not relocating their families to Muswellbrook. Non-compliant accommodation practices to accommodate workers looking for short to medium term accommodation ie caravans in backyards, hot bedding and the establishment of sleeping quarters in industrial zoned areas. (Muswellbrook Shire Council Scoping SIA)

As mining has continued through the Covid 19 restrictions/isolation, there is still pressure on affordable housing in the area. (Muswellbrook Shire Council SIA)

While staying in town, the miners share a rental property with miners or in temporary accommodation e.g. hotels. The owners of the rental properties are raising the rent because they can get more money from a group of miners rather than a low-income family. This has led to a limited number of rental options for local income families. One example is during the boom, when Mount Arthur was being built a low-income family with five children had their rent increased from \$500/week to \$1,500/week, which they could not afford and had to move out. New houses aren't being built because the permanent population is not growing leading to a lack of affordable housing. (Wanaruah Local Aboriginal Land Council, Scoping SIA)

In their meeting for the SIA, Wanaruah Local Aboriginal Land Council described how the DIDO mine workers often stay in hotels while on shift and then move into a rental property when one becomes available. They said they could tell which houses had DIDO miner workers staying in them because of all the cars parked outside and gave Sydney Street in Muswellbrook as an example.

After the 2012/2013 downturn, house prices in Muswellbrook dropped because of the decreased demand. This meant they became more affordable. People on lower incomes moved into the area to take up the opportunity for cheaper housing. A housing development on the south east of Muswellbrook didn't get completed due to the downturn. Many of the houses in the development are now owned and managed by Compass Housing. There is now a lack of housing in Muswellbrook and a significant number of people displaced in the community.

People who work for the mining companies live in Scone, because they want to live locally but do not want their families to experience the impacts of mining. Sadly the dust from the Muswellbrook mines is already in the Upper Hunter and this expansion project would bring other impacts by crashing through the ridge: impacting views, with blast disturbance, vibration and noise. Clearly this results in a loss of ambience and reputation.

Mining companies' move towards having a contract/casualised workforce means people don't have the confidence in their job security to apply for a mortgage and buy in the local area; particularly when limited economic diversity makes it hard for mine workers to shift industries if there is another

downtown in the coal market. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

The real estate market is changing with investors looking to come back into the market. Rents have decreased but are now on the way back up again, but nothing like the boom. No one wants another boom, the highs are too high and the fall is too great. (Muswellbrook Chamber of Commerce and Industry Inc. SIA)

There have not been any overwhelming significant impacts on the real estate market since the construction and operation of Mount Pleasant. The anticipation of Mount Pleasant helped to buffer the area from the impacts of the GFC and its construction and operation have helped to stabilise the market. (Tony McTaggart, EHP First National, SIA)

Continued issues created by a large DIDO workforce and well-known 'gaming of the system' by DIDO workers (Friends of the Upper Hunter Inc., SIA)

3.11 Summary

The housing market in the Upper Hunter is currently on a slow upward turn after the observed downturn associated with the cessation of the previous 'coal boom'. This slow upturn means there will be increasing pressure placed on affordable housing in the private rental market and social housing in Muswellbrook, Upper Hunter and Singleton Shire Council LGAs. It is suggested, given the similarities of data from 2011 to 2020, that the number of rental and purchase households experiencing housing stress would be similar. The impact the Mount Pleasant Operation may be having in this upturn cannot be confirmed within the scope of the SIA. Based on the results of the Workforce Survey, however, there are people who live in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs on a permanent and temporary basis and either own, are paying off a mortgage or renting. Based on this, the workforce is influencing the housing market, however based on the data currently available, specific impacts are not known.

4 Way of life - how people get around

4.1 Indicators for how people move around

Indicators for how people move around the social area of influence have been selected based on engagement for the Scoping SIA and the SIA are road use and congestion and public transport – train.

4.2 Road use and congestion

4.2.1 New England Highway between Singleton and Muswellbrook

According to the NSW Roads and Maritime Preferred Option Report for the New England Highway Singleton Bypass Options Assessment (2015), the New England Highway is a major north-south route passing through the Singleton town centre. It provides access to Singleton, Singleton Heights, and the coal fields and rural properties in the area. The average daily traffic count in 2014 on the New England Highway near Rix Creek was 14,100, with 18.6% of the traffic being heavy vehicles. Between 18,000 and 28,000 vehicles per day use the highway through Singleton, with around 15% of the traffic being heavy vehicles (NSW Roads and Maritime 2015). NSW Roads and Maritime (2015) identified the key road users as being:

- town centre shoppers and workers
- Singleton and Singleton Heights residents
- mining workers driving to mines around Singleton
- freight and construction vehicles servicing mines around Singleton and
- commercial and general motorists travelling between the Upper Hunter and North West new England to Newcastle and Sydney.

4.2.2 Traffic counts on Wybong and Bengalla Roads

The Mount Pleasant Operation daily traffic volumes were surveyed as part of the Road Transport Assessment for the Project. Results of the survey at Bengalla Road (south-east of Wybong Road) and Wybong Road (north of Bengalla Road) are shown in Table 7. Detailed survey results and a map showing the location of the survey locations is available in the Road Transport Assessment.

Table 7: Surveyed average weekday peak hourly traffic volumes (vehicles per hour)

Road	AM Peak	PM Peak
Bengalla Road (south-east of Wybong Road)	06:00, 222 vehicles/hr	16:00, 179 vehicles/hr
Wybong Road (north of Bengalla Road)	06:00, 164 vehicles/hr	18:00, 125 vehicles/hr

Source: The Transport Planning Partnership 2020:27

Based on the findings of the Workforce Survey, a proportion of the workforce is driving to the Mount Pleasant Operation from outside of Muswellbrook, either on a daily basis (e.g. commute from Singleton) or either side of rosters (e.g. from Maitland).

4.2.3 Mount Pleasant Operation traffic movements

The Mount Pleasant Operation daily traffic volumes were surveyed as part of the Road Transport Assessment for the Project. Results of the survey at the Mount Pleasant Operation Road are shown in Table 8. Detailed survey results are available in the Road Transport Assessment.

Table 8: Surveyed vehicle movements per day at Mount Pleasant Operation Road

Day	Number of movements
Monday	784
Tuesday	895
Wednesday	988
Thursday	951
Friday	820
Saturday	380
Sunday	344

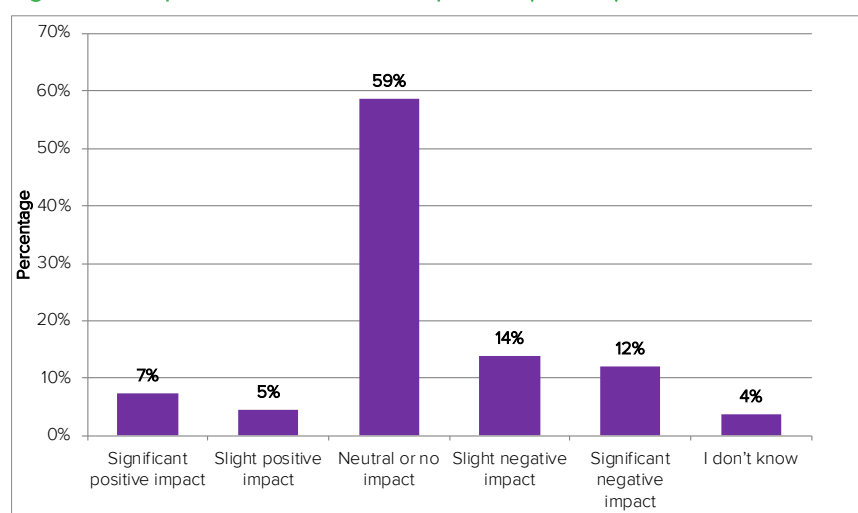
Source: The Transport Planning Partnership 2020:25

The Road Transport Assessment (The Transport Planning Partnership 2020) concluded that the weekday volumes were distinctly different from those on weekend days. The Transport Planning Partnership (2020) also indicated that over the surveyed week (Tuesday 11 February 2020 to Monday 17 February 2020 inclusive), there was an average of 888 vehicle movements per weekday, and 362 vehicle movements per weekend day.

4.2.4 Community Survey

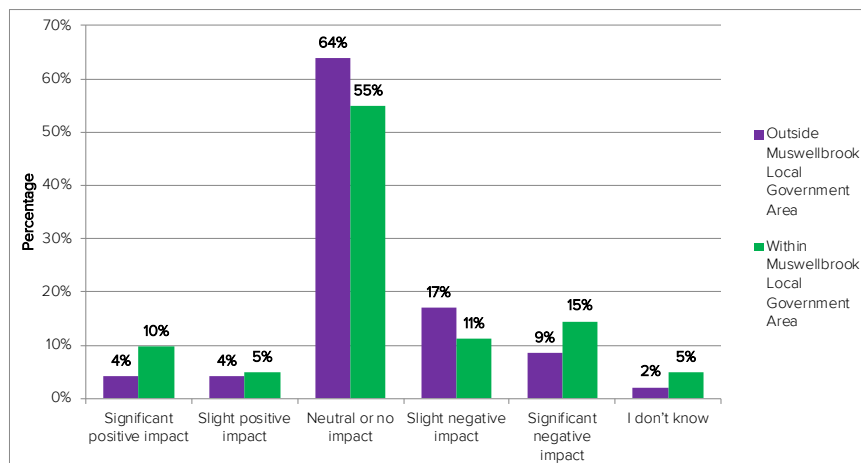
The SIA Community Survey asked about the overall impact the Mount Pleasant Operation had on access to the area in which people lived. When comparing all responses, 59% of respondents provided a neutral Likert scale rating in response to this question (Figure 27), relatively high when compared to negative Likert scale ratings for other questions in the Community Survey.

Figure 27: Impact on access – all responses (n = 109)



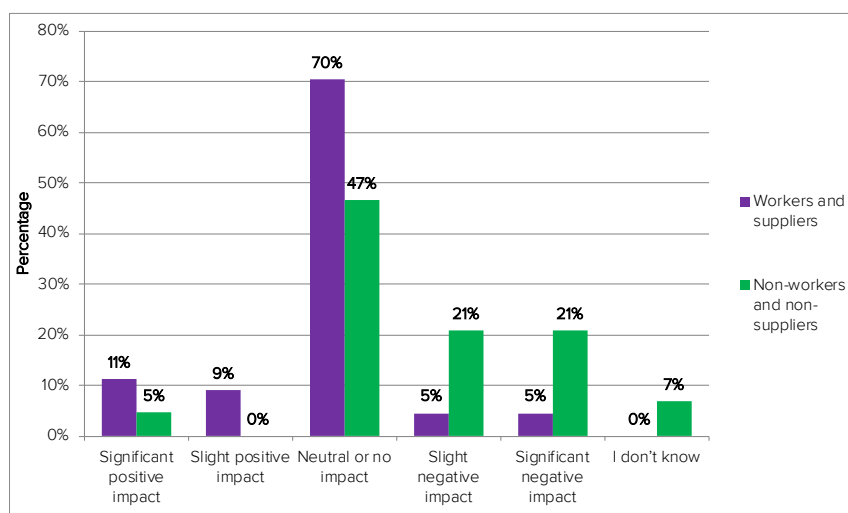
There was a similar result when looking at results within the Muswellbrook Shire Council and outside the Muswellbrook Shire Council LGA (Figure 28)

Figure 28: Impact on access – comparison by Local Government Area (n = 109)



There was a difference in the responses between those people who had a relationship with the Mount Pleasant Operation (worker or supplier) and those who did not. Respondents who were workers and suppliers of the Mount Pleasant Operation tended to respond positively while those who are not tended to respond in the negative, refer to Figure 29.

Figure 29: Impact on access by – comparison by relationship to the Mount Pleasant Operation (n = 87)



Relevant comments⁶ from the community survey are provided in Table 9. Of the comments received, the majority were negative. Only areas where comments were received on are included.

Table 9: Comments on the access impacts of the Mount Pleasant Operation, Community Survey

Location	Comment
Castlerock	<p><i>"At this stage none apart from roads not being repaired"</i></p> <p><i>"Soon to be closure of Castlerock Road. Hopefully a suitable diversion road will be put in place."</i></p> <p><i>"The mine was required to build a new Wybong Road to its entrance. The realignment of the new road has completely removed sharp bends which were a traffic hazard. This new road easily handles the increased flow of traffic. Mount Pleasant mine traffic has also been denied access on some local roads which has improved traffic for local residents."</i></p>

⁶ If a comment was more suited to another survey topic, it is reported in the other survey topic.

Location	Comment
Wybong	<p><i>"Recent closures and potential permanent closure of Wybong Road due to mining in the absence of Muswellbrook Shire Council initiating and permitting construction of MTP Western and Northern Link Roads. MSC Martin Rush is the roadblock not so much MTP."</i></p> <p><i>"Road works interruptions, wide loads"</i></p>
Denman	<p><i>"Traffic keeps increasing on all roads. We now have a peak hour!!"</i></p>
Kayuga	<p><i>"More coal trains means public transport more frequently disrupted due to track work. Dorset Rd will carry more traffic."</i></p> <p><i>"We are unable to fly a drone on our land???"</i></p>
McCullys Gap	<p><i>"Wybong Rd upgrade is a significant improvement along with funding for the maintenance of local roads provided to local council."</i></p>
Muswellbrook	<p><i>"Hard to separate its impact from that of other mines"</i></p> <p><i>"increased traffic in early morning and late afternoon"</i></p> <p><i>"Marked increase in mine traffic"</i></p> <p><i>"More traffic coming in and out of Muswellbrook. Absolutely ridiculous amount of traffic heading in and out as nobody lives here who works there"</i></p> <p><i>"More traffic through the main street"</i></p> <p><i>"Nothings changed"</i></p> <p><i>"road deterioration with increased traffic"</i></p> <p><i>"The road upgrades and maintenance MPO have undertaken have greatly improved the roads affected by the mine, which has resulted in improved road assets for the community"</i></p>
Aberdeen	<p><i>"More coal trains means more track maintenance which leads to more days where buses replace trains. This is the short straw for public transport users."</i></p>
Singleton	<p><i>"Again the actual extent of impact by the MPO to the overall cumulative impact of the mineworkers in the valley travelling along the New England Highway is not known by me so I say slight negative impact in order to register the fact that there actually is impact. Singleton has traffic jams at times that are of significant negative impact but obviously not attributable to MPO in isolation, merely as a possible contributor ..."</i></p> <p><i>"The highways are already busy but traffic is increased through our town because of mining vehicles travelling every day up and down the highway."</i></p> <p><i>"traffic on the New England Highway"</i></p> <p><i>"While the mine was being constructed there was significant road works on Wybong Road, slightly impacting travel and the quality of the road."</i></p>
Parkville	<p><i>"I do not travel in that area"</i></p>
Scone	<p><i>"Mine traffic on the road has damaged roads."</i></p> <p><i>"No impacts"</i></p> <p><i>"The Mount Pleasant Operation to my knowledge has had no impact on access to road, rail, public transport and parking."</i></p> <p><i>"The specifics from one current mine is unknown but the contribution all mining does impact trains dependent on coal train movement as well as the degradation on roads with the constant mining equipment and large machinery being bought by road."</i></p>
Merriwa	<p><i>"I live well away so only impact would be on driving to Muswellbrook."</i></p> <p><i>"To travel to Muswellbrook we used to use Wybong Road, and now mainly use Dartbrook Road through Kayuga. Both these roads will be intermittently closed due to mine activity and heavy vehicle traffic will increase. To travel by an alternative route adds about 15 minutes travel time and also involves travelling on the busy New England highway instead of a quiet scenic country road. There is no public transport option accessible from our home unless we drive to the pick-up point in Merriwa (8km) or Scone (54km). In addition to this although not a direct result of Mt Pleasant operations Edderton Road and Wallaby Scrub Road have also been impacted by mining so our travel options are becoming fewer and fewer to access"</i></p>

Location	Comment
	<i>Sydney, Newcastle, Maitland, Singleton and Muswellbrook. We local residents feel we are simply being overlooked and overwhelmed by the mining sector.”</i>

Note: this table only lists the responses relevant to the potential access-related impacts. Further details regarding the Community Survey are included in Appendix F.

4.2.5 SIA Stakeholders

SIA stakeholders raised the impact of the Mount Pleasant Operation and other mining operations on the amount of traffic along the Wybong Road, Bengalla Road and on the New England Highway between Muswellbrook and Singleton. SIA stakeholders also raised time it takes to get through Singleton on shift change, with stakeholders saying it could take up to an hour to get through town on shift change.

It's been hell since the start of the MACHEnergy Mount Pleasant Operation, it all started with the entry to the mine right outside our gateway. There was no consideration given to us and what we were experiencing. They had their approval and just did it. There are still a lot of traffic and congestion on the roads, especially on shift change and going through Singleton, it's still a real bottleneck. (Stakeholder B, SIA)

Singleton is one of the most congested areas in New South Wales at shift change, there are a lot of people trying to get to work or to home. (Tony McTaggart EHP First National, SIA)

Issues with traffic on shift changes (Friends of the Upper Hunter Inc., SIA)

4.3 Public transport – train

A number of SIA stakeholders have commented on the impact of the increased train movements along the Muswellbrook-Ulan Rail Line and how this has affected the Intercity train from Muswellbrook to Newcastle (i.e. more maintenance is required and the commuter train is replaced by buses). On average the Intercity train leaves Muswellbrook three times a day and takes about 1 hour and 45 minutes to Newcastle.

ARTC manage the train line and are responsible for the management of impacts associated with the increased use of the rail line. The ARTC 2019 Hunter Valley Corridor Capacity Strategy (ARTC 2019) notes that the section between Muswellbrook and the Terminals is the core of the Hunter Valley network. Although this section has all of the non-coal freight and passenger trains from the Gunnedah and Ulan lines, as well as an additional daily Muswellbrook passenger service, the volume of coal means that coal dominates operations across this corridor. The passenger services, which get priority and run down the coal services, create a disproportionate loss of capacity, particularly in the loaded direction (ARTC 2019). However, ARTC reports that there is sufficient capacity on the corridor and flexibility created by the three track sections, that the shadow effect of the passenger services has a relatively limited effect (ARTC 2019). The major issues affecting the line between Muswellbrook and the terminals

are headways, junctions, the continuous flow of trains, and efficient flows into the terminals (ARTC 2019). ARTC have noted that work is being undertaken to address these issues (ARTC 2019).

4.4 Summary

The workforce for the Mount Pleasant Operation is contributing to increased traffic on local and regional roads, for example on Bengalla and Wybong Roads and proportionally to existing congestion in the New England Highway between Muswellbrook and Singleton, especially during the start and end of shifts. Near neighbours reported noise impacts associated with traffic to and from the site.

5 Impacts on way of life - recreation

5.1 Indicators for recreation

A number of indicators have been selected based on stakeholder participation in the SIA and social impacts identified in the Scoping SIA:

- Muswellbrook Race Club and
- NAIDOC Week Celebrations and Biennial Cultural Spectacular.

5.2 Muswellbrook Race Club

The Muswellbrook Race Club Strategic Plan (2017) outlines the challenges of increasing the number of patrons to race days. Explanations for why the Club is facing some difficulties have been provided by SIA stakeholders, and included the perception of the race club given the view of the Bengalla Mine and now the Mount Pleasant Operation overburden from the grandstand. The overburden is also visible when races are telecast on Sky Racing. Despite the support of MRC from mining companies in the area, there is a concern that the division between the mining and horse racing community has meant miners do not attend the race days. This was explained in context of the lead up to the Maxwell Infrastructure (former Drayton Coal Mine) decision which saw a high level of division in the community. Another explanation has been the shift work preventing mine workers from attending race days.

The two big impacts of the MPO are the visual and dust impacts with some night time noise. The visual impact is greatest for patrons viewing from the grandstand which faces north-west and straight at the MPO waste rock dump. This 'view' can be seen when watching the race starts at the 1,280m, 1,450m and 1,500m start line and can be seen on national and international television coverage. Depending on the wind direction dust impacts are sometimes experienced in the Racecourse Road precinct.

In some environmental conditions, the racecourse and race course precinct can experience dust effects from Mount Pleasant, Mt Arthur and Bengalla mining operations. The impacts of Mount Pleasant will be like Bengalla. Over the last 22 years, the impacts from the neighbouring Bengalla Mine have decreased as they have progressed west and established a land buffer between them and the town. Obviously with the introduction of Mt Pleasant, the impacts from mining have increased again and will continue until their bund wall has finished and they progress away from the township.

There is some divide between some mining and thoroughbred/racing people in Muswellbrook because of the 2017 Independent Planning Commission decision not to approve the Drayton South Coal Project and this can impact on the local membership and patronage of the MRC. (Stakeholder A, Scoping SIA)

5.3 ACDF Funding - NAIDOC week and biennial Cultural Spectacular

The ACDF currently funds annual NAIDOC Week celebrations, including a Fun Day which are open to all residents and visitors to the Hunter Region. According to the Hunter Valley News (11 July 2019), more than 500 people participated in the 2019 Fun Day held in Singleton which celebrated the history, culture and achievements of Aboriginal and Torres Strait Islander peoples. MACH also directly sponsored the Fun Day.

The vision for the ACDF is to also include a biennial Cultural Spectacular, an event open to all to come together and celebrate Aboriginal culture in the community. The first Cultural Spectacular was held in 2017 in Singleton with the second in Muswellbrook in 2018. The Committee then made the decision to hold the event on a biennial basis with the next event to be held in Singleton in 2020, however, due to COVID-19 the event has been postponed until May 2021.

5.4 Summary

Race days at the Muswellbrook Race Club, NAIDOC Week Celebrations and the biannual Cultural Spectacular are three of the highlights of recreation in Muswellbrook that were raised in SIA consultation. The Mount Pleasant Operation may be adding to the challenges to the Muswellbrook Race Club to attract patrons to local races. Whereas, funding from the Mount Pleasant Operation currently supports the NAIDOC Week Celebrations and biannual Cultural Spectacular. This is an example of the differentiating impacts of the Mount Pleasant Operation, where one group of people may be impacted in a negative way while another group experience positive impacts.

6 Health and Wellbeing

This section of the SIA does not replace the work undertaken in the Human Health Assessment for the EIS.

6.1 Indicators for health and wellbeing

SIA stakeholders raised their own personal experiences of health impacts during the SIA engagement process, experiences of friends and family and health impacts associated with coal mining in the media. People who participated in the Community Survey raised their concerns about health impacts although a direct question about health was not asked. As social impacts are considered to be “something that is experienced or felt, in a perceptual or corporeal sense at the level of an individual, social unit (family/household/collectively) or community/society” (Vanclay et al 2015), these impacts are social impacts. A number of indicators have been selected based on stakeholder participation in the SIA and social impacts identified in the Scoping SIA:

- A general overview of the current levels of health and wellbeing
- Asthma prevalence in persons aged 16 and over
- Asthma hospitalisations
- Stress and mental health
- Solastalgia
- Eritalgia
- Health and wellbeing benefits of employment
- Health and wellbeing of working 12 hour shifts
- Road safety and
- ACDF funding for health organisations and programs

6.2 Health, wellbeing and coal mining in the Upper Hunter

The background to the health, wellbeing and coal mining in the Upper Hunter is provided for context on the potential impacts of the Mount Pleasant Operation.

The impacts of coal mining on the physical health of people living in the Upper Hunter is a long running and contested topic. Higginbotham et al (2010) states that since 2000, many different groups and organisations have unsuccessfully made representations to members of the NSW parliament, the Hunter New England Public Health Unit and the NSW Environmental Protection Agency (EPA) asking for a study to examine the relationship between industrial emissions in the Upper Hunter and the health status of the population.

In 2012, The University of Sydney (Colagiuri et al 2012) undertook a study into the Health and Social Harms of Coal Mining in Local Communities. The study was commissioned by Beyond Zero Emissions (Australia). The purpose of the study (Colagiuri et al 2012) was to examine and summarise what is known in the available research from Australian and international health journals, and other relevant reports, about the health and social harms of mining activity for people living in communities near coal mines and coal-fired power stations, and to relate these issues to the Hunter Region of NSW.

The Study (Colagiuri et al 2012) found that adults in coal mining communities were found to have higher rates of mortality from lung cancer, chronic heart, respiratory and kidney diseases; higher rates of cardiopulmonary disease, chronic obstructive pulmonary disease (COPD) and other lung diseases, hypertension, kidney disease, heart attack and stroke, and asthma; increased probability of a hospitalisation for COPD, and for hypertension; and poorer self-rated health and reduced quality of life (Colagiuri et al 2012).

The Study also found that children and infants in coal mining communities were found to have increased respiratory symptoms including wheeze, cough and absence from school with respiratory symptoms. Although not all studies reported this effect, others were found to have high blood levels of heavy metals such as lead and cadmium, higher incidence of neural tube deficits, a high prevalence of any birth defect, and a greater chance of being of low birth weight (a risk factor for future obesity, diabetes and heart disease) (Colagiuri et al 2012).

The authors of the study noted the minimal available research evidence on the health impacts of coal mining in Australian communities. The authors also acknowledged the limitation to many of the studies they cited, the inherent difficulties in designing population and community studies that can unequivocally attribute and precisely quantify associations and the lack of long term prospective studies on the effect of coal mining on mining communities which may lead to potential causal associations between mining activity and diseases with a long lag time such as cancers to be underestimated (Colagiuri et al 2012).

Research undertaken by the NSW Health (Merritt et al 2013) and published in the NSW Public Health Bulletin in 2013 analysed general practice data for rural communities in close proximity to coal mining and coal fired power generation in the Hunter Valley. This study found there were no significantly higher rates of problems managed or medications prescribed for Hunter Valley region residents compared with the rest of rural NSW (Merritt et al 2013). Rates of respiratory problem management in the Hunter Valley region did not change significantly over time, while for all other rural NSW areas these rates significantly decreased. The study concluded that there was no evidence of significantly elevated health issues for residents in the Hunter Valley region of NSW. The diverging trend for respiratory problem management over time is worthy of further exploration. It is unknown if this trend has been further investigated.

6.3 Current levels of health and wellbeing

Based on the discussion above and the potential health impacts raised by SIA stakeholders⁷ and concern of health impacts raised in the Scoping SIA, the following indicators were selected for the SIA and data is provided in Table 10:

- psychological distress
- circulatory system disease
- asthma and
- chronic obstructive pulmonary disease.

⁷ Moore, Gilgai and Denman Aberdeen Muswellbrook Scone Healthy Environment Group

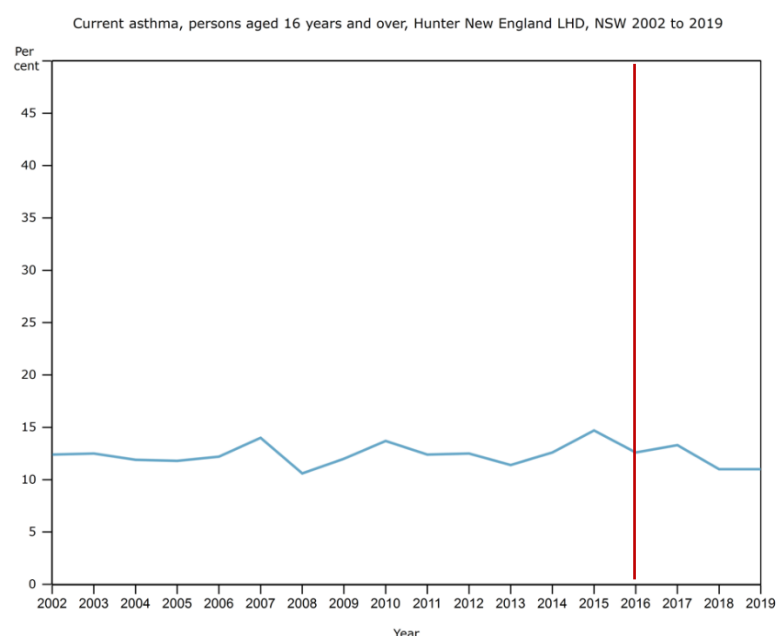
Table 10: Selected indicators for health and wellbeing

Indicator	Muswellbrook Shire Council LGA	Upper Hunter Shire Council LGA	Singleton LGA	NSW
High or very high psychological distress	13.7 of every 100 adults	10.6 of every 100 adults	11.0 of every 100 adults	11 of every 100 adults
Circulatory system disease	17.8 per 100 people	17.9 per 100 people	18.1 per 100 people	17.8 per 100 people
Asthma	12.0 per 100 people	11.1 per 100 people	11.9 per 100 people	9.6 per 100 people
Chronic obstructive pulmonary disease	3.1 per 100 people	2.8 per 100 people	3.0 per 100 people	2.6 per 100 people

Source: Primary Health Networks (phn) Hunter New England and Central Coast (2018a, b and c)

Given SIA stakeholders' high concern about asthma, the SIA has focused on asthma data. Data from HealthStats NSW for asthma prevalence in the Hunter New England Local Health District from 2002 to 2019 in adults is shown in Figure 30 and for children in Figure 31. The data used for these figures was sourced from the NSW Population Health Survey (SAPHaRI), Centre for Epidemiology and Evidence, NSW Ministry of Health⁸ and is not the same data set as used in the NSW Health research published in 2013 (Merritt et al 2013) and so cannot be directly compared. A red line shows the start of construction at the Mount Pleasant Operation in 2016.

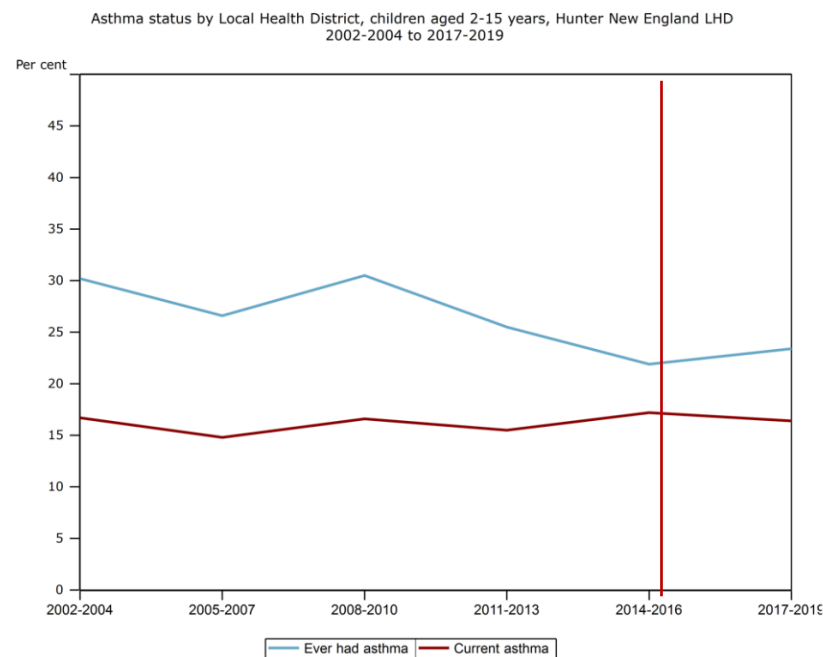
Figure 30: Asthma prevalence in persons aged 16 and over, Hunter New England LHD, NSW 2002 to 2019



Source: HealthStats NSW 2020a

⁸ <https://www.health.nsw.gov.au/epidemiology/Pages/NSW-Population-Health-Survey.aspx>

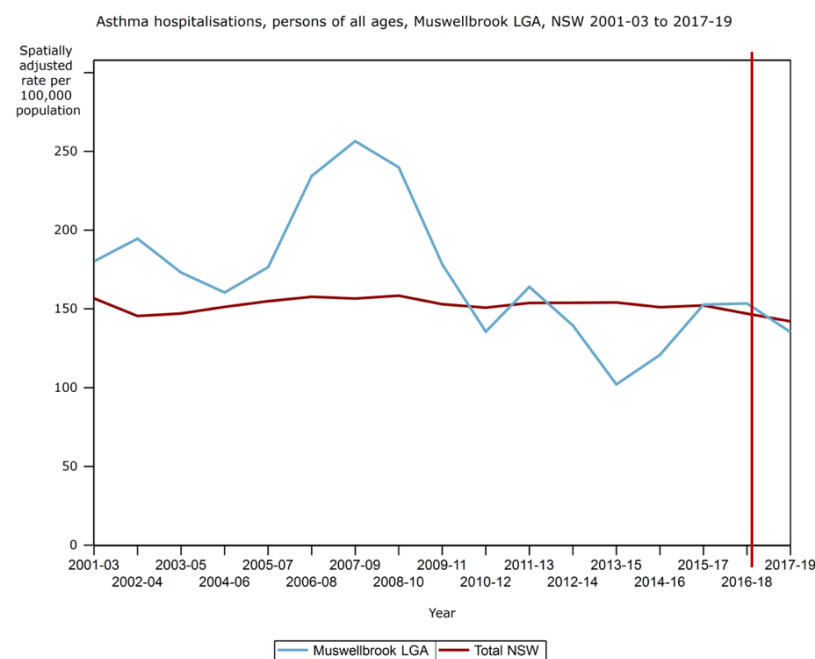
Figure 31: Asthma prevalence in children aged 2-15, Hunter New England LHD, NSW 2002 to 2019



Source: HealthStats NSW 2020b

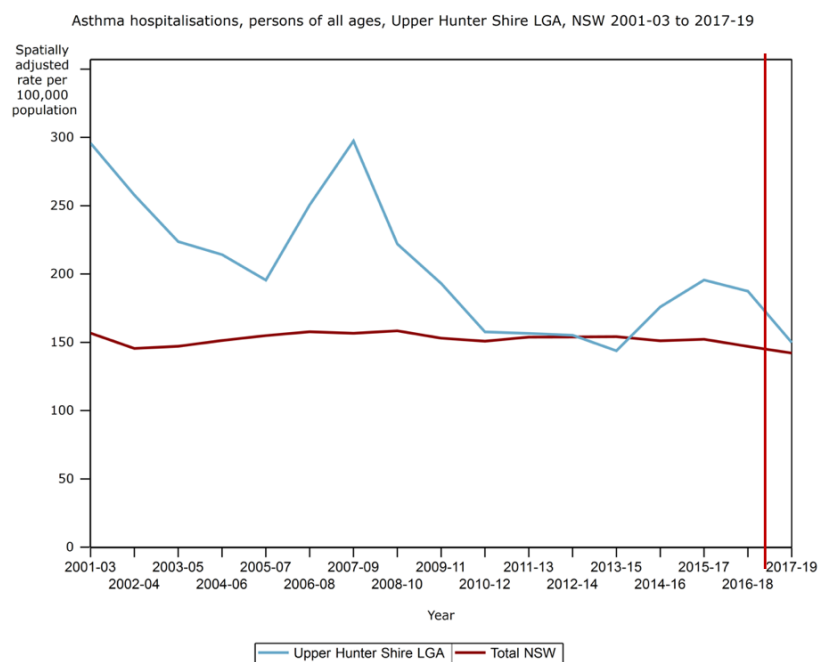
Asthma hospitalisations for the Muswellbrook Shire Council LGA and these results for 2001-2003 through to 2017-2019 are shown in Figure 32 and Upper Hunter and Singleton Shire Council LGAs for the same timeframes in Figure 33 and Figure 34, respectively. A red line shows the start of construction at the Mount Pleasant Operation in 2016.

Figure 32: Asthma hospitalisations, persons of all ages, Muswellbrook Shire Council LGA, NSW 2001-03 to 2017-19



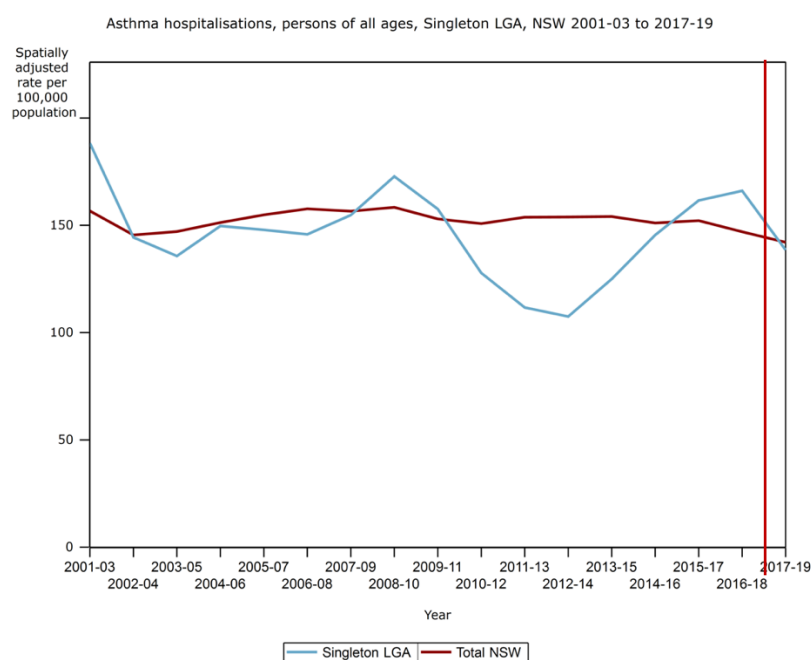
Source: HealthStats NSW 2020c

Figure 33: Asthma hospitalisations, persons of all ages, Upper Hunter Shire Council LGA, NSW 2001-03 to 2017-19



Source: HealthStats NSW 2020d

Figure 34: Asthma hospitalisations, persons of all ages, Singleton LGA, NSW 2001-03 to 2017-19



Source: HealthStats NSW 2020e

The Upper Hunter Mining Dialogue Steering Committee has endorsed a project seeking to analyse available long-term air quality data gathered via the Upper Hunter Air Quality Monitoring Network data to provide an assessment of long-term trends of air quality in the Upper Hunter. The Upper Hunter Mining

Dialogue is undertaking an analysis and interpretation of existing air quality monitoring network data (specifically PM₁₀ and PM_{2.5}) and other relevant contextual climate information (e.g. rainfall, temperature, weather and climate, wind speed and direction, solar exposure) to create a narrative around air quality in the Upper Hunter (Upper Hunter Mining Dialogue no date). ERM Australia Pacific P/L was engaged to undertake this Project on the Upper Hunter Mining Dialogue's behalf in October 2019. A draft report is currently being reviewed by the Upper Hunter Mining Dialogue's Joint Working Group and Steering Committee, and will be distributed shortly for peer review. The report will be published on the Upper Hunter Mining Dialogue website and distributed to Dialogue stakeholders once finalised. The data used in this study is from 2013 through to 2018, and includes the first year of operations at the Mount Pleasant Operation.

6.3.1 Community survey

Although the Community Survey did not include a question about health, respondents made comments about the potential impacts on health, which are provided in Table 11.

Table 11: Comments on health from Community Survey

Location	Comment
Muswellbrook	<p><i>"Poor health from air/noise/aesthetics."</i></p> <p><i>"Further mines in the area discourage people from buying homes and living in the area. The health impacts are too great."</i></p> <p><i>"The ongoing health impacts for people continue and become greater with each new mine"</i></p> <p><i>"More noise from trains and trucks, more coal dust polluting the air and the associated negative health impacts are all reasons I strongly oppose the expansion of this mine."</i></p> <p><i>"More dust equals worse air quality more respiratory complaints impacting on our already overloaded health care system"</i></p> <p><i>"A bit sad that it is so dominated by coal mining now. Great for jobs, but no so good for our health or the planet."</i></p> <p><i>"More dust. More community having health issues such as asthma and cancer"</i></p>
Kayuga	<p><i>"I would not recommend a family relocate to Muswellbrook, given the known health risks of PM and that Mt Pleasant has proceeded upwind of town"</i></p> <p><i>"Mt Pleasant has ruined the immediate surrounds of Muswellbrook, changing the setting from rural to industrial with associated dust, noise and light pollution. I expect this would have a cumulative unhealthy and depressing effect on the local psyche, it is difficult muster a sense of pride living on the edge of a mullock heap."</i></p>
Aberdeen	<p><i>"Exercising outside can be hazardous because of the particulate matter. Sport clubs and teams who have weekly training days may not check the air quality rating and proceed in fair and poor conditions. Wellbeing is certainly affected for people who face Mt Pleasant- a significant proportion of the population of Muswellbrook. It is depressing and disempowering to see this destruction of landscape taking place upwind of town."</i></p>
Merriwa	<p><i>"Dust is always a factor impacting health."</i></p>
Singleton	<p><i>"Significant cost to the taxpayer from increased health concerns involved with high pollution and dust levels causing respiratory and other diseases associated with increased diesel fumes."</i></p>

Note: this table only lists the responses relevant to the potential health impacts. Further details regarding the Community Survey are included in Appendix F.

6.4 Stress and mental health

SIA stakeholders self-reported a change in their stress levels, change in mental health and/or feelings of frustration, uncertainty as a result of the Mount Pleasant Operation. Some of these SIA stakeholders reported this in the context of the environmental approval process for the Mount Pleasant Operation and the ongoing modifications that they have participated in, using their own time and resources, often taking them away from paid employment or running their own businesses and away from spending time with family and friends.

We have gone through this process with the previous owners, Rio Tinto. This has been an ongoing task that we have had to endure since the initial start of the Mt. Pleasant in 1994. (Stakeholder B, Scoping SIA)

Jonathan and Elisabeth first felt the impacts on mining in 1997/1998 when the Coal and Allied (Rio Tinto) were applying for a Development Approval for their Mount Pleasant project. Jonathan and Elisabeth tried to imagine the impacts of the proposed mine including the downstream impacts of the tailings dam located upstream on the northern catchment of Sandy Creek. Both Jonathan and Elisabeth invested their time in reading the Environmental Impact Statement for the proposed project and spoke at the Planning and Assessment Commission hearing. They also invited the Commissioners to visit their property and discuss the potential impacts, which the Commissioners did in February and March 1999. This led to specific conditions on the original Development Approval for the Mount Pleasant mine. (Moore, Gilgai, Scoping SIA)

At the moment, depending on what is going on at a mining company, I can easily spend 3- 4 days a month dealing with them. It takes time. It's not just the meetings and reading all the materials, you can be in the middle of the paddock and stop and realise something, it's always on your mind. It's hard to keep up with the mines and what they are up too. It's getting even harder with everything going online as we don't have the internet. (Jim Lonergan, Kayuga, SIA)

Mental health impacts created through the cumulative stress of so many mining projects in the same place and fears regarding climate change impacts of continued mining. (Friends of the Upper Hunter, SIA)

6.5 Solastalgia

Solastalgia is the distress that is produced by environmental change impacting on people while they are directly connected to their home environment (Albrecht *et al* 2007). Key components of solastalgia are:

- loss of ecosystem health and corresponding sense of place
- threats to personal health and wellbeing and
- sense of injustice and powerlessness.

Moffatt and Baker (2013) describe the positive association farmers have with their physical environment and way of life and how changed landscapes, including the altered visual appearance of landscapes, as occurs with for example, long term drought, environmental degradation, climate change or large scale development, have been found to have negative psychological impacts. These changes have been associated with depression, anxiety and psychological distress, with concerns about climate change being a chronic environmental stressor. Moffatt and Baker (2013) describe how the negative changes impacting on the individual's relationship with and attachment to a location has been characterised as a type of psychoterratic illness with a scale developed to measure environmental distress. Therefore, a combination of structural, geographic, cultural and occupational circumstances result in farmers being at risk of suffering from psychological distress.

6.5.1 Research into solastalgia in the Upper Hunter

From 2003 to 2006, a transdisciplinary team based in Newcastle conducted key informant, community and group interviews with over 60 people in the Upper Hunter region. In 2005/06, ethnographic fieldwork with residents was commenced with an aim to document perceived threats to wellbeing and actual lived experience of environmental change in both the Lower and the Upper Hunter. The research highlighted that there were very personal and emotional responses to the impacts of mining and power station fallout on residents in the Hunter Valley. The transformation of the regional landscape (place) has, for many of the research participants (including some who actually work in the mining and power industries), been a direct cause of solastalgia. Their sense of place, their identity, physical and mental health and general wellbeing were all challenged by unwelcome change. Moreover, they felt powerless to influence the outcome of the change process (Albrecht *et al* 2007).

A survey instrument, the environmental distress scale (EDS) has been developed by Nick Higginbotham. The EDS was designed to measure the environmental distress experienced by people living in areas being transformed by disturbance. It was validated in 2006 with a comparison of two rural communities, Singleton (high environmental disturbance) and Dungog (low environmental disturbance). The data indicated that the high disturbance group had significantly higher environmental distress scores across all measured components and a higher total score (Albrecht *et al* 2007).

6.5.2 SIA stakeholders

The notes from meetings with stakeholders who participated in the Scoping SIA and the SIA were reviewed against key components of solastalgia. Examples of SIA stakeholders potentially experiencing solastalgia are provided below:

It's been hell since the start of the MACH Energy Mount Pleasant Operation, it all started with the entry to the mine right outside our gateway. There was no consideration given to us and what we were experiencing. They had their approval and just did it. (Stakeholder B, SIA)

This mine, like other mines in the area will continue to permanently change the landscape. The landscape that I grew up with is different to what the next generation experiences and the ones after that won't be able to experience what I did – it just doesn't exist anymore. (Jim Lonergan, Kayuga, SIA)

The well known term applying to the emotional impact on people, of the totality of the degradation and permanent changes to the landscape, is "solastalgia". At the moment there is no beauty associated with the Mt Pleasant site, and fear of more of that ugliness causes great dread.

For those of us who live here, the rapid development of Mt Pleasant has been shocking and heartbreaking. Its proximity to town makes for a high visual impact (eyesore) on the landscape, from all approaches to Muswellbrook and it is a real loss for those who live, looking West across what were restful floodplains, horse paddocks and rolling hills and is now mega scale industrial mining complex and attendant filthy skies.

Mt Pleasant coal overburden is already changing the image of the Upper Hunter Valley, even without breaking through the Castlerock Rd Ridge. It is seen from Aberdeen. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Continued industrialisation of the local landscape causes many residents to state that Muswellbrook isn't the town they grew up in. Connection to local landscape, villages and history is eroded with physical destruction of homes and landscapes. (Friends of the Upper Hunter Inc., SIA)

Due to the location of the mine so close to Muswellbrook and visible from the highway driving into Muswellbrook from Scone, the large number of people from a large geographical area who are already experiencing solastalgia are set to continue and grow (Wybong, Denman and Singleton etc). Even with rehabilitation, the landscape has changed forever, it won't go back to the way it was, there will always be a void and a 'new' hill that was never there. (Scone Chamber of Commerce, SIA)

6.6 Eritalgia

Eritalgia is a concept describing the experiences of place-based distress in response to lived experiences of significant environmental change that distorts, disrupts or displaces individual's sense of future self (in place). It is constructed as a sister-concept to nostalgia and solastalgia, adding the future as a temporal reality of place-based distress. Eritalgia is linked to the impact of the loss of rural communities and people being 'stranded' or being 'left behind', unable to move forward as they feel they cannot leave because of a single or a variety of reasons.

The notes from meetings with stakeholders who participated in the Scoping SIA and the SIA were reviewed against on the description of eritalgia. Examples of SIA stakeholders potentially experiencing eritalgia are provided below.

We have acquisition rights with a number of mining companies and it feels like they are waiting for us to sell or die, but we were here first, before any of the mines. We know what the country was like before mining and we've seen the mining companies permanently change it. (Stakeholder B, SIA)

What are we going to do? What should we do? Do we stay or do we go? If we go, where do we go and what will we do? This land is our home. We know this land, it's people, its history. (Jim Lonergan, Kayuga, SIA)

Between the ongoing denials of environmental impacts and lifestyle impacts, the purchase of surrounding land and water, reductions in the value of our properties as a consequence of mining, the added costs to our business in dealing with existing mining impacts, concerns of the cost of future mining impacts and the delays in negotiating a purchase of our properties, we are feeling very frustrated with where we find ourselves. Through no fault of our own, after forty years successfully operating our business, producing premium milk and milk products, employing local people and raising our families on Glen Eden, we find ourselves in jeopardy of losing our business, our lifestyle and our families' future. We feel as if we are being squeezed out. But MACH won't give us certainty by buying us outright, in advance of the SSD approval, so we are stuck, trying to make the best of a situation that is getting worse and that we have no control over. (Glen Eden Holsteins Pty Ltd, SIA)

Where a community has been decimated by mining there are usually people "left behind". Those who are on the wrong side of the arbitrary lines marking zones of affectation and acquisition. It is these people who are left to experience the impacts of mining and unable to sell at a price that would buy them a comparable property in a now more desirable location. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

There are reduced options for landowners to attract buyers if the community members want to sell. Often landowners feel powerless through acquisition processes and are resigned to the fact that they feel like they do not have a choice due to the aggregation of environmental impacts such as noise, dust, groundwater and blasting. (Muswellbrook Shire Council, Scoping SIA)

Residents of the area are unable to plan for the future as further expansions contribute to the sense that no land is safe from mining. This mine has been strongly resisted by local residents since the 1990s. Despite this, there is a strong sense that Government is not listening and will push this extension through despite the ongoing objections of local landowners and residents whose property values are being impacted. (Friends of the Upper Hunter Inc., SIA)

6.7 Health benefits of employment

In the Workforce Survey, a question "If the Optimisation Project proceeds, what would the positive impacts be on you, your family and friends?" was asked. Comments made by workers who completed the survey described the benefits of their ongoing employment, including their individual wellbeing for being able to care and provide for their families, a sample of quotes is provided below:

Job security, happy home life, continue to pay off my mortgage, work close to home, friends and family. (Worker at the Mount Pleasant Operation)

Stability in building a family and career (Worker at the Mount Pleasant Operation)

Would allow me and my family to buy a house..... (Worker at the Mount Pleasant Operation)

6.8 Working 12 hour shifts

SIA stakeholders raised the impact of workers at the Mount Pleasant Operation working 12 hours shifts and the impact this was having on the health and wellbeing of the person and their family and friends, and their ability to participate in the community in which they lived.

The 12 hour shifts have changed people's family life and their social lives. They can't volunteer anymore – they are either too tired or the organisations they would like to support e.g. their child's sporting team is set up on a Monday to Friday/weekend structure, e.g. week day afternoon training and playing on a Saturday/Sunday which doesn't align with four days on and four days off. The shifts are not aligned to how a community traditionally works. (Tony McTaggart EHP First National, SIA)

A need for acute mental health services in Muswellbrook. Young healthy, employed people are experiencing depression, anxiety, financial stress and there is a growing addiction to alcohol and drugs because of this. [a change in how mining is undertaken, change in the working environment, a change in family roles and responsibilities and location of the workforce and their families] (CCC, Scoping SIA)

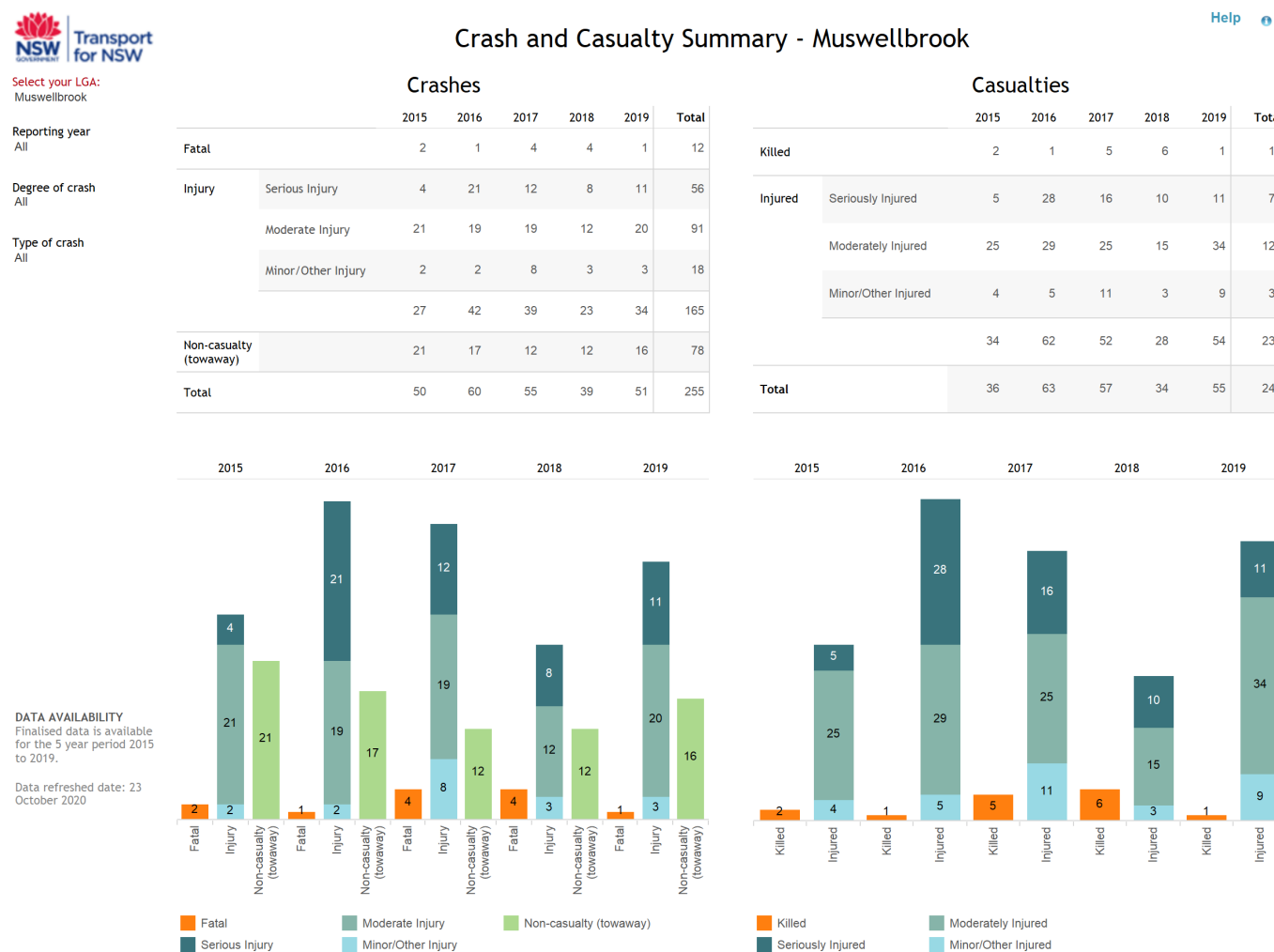
The Workforce Survey did not include a specific question regarding the health impacts of 12 hours shifts, and no specific comments were received regarding this impact from mine workers. There is however, research on the impacts of workers working 12 hour shifts and working away from family on rosters, including for example:

- impacts on circadian rhythm affecting physiological function such as sleep disorders, fatigue, gastro-intestinal malfunctions that induces irritability, grumpiness and lethargy (Sharma 2009)
- psychological distress caused by missing special family events, relationship problems with partners, financial stress and social isolation (Bowers *et al* 2018).

6.9 Road Safety

Concerns about the increased traffic during shift changes and the perceived impacts on road safety (e.g. fatigued drivers) were raised by SIA stakeholders and in the Community Survey. Road crash data and data where fatigue was identified as a contributing factor is provided for Muswellbrook, Upper Hunter

Figure 36: Crash data where fatigue was a contributing factor for Muswellbrook Shire Council LGA 2014 - 2018

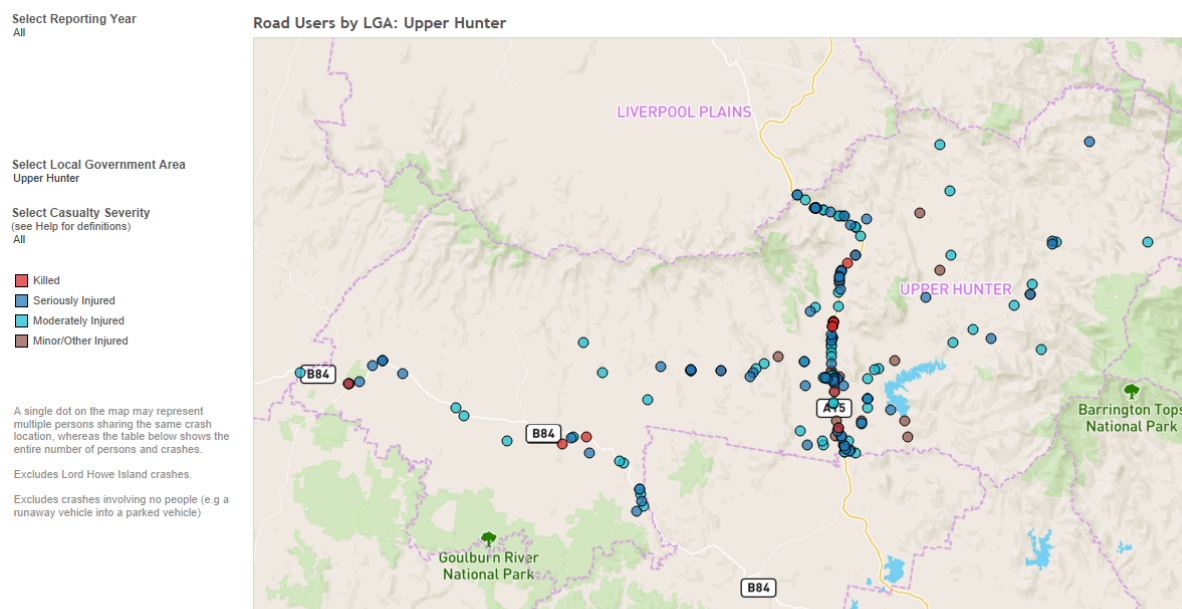


Source: Transport for NSW (2020b)

6.9.2 Upper Hunter

Crash data for the Upper Hunter Shire Council LGA from 2014 – 2018 is shown in Figure 37 and Table 13 and crashes where fatigue was a contributing factor is shown in Figure 38.

Figure 37: Crash data for Upper Hunter Shire Council LGA 2014 - 2018



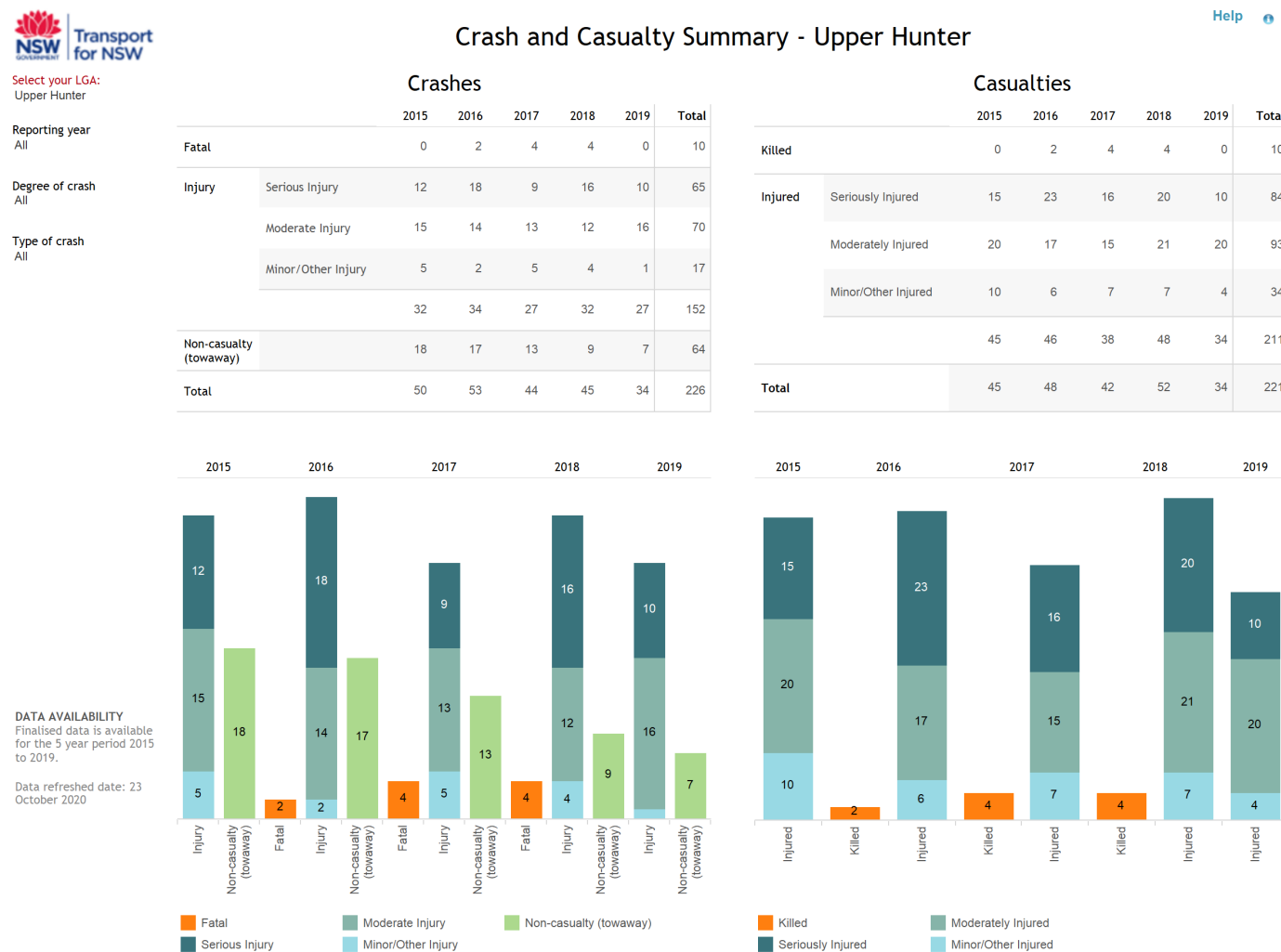
Source: [Transport for NSW \(2020a\)](#)

Table 13: Crash data for Upper Hunter Shire Council LGA 2014 - 2018

	2014	2015	2016	2017	2018
Casualties					
Killed	0	0	2	4	4
Seriously injured	12	15	23	16	19
Moderately injured	27	20	17	15	21
Minor/other injured	9	10	6	7	7
Crashes					
Fatal	0	0	2	4	4
Serious injury	9	12	18	9	15
Moderate injury	22	15	14	13	13
Minor/Other injury	7	5	2	5	4

Source: [Transport for NSW \(2020a\)](#)

Figure 38: Crash data where fatigue was a contributing factor for Upper Hunter Shire Council LGA 2014 - 2018

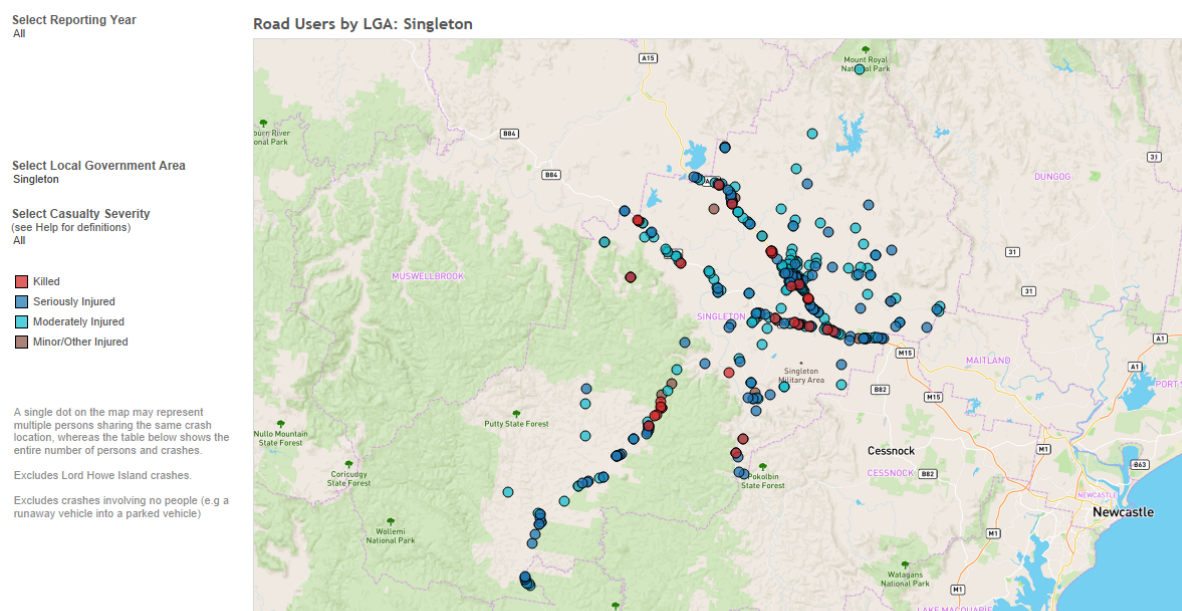


Source: Transport for NSW (2020b)

6.9.3 Singleton

Crash data for the Singleton LGA from 2014 – 2018 is shown in Figure 39 and Table 14 and crashes where fatigue was a contributing factor is shown in Figure 40.

Figure 39: Crash data for Singleton Council LGA 2014 - 2018



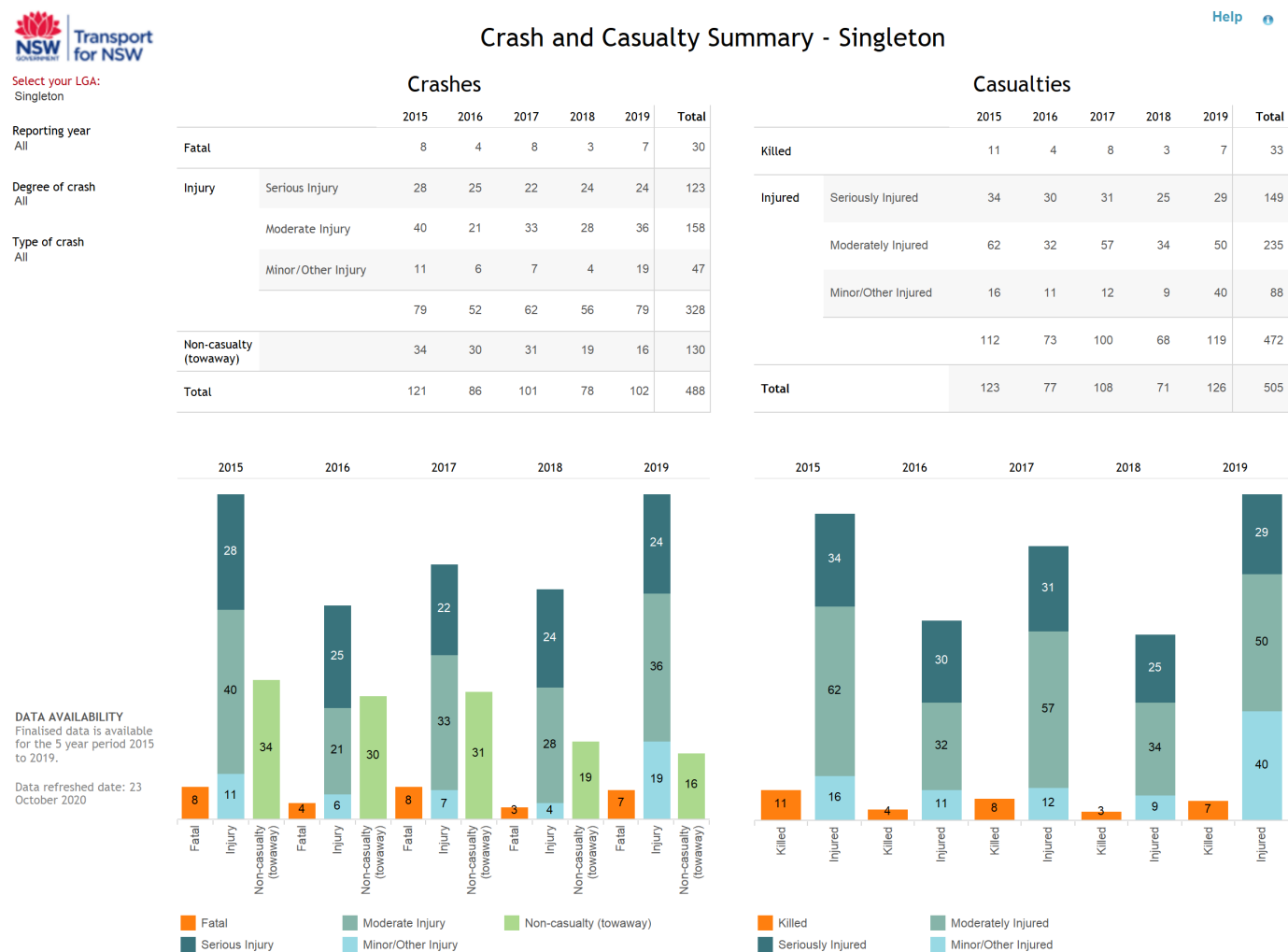
Source: [Transport for NSW \(2020a\)](#)

Table 14: Crash data for Singleton LGA 2014 - 2018

	2014	2015	2016	2017	2018
Casualties					
Killed	6	11	4	8	3
Seriously injured	19	34	30	31	25
Moderately injured	64	61	31	56	33
Minor/other injured	28	17	12	13	9
Crashes					
Fatal	4	8	4	8	3
Serious injury	16	28	25	22	24
Moderate injury	46	40	21	32	27
Minor/Other injury	17	11	6	8	4

Source: [Transport for NSW \(2020a\)](#)

Figure 40: Crash data where fatigue was a contributing factor for Singleton Council LGA 2014 - 2018



Source: Transport for NSW (2020b)

6.10 Summary

The physical health impacts of coal mining in the Upper Hunter is a contested topic and the Human Health Risk Assessment for the EIS will provide further details on potential health impacts of the Project. Health and wellbeing was raised during SIA stakeholder engagement and a number of indicators were identified based on the feedback. The five health and wellbeing impacts raised were:

- physical health – asthma due to dust impacts
- mental health – stress, uncertainty, solastalgia and eritalgia
- health and wellbeing benefits of being employed
- health and wellbeing impacts for employees of working on rosters and 12 hour shifts and
- road safety.

At a regional level, there have been changes in the health indicators selected, however it is unknown how the Mount Pleasant Operation is contributing to this. There is a level of complexity to the environmental issues contributing to the health of people in the Upper Hunter. The Upper Hunter Mining Dialogue is currently undertaking an assessment of long-term trends of air quality.

Based on feedback received as part of the SIA, the Mount Pleasant Operation is impacting on people's mental health, with some stakeholders self-identifying higher levels of stress. Notes from meetings with stakeholders who participated in the Scoping SIA and the SIA were reviewed against key components of solastalgia and a description of eritalgia. Examples of SIA stakeholders potentially experiencing solastalgia and eritalgia were identified. Workers self identified positive mental health impacts associated with being able to support and provide for their families.

Road crash data and data where fatigue was identified as a contributing factor is provided for Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, however, it is unknown what proportion of the road crash data can be attributed to Mount Pleasant related traffic.

7 Community services and facilities

7.1 Selection of indicators for community services and facilities

A number of indicators have been selected based on stakeholder participation in the SIA and social impacts identified in the Scoping SIA:

- Medical services
- Educational services
- Childcare services
- Ambulance services
- Rural Fire Service
- Police services and
- Community organisations.

7.2 Medical services

7.2.1 Access to medical services and infrastructure

Table 15 sets out selected indicators related to access to basic medical services and infrastructure in the Muswellbrook, Upper Hunter and Singleton Council LGAs and compares them to NSW.

Table 15: Access to basic medical services and infrastructure

Indicator	Muswellbrook Shire Council LGA	Upper Hunter Shire Council LGA	Singleton Council LGA	NSW
Barrier to health care access (2014), with cost being the main reason	251 people 2.0/100 people	201 people 2.0/100 people	503 people 2.7/100 people	2.5/100 people
Difficulty or could not get to places with transport (2014)	478 people 4.0/100 people	407 people 3.7/100 people	610 people 3.6/100 people	4.3/100 people
GPs	5 GPs 1 FTE GP/983	5 GPs 1 FTE GP/991	8 GPs 1 FTE GP/1,154	No data
Public hospitals	2	3	1	No data
Aboriginal health service	0	0	1	No data

Source: phn Hunter New England and Central Coast (2018a, b and c)

Note: FTE = Full Time Equivalent and GPs = General Practices

7.2.2 Challenges for health services in the Hunter New England and Central Coast

A 2019 Needs Assessment completed by the Primary Health Network Program for the Hunter New England and Central Coast identified the following challenges to health services in the region (phn 2019):

- fewer health care professionals in rural areas
- limited access to dental services
- barriers to cancer screening in primary care
- barriers to accessing disability services
- reduced access to services for children and youth
- limited access to after-hours GPs
- reduced access to services for older people
- reduced access to services in rural and remote areas
- transport limitations
- cost barriers to health care
- reduced access to services for people experiencing homelessness
- limited services for people experiencing moderate to severe mental illness
- reduced access to psychiatrists
- limited availability of early intervention and prevention services
- limited support for families and carers of people living with mental illness
- reduced access to health services for Aboriginal and Torres Strait Islander people and
- reduced access to drug and alcohol treatment services.

In a news article about mental health services in the Upper Hunter, GP Dr Noman Jawaad is quoted as saying "Basically, it is an eight week waiting time to see a GP, then another two months to see a psychologist and often that involves a drive to Maitland and Newcastle because many of our local psychologists have had to close their books. It is terrible. That's just in the private sector. It is months to get into any of the government services in Muswellbrook and there is no follow-up. There is a huge lack of services." (Muswellbrook Cornicle 17 August 2020).

7.2.3 ACDF funding for health organisations and programs

The ACDF provided funding for:

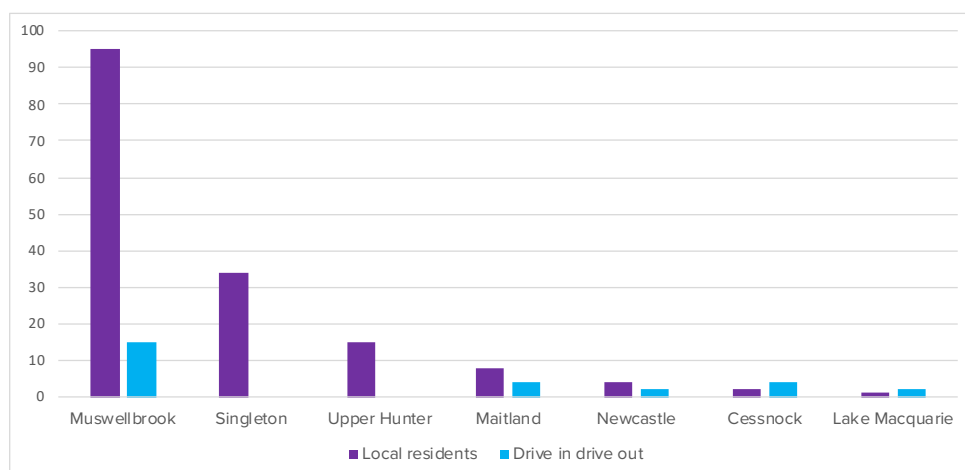
- Ungooroo Aboriginal Corporation which works with their Indigenous community to:
 - ensure access to essential services
 - improve the health of Indigenous people
 - increase skills, training, education and employment
 - help community members to achieve personal and financial goals
 - ensure social justice and social equality
 - maximise participation in all aspects of community life and
 - develop and grow sustainable Indigenous businesses.
- Beyond Blue Fundraising Event and
- Dental Program – free minor dental work for adult (18+) Aboriginal people.

See Appendix J for further information.

7.2.4 Workforce survey

The Workforce Survey asked respondents where they and their family regularly access medical and health services, with an invitation to select as many locations as relevant. As shown in Figure 41, while some DIDO respondents use medical and health services in the Muswellbrook Shire Council LGA, it is possible that the few who report using services in Maitland, Newcastle and Cessnock LGAs actually live there. Local residents mostly use local services in the Muswellbrook Shire Council LGA and also use services in Singleton and Upper Hunter Shire Council LGAs.

Figure 41: LGA where medical and health services are accessed (n = 137)



7.3 Educational services

7.3.1 Enrolment numbers

Enrolment numbers at public schools in Muswellbrook, Denman, Aberdeen, Scone and Singleton from 2004 – 2018 are provided in Table 16. As it is shown on Table 16, there have been a mix of trends across the various schools in the previous 10 years as well as since the construction of Mount Pleasant in 2016. It is unknown whether any of the changes since the 2016 are attributable to the families of workers at the Mount Pleasant Operation.

Table 16: Enrolment numbers at state schools

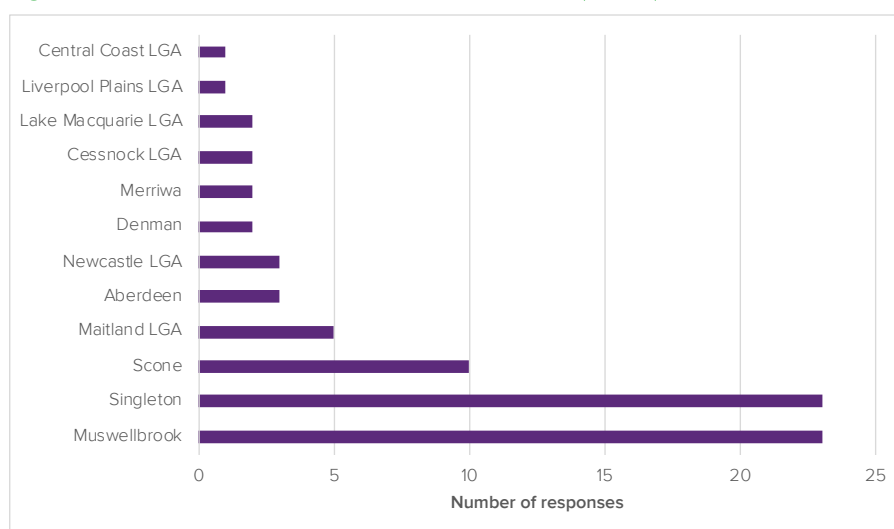
School Name	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	General trend	Trend since 2016
Muswellbrook South Public School	427	406	406	400	399	424	405	366	393	389	436	518	506	549	541	↑	↑
Muswellbrook Public School	662	673	630	611	588	563	561	563	567	601	599	597	605	600	560	↓	↓
Muswellbrook High School	757	751	733	720	688	705	728	757	781	718	701	753	782	825	868	↑	↑
Denman Public School	152	177	195	190	204	201	200	209	203	185	170	183	178	167	157	↑	↓
Aberdeen Public School	212	209	213	190	195	176	195	201	201	196	202	220	241	227	201	↓	↓
Scone Public School	503	499	481	461	475	470	465	482	517	538	515	502	479	459	446	↓	↓
Scone High School	489	461	462	479	479	447	454	461	427	424	411	384	384	389	351	↓	↓
Singleton Heights Public School	620	608	585	587	559	592	593	610	601	589	594	597	573	571	575	↓	→
Singleton Public School	564	560	557	512	476	432	390	411	428	428	425	439	462	474	466	↓	→
Singleton High School	1266	1282	1294	1254	1202	1220	1233	1245	1231	1221	1217	1218	1204	1157	1161	↓	↓

Source: [Centre for Education Statistics and Evaluation 2017](#)

7.3.2 Workforce survey

The Workforce Survey asked respondents if they had school aged children and if they did, where they attended school. The majority of school aged children attend school in Muswellbrook and Singleton, refer to Figure 42.

Figure 42: LGAs where children attend education (n = 77)



7.3.3 ACDF Funding for education programs

The ACDF providing funding for the following educational programs:

- Graham (Polly) Farmer Foundation – operating out of the Muswellbrook TAFE for junior and senior Aboriginal students
- Singleton Girls Academy Partnership Agreement – operating out of Singleton High School for female Aboriginal students and
- Muswellbrook South Primary School Muswellbrook South Public School Warrae Wannii Preschool Program.

See Appendix J for further information.

7.3.4 Childcare services

Childcare options, average cost and vacancies in Muswellbrook, Denman, Aberdeen, Scone and Singleton are shown in Table 17.

Table 17: Childcare centres/services (August 2020)

Location	Number of centres/ services	Centres/ services with vacancies	Average cost/day
Muswellbrook	11	5	\$95.06
Denman	23	1	\$96.96
Aberdeen	3	2	\$96.96
Scone	7	3	\$102.67
Singleton	11	29	\$106.20

<https://www.careforkids.com.au/child-care/>

7.4 Ambulance services

The Bureau of Health Information publishes data on the NSW Ambulance Service. This includes data on activities undertaken and priorities. Data can be access per ABS Statistical Area Level 3 (SA3) areas which cover:

- Muswellbrook and Upper Hunter Shire Council LGAs in the Upper Hunter SA3 (see Figure 43) and
- Singleton, Cessnock and Dungog in the Lower Hunter SA3 (see Figure 44).

For the Upper Hunter SA3 there has been an increase in responses, incidents and patient transports from the January-March 2019 reporting period to the January to March 2020 reporting period.

For the Lower Hunter SA3 there has been a decrease in the number of responses, incidents and patient transports from the January-March 2019 reporting period to the January-March 2020 reporting period.

Although these data sets are too geographically large and do not include trend data prior to 2016 (the construction of the Mount Pleasant Operation), it does provide a baseline and context to discussions with the NSW Ambulance in Muswellbrook, Scone and Singleton.

Figure 44: Ambulance Data for Lower Hunter SA3

Ambulance results Lower Hunter



Ambulance activity

Ambulance activity measures					
	Jan-Mar 2020	Jan-Mar 2019	Difference	% change	
Responses	3,610	3,700	-90	-2.4%	
Incidents	2,728	2,753	-25	-0.9%	
Patient transports	2,074	2,129	-55	-2.6%	
Incident rate per 1,000 population	29.2	29.5	-0.3		

Ambulance responses by priority category					
	Jan-Mar 2020	Jan-Mar 2019	Difference	% change	
All responses	3,610	3,700	-90	-2.4%	
P1: Emergency	1,663	1,669	-6	-0.4%	
P1A: Highest priority	103	94	9	+9.6%	
P2: Urgent	1,561	1,660	-99	-6.0%	
P3: Time-critical	352	327	25	+7.6%	
P4-P9	34	44	-10	-22.7%	

Ambulance performance

Call to ambulance arrival time (from time call answered to time first vehicle arrived at scene)					
	Jan-Mar 2020	Jan-Mar 2019	Difference		
P1 within 15 mins	45.5%	46.8%	-1.3 points		
P1 within 30 mins	85.5%	86.0%	-0.5 points		
P2 within 30 mins	67.1%	66.4%	+0.7 points		
P2 within 60 minutes	92.5%	90.2%	+2.3 points		

Ambulance response time (from call placed in queue to time first vehicle arrived at scene)					
		Jan-Mar 2020	Jan-Mar 2019	Difference	
P1: Emergency	Median	14.6m	14.0m	+0.6m	
	90th Percentile	32.0m	31.9m	+0.1m	
P1A: Highest priority	Median	9.9m **	8.1m	1.8	
P2: Urgent	Median	20.3m	20.0m	+0.3m	
	90th Percentile	51.5m	57.8m	-6.3m	

** The priority 1A (P1A) median response time for this SA3 has been calculated for a group of SA3s known as **Hunter Valley exc Newcastle**. This is to ensure sufficient numbers of P1A cases for public reporting. The SA3s in this group are **Lower Hunter, Maitland, Port Stephens and Upper Hunter**.

(<5) or (*) If the result is suppressed due to small numbers and to protect patient privacy.

7.5 Rural Fire Service

The Hunter Valley Fire District covers the Muswellbrook and Singleton Shire Council LGAs. It includes 32 brigades, 1,185 volunteers and five permanent staff. The five permanent staff are employed by the NSW State Government. The stations, equipment and trucks are vested in the Local Council.

The brigades closest to the Mount Pleasant Operation are the Kayuga (to the north-east), Wybong (to the west) and Edinglassie (Muswellbrook town and south to Singleton). Dartbrook Brigade is to the north and in the Upper Hunter Fire District. Details for the Kayuga, Wybong and Edinglassie Brigades are set out in Table 18.

Table 18: RFS Brigades in proximity to Mount Pleasant Operation

	Kayuga	Wybong	Edinglassie
Classification	Rural brigade	Rural brigade	Village 2
Estimate of Active members	17 - 20	15 - 20	95
Estimated membership demographics	3 to 1 male to female ratio Mix of ages	3 to 1 male to female ratio Aging membership	Equal male to female membership Mix of ages
Trucks	1 dual cab	1 dual cab 1 single cab	2 dual cabs 1 single cab
Level of service	Not enough numbers to rotate between 3 teams of 8 over a 24 hour period	Not enough numbers to rotate between 3 teams of 8 over a 24 hour period	Enough numbers to rotate between 3 crews of 8 over a 24 hour period

Source: Damian Honor, District Officer, Hunter Valley NSW Rural Fire Service (2020), SIA Case Study

7.6 Police service

The indicator for the potential impact on the type and level of policing are the top 20 offences in the Muswellbrook, Upper Hunter and Singleton Council LGAs over the past 10 years.

The most significant change since 2016 was in the Muswellbrook Shire Council LGA was the number of transport regulatory offences tripled from 42 to 119, see Table 19. Whether any of these are attributable to the Mount Pleasant Operation workforce is unknown. Data is also provided for the Upper Hunter Shire Council LGA (see Table 20) and the Singleton LGA (see Table 21).

Table 19: Top 20 Offences committed in the Muswellbrook Shire Council LGA 2010 – 2020

Offence ⁹	April 2010 to Mar 2011	Apr 2011 to Mar 2012	Apr 2012 to Mar 2013	Apr 2013 to Mar 2014	Apr 2014 to Mar 2015	Apr 2015 to Mar 2016	Apr 2016 to Mar 2017	Apr 2017 to Mar 2018	Apr 2018 to Mar 2019	Apr 2019 to Mar 2020	10 yr trend	Trend since 2016
Malicious damage to property	349	355	296	280	270	304	249	216	222	197	↓	↓
Break and enter - dwelling	151	174	180	192	150	123	157	159	115	103	↓	↓
Steal from motor vehicle	119	234	215	143	150	134	125	102	58	60	↓	↓
Breach bail conditions	40	37	61	101	124	149	154	126	242	173	↑	↑
Intimidation, stalking and harassment	51	61	80	117	90	90	115	103	116	157	↑	↑
Assault - domestic violence related	70	79	85	108	130	81	98	94	109	122	↑	↑
Steal from dwelling	66	78	77	96	86	79	80	62	83	98	↑	↑
Other theft	76	87	89	80	76	85	64	59	50	77	→	↑
Break and enter - non-dwelling	120	64	97	57	62	78	64	64	72	60	↓	↓
Breach Apprehended Violence Order	42	60	72	68	86	76	67	81	82	85	↑	↑
Fraud	36	40	58	73	69	79	62	60	104	94	↑	↑
Prohibited and regulated weapons offences	18	20	26	49	81	94	98	69	101	102	↑	↑
Other offences	50	48	49	71	71	65	66	53	62	40	↓	↓
Steal from retail store	37	38	18	39	64	99	80	47	61	47	↑	↓
Possession and/or use of cannabis	48	22	37	44	66	67	52	66	46	60	↑	↑
Motor vehicle theft	49	47	68	53	57	48	65	30	41	35	↓	↓
Arson	43	40	51	36	31	28	38	40	35	33	↓	↓
Trespass	28	15	28	31	52	59	34	31	38	28	→	↓
Transport regulatory offences	31	3	8	2	2	0	43	81	42	119	↑	↑
Liquor offences	78	9	22	43	37	11	22	36	52	11	↓	↓
Possession and/or use of amphetamines	4	4	6	16	43	46	26	28	30	43	↑	↑

Source: NSW Bureau of Crime Statistics and Research 2015

⁹ Explanation of offences can be found at https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_glossary.aspx#F

Table 20: Top 20 Offences committed in the Upper Hunter Shire Council LGA 2010 – 2020

Offence ¹⁰	April 10 to Mar 2011	Apr 2011 to Mar 2012	Apr 2012 to Mar 2013	Apr 2013 to Mar 2014	Apr 2014 to Mar 2015	Apr 2015 to Mar 2016	Apr 2016 to Mar 2017	Apr 2017 to Mar 2018	Apr 2018 to Mar 2019	Apr 2019 to Mar 2020	10 yr trend	Trend since 2016
Malicious damage to property	158	173	140	109	108	141	130	97	100	92	↓	↓
Other theft	64	64	70	53	56	52	42	50	77	35	↓	↓
Break and enter - non-dwelling	63	81	115	44	34	30	32	54	37	61	→	↑
Steal from motor vehicle	48	61	86	64	43	60	49	39	29	31	↓	↓
Break and enter - dwelling	55	44	91	43	44	47	44	46	33	32	↓	↓
Intimidation, stalking and harassment	43	38	43	37	30	36	35	48	45	76	↑	↑
Assault - non-domestic violence related	52	56	52	46	36	31	46	34	39	40	↓	↓
Steal from dwelling	35	35	45	37	49	46	40	44	53	39	↑	→
Prohibited and regulated weapons offences	22	19	21	45	61	54	45	27	45	61	↑	↑
Assault - domestic violence related	35	32	31	25	22	34	30	31	59	47	↑	↑
Fraud	26	20	33	37	33	38	40	42	39	29	↑	↓
Liquor offences	71	51	24	16	23	27	14	40	29	37	↓	↑
Other offences	33	32	24	13	11	51	41	24	52	29	↓	↓
Possession and/or use of cannabis	16	12	20	17	44	41	26	23	26	29	↑	↑
Motor vehicle theft	29	15	21	22	24	31	27	24	20	18	↓	↓
Breach Apprehended Violence Order	27	12	24	23	17	18	24	18	13	33	↑	↑
Trespass	25	16	17	15	13	19	22	21	25	27	→	↑
Breach bail conditions	10	13	8	16	9	18	32	27	37	25	↑	↓
Indecent assault, act of indecency and other sexual offences	10	12	14	15	16	17	15	19	15	16	↑	→
Steal from retail store	7	5	16	12	20	19	16	8	23	11	↑	↑

Source: NSW Bureau of Crime Statistics and Research 2015

¹⁰ Explanation of offences can be found at https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_glossary.aspx#F

Table 21: Top 20 Offences committed in the Singleton LGA 2010 – 2020

Offence ¹¹	April 2010 to Mar 2011	Apr 2011 to Mar 2012	Apr 2012 to Mar 2013	Apr 2013 to Mar 2014	Apr 2014 to Mar 2015	Apr 2015 to Mar 2016	Apr 2016 to Mar 2017	Apr 2017 to Mar 2018	Apr 2018 to Mar 2019	Apr 2019 to Mar 2020	10 year trend	Trend since 2016
Malicious damage to property	282	264	280	236	205	173	170	181	243	216	↓	↑
Steal from motor vehicle	117	181	252	143	231	160	100	95	87	84	↓	↓
Other theft	121	169	149	150	144	124	128	86	178	96	↓	↓
Break and enter - dwelling	146	123	136	123	170	131	94	97	106	94	↓	→
Steal from dwelling	107	99	100	127	112	83	84	75	122	104	→	↑
Assault - non-domestic violence related	101	101	82	102	67	75	76	102	96	71	↓	↓
Break and enter - non-dwelling	146	80	109	55	78	55	80	55	80	118	↓	↑
Breach bail conditions	48	48	48	52	62	117	132	122	104	118	↑	↓
Fraud	67	62	92	56	57	71	69	135	97	134	↑	↑
Intimidation, stalking and harassment	71	57	75	86	79	88	91	101	94	97	↑	↑
Assault - domestic violence related	57	79	74	82	62	85	91	109	87	89	↑	→
Motor vehicle theft	100	51	165	68	82	72	66	57	47	70	↓	↑
Prohibited and regulated weapons offences	33	27	41	73	65	53	67	86	76	77	↑	↑
Steal from retail store	37	44	34	31	70	74	48	68	64	94	↑	↑
Breach Apprehended Violence Order	30	41	37	51	44	56	79	73	68	64	↑	↓
Other offences	30	38	50	51	73	63	49	70	69	49	↑	→
Possession and/or use of cannabis	25	17	38	57	59	44	47	54	74	58	↑	↑
Trespass	26	24	37	32	42	29	38	51	61	76	↑	↑
Arson	29	30	61	40	35	40	35	44	45	34	↑	→
Transport regulatory offences	76	4	7	3	2	2	29	56	27	52	↓	↑
Indecent assault, act of indecency and other sexual offences	19	24	18	20	32	16	22	31	27	24	↑	→

Source: NSW Bureau of Crime Statistics and Research 2015

¹¹ Explanation of offences can be found at https://www.bocsar.nsw.gov.au/Pages/bocsar_crime_stats/bocsar_glossary.aspx#F

7.7 Workforce support and participation in community-based organisations

7.7.1 Workforce Survey

Of the Mount Pleasant Operation workforce who completed the Workforce survey, there was a combination of permanent residents and DIDO workers and their families who participate in a range of community-based organisations across the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs. There are higher numbers of workers and their families who participate in community organisations who live in their normal family home while working (see Figure 45). There are also some DIDO workers who reported participating in community-based organisations in Muswellbrook, Upper Hunter and Singleton, refer Figure 46.

Figure 45: Local residents' participation in community groups and activities by LGA (n = 122)

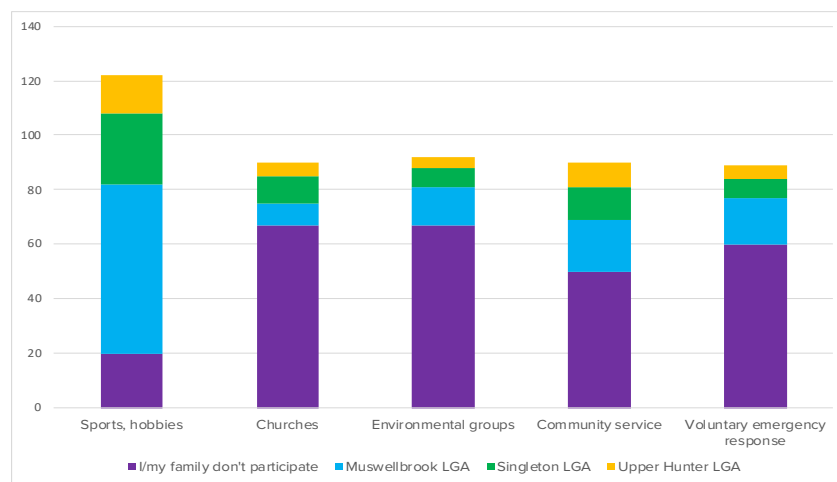
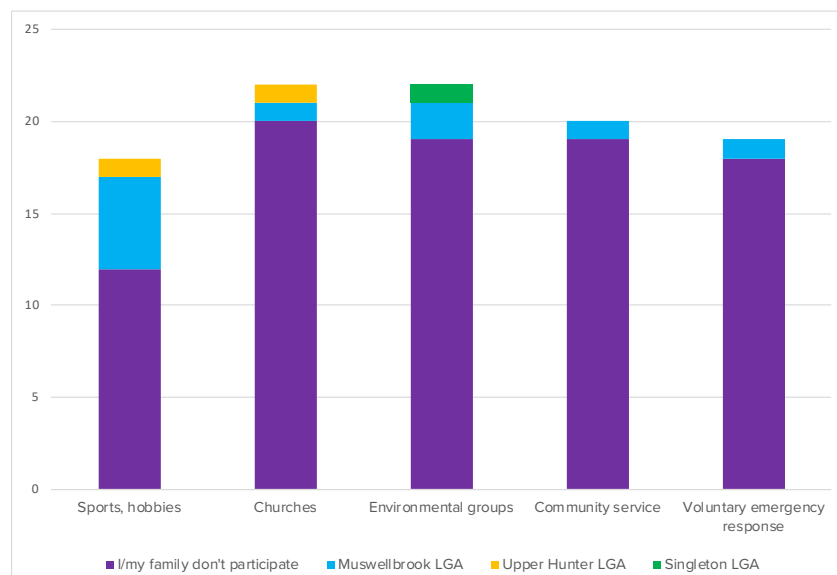


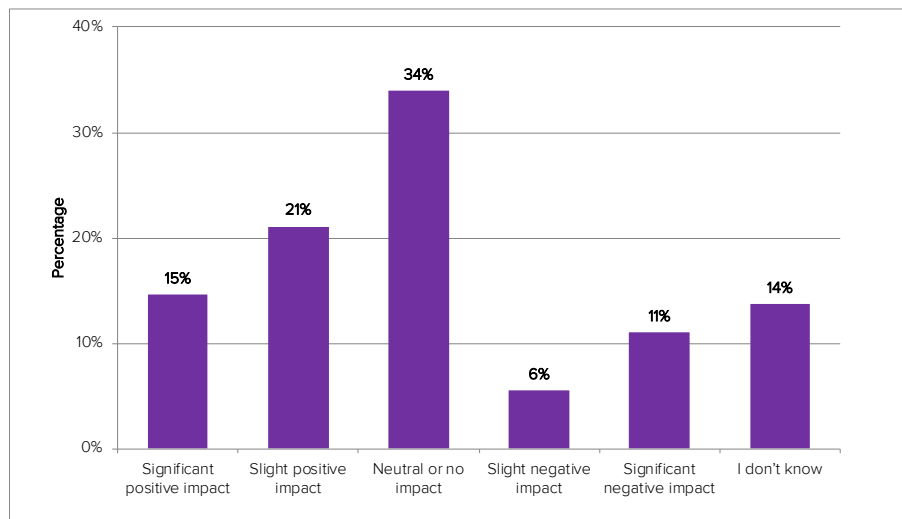
Figure 46: DIDO participation in community groups and activities by LGA (n = 25)



7.8 Community Survey

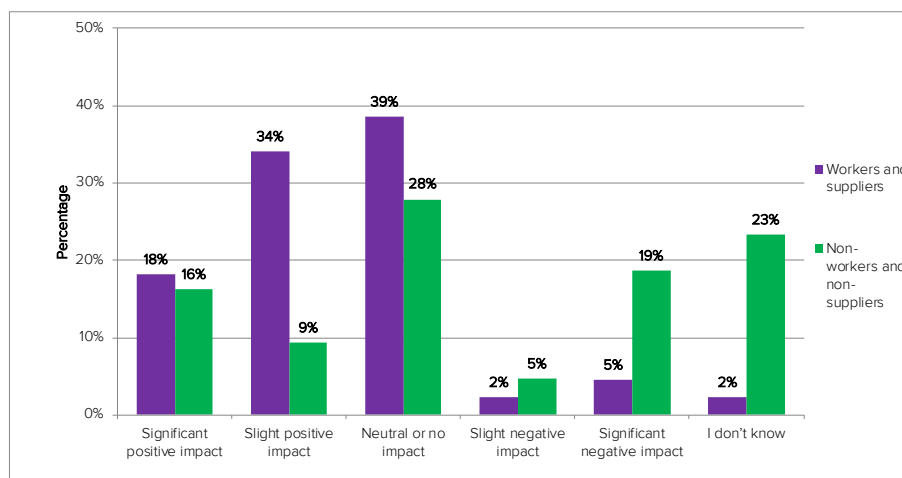
The Community Survey asked a question regarding the impact the current Mount Pleasant Operation was having on community services. The total responses are shown in Figure 47. 36% of survey participants provided a positive Likert scale rating in response to this question, compared with 17% of survey participants who provided a negative rating.

Figure 47: Impact on community services – all responses (n = 109)



There were only minor differences between age, gender and locational responses. However, there was a difference in the respondents' connection to the Mount Pleasant Operation, as shown in Figure 48. There is more positive response from workers and suppliers of the Mount Pleasant Operation and a more negative response from those who are not.

Figure 48: Impact on community services – comparison by employment (n = 87)



Relevant comments¹² from the community survey are provided in Table 22.

¹² If a comment was more suited to another survey topic, it is reported in other survey topic.

Table 22: Comments on the impact of the Mount Pleasant Operation on community services, Community Survey

Location	Comment
Wybong	<i>"Consolidation of community services is needed for efficient delivery in lieu of hundreds of small irrelevant inefficient providers absorbing funding into admin and self-employment reward schemes."</i>
Muswellbrook	<i>"Additional staff and contractors from outside of muswellbrook are now utilising services in the town that were already limited for local people." "I have not noticed or heard of any impacts" "large community contributions continue to drive community projects" "Mount Pleasant MACH Energy would be one of the best mining companies that give back to the community."</i>
Denman	<i>"Overloading many services - particularly medical"</i>
Parkville	<i>"Health services are already overtaxed."</i>
Scone	<i>"Childcare is very difficult to obtain in this area. There are very long waiting lists." "Mines throw money around for just this purpose!" "The Mount Pleasant Operation hasn't necessarily impacted the availability of services, however in a mining town with a high proportion of shift workers, it continues to be difficult when medical practices are only open during the days."</i>
Singleton	<i>"Significant cost to the taxpayer from increased health concerns involved with high pollution and dust levels causing respiratory and other diseases associated with increased diesel fumes." "The MachEnergy team are very supportive of all community projects. The Muswellbrook community has benefited greatly from this."</i>

Note: this table only lists the responses relevant to the potential community services and facilities related impacts. Further details regarding the Community Survey are included in Appendix F.

7.9 Summary

The Mount Pleasant Workforce and their families live in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs and beyond. They are part of their communities and access a range of services including medical, educational, child care, ambulance, and police services. They also support community based organisations. There is a reported demand for child care and mental health services in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, however, SIA stakeholders did not directly link this demand to the Mount Pleasant Operation workforce and their families. How the Mount Pleasant Workforce and their families have influenced supply and demand, and data trends since 2016 (the start of construction) and since 2017 (starting of mine operations) is unknown due to the complexity of the social environment and cumulative nature of impacts with other mining companies.

8 Quality of the living environment

8.1 Selection of indicators for the quality of the living environment

Impacts on the quality of the living environment is based on a range of environmental impacts people are experiencing or are likely to experience from the Mount Pleasant Operation. A review of complaints data and stakeholder feedback during the Scoping SIA and SIA stakeholders identified a number of characteristics of how the quality of their living environment has changed since the construction and operation of the Mount Pleasant Operation. These characteristics (either individually or cumulatively) were:

- Environmental impacts including dust, noise, blasting noise, vibration, odour, lighting
- impacts on visual amenity and
- impacts on water resources.

8.2 Environmental Impacts

8.2.1 SIA stakeholders

SIA stakeholders described different environmental impacts as causing a decreased level of amenity, these included dust impacts, noise impacts, blasting impacts/vibration and lighting impacts.

The most significant impact from the current Mount Pleasant Operation is dust. It is good that Mount Pleasant has to shut down during certain environmental conditions and don't have to call up to complain. But the dust impacts still occur and is impacting on Jonathan and Elisabeth's health and everyday life. (Johnathan Moore, Gilgai, Scoping SIA)

The two big impacts of the MPO are the visual and dust impacts with some night time noise. The visual impact is greatest for patrons viewing from the grandstand which faces north-west and straight at the MPO waste rock dump. This 'view' can be seen when watching the race starts at the 1,280m, 1,450m and 1,500m start line and can be seen on national and international television coverage. Depending on the wind direction dust impacts are sometimes experienced in the Racecourse Road precinct. (Stakeholder A, Scoping SIA)

Dust, noise, blasting vibrations, fumes and the continual inconvenience of large numbers of vehicles and machinery entering and leaving the mine site. Every day we are aware of the dust problem and it is getting worse. The air pollution is above the national safety standards, (for the last two months

most of the EPA monitoring stations have recorded alert levels, and all the open cut mines are contributing to this). (Stakeholder B, Scoping SIA)

Dust. Can see the dust build-up in layers on the outside of houses surrounding the mine. Recognise that MACH Energy shuts the mine down when they are going to go over their environmental licence. It is good that they have to shut down. It's the overburden dust (brown/red colour).

Noise. The noise impacts are managed a bit differently by MACH Energy. People have to make a complaint/s about the noise before anything is done. MACH Energy isn't as proactive with noise as they are about dust. Because MACH Energy has to shut down to manage dust impacts, it means they have to work harder to catch up when they are allowed to start mining again and this can produce more noise. Because there is less ambient noise at night, the noise impacts are worse. The machinery seems to start up at about 10:30pm, maybe this is when they think everyone is asleep, but really this is when some people are trying to get to sleep. This is when we get really frustrated because it's the end of our day and we are trying to get to sleep. (Stakeholder D, Scoping SIA)

There seems to be more dust now, despite the rain. The house and our cars are getting dirtier. Our cars are getting dirt on them even when the garage door is closed. We need to wipe the wire on the clothes line before we can hang the washing out, which we have never had to do before. Noise has been ok, although over the past 6 weeks it seems to be getting worse. We just put the pillow over our heads and try to get back to sleep, there's no point in complaining. (Stakeholder D)

Dust accumulates on all the homes on the properties, both on the inside and outside. In April 2020 we had repairs carried out to the house on property 241 for cracks in the gyprock. They are now starting to appear again. We believe the cracks are due to the vibrations from blasting. Can smell when there is a blast. We can hear the dull background noise, like drum rolls and then there is the sound of machinery and blasting on top of that. Can hear the machinery scaping the ground at night. MACH stays within their noise conditions but that doesn't mean we're not impacted. Lights from the mine shine into every home on the farm and also into the dairy yard where cattle are yarded at 2am. The lights are set up not to shine towards Muswellbrook, but we are north/west of the mine, not west like Muswellbrook. (Glen Eden Holsteins Pty Ltd, SIA)

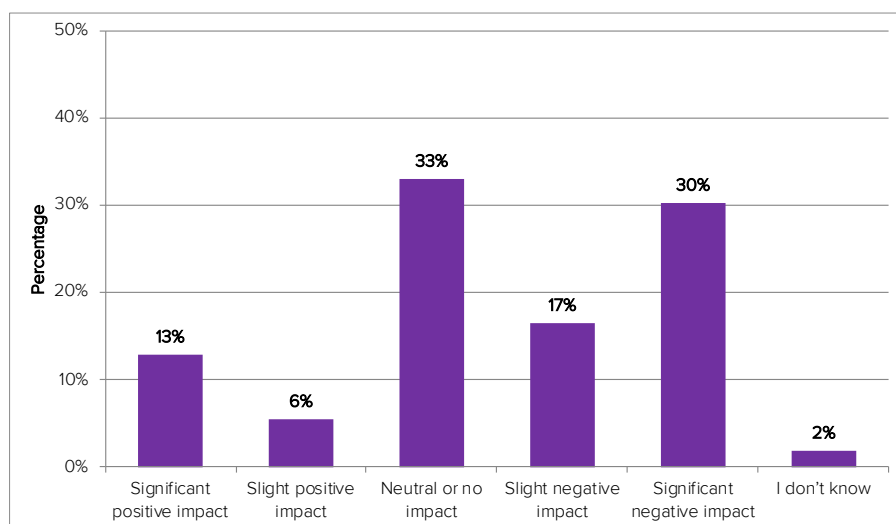
Neighbours to Mt Pleasant no longer enjoy the quiet of a rural lifestyle, rather the constant industrial background drone. Farmers on Blairmore Lane complain that the noise levels already disturb their sleep. This can be expected to intensify and increase as the mine expands. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Muswellbrook experiences the cost of mining, the noise and the dust, but it hasn't been receiving the benefits from it through the Resources for Regions Program. The NSW Government needs to be putting the money taken from the town back into the town. (Tony McTaggart EHP First National, SIA)

8.2.2 Community survey

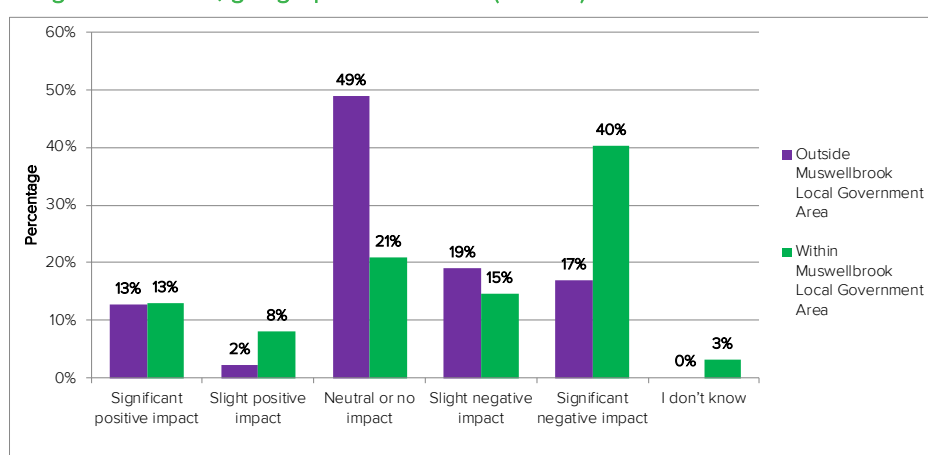
The Community Survey asked what the overall impact the current Mount Pleasant Operation had on the quality of the living environment of the area in which the respondent lived. Of the 109 responses to the question, 30% identified the impacts as being significantly negative, with only 13% identifying the impacts as being significantly positive (Figure 49).

Figure 49: Community Survey – impact of the current Mount Pleasant Operation on the quality of the living environment (n = 109)



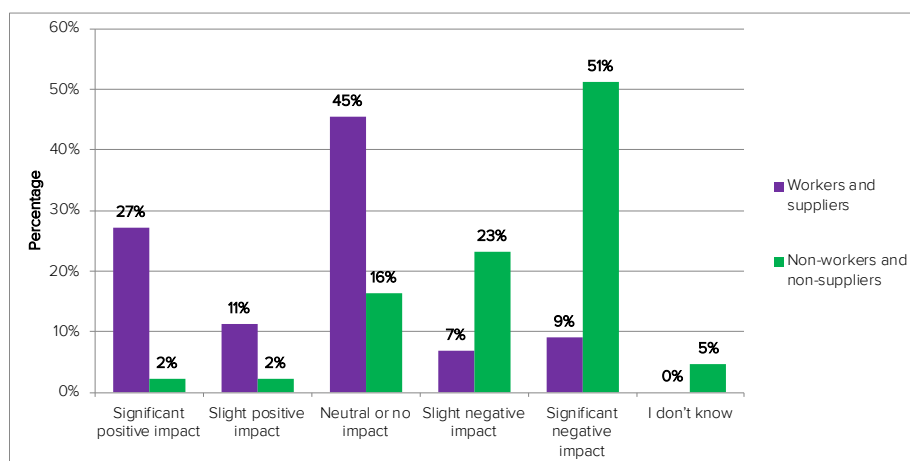
There was a trend for the responses to this question to be more negative the older the age groups. Survey participants living outside Muswellbrook Shire Council LGA were more likely to provide a neutral Likert scale ratings, compared with those living within Muswellbrook Shire Council LGA who provided negative responses, refer to Figure 50.

Figure 50: Community Survey – impact of the current Mount Pleasant Operation on the quality of the living environment, geographic difference (n = 109)



Survey participants who are either workers at, or suppliers to the Mount Pleasant Operation, responded to this question with Likert scale ratings that were more positive than the combined responses of non-workers and non-suppliers, as can be seen in Figure 51.

Figure 51: Community Survey – impact of the current Mount Pleasant Operation on the quality of the living environment, relationship to the Mount Pleasant Operation



44 supporting comments were provided in response to this question, the highest for any question. Supporting comments were mainly from the community survey are provided in Table 23.

Table 23: Comments on the impact of the Mount Pleasant Operation on the quality of the living environment, Community Survey

Location	Comment
Castlerock	<p>"Due to the proximity of our family property the dust and noise is a significant impact. We are also concerned about the possible loss of run off from Mount Pleasant land that drains into our property and dams."</p> <p>"Increased dust noticeable since the commencement of operations at MACH."</p> <p>"Noise at this stage"</p>
Kayuga	<p>"Increased dust, pollution of our tank water, significant loss of night sky"</p> <p>"Light pollution means we do not see as many stars. Noise is invasive, the solstalgia I feel when driving past is depressing and as is the dirty sky."</p>
Muswellbrook	<p>"Again not just one mining company..... More vibrations/ earth quakes than 5+ years ago. More dust. More community having health issues such as asthma and cancer"</p> <p>"Alot of dust in the community attributed to the collective of mines in close vicinity to the township"</p> <p>"can get dusty at times however one mine is not always at blame"</p> <p>"Compared to Mount Arthur's dust, and Bengallas dragline. Mount Pleasant is great!"</p> <p>"House needs to be dusted everyday."</p> <p>"I have contacted MAC Energy 24 hour hotline...no one returns your calls...have contacted EPA in regards to their operations."</p> <p>"I'm proud of living in an industrial town that underpins Australia's privileged lifestyle"</p> <p>"More coal dust on home outdoor areas since Mt Pleasant commenced operations"</p> <p>"Mostly concerned about air quality (dust)."</p> <p>"My home is now covered in filth as the dust from the mine blows straight across town, I hear the machinery noise every night and there are cracks in my house which I believe to be as a result of the mining activity"</p> <p>"Noise , dust & Light pollution which has significant effect on our previously quite lifestyle"</p> <p>"Noise at night from mine operations"</p> <p>"There has been a marked increase in coal dust recently."</p> <p>"Way more dust on all outdoor surfaces and very visible on windy days"</p>

Location	Comment
	<i>"We are on a hill and our verandah is westerly facing in other words overlooking the mine. The dust is significant since the mine commenced. The house is full of it in every nook and cranny. We choose to live in a mining area but consider Mount Pleasant could do much more as regards dust management."</i>
Merriwa	<i>"The south east horizon is now outlined by light from the mines all through the night. When the wind is coming from that direction we can smell a methane or sulphur like odour which makes sleeping with open house windows unpleasant, but overnight temperatures in summer require ventilation or air conditioning. Air quality monitors on the Gundibri property (about 2 km from us) frequently send alerts about poor air quality which is a frequent source of anxiety. I experience constant eye and nose irritation to the point where I always need a handkerchief when outdoors and use an anti-inflammatory nasal spray daily (Nasonex). The dust in the house has greatly increased and turned black in colour so that cleaning requirements have increased and kitchen benches must be thoroughly cleaned before any use even if cleaned previously that day. These issues have greatly increased in the past five years."</i>
Parkville	<i>"Prevailing winds bring pollution"</i>
Scone	<i>"Air quality is noticeably poorer in Muswellbrook. I work in Muswellbrook and can see the poor air quality as I travel to work each day."</i> <i>"Mount Pleasant has had minimal impact and that has been managed through the installation of the bund (outer dump) and their demonstrated commitment to progressive rehabilitation. Mount Pleasant is also the only mine in the valley that has to shut down its operation if the Muswellbrook NW Upper Hunter Air Quality Monitor goes over a set limit regardless of where the dust or smoke is coming from."</i> <i>"With such a huge area exposed to the elements, dust and air quality are significant problems"</i>
Singleton	<i>"I consider that I can count the contribution of the current MPO to the cumulative impact of the mining industry in the Hunter Valley to my experience of light in the sky that was not there 20 years ago. Similarly there is a contribution to the decrease in air quality and consequent quality of the rainwater that I collect."</i> <i>"Job opportunity and growth in local communities"</i>

Note: this table only lists the responses relevant to the potential impacts on the quality of the living environment. Further details regarding the Community Survey are included in Appendix F.

8.3 Visual impacts

8.3.1 SIA Stakeholders

SIA stakeholders raised the visual impacts of the Mount Pleasant Operation:

You actually see mining getting closer. (Johnathan Moore, Gilgai SIA)

When you drive down Wybong Road you can see the difference and effort in the rehabilitation on the overburden/bund wall, it looks good with the green grass and tree stumps re-positioned.
(Stakeholder A, SIA)

At the moment the waste rock emplacement bund is still a dirt hill. The waste rock emplacement bund is the biggest bug bear for people in town – they just see a dirt hill. Everyone on the western side of Muswellbrook can see it. If it was green, had grass growing, Mount Pleasant wouldn't have

had the push back they have had. It would have been good if Mount Pleasant had made rehabilitating the hill a higher priority. (Stakeholder D, SIA)

Through various consultation mediums, Council is hearing feedback from community members that the MACH Energy rehabilitation works on the overburden emplacement area facing Muswellbrook is being well received. (Muswellbrook Shire Council, SIA)

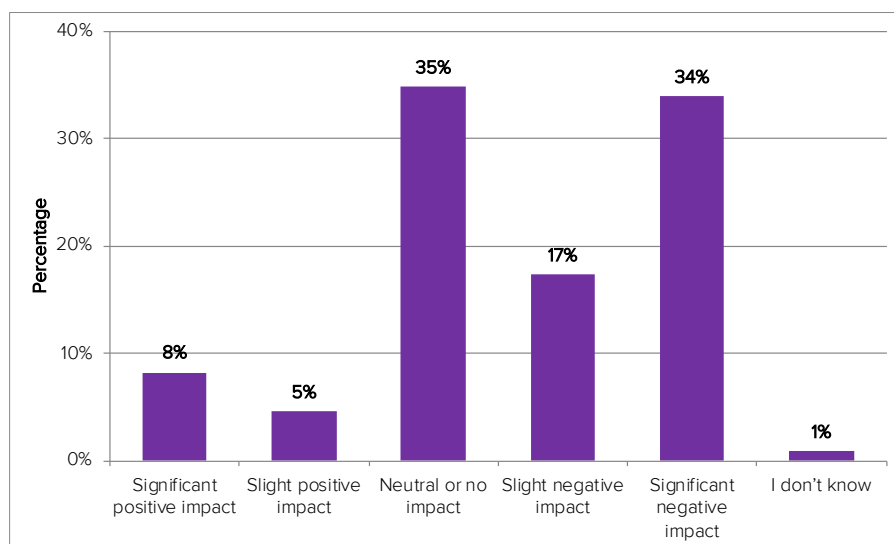
The worst part about mining is, it annihilates everything in its path, the houses, the productive land, the people and what does it leave behind? The mining companies say they are or are going to rehabilitate but how can they? They have taken so much out of the land and moved it around so much, it can never go back. You can see that from the attempts to rehabilitate the overburden. There just isn't enough top soil to cover it – it's simple mathematics. (Jim Lonergan, Kayuga, SIA)

We've been watching the overburden being built. We no longer have a view of the natural landscape but rather look directly into the overburden. We also see the dust and blasts. We can see the dust come off the overburden or out of the mine and settle on the surrounding areas. The rural landscape has changed dramatically. (Glen Eden Holsteins Pty Ltd, SIA)

8.3.2 Community survey

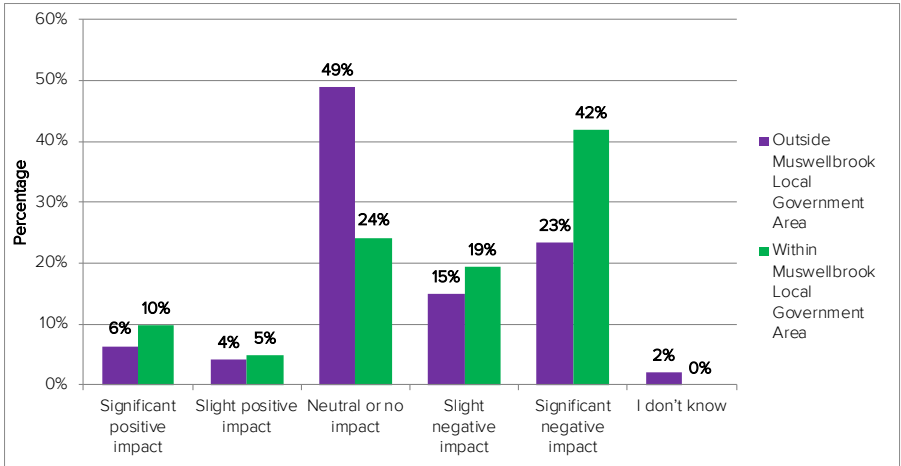
The Community Survey asked a question about the impacts the Mount Pleasant Operation was having on the visual amenity. All responses are shown in Figure 52. 51% of participants provided a negative Likert scale rating in response to this question; relatively high when compared to negative Likert scale ratings for other questions in the Community Survey.

Figure 52: Community survey – Mount Pleasant Operation impacts on visual amenity (all responses n=109)



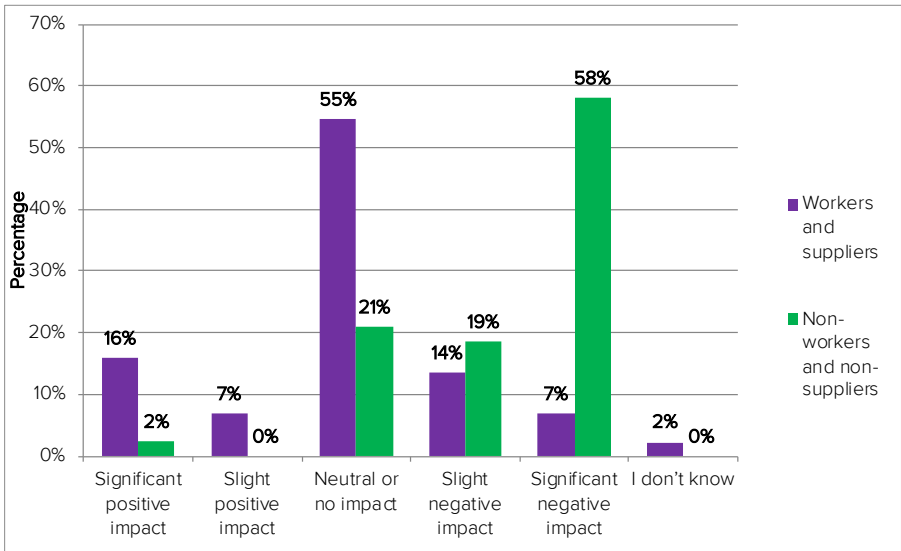
There was a trend for the responses to this question to be more negative the older the age groups. 61% of survey participants living within Muswellbrook Shire Council LGA provided negative Likert scale ratings in response to this question, compared with 38% of participants living outside Muswellbrook Shire Council LGA, refer to Figure 53.

Figure 53: Community survey – Mount Pleasant Operation impacts on visual amenity, geographical differences (n=109)



77% of non-workers and non-suppliers responded to this question with negative Likert scale ratings, compared with 21% of workers and suppliers, refer to Figure 54.

Figure 54: Community survey – Mount Pleasant Operation impacts on visual amenity, relationship to the Mount Pleasant Operation (n=87)



Relevant comments¹³ from the community survey are provided in Table 24. Of the comments received, the majority were negative. Only areas where comments were received from are included.

¹³ If a comment was more suited to another survey topic that it is reported in other survey topic.

Table 24: Comments on the visual impact of the Mount Pleasant Operation, Community Survey

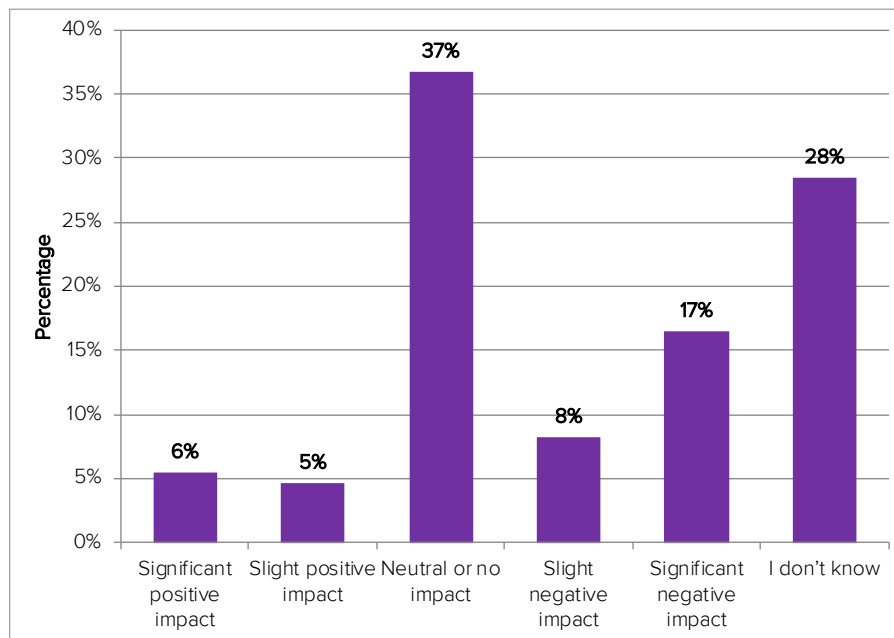
Location	Comment
Castlerock	<i>"Mount Pleasant mine is in a very visual position easily seen from Muswellbrook and very close to the Wybong Road. Every attempt is being made by the mine to reduce the visual impact and as the mine progresses we think the visual impacts will be reduced."</i>
Kayuga	<i>"Driving to town, past Mt Pleasant , is always a sad and regretful experience. Approaching Muswellbrook from North and South, similar sadness." "Mt Pleasant is too close to Muswellbrook and has a high impact on the landscape, no matter from which direction you approach the town. The town looks like it is built in a mullock heap." "The mine looks terrible - what a mess"</i>
McCullys Gap	<i>"Mount Pleasant should be commended for their efforts with the landform construction and progressive rehabilitation of the site. Mount Pleasant is the only site in the Hunter Valley that has build a geomorphic landform from the ground up. The site has also gone to alot of effort to incorporate habitat trees into the rehabilitation design. It looks impressive!"</i>
Muswellbrook	<i>"180 degrees view of mines" "Disgusting view when you return to Muswellbrook from Black Hill." "Full Horizon is large dirt patches" "I used to look out across sloping green hills and pasture, now it's a dirty brown and dusty landscape" "If all the mines in the area followed MPO's standard for mining rehabilitation, the community vision of mines would be much more positive." "It currently looks like crap, but that because it's a new pit" "It is a real scar on a rural landscape" "It's impossible to miss from the highway and elevated spots around town." 'Mine site and pit area very visible" "obvious to anyone with a before and after memory" "Open cut mines are ugly" "Severe visual impact....significant lighting issues at night...cannot understand how this is acceptable.....too much lighting escaping the site." "The mine can be seen from the township. The dust in the air and the lights at night" "The result of the current & future planned mining operations has changed our visual outlook from a quite rural outlook to one that has large overburden piles." "This project has completely destroyed the visual landscape" "Unfortunately can not see the beautiful natural landscape from my house anymore" "Very poor presentation, a view of a man made dirt mound is not an attractive view" "We live in a mining town and it's good to see all the activity" "We overlook the mine. Our main aspect is westerly and used to be countryside and cows."</i>
Wybong	<i>"The Wybong Road is now called "the gates of hell" "Visual is not the best at the current time however the landform developing is acceptable aesthetically assuming vegetative covering."</i>
Parkville	<i>"Overburden looks grim."</i>
Singleton	<i>"Dust from Mt Pleasant and other mines impacts greatly on air quality in our area." "It is still under construction. In the next 12 months it will be a positive impact." "There is obviously a significant impoact for Muswellbrook people" "Visual amenity of rehabilitation surface and the clean-up of small rural holdings has had a positive impact on the landscape. First rehabilitation was undertaken prior to first coal mining and concerted effort made to maintain progress on rehab."</i>

Note: this table only lists the responses relevant to the potential visual impacts. Further details regarding the Community Survey are included in Appendix F.

8.4 Impacts on water

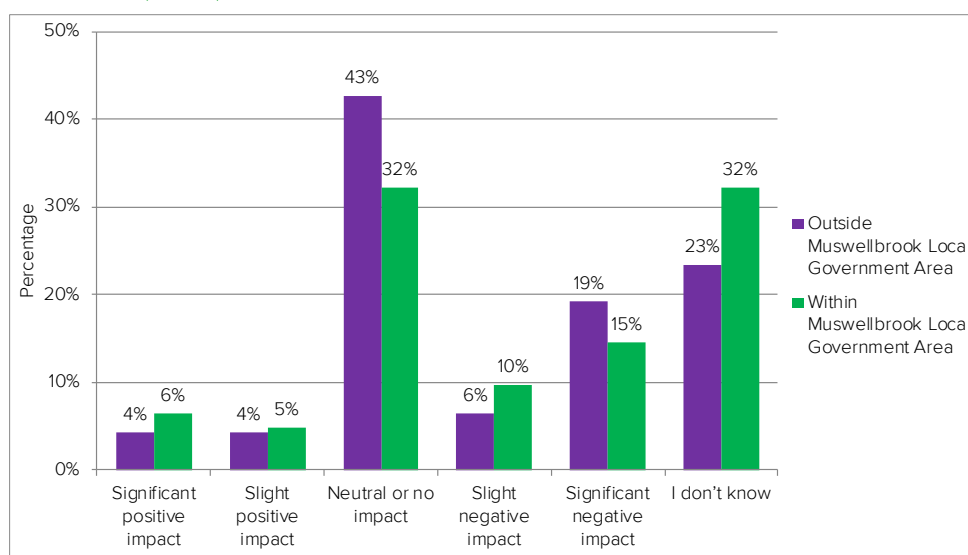
The Community Survey asked a question about the impacts the Mount Pleasant Operation was having on water resources including impacts on surface water, the Hunter River and groundwater in the area that respondents live. The majority of responses were either neutral or no impact, or I don't know, see Figure 55.

Figure 55: Community survey – Mount Pleasant Operation impacts on water (all responses n=109)



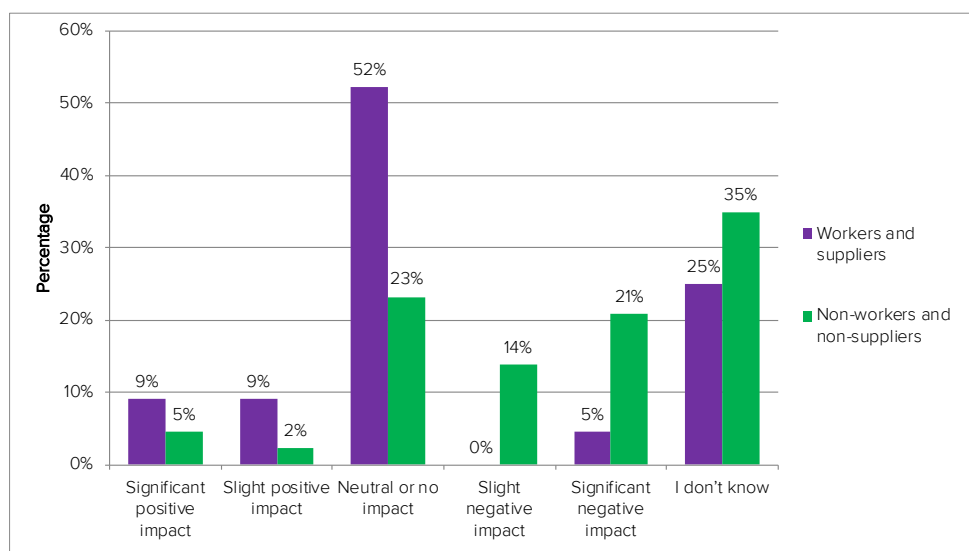
There was a similar trend in the impacts on water resources between those people who lived within and outside the MSC LGA, see Figure 56.

Figure 56: Community survey – Mount Pleasant Operation impacts on water resources, geographical differences (n=109)



Those people with a relationship to the Mount Pleasant Operation, either as a worker or a supplier, had a more positive response to the impacts on water resources, whereas respondents who did not have a relationship, tended to respond in the negative, see Figure 57.

Figure 57: Community survey – Mount Pleasant Operation impacts on water resources, relationship to the Mount Pleasant Operation (n=87)



Relevant comments¹⁴ from the community survey are provided in Table 25. Of the comments received, the majority were negative. Only areas where comments were received from are included.

Table 25: Comments on the impacts of the Mount Pleasant Operation on water, Community Survey

Location	Comment
Castlerock	"Mining operations require a lot of water and with extended periods of drought we are concerned about the amount of water coming from the Hunter River for mining. Mining in the future will continue to need large amounts of water and this could be to the disadvantage of agriculture activities that also require Hunter River water."
Kayuga	"Buying all available water allocations - leaving nothing available for farmers who have been farming for years."
Merriwa	"Destruction of important landscape. Maybe negative impact on water table." "I live on a rural property and we rely on rainwater for drinking, roof runoff is stored in a closed system of tanks and pumped for household use. The property has been owned and farmed by the family since 1964. I have lived here for over twenty years and the amount of dust residue in the house guttering (which drains into the water tanks) has significantly increased in that time, it has also changed in colour from red brown (similar to surrounding soil colour) to black. The dust monitor on nearby property Gundibri also confirms increased dust in the past several years, even when not impacted by drought or bushfires. In the past we were able to store metal objects outside exposed to rain, and fencing wire and galvanised iron sheds lasted many years. In the past ten years the impact of rust on metal exposed to rain has greatly accelerated to the point where we need to replace fencing wire regularly and have changed our usage to double-galvanised heavy duty wire, to reduce the impact of rust. Metal stored away from rainwater also deteriorates but much more slowly. I believe our rainwater is being contaminated by increased industry in the Upper Hunter Valley, which consists of coal mining. The Mount Pleasant Project is located approximately 35 km from my property. I believe it will further detrimentally affect rain and water quality at my home."

¹⁴ If a comment was more suited to another survey topic that it is reported in other survey topic.

Location	Comment
Muswellbrook	<p><i>"Concerned about surface water runoff and groundwater"</i></p> <p><i>"How would we know that ?"</i></p> <p><i>"I buy bottled water due to dust and colour of water."</i></p> <p><i>"I have not noticed or heard of any impacts, good or bad"</i></p> <p><i>"If it uses Hunter river/catchment water can only be negative"</i></p> <p><i>"People who live near the mine are aware of a reduced water table due to the mine"</i></p> <p><i>"The Hunter River is not clear, not 100% safe like it used to be. The land is very dry and sick from under ground water being taken. Natural waterways being moved having negative impacts on the land - this is from all mining in the area not just one company "</i></p> <p><i>"They dam their own water which reduces the usage from the town"</i></p> <p><i>"Water restrictions had been imposed mt pleasant cannot be divorced from that impact"</i></p> <p><i>"Whilst I don't profess to have data regarding this issue, I can only assume the mine and it's proposed doubling in size/extraction will have a significant negative impact on local water resources."</i></p>
Wybong	<i>"Reduction in clean water run-off"</i>
Scone	<p><i>"ANY degrading of aquifers has a significant negative impact! This includes damage to aquifers by cutting into; and pollution."</i></p> <p><i>"As I live in Scone, water use at the Mount Pleasant Operation has no impact due to being downstream of me."</i></p> <p><i>"I live too far upstream to notice the inevitable impact"</i></p> <p><i>"Mount Pleasant contributes to the ruination of my home and the planet"</i></p> <p><i>"The amount of water the Mount Pleasant Operation draws from the Hunter River would be minimal when compared to water usage of other industries. Water usage in NSW is heavily regulated and like everyone else with water licences, the Mount Pleasant Operation would have to adhered to the conditions on those licence or face tough penalties."</i></p>
Singleton	<i>"the extent of the impact of this particular mine is unknown to me but I am aware that the Hunter bioregional Assessment Report in 2018 identified negative impact on groundwater ... drawdown ... and since then obviously drought highlights water concerns both in usage and sharing the limited resource between mining and agriculture and in the Hunter River the need for high flows to be able to discharge the salty water will be constrained. I should become better informed to be better able to assess the new extension proposal"</i>

Note: this table only lists the responses relevant to the potential water impacts. Further details regarding the Community Survey are included in Appendix F.

8.5 Summary

How people experience the environmental impacts of the Mount Pleasant Operation is dependent on:

- their location – the closer someone lives to the Mount Pleasant Operation, the increased impact on the quality of their living environment and
- relationship to the Mount Pleasant Operation – those who benefit from the Mount Pleasant Operation (employment or as a supplier) were more likely to express less negative or positive impacts on the quality of their living environment.

The closer to the Mount Pleasant Operation people are, the higher the negative impact on the quality of the living environment and visual impact, however this may be reduced if the person is experiencing a financial benefit, either by employment or as a supplier.

9 Socio-economic impacts

9.1 Selection of indicators

A selection of indicators on socio-economic impacts have been identified based on feedback from SIA stakeholders:

- time lost
- increase housekeeping
- impacts on employment
- local economy
- local workforce spend
- local Mount Pleasant Operation spend
- increasing costs of good and services
- local/regional competition for skilled workers and
- impacts on the agricultural industry.

9.2 Time lost

Some SIA stakeholders reported an economic cost of time lost having to manage the impacts of the Mount Pleasant Operation. This included maintaining fencing and having to respond to weeds and pests.

Weeds are not being managed on the Mt Pleasant site, e.g. African boxthorn, Galenia, and St John's Wort. Neighbouring landowners need to complain before MACH Energy does anything about the weeds. The weed plan needs to be followed as part of conditions of consent. There has been an increase of feral animals, particularly pigs since Mt Pleasant acquired so much land. This has meant the neighbouring landowners have to invest more time and money in managing weeds and pests.
(Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

We don't bother about complaining because it's not worth it. If there is a problem, we just tend to fix it ourselves e.g. fixing broken boundary fences. (Stakeholder B, SIA)

Impacts on cattle - The dust settles on the crops, particularly when there is a heavy dew and the cattle don't want to eat it. Noise and light, they are skittish animals and easily spooked when there is unexpected noise (like blast) or light. They have repeatedly broken fences and got out on the highway when spooked. Others have jumped barbed wire fences and torn their udders. We have cattle grazing within 400m of the boundary with Mount Pleasant. I have asked to be notified of upcoming blasts, which MACH do, and I move the cattle. However, not only is it an inconvenience to our farm operations but it is also a time consuming and costly exercise and at times, can be for nothing as the blast gets cancelled after we have carried out the work to shift the cattle which effects production.

Impacts on the business - Extra cleaning of the dairy and equipment to keep it up to health standards. Stainless steel in the dairy is cleaned weekly instead of quarterly. These are all added costs to the business. Management practices are being impacted by mine operations – such as costs of moving cattle, cost of cleaning infrastructure and equipment for health and hygiene. Concerns of the impacts of blasting on a number of our improvements including underground irrigation infrastructure and building floor slabs. Milk production down due to “spooked” cows. (Glen Eden Holsteins Pty Ltd, SIA)

9.3 Increased housekeeping and cleaning

Some SIA stakeholders reported an increased level of housekeeping due to dust impacts.

The dust also impacts on Jonathan and Elisabeth’s day to day life. This includes daily cleaning inside and outside the home, and having to use air conditioners because they can no longer open the windows on the south side of the house when there is a southerly breeze.

Having to clean away the increasing level of dust each day is annoying and frustrating, and after so many years it is starting to take its toll. Elisabeth needs help to stay on top of the cleaning, it is getting to be too much for one person to clean each day. Vehicles left out at night are now covered in a fine dust layer each morning. (Jonathan Moore, Gilgai, Scoping SIA)

Dust accumulates on all the homes on the properties, both on the inside and outside. We get a layer of grey/brown dust every day that requires daily cleaning. You can feel it under your feet on the tiled floors. (Glen Eden Holsteins Pty Ltd, SIA)

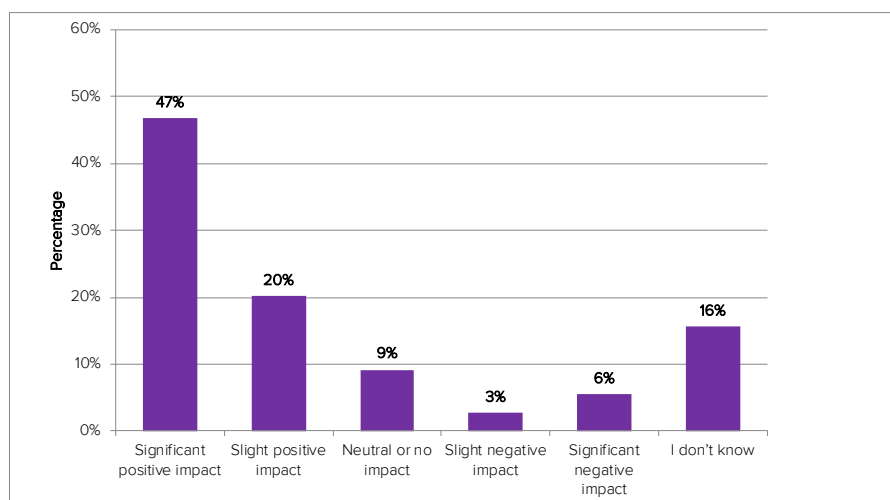
Further to this people’s amenity and way of life is being impacted by the cumulative mining that occurs in the local government area in particular community members express their frustrations with the impact of dust and the increase in domestic cleaning and fear around the impact on ecological systems such as waterways, drinking water etc. (Muswellbrook Shire Council, Scoping SIA)

The dust in the house has greatly increased and turned black in colour so that cleaning requirements have increased and kitchen benches must be thoroughly cleaned before any use even if cleaned previously that day. (respondent to Community Survey)

9.4 Impacts on employment

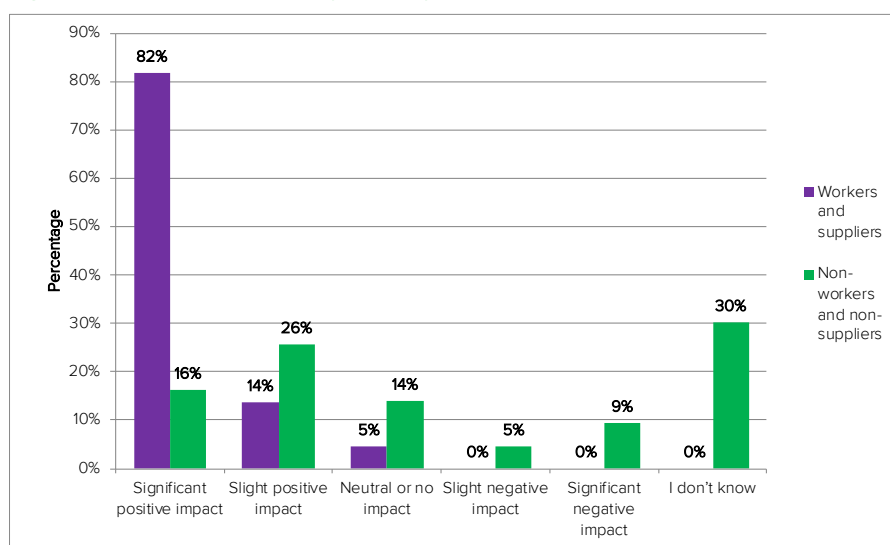
The Community Survey asked the impact of the Mount Pleasant Operation on employment in the area in which the respondent lived. 67% of survey respondents provided a positive Likert scale rating in response to this question, compared with 9% of survey respondents who provided a negative rating see Figure 58.

Figure 58: Impact on employment – all responses (n = 109)



96% of workers and suppliers responded to this question with positive Likert scale ratings, compared with 42% of non-workers and non-suppliers, see Figure 59.

Figure 59: Impact on employment by – relationship to the Mount Pleasant Operation



Relevant comments¹⁵ from the community survey are provided in Table 26. Of the comments received, there was a mixture of positive and negative comments.

Table 26: Comments on the employment impacts of the Mount Pleasant Operation, Community Survey

Location	Comment
Kayuga	<i>"I expect some local people have found better paying job at Mt Pleasant."</i>
McCullys Gap	<i>"Mount Pleasant Provides Employment opportunities. If I was not working at Mount Pleasant I would leave the local area."</i>
Muswellbrook	<i>"99% of the jobs are contractor based, not permanent, minimal actual MAC Energy employees, Muswellbrook is being exploited by a mine that would not have gone ahead if approval was sort closer to the actual starting of mining by an Indonesian company that purchased it before the lease expired."</i>

¹⁵ If a comment was more suited to another survey topic that it is reported in other survey topic.

Location	Comment
	<p><i>"as stated before if mines employed more local people it would have a positive impact on the town due to increased local employment and more spent in township."</i></p> <p><i>"Employees large amounts of people, needs to drive more local roles and relinquish FIFO"</i></p> <p><i>"I don't believe my pleasant employs any significant numbers of local people"</i></p> <p><i>"I know a lot of contract companies that have a success long term relation ship with MPO, its been awesome to see"</i></p> <p><i>"I'm not aware of locals working at the mine, mostly out of town contractors"</i></p> <p><i>"In the mining services and mining areas."</i></p> <p><i>"It is good for employment for people who live nearer the coast, where people who work in the mines actually live"</i></p> <p><i>"Many of the benefits are felt out of town."</i></p> <p><i>"More local jobs"</i></p> <p><i>"Permanent workers buy houses and spend money in town."</i></p> <p><i>"The mines are the biggest local employer."</i></p>
Parkville	<i>"Locals find it hard to provide wages equal to mines so it is hard to get mechanics etc."</i>
Scone	<p><i>"As a significant employer, an operating mine means local jobs. Mount Pleasant Operation has a reputation of focusing on hiring local."</i></p> <p><i>"I believe The Mount Pleasant Operation has increased employment opportunities both directly at the site and indirectly through local businesses that support operation requiring more employees."</i></p> <p><i>"Employment in mining as opposed to employment in farming, tourism etc"</i></p> <p><i>"In ONE way there is more work for people . In ANOTHER way; this employment encourages men to neglect farms ; and families to live beyond their means ; as people always want MORE ; and tend to spend more than they earn ."</i></p> <p><i>"People leave good jobs and take up dirty dangerous ones, with shift work and family disruption, just for a bit more money and large purchases they don't benefit from"</i></p>
Singleton	<p><i>"Again the specificity of the MPO to the issue is unknown really but slight negative is entered to register the fact that for instance it was not possible for my local mechanic to find a temporary replacement for his colleague who broke his leg ... mechanics are on very good wages in the mines and they are snapped up"</i></p> <p><i>"Via construction and operation a large number of jobs have been created."</i></p>

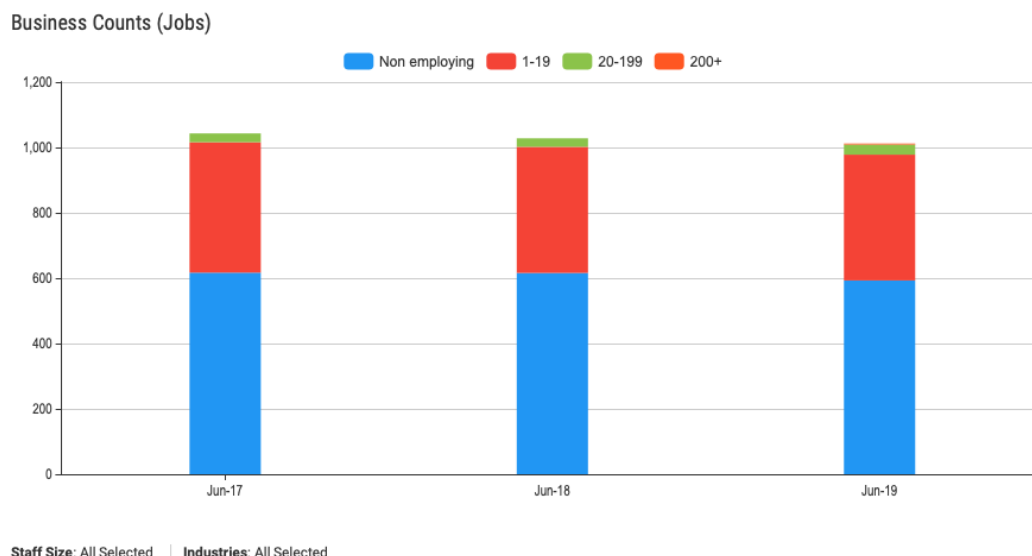
Note: this table only lists the responses relevant to the potential employment impacts. Further details regarding the Community Survey are included in Appendix F.

9.5 Local businesses – employment and turnover

9.5.1 Muswellbrook Shire Council LGA

Based on the data in Figure 60, there has been a slight decrease in the number of businesses in the LGA from 1,043 in June 2017, to 1,028 in June 2018. While the number of non-employing businesses decreased over the last three years, the number of businesses employing 20 – 199 people has increased from 27 in June 2017 to 31 in June 2019. The number of businesses employing 200+ was zero in June 2017, 0 in June 2018 and 3 in 2019. Figure 60 shows how businesses in the Muswellbrook Shire Council LGA has changed over time.

Figure 60: Business Counts (staff) in Muswellbrook, 2019



Source: REMPLAN (2020a)

The number of business in all turnover categories, except for the largest category of \$10m or more and the lowest category of 0 - \$50,000, decreased from June 2017 to June 2019. The number of businesses with a turnover of \$10m or more increased from 10 in June 2017 to 21 in June 2019. These trends are shown in Figure 61.

Figure 61: Business Counts (turnover) in Muswellbrook Shire Council LGA, 2019

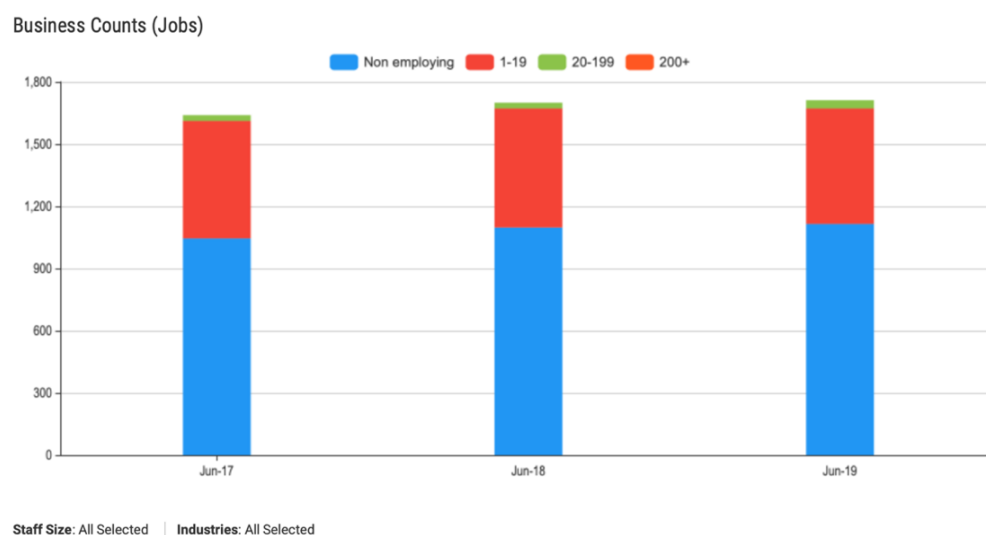


Source: REMPLAN (2020a)

9.5.2 Upper Hunter Shire Council LGA

Based on the data in Figure 62, the number of businesses in the Upper Hunter Shire Council LGA has increased from 1,640 in June 2017 to 1,700 in June 2018 and 1,712 in June 2019. While there has been a decrease in the number of businesses that were non-employing and employing between 1 – 19 people, the number of businesses employing 20 – 199 people increased. There were no businesses employing 200+ people. Figure 62 shows this trend.

Figure 62: Business Counts (staff) in Upper Hunter Shire Council LGA, 2019



Source: REMPLAN (2020c)

There was an increase in the number of businesses with a turnover of zero to less than \$50k, \$50K to less than \$200k, \$2m to \$5m and a stable number of businesses with a turnover of between \$200k and less than \$2m. The number of businesses with a turnover of \$10m or more decreased from June 2017 to June 2019. These trends are shown in Figure 63.

Figure 63: Business Counts (turnover) in Upper Hunter Shire Council LGA, 2019



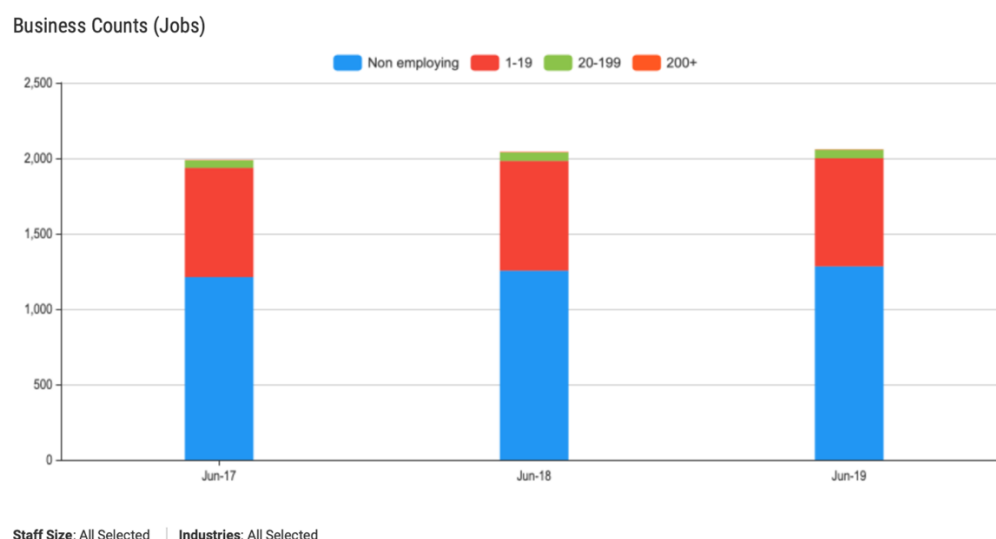
Source: REMPLAN (2020c)

9.5.3 Singleton LGA

Based on the data in Figure 64, there has been an increase in the number of businesses in the Singleton LGA from 1,989 in June 2017 to 2,042 in June 2018 and 2,059 in June 2019.

The number of non-employing businesses increased as well as the number of businesses employing 20-199 people. The number of businesses employing between 1-19 people decreased while the number of businesses employing 200+ people remained the same. This trend is shown in Figure 64.

Figure 64: Business Counts (staff) in the Singleton LGA, 2019



Source: REMPLAN (2020b)

The number of businesses with a turnover of zero to less than \$50k, \$200k to \$2m, \$2m to less than \$5m and \$10m or more increased from June 2017 to June 2019. The number of businesses with a turnover of \$50k to less than \$200k and \$5m to less than \$10m decreased from June 2017 to June 2019. These trends are shown in Figure 65.

Figure 65: Business Counts (turnover) in the Singleton LGA, 2019



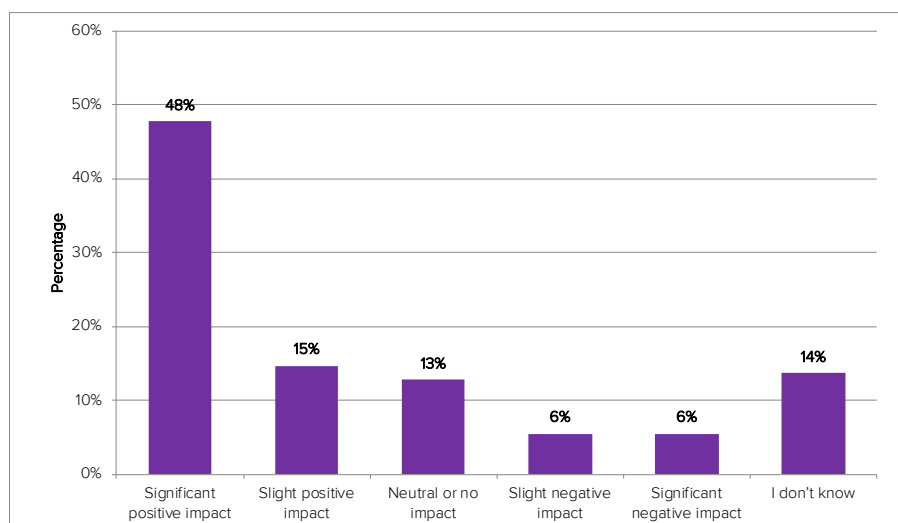
Source: REMPLAN (2020b)

9.6 Local economy

9.6.1 Community Survey

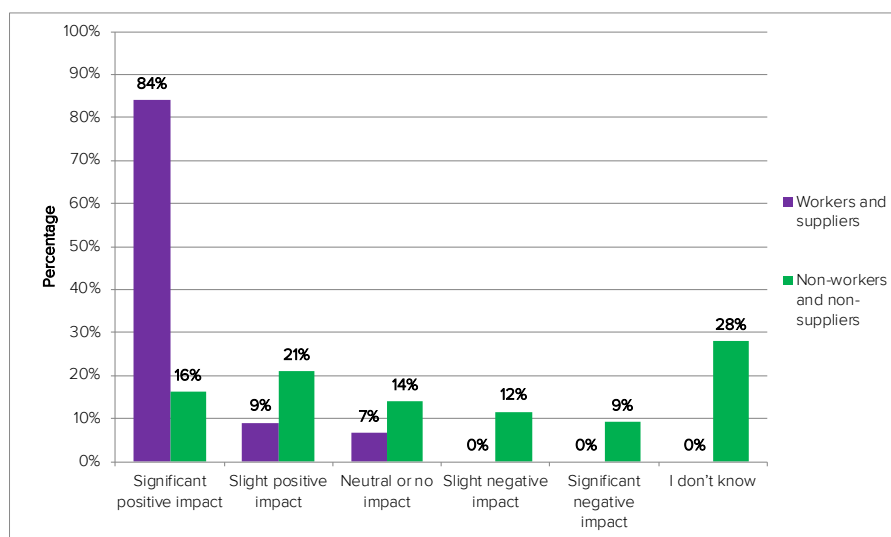
The Community Survey include a question on the current impact of the Mount Pleasant Operation on the local economy, with all responses provided in Figure 66. 63% of survey participants provided a positive Likert scale rating in response to this question, compared with 12% of survey participants who provided a negative rating.

Figure 66: Community Survey – impact of the current Mount Pleasant Operation on the economy (n = 109)



There were similarities in responses across age, gender and geography. There was a distinct difference based on associated with the Mount Pleasant Operation, as shown in Figure 67. Figure 67 shows there is a more skewed trend to the positive for people who have a relationship with the Mount Pleasant Operation and a more equal distribution of responses across the other categories for people not associated with the Mount Pleasant Operation.

Figure 67: Community Survey impacts of the Mount Pleasant Operation on the economy, relationship to the Mount Pleasant Operation (n = 87)



Relevant comments¹⁶ from the community survey are provided in Table 27. Of the comments received, there was a mix of positive and negative comments.

Table 27: Comments on the impacts of the Mount Pleasant Operation on the local economy, Community Survey

Location	Comment
Denman	<i>"More jobs in the area resulting in more spending within the local townships."</i>
Kayuga	<i>"I believe Mt Pleasant buys local where it can and supports new local businesses."</i>
McCullys Gap	<i>"If I was not working at Mount Pleasant I would move from the Local area. Mount Pleasant's Optimisation project is critical for ongoing employment opportunities in Muswellbrook. Mining will be extremely important to keep the local, State and Australian economy going as we are still dealing with this COVID-19 Global Pandemic."</i>
Muswellbrook	<p><i>"great boost for the town economy"</i></p> <p><i>"buying local"</i></p> <p><i>"Doesn't seem to be any emphasis on employment of true local residents"</i></p> <p><i>"for example during their construction they level of extra jobs and extra people staying here for contract purposes was great"</i></p> <p><i>"Have not seen any positive impact in the local economy. A lot of business servicing the site do not live in the Muswellbrook Shire which is disappointing, or claim they have a business address but the workers live elsewhere"</i></p> <p><i>"I haven't seen any benefit for locals"</i></p> <p><i>"Increased employment, product purchases and services engaged"</i></p> <p><i>"Many of the benefits are taken out of town."</i></p> <p><i>"Mining keeps Australia working"</i></p> <p><i>"More jobs, more people in the area. Be better if the jobs were given to locals"</i></p> <p><i>"more locals need to be employed so that wages earned will stay in the area and not be taken back out of the town at the end of the rostered shifts"</i></p> <p><i>"No permanent employees. Workers staying in rentals and motels do not spend their money in town. Most workers travel out of town to live."</i></p> <p><i>"Significant positive for mining services but not significant for much else. Mining has not been able to attract enough businesses because shopping out of town is an opportunity to visit the Newcastle area which is far more pleasant for outings."</i></p> <p><i>"The majority of workers do not live in muswellbrook and do not make a positive impact financially on this community. Their money is spent elsewhere."</i></p> <p><i>"We already see that a significant number of workers living locally only for their rotation then leave back to their families. They dont settle their families here as a result the money they make is not spent in the local economy."</i></p>
Parkville	<i>"Most miners do not live in the area so do not contribute much to local economy."</i>
Scone	<p><i>"Again ; mines throw money around to make themselves look good ! This also serves to drive prices up ; as miners have more money to spend . This is a short - term positive ; but a long - term negative . ECONOMY is short term :- HEALTH of the ENVIRONMENT is LONG term ."</i></p> <p><i>"As a significant employer, an operating mine means local jobs. Mount Pleasant Operation has a reputation of focusing on hiring local."</i></p> <p><i>"The Mount Pleasant has had a significant positive level of impact on the economy providing stimulus through providing jobs and using local suppliers. Providing jobs has a huge flow on effect with people then spending income in the local area, thereby supporting local businesses."</i></p>

¹⁶ If a comment was more suited to another survey topic, it is reported in other survey topic.

Location	Comment
	<p><i>"The positive impact of jobs and business to the area because of this mine are over- ridden by the impact of CO2 emissions relating to climate change and the environmental damage"</i></p> <p><i>"The tourism in the Hunter is now dying a death due to mines."</i></p> <p><i>"Trashes everything"</i></p>
Singleton	<p><i>"Employment, housing, service and support industries, supporting local suppliers. An enormous benefit to the local community."</i></p> <p><i>"The Mount Pleasant Operation has brought people to the townships of Muswellbrook and Singleton, increasing the needs for good and services as well as accommodation. This has created a postive increase in these areas."</i></p>

Note: this table only lists the responses relevant to the potential impacts on the local economy. Further details regarding the Community Survey are included in Appendix F.

9.6.2 Workforce survey

The focus of significant positive impacts by workers and suppliers can be supported by comments in the Workforce Survey about the positive impacts if the Project proceeded, a sample of these comments are provided below.

Will be able to continue our patronage of the many local businesses knowing we have a secure future. (Worker at Mount Pleasant Operation)

hopefully continued full time employment where funds feed into local communities (Worker at Mount Pleasant Operation)

Continued employment as well as the positive cash flow to the local community (Worker at Mount Pleasant Operation)

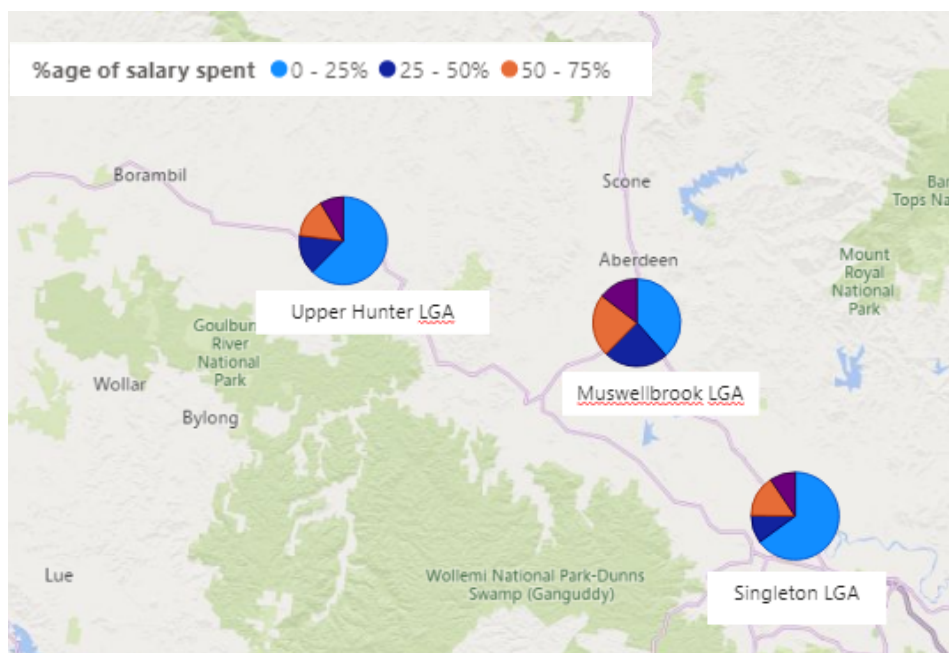
9.7 Support for local businesses

The Workforce Survey asked participants roughly what percentage of their after-tax income is spent in each LGA. Of those respondents categorised as local residents:

- Approximately 15% (17 respondents) spend (75 – 100%) almost all to all of their income in Muswellbrook Shire Council LGA, 9% (11) spend almost all of their income in each of Singleton and Upper Hunter Shire Council LGAs
- Approximately 23% (27) spend most (50 – 75%) of their income in Muswellbrook, with 15% (18) spending this proportion in Singleton and 15% (17) in Upper Hunter Shire Council LGAs
- Approximately 24% (28) spend some (25 – 50%) of their income in Muswellbrook, with 10% (12) in Singleton and 15% (17) in Upper Hunter Shire Council LGAs and
- Approximately 38% (45) spend nothing to little (0 – 25%) in Muswellbrook, 65% (76) spend little to nothing in Singleton LGA and 62% (73) spend little to nothing in the Upper Hunter Shire Council LGAs.

Figure 68 shows the breakdown of local resident's spending across the three LGAs.

Figure 68: Map of local residents' average spending by LGA (n = 117)

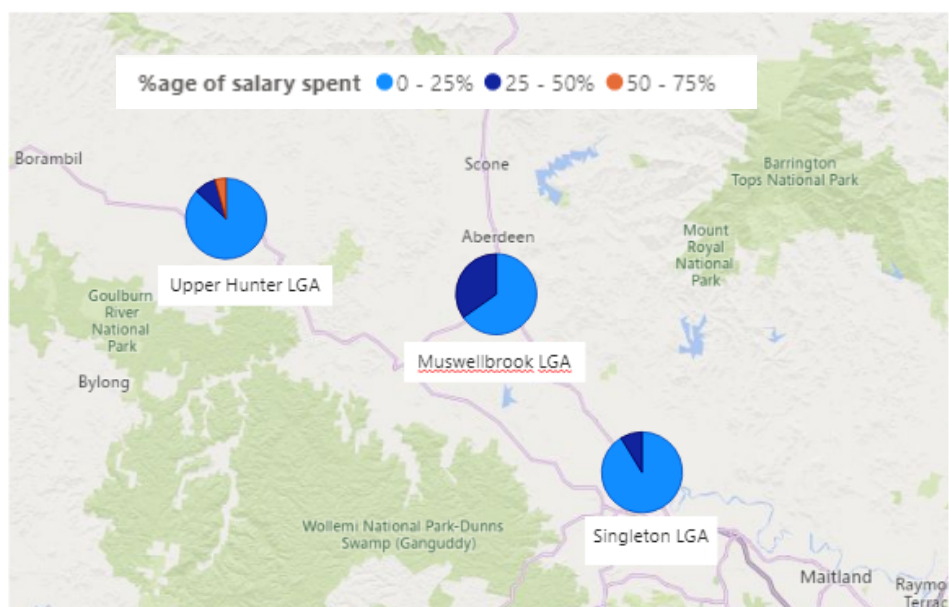


Of those workers categorised as DIDO:

- One person (1%) who lives in Aberdeen on roster, (Newcastle normally), reports spending on average 50-75% in the Upper Hunter Shire Council LGA and 25 – 50% in Muswellbrook Shire Council LGA
- Approximately 35% (8 respondents) of DIDO respondents spend 25 – 50% in Muswellbrook Shire Council LGA and 9% each in Singleton and Upper Hunter Shire Council LGAs and
- Approximately 65% (15) of DIDO respondents spend 0 – 25% in Muswellbrook Shire Council LGA and 21% and 20% in Singleton and Upper Hunter Shire Council LGAs respectively.

Figure 69 shows the breakdown of local resident's spending across the three LGAs.

Figure 69: Map of DIDO average spending by LGA (n = 23)



Those who live locally are more likely to spend most to all of their income in one of three LGA areas, compared with DIDO respondents who are most likely to spend 0 – 25% of their income in the three LGAs. This supports the perception that workforce members that live locally support the local economy to a greater extent than those who DIDO. Interesting to note that local residents spend fairly consistently across the three LGAs, even though they mostly live in Muswellbrook.

9.8 Mount Pleasant Operation local spend

MPO has a history of strong engagement with local businesses and the community. Local procurement and employment are evident. (Muswellbrook Chamber of Commerce and Industry, Scoping SIA)

According to the Economic Assessment, almost 58% of MACH’s operating expenditures are “directed at NSW suppliers” and 3.7% of operating expenditures are “directed at suppliers in the Project Region (Muswellbrook, Singleton and Upper Hunter Shire Council LGAs)”, as shown in Table 28.

Table 28: Analysis of direction operating expenditures in NSW (excluding labour, 2019)

Expenditure by geography	Percentage of expenditure
Muswellbrook Shire Council LGA	2.7%
Upper Hunter Shire Council LGA	0.4%
Singleton Council LGA	0.6%
Project Region	3.7%
New South Wales	57.8%

Source: AnalytEcon (2020)

The perception of Muswellbrook and Singleton as being ‘mining towns’ and a two-tier economy (those people working in the mining industry earning more than those who do not work in the mining industry, see Table 2, has led to a perception of increasing cost of goods and services for people living in Muswellbrook and Singleton.

A number of SIA stakeholders have reported the increase in the cost of goods and services in the area as it has transitioned from an agricultural area to a mining area.

As Singleton is perceived as a mining town, so the cost of retail/commercial rentals has also increased, forcing some speciality shops to close. As the cost of living has increased, people have moved away to where its it is more affordable. (ACDF, Scoping SIA)

Impacts on the cost of living. (Wanaruah Local Aboriginal Land Council, Scoping SIA)

The cost of living in Muswellbrook is increasing with the perception that it is a mining town. It is no longer an agricultural town. People now have to pay mining prices for rents, goods and services. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Economic life is kept tense by the two-tier economy pushing rents up for low-income people. There is high youth and long-term unemployment. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

9.9 Local/regional competition for skilled workers

SIA stakeholders reported competition for skilled workers between employers in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs. This included skilled workers leaving their employment at a local business or government organisation to work for a mining company. The attraction for workers to work for a mining company was said to be the higher wages.

increasing recruitment costs and rapid wage growth for local businesses which is unsustainable. (Muswellbrook Shire Council, SIA)

Increasing the number of jobs available at the Mt Pleasant mine only further increases the imbalance in the local and regional economy. Those that work at the mine earn good wages for long hours and it takes away from the potential for local businesses to employ similar trades.

There needs to be an assessment of the skills shortage in the local and regional area because of mining. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

There is a skills shortage in the local area, which is why BHP (Mt Arthur) employees/contracts people from outside the Muswellbrook area. They have long term contracts with certain hotels in Muswellbrook to accommodate these workers while on shift.

The mines and support industries are competing for skilled workers. The workers who are skilled are ageing, and there aren't the skilled young people coming through. (Muswellbrook Chamber of Commerce and Industry Inc., SIA)

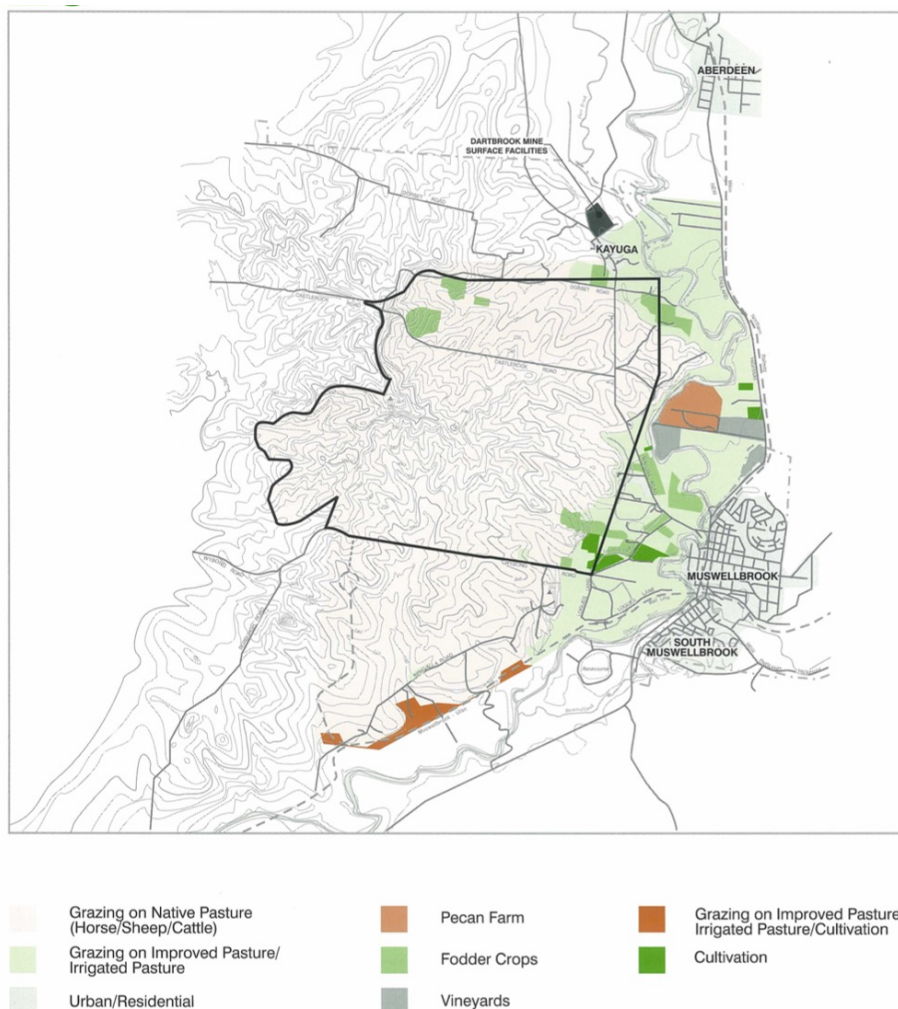
9.10 Impacts on agricultural industry

Reported impacts on the agricultural industry were linked to the direct loss of productive agricultural land and change in access to water.

9.10.1 Change in land use

Prior to Coal & Allied purchasing properties for the Mount Pleasant Operation (as the Mount Pleasant Project), the land was used for agricultural purposes. A map from the original EIS shows the agricultural land use types of grazing, fodder crops and cultivation (with grazing land use dominating), see Figure 70.

Figure 70: Map of the land use prior to the Mount Pleasant Project



Source: Coal & Allied, *Mount Pleasant EIS Volume 2a* available from <https://machenergyaustralia.com.au/mount-pleasant/documentation/>

According to SIA stakeholders, the loss of these agricultural businesses from the industry had an economic, social and cultural impact on the area:

There has been a lot of productive land lost to coal mining and its associate infrastructure in the Upper Hunter region. The productive farming is nearly all gone. There are still some properties along the Hunter River flood plain but they are not being used as productively as they use too. Most of the fodder farms are gone (purchased by the mining companies), there are only three diaries left and there are a few horse studs. Most of the river flat land isn't productive because you need a water licence to make it productive. (Stakeholder B, SIA)

The number of people working on the floodplains of the Hunter River has decreased with the mines and Mt Pleasant Mine owners buying up properties.

The diversity of the economy and within the agricultural economy is being reduced and replaced with an increasing dependency on mining. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Where practical, MACH has continued the approach of having the original landowner or local farmer lease the property and continue the previous land use.

9.10.2 Change in access to water

The agricultural industry is also reportedly impacted by changes in access to water, either due to impacts on groundwater or competition for water licences:

People can't access the water licences because the mining companies have bought them and use the water for mining.

MACHEnergy are proposing to purchase waste mine surplus water from Bengalla and Dartbrook Mines, but we know that mining companies are in competition with each other, why would Bengalla and Dartbrook (even though Dartbrook is not operating at the moment) sell their water to MACHEnergy for their operation, especially in dry years? It doesn't seem right that a foreign owned company can purchase water licences and take away that water from local people – people who rely on water to operate their properties but cannot compete with what the mining companies can offer to pay for a high security licence. We had rain earlier in the year, however the rain did not fall in the catchment of the Glenbawn Dam, it is only at 38% so we're not out of the woods yet. Muswellbrook is still on water restrictions. Local dairy farms (which there are only three left) only received 25% of their allocation under general security water licences, which makes operating an agricultural business a lot harder, particularly when you see what the mines can afford to buy. (Stakeholder B, SIA)

To grow feed for the cattle (using irrigation) and run the dairy we are reliant on both well water and water from the Hunter River. MACH are impacting our water as well. They have bought all the available water. MACH can afford to pay more for water than can farmers. We used to be able to temporary transfer water from other farmers in our area, however MACH has since bought a large number of those licenses. The aquifers have not recharged after the rain earlier in the year, we've had two wells run dry. (Glen Eden Holsteins Pty Ltd, SIA)

Glenbawn Dam has risen from 39 to 44% capacity since the drought broke locally this year, 2020. Glenbawn Dam water is kept for Bayswater power station while irrigators and towns move to water restrictions. Glenbawn Dam cannot be seen as a secure supply to the mines in times of drought.

Surface water for farms downstream is not clearly guaranteed to those farmers.

There will inevitably be disruption to natural flows to adjacent farms and absorption into water table. There will also be disruption and comingling of water tables. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Impacts on the availability of water in a river system which is already subject to restrictions during times of drought and where groundwater systems have already undergone significant detrimental changes linked to mining (as evidenced by the Hunter Bioregional Assessment). (Friends of the Upper Hunter Inc., SIA)

9.11 Summary

The Mount Pleasant Operation causes differential socio-economic impacts. Those people located closest to the Mount Pleasant Operation experience time costs associated with extra work such as increased internal and external cleaning due to dust, which takes away from other things they may wish to be doing. A cost of employing people from the local labour market is contributing to the competition for skilled workers. SIA stakeholders described the challenges of other businesses and organisation to attract and retain skilled workers because the Mount Pleasant Operation and other mines in the area can offer higher remuneration.

The agricultural industry also experiences costs associated with loss of agricultural land, loss of employment opportunities, loss of people with agricultural skills and experience and increased competition for water licences from Mount Pleasant and other mines in the area.

There are many people who financially benefit from the Mount Pleasant Operation, either through direct employment, contracts or indirect employment effects. The Mount Pleasant Operation's financial impact is beyond the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs, although there is a concerted effort by MACH to maximise the proportion of its expenditure in these three LGAs as much as practical.

10 Cultural impacts

10.1 Selection of indicators

Based on feedback from SIA stakeholders there were two main areas of cultural impact Aboriginal culture and agricultural culture.

10.2 Aboriginal culture

SIA stakeholders from Wanaruah Local Aboriginal Land Council described the impact mining has on their Aboriginal community.

Impact on the Aboriginal community with the destruction of songlines, loss of lore that is held in the soil, the trees and the plants of the area, loss of identity due to inability to connect to significant tracts of land and understand and practice culture.

Mines can make people unhealthy because they separate people from country, but on the flip side, the mines can also provide the opportunity to reconnect to country and to make them healthy.

Need to consult with the holders of traditional knowledge and lore who can assist the mine in understanding the importance of culture and connection and assist the community to stay healthy throughout this process. (Wanaruah Local Aboriginal Land Council, Scoping SIA)

The ACDF funds the following programs to support cultural development:

- NAIDOC Week Celebrations, Welcome to Country and Painting (also mentioned under recreational activities)
- Muswellbrook Oral History
- Singleton Learning Community, Singleton Heights Public School - Aboriginal Dance Instructor and
- Gundi Program Partnership Agreement (this is also mentioned under employment).

Refer to Appendix J for further information.

10.3 Change in agricultural culture

10.3.1 Employment by industry

A change in agriculture culture can be seen in the proportion of people who are employed in the various industries in the Muswellbrook Shire Council LGA. The change in the number/proportion of people working in the agricultural, mining and electricity industries over time can be seen in Table 29.

Table 29: Changes in industry of employment, MSC

Industry of employment	2006	2011	2016	General trend over 10 year period
Agriculture, forestry and fishing	1.89%	1.34%	1.41%	↓
Mining	17.37%	22.98%	23.04%	↑

Industry of employment	2006	2011	2016	General trend over 10 year period
Manufacturing	5.91%	5.06%	3.76%	↓
Electricity, gas, water and waste services	6.00%	5.04%	5.51%	↓
Construction	6.64%	6.70%	4.59%	↓
Wholesale trade	3.24%	3.47%	2.92%	↓
Retail trade	11.71%	10.54%	10.09%	↓
Accommodation and food services	8.49%	7.63%	7.36%	↓
Transport, postal and warehousing	3.17%	2.78%	2.89%	↓
Information media and telecommunications	0.48%	0.53%	0.75%	↑
Financial and insurance services	1.23%	1.29%	1.36%	↑
Rental, hiring and real estate services	2.12%	1.48%	1.18%	↓
Professional, scientific and technical services	4.50%	2.80%	2.75%	↓
Administrative and support services	2.69%	3.41%	4.21%	↑
Public administration and safety	4.27%	4.23%	4.96%	↑
Education and training	6.14%	5.10%	6.38%	↑
Health care and social assistance	6.80%	7.42%	8.89%	↑
Arts and recreation services	1.07%	0.95%	0.73%	↓
Other services	4.04%	4.85%	4.31%	↑

Source: ABS (2019)

10.3.2 Feedback from SIA stakeholders

The difference between the agricultural culture and mining culture has been described by a SIA stakeholder:

Miners don't see the land like farmers do. Most are not from here so don't have a connection to this land. They don't feel the permanent damage they are doing. Everything they do is big, big equipment, big holes in the ground and big hills of overburden. Miners are pushing all the time and there is constant pressure. They operate 24 hours a day, 7 days a week, but why? It's all about the money, they have got themselves in a position where they cannot afford to stop. The mine workers live a completely different lifestyle to the farmers. They don't have freedom or flexibility we have. They do however earn a lot more money and I think because of this, some of them think they are better than us. (Jim Lonergan, Kayuga, SIA)

A loss of agricultural culture was described by multiple SIA stakeholders:

Kayuga village is basically gone, MACH owns most of it. It used to be a thriving village, known for its dances at the Kayuga Hall. But they don't happen anymore. John grew up on the farm and he had friends at Kayuga, our girls used to ride their horses with friends at Kayuga. (Glen Eden Holsteins Pty Ltd, SIA)

The old farming communities, including Kayuga have been wiped out. The land has been bought, the homes, including Berrywood, mostly demolished and the people dispersed. The history was recorded and then so much of previous land use and lifestyle was destroyed. The local culture belonged to the people who led those lives.

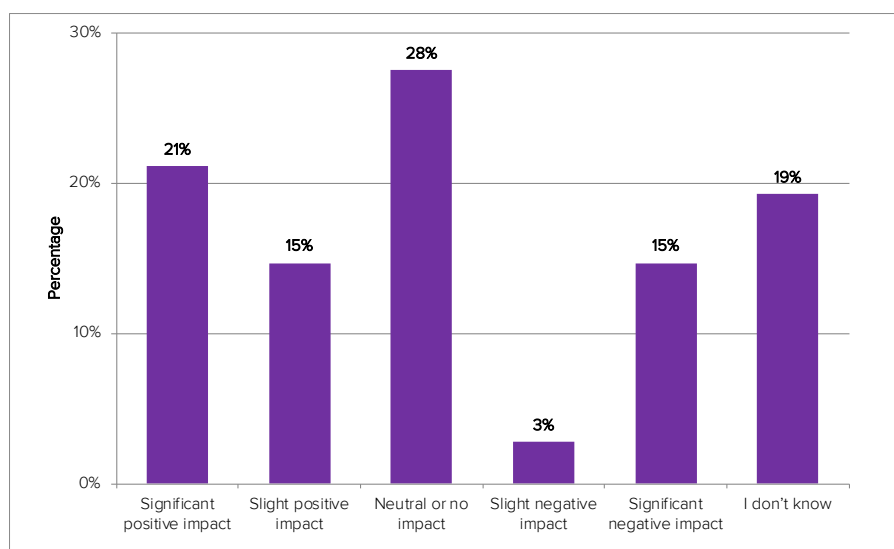
Mt Pleasant Mine contractors have demolished many homes including older/heritage homes that Rio Tinto had renovated. This is an insult to the Built aspect of our cultural heritage. The integrity of the mining operations is dismal with respect to property protection. The recommendations of the Mt Pleasant mining lease Heritage study were ignored, with so much heritage destroyed as a result.

Visitors are always hungry for history, beauty and heritage. MACH has destroyed so much already. This destruction of heritage and landscape reduces the potential for tourism and diminishes local pride in the area. Much housing stock has been demolished. Including homes that might have been relocated or rented. Mt Pleasant has taken too much now. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

10.4 Community survey

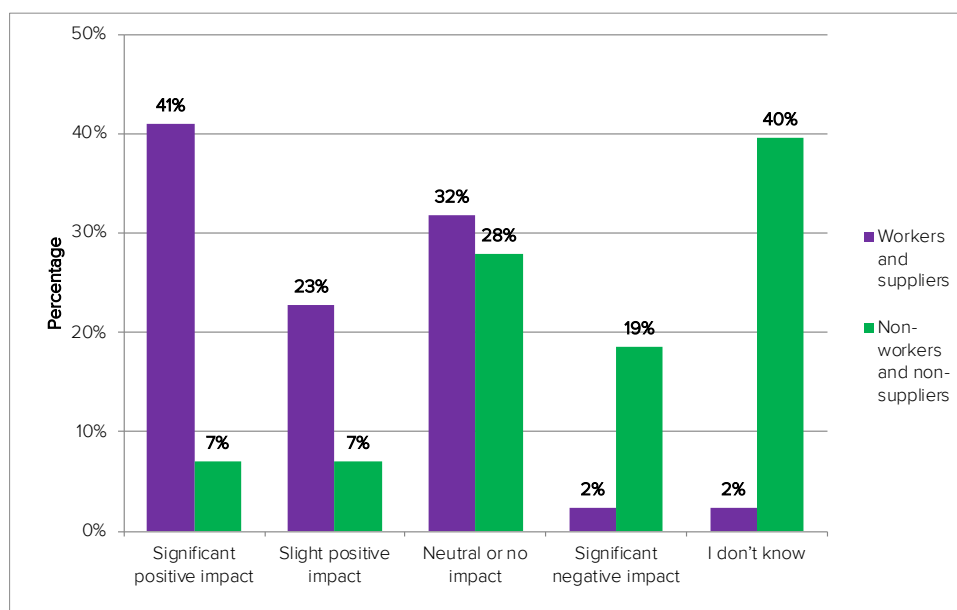
The Community Survey asked a question about the impacts of the current Mount Pleasant Operation on the culture of where respondents live. The overall responses are shown in Figure 71, with 36% of survey participants provided a positive Likert scale rating in response to this question, compared with 18% of survey participants who provided a negative rating.

Figure 71: Community Survey impacts of the Mount Pleasant Operation on culture (n = 109)



There were similarities in responses across age, gender and geography. There was a distinct difference based on associated with the Mount Pleasant Operation, as shown in Figure 72. Figure 72 shows there is a trend for those people who have a relationship with the Mount Pleasant Operation to provide a positive response and for those not associated with the Mount Pleasant Operation to provide a negative response.

Figure 72: Community Survey impacts of the Mount Pleasant Operation on culture, relationship to the Mount Pleasant Operation (n = 87)



Relevant comments¹⁷ from the community survey are provided in Table 30. Of the comments received, there was a mix of positive and negative comments. Only areas where comments were received from are included.

Table 30: Comments on the impacts of the Mount Pleasant Operation on culture, Community Survey

Location	Comment
Castlerock	<i>"We note and appreciate the effort that the mine has done to create a good culture. It is good to see Indigenous people within the area finding employment at the mine."</i>
Kayuga	<i>"I doubt Mt Pleasant will build cultural diversity."</i> <i>"The Kayuga community has been depopulated."</i>
McCullys Gap	<i>"Mount Pleasant Supports a number of aboriginal business and the ACDF."</i>
Muswellbrook	<i>"it has been great to see the interest they have in Aboriginal lives, culture and their understanding"</i> <i>"Mount pleasant could not care less about the aboriginal people in this area."</i> <i>"Mount Pleasant Operations are very supportive"</i> <i>"Particularly for people that were living in the affected area"</i> <i>"Particularly with the Aboriginal community. "</i> <i>"What culture? We had a rural culture before large scale mining. Now I would best describe it as a redneck culture...rape the land, rip out every ounce of coal while you can, ignore climate change which is happening right under our noses, live for now at the expense of future generations"</i>
Merriwa	<i>"Any disturbance impacts the past heritage."</i> <i>"we have lost any sense of security or representation . Our properties (including the entire township of Merriwa) are subject to mining exploration leases. Our own farm is subject to three exploration leases for coal and minerals. The climate seems to be deteriorating with increased heat waves and bushfire risks. Many farming families have now left the district, properties are bought as greenhouse gas offsets by large companies and left unmanaged and prone to fires and feral pest invasion, there are fewer people in the area to take part in</i>

¹⁷ If a comment was more suited to another survey topic, it is reported in other survey topic.

Location	Comment
	<i>community activities like the Rural Fire Service, Service clubs like Rotary, Apex and Lions, and community sporting groups. Changing work shifts make regular after work commitments impossible so it is difficult to get to know new residents who move to the area."</i>
Aberdeen	<i>"There is a massive hole being exploded into the Earth which forms another incremental destruction of place."</i>
Parkville	<i>"Community split between miners and others as miners are thought to be overpaid and causing pollution."</i>
Scone	<i>"Archaeological survey does not appear to have been done or local aboriginal people consulted."</i> <i>"Culture as defined here is blown out of the water. Forget it. The place is now repellent, and the history gone. Heritage is not respected, heritage recommendations scrapped."</i> <i>"for example Rio Tinto"</i> <i>"The Mount Pleasant Operation has provided a significant level of support promote culture within the local community. The Mount Pleasant Operation has actively participated in the ACDF and provided both monetary and in-kind support to a range of projects, local artists as well as supporting local Aboriginal businesses through its supply chain."</i>
Singleton	<i>"BUT I do know that the digging in to Mother Earth actually was a painful visceral experience for my father"</i> <i>"Collaboration with the local indigenous groups is essential."</i> <i>"Mach Energy have actively engaged with local indigenous communities and contributed positively with these communities via employment, sponsorship, promotion and celebration of culture."</i>

Note: this table only lists the responses relevant to the potential cultural impacts. Further details regarding the Community Survey are included in Appendix F.

10.5 Summary

The Mount Pleasant Operation impacts on the culture for those people who have a connection to the land and waters associated with the mining lease area, both Aboriginal culture and agricultural culture. Impacts on Aboriginal culture are both negative and positive, and are reliant on the individual's perspective on mining and what it means for their relationship to the land and waters. Mount Pleasant Operation's impact on the agricultural industry can be seen in the change of land use from agricultural land to mining and the change in industries in which people work, with a decrease in agriculture and an increase in mining. Mount Pleasant Operation is part of the cumulative mining industry impact on Aboriginal and agricultural culture, with impacts also experienced from Dartbrook Mine, Mt Arthur Coal Mine, Mangoola Coal and Bengalla Mine, and other projects in the Upper Hunter.

11 Family and community

11.1 Selection of indicators

SIA stakeholders identified three main areas of impacts on family and community:

- loss of rural communities
- tensions between those people who support/benefit from mining and those who do not support/experience costs from mining and
- change in family and social structures of workforce who work on roster and 12 hour shifts.

11.2 Loss of rural communities

SIA stakeholders reported the loss of rural communities and social networks since Coal & Allied's acquisition of land for the Mount Pleasant Operation mining leases in the mid-1990s. An indicator of the numbers of people who have left the area due to their properties being acquired by Rio Tinto can be seen in a map of property boundaries from the original Project EIS, shown in Figure 73 and Figure 74.

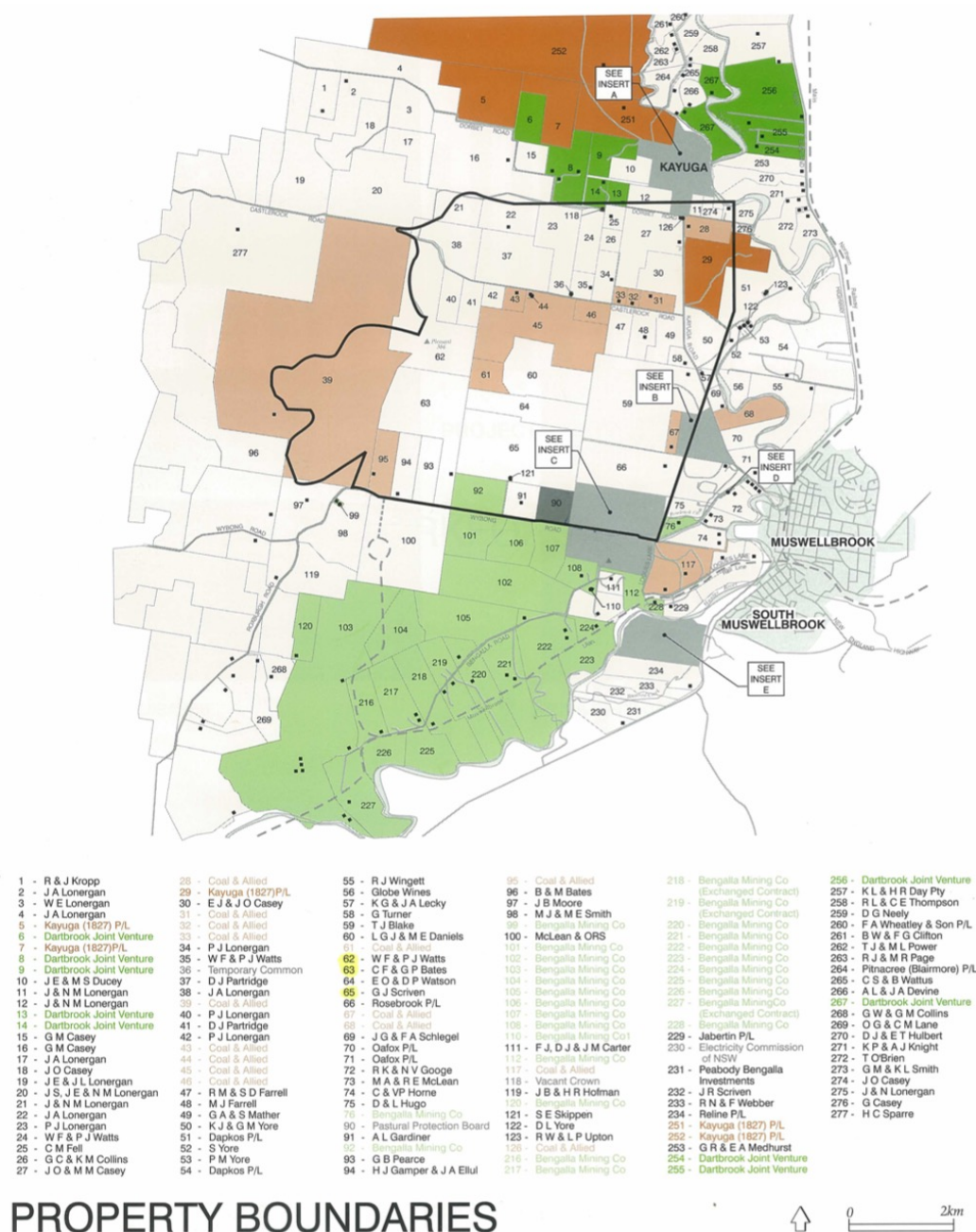
It has been estimated that there were at least 28 properties acquired for the Mount Pleasant Operation mining leases, and some of the surrounding properties were already purchased by the Dartbrook Joint Venture, Bengalla Mining Company or Coal & Allied. Names of people who had their property purchased for the Mount Pleasant Operation mining leases have the same surnames of people still in the area and who have participated in the SIA.

Land acquisitions have continued since MACH's purchase of the Mount Pleasant Operation due to acquisitions on request associated with dust and noise impacts. It has been estimated that MACH has acquired has 11 properties, with 8 within the Mount Pleasant Operation mining leases and 3 outside the Mount Pleasant Operation mining leases since purchasing the Mount Pleasant Operation from Rio Tinto¹⁸. Where possible and safe to do so, and when the property is outside the mining leases, MACH prefers to lease the land back to the original owner or local farmer and maintain its land use, however this is the decision of the land owner.

Schedule 3 of Development Consent DA 92/97 lists the properties to be acquired on request due to noise, noise and air or air impacts. There are 25 properties on the list. A map showing the land currently owned by MACH and the residences with acquisition on request rights is shown in Figure 75.

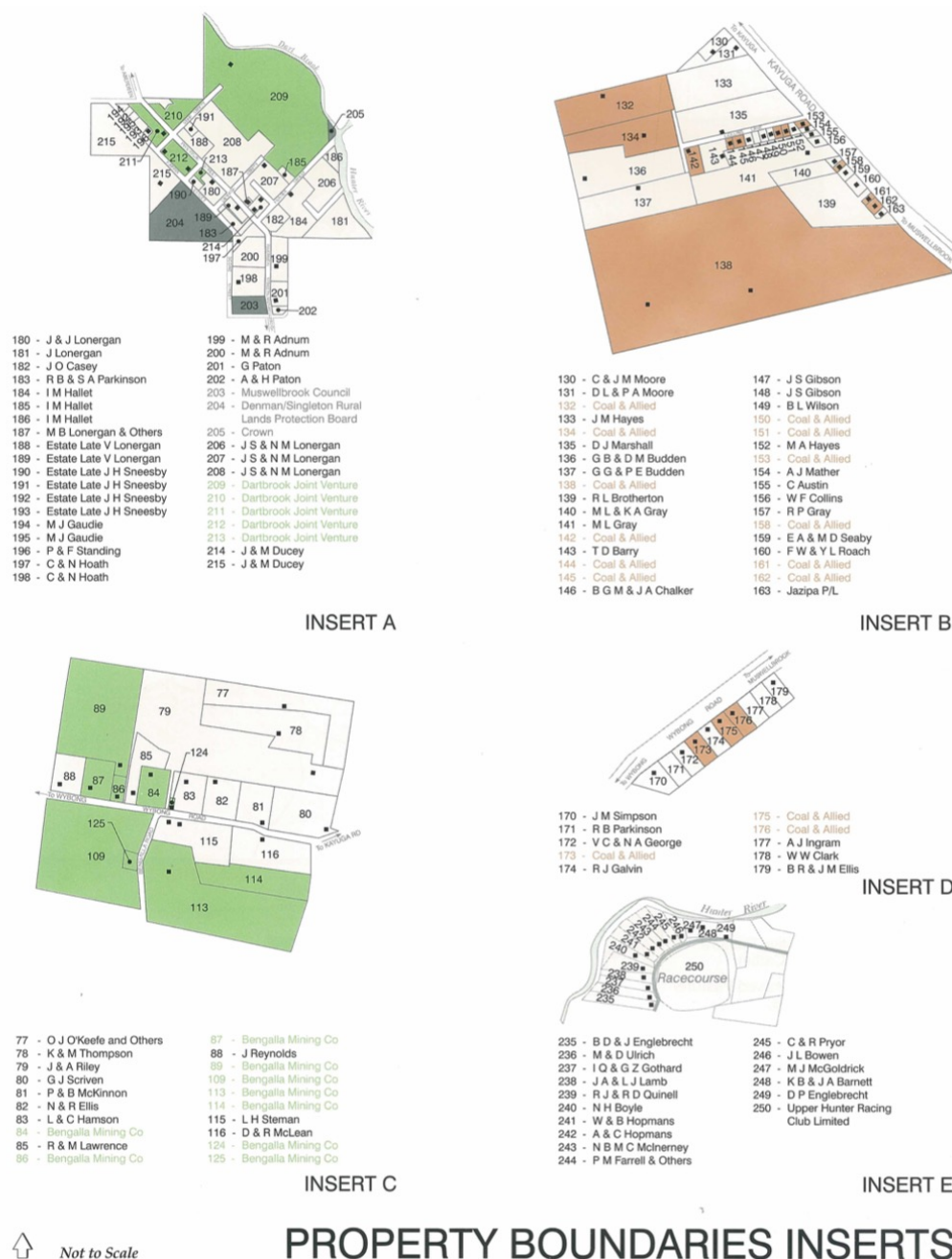
¹⁸ This estimation has been developed by comparing the land ownership map in the MOD 1 EIS with the current land ownership map and may not be accurate but provides an indication of the number of properties.

Figure 73: Map of the land ownership for the Mount Pleasant Operation (circa 1997)



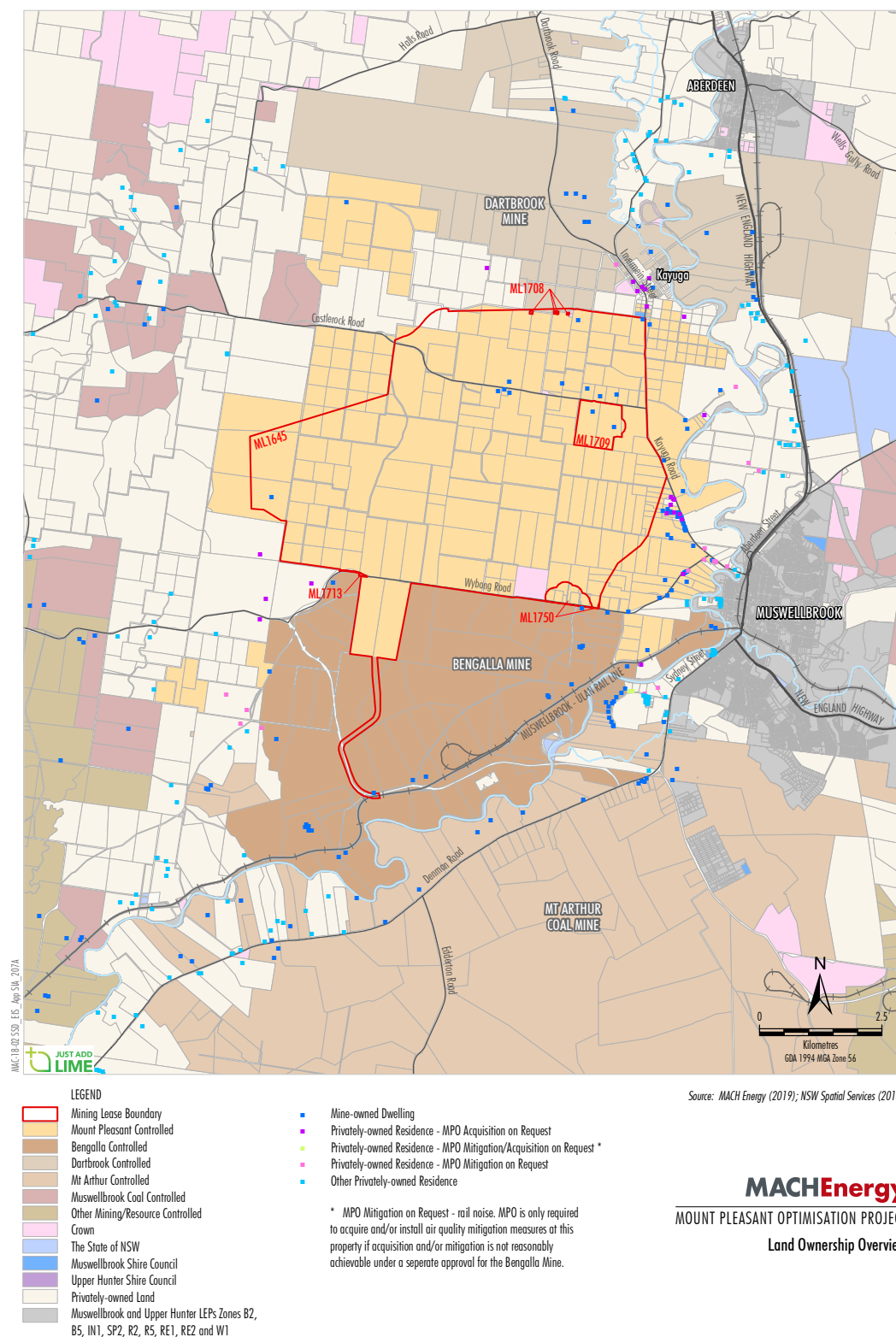
Source: Coal and Allied, *Mount Pleasant EIS Volume 2a* available from <https://machenergyaustralia.com.au/mount-pleasant/documentation/>

Figure 74: Map of the land ownership for the Mount Pleasant Operation inserts (circa 1997)



Source: Coal and Allied, *Mount Pleasant EIS Volume 2a* available from <https://machenergyaustralia.com.au/mount-pleasant/documentation/>

Figure 75: Current land ownership and properties with acquisition on request



The impacts of the land acquisitions for the Mount Pleasant Operation are cumulative with other projects purchasing land and people moving away from the area including Dartbrook Mine (now in care and maintenance), Mangoola Coal, Mt Arthur Coal Mine and Bengalla Mine.

SIA stakeholders have raised concern regarding impacts on Kayuga and other small rural villages in the area. Kayuga was a once known as a vibrant village in the memories of residents, but is now a 'ghost town' of what it was. It is noted that Kayuga is zoned RU1 (Primary Production) under the Muswellbrook Local Environmental Plan. The decline of Kayuga is not solely because of the Dartbrook Mine or the Mount Pleasant Operation, there have been other social trends that have meant people have moved away, however the Dartbrook Mine and the Mount Pleasant Operation have also had an impact.

People used to live off the land, there was more people on the land than in town. There was no need to go into town. You can still see where the old homesteads used to be, just need to look for a grove of old pepper trees. Many of the houses are long gone now but the trees are still there. People would have made their living by having a small herd of dairy cattle, about 20 of them. People knew the country, kids would walk to school through the paddocks and people would know the best and easiest way to get through the hills. Back then the Hunter River didn't run all the time, so there was no real benefit being in the hills or on the flood plain.

My dad went to the Kayuga school in the 1920s and at one point there were 80 kids enrolled and two teachers. The Lonergans could field a whole cricket team at the Kayuga Cricket Club. Over time things changed and Muswellbrook started to grow, people started to move into town. The school closed in the 1970s and kids went to school in either Aberdeen or Muswellbrook.

But that was before mining. In the mid-1980s it all changed. Mining started with Dartbrook and has grown since then. We've all been impacted by mining. People have had their land purchased and left the area or have been impacted by the dust, the noise the traffic. Most of the old families have gone now. They have either sold to the mining companies and moved away or passed on. There aren't any young people in Kayuga anymore. The town is dying with just a few people left. Dartbrook was the start of the end of Kayuga. (Jim Lonergan, Kayuga, SIA)

The Dorset Road community has mostly gone due to Mt Pleasant depopulating the area. There were 11 houses on Dorset Road, now there are three, eight have been destroyed. The Kayuga community is greatly diminished and will be further impacted.

The depopulation has decimated the Kayuga and similar small communities breaking cohesion and leaving remaining residents feeling isolated.

There have been too many small rural communities in the Upper Hunter region lost to mining, e.g. Ravensworth, Wybong, Kayuga and Bulga. Where a community has been decimated by mining there are usually people "left behind". (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Many people in Muswellbrook can remember when there wasn't Mount Arthur, Mangoola or Bengalla, this would have been in the mid-1980s. Impacts of the these open cut mines started when the mining companies started to purchase rural properties. Most of the people who sold to the mining companies have moved away from the Upper Hunter Valley area. The rural communities that was here prior to the mines have been greatly affected. There are still some people at Castlerock and Wybong, but the numbers are decreasing. The Wybong community has mainly been impacted by the Mangoola open cut mine. (Stakeholder B, Scoping SIA)

I have seen Bengalla being built, we lived here before Mangoola and watched how the town of Wybong was desolated with the construction and operation of Mangoola. (Stakeholder C, SIA)

Continued loss of long-time residents (Friends of the Upper Hunter, SIA)

SIA Stakeholders have also raised their concerns for the Mount Pleasant Operation's impact on the Castlerock community:

The Castlerock Community has already experience an aggregation of environmental impacts from the Mangoola Coal Mine, the proposed Mount Pleasant Optimisation Project will further exacerbate these impacts for surrounding property owners;

Further to this point, the existing MACH Energy Mount Pleasant Mining Operations has reduced the population of the area. Further acquisition of properties in the proposed Mount Pleasant Optimisation Project will again shrink the community further. (Muswellbrook Shire Council, Scoping SIA)

11.3 Tensions between those for and against mining

11.3.1 SIA Stakeholders

SIA stakeholders reported tensions between people who support or who do not support mining.

Miners don't see the land like farmers do. Most are not from here so don't have a connection to this land. They don't feel the permanent damage they are doing. Everything they do is big, big equipment, big holes in the ground and big hills of overburden. Miners are pushing all the time and there is constant pressure. They operate 24 hours a day, 7 days a week, but why? It's all about the money, they have got themselves in a position where they cannot afford to stop. The mine workers live a completely different lifestyle to the farmers. They don't have freedom or flexibility we have. They do however earn a lot more money and I think because of this, some of them think they are better than us. (Jim Lonergan, Kayuga)

Deepening resentment from non-mining members of the community at the ongoing impacts from mining (Friends of the Upper Hunter)

It's also important that MACH do not play lip service to community engagement and rely on donations and sponsorships to get them through. (Stakeholder E)

Coal mining can be quite divisive in the community. For example there was a lot of intimidation with the lobbying for Drayton South, with men in high visibility clothing going as a group, into businesses and charities, to collect signatures on their petition, signs at preschool and large billboards with advertisements to "Tell the PAC" to approve the Drayton South seem to be in complete contravention of due process. While people working for Mt Pleasant may be for the mine many find its addition a tragic blight on the landscape. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

There is a feeling from some stakeholders that mining has a growing preference over other land uses and this can be a source of resentment, as shown in the quotes from stakeholders below.

Members of the community have openly expressed that 1. "Cannot believe a mine is being constructed and operated so close to the township and the excavation of such large volumes of topsoil can occur in a drought."; and 2. "Mount Pleasant is the 'straw that broke the camels back!'. The above statements gauge a high level of frustration that is held in a community in particular their inability to have a say in decisions that affect their way of life. (Muswellbrook Shire Council, Scoping SIA)

Other near neighbours made submissions on the EIS and raised their concerns about the downstream impacts the proposed dams, dust, noise and impacts on property prices. Everything people thought would happen has, except the severity of the impact has been greater than they thought it would be. (Moore, Gilgai, Scoping SIA)

What is most concerning is that no matter what is approved with this application, if MACH Energy want to change it, they just put in an application and we have to go through the whole process again – nothing is certain. (Stakeholder B, SIA)

Add to that the deep frustration and horror at the prevailing absence of justice and common sense in the government prioritising foreign profit and quick revenues, before the ongoing wellbeing of people and land. People are deterred from participating in the environmental approval process because they do not trust the process or the decision makers. The ultimate decision makers, those who

decide what is and is not “acceptable” do not live next to the mine or experience the negative social impacts associated with the development. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

Sense that the NSW Government has abandoned the Upper Hunter community, its residents and its long- standing locally owned industries such as agriculture in favour of coal mining with no end in sight.

Well documented history of corruption associated with mining approvals, current clear pro-mining stance of political leaders including John Barilaro and the clear influence of lobbyists such as the Minerals Council in relation to NSW Government policy (such as the hastily called review into the IPC) - all impacting confidence in the good governance and fairness of the approvals process for mining. (Friends of the Upper Hunter, SIA)

Dr Bob Vickers, a GP from Singleton and a member of Doctors for the Environment Australia wrote an opinion piece in the Newcastle Herald on 12 October 2019 where he described the emotional impacts of coal mining, including “creating an adversarial culture in coal communities as both those against and for continued mining advocate for a future that they believe will best look after themselves and their families.”

Dr Vickers writes about the people working for coal mines, the farmers and people concerned about air pollution:

“The workforce employed in the mining of thermal coal in the Hunter has in recent years become much more casualised. Many are now employed through labour hire companies.

There is a palpable fear of job insecurity, and for some the despair has already begun due to redundancies.

Despite the Minerals Council of Australia's assurances, we are seeing a global shift away from thermal coal from those countries on target to meet emissions reductions targets.”

Farmers are also anxious that the ongoing drought and its link to worsening climate is not only hurting their financial security, but in some regions, food and water security.

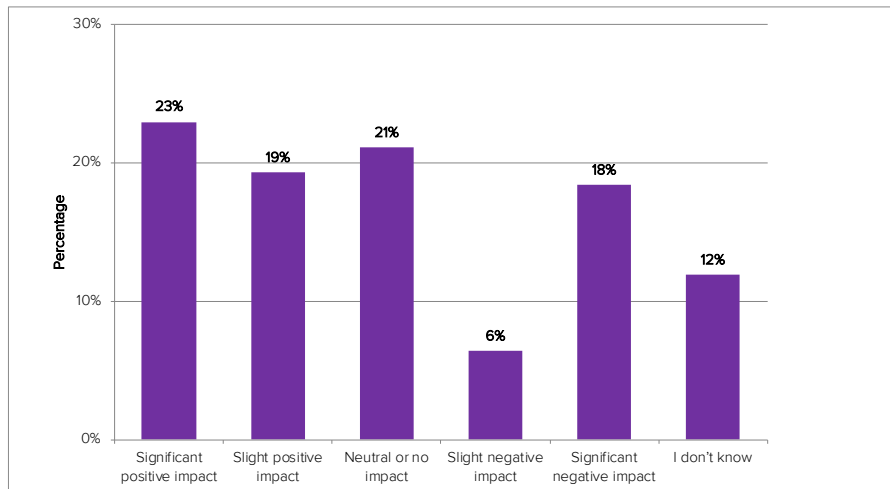
The other major concern with open cut thermal coal mining is air pollution which in the Hunter Valley is consistently breaching national standards, leading to higher rates of lung diseases, heart diseases, lower birth weight children, dementia, type 2 diabetes and other negative health effects. Families have left town fearful of the damage the air pollution will do to their children.

Evidence of this division can also be seen in the objections and support for previous modifications.

11.3.2 Community survey

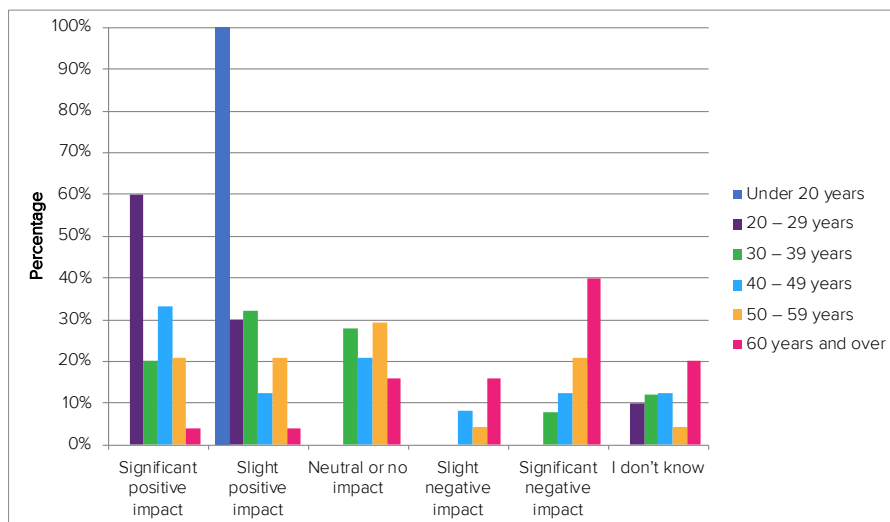
Based on feedback from stakeholders during the Scoping SIA, there was a specific question on community cohesion in the Community Survey. 42% of survey participants provided a positive Likert scale rating in response to this question, compared with 24% of survey participants who provided a negative rating, as shown in Figure 76.

Figure 76: Community Survey impacts of the Mount Pleasant Operation on community cohesion, all responses (n = 109)



Survey respondents' Likert scale ratings trended negative in response to this question, the older the age bracket, as shown in Figure 77¹⁹.

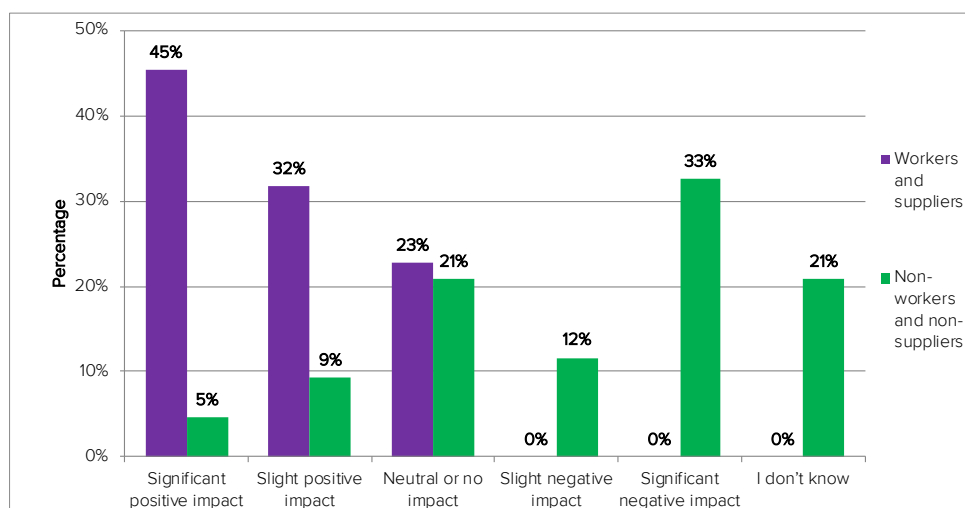
Figure 77: Impact on community cohesion – comparison by age (n. 109)



Survey participants who are either workers at, or suppliers to the Mount Pleasant Operation, responded to this question with Likert scale ratings that were more significantly more positive than the responses of non-workers and non-suppliers, see Figure 78.

¹⁹ There was only one respondent in the under 20 year age bracket.

Figure 78: Community Survey impacts of the Mount Pleasant Operation on community cohesion, relationship to the Mount Pleasant Operation (n = 87)



Relevant comments²⁰ from the community survey are provided in Table 31. Of the comments received, the majority were negative. Only areas where comments were received from are included.

Table 31: Comments on the impacts of the Mount Pleasant Operation on community cohesion, Community Survey

Location	Comment
Castlerock	<i>"There is a difficulty with some employees committing to training and team sport. Mining families coming to the area have also assisted in a positive way in sporting organisations."</i>
Kayuga	<i>"My community has been depopulated by Mt Pleasant and the homes demolished."</i>
Muswellbrook	<i>"I think out of all mines around they seem to make the best effort at that grass roots level of community connect"</i> <i>"More than money is required to help communities. Granted the mine helps out financially in a number of ways but it can't buy community spirit."</i> <i>"Most people would live elsewhere if they could, and leave the town as soon as they are able"</i> <i>"No one can come to stay in Muswellbrook for funerals or weddings as all motels are booked out for workers"</i> <i>"Ongoing coal projects do not create a cohesive community..., particularly when the employees don't live in this community"</i> <i>"Ongoing new mines is causing division in the community particularly because of the impact on climate change"</i> <i>"The mines are keen to support local activities. I was involved in the town athletics club and the Eisteddfod, both supported by mine workers and mine funding"</i> <i>"Us and them. Coexisting with a coal mine is difficult."</i>
Wybong	<i>"Not restricted to MTP. All mining displaces long term residents and replaces the core of the old community with a North Korean style fossil indoctrinated violent overblown pro-coal anti-IPCC cult."</i>
Parkville	<i>"As stated there is division between miners and locals."</i>
Aberdeen	<i>"Shift work has mental and physical health impacts and makes it difficult for workers to make regular commitments to sporting clubs, parent teacher interviews and community groups."</i>

²⁰ If a comment was more suited to another survey topic that it is reported in other survey topic.

Location	Comment
Scone	<p><i>"I would stay that the Mount Pleasant Operation impacts social cohesion with other's in the community by providing support to the the local community, through community organisations such as the PCYC or supporting local sporting teams."</i></p> <p><i>"No grants from coal companies can repair family disruption from shift work, or talented youngsters filched for mine work"</i></p> <p><i>"Utterly divisive"</i></p>
Singleton	<p><i>"Mach have actively engaged with local groups."</i></p> <p><i>"They could probably have a larger community presence now that they are an established mine."</i></p> <p><i>"with the fall in coal prices and the increase in global warming from burning fossil fuels there are more people who think that jobs from coal mining are not worth the impact, even miners themselves ... but it sets up tension within them as they do still have a mortgage. This affects social relations."</i></p>

Note: this table only lists the responses relevant to the potential impacts on community cohesion. Further details regarding the Community Survey are included in Appendix F.

11.4 Change in family and social structures of workforce who work on roster and 12 hour shifts.

SIA stakeholders described the change in family structures of the workers in the mining industry and how they are able to participate in the community:

Mining in the area has changed, it used to be small and underground, they used to operate Monday to Friday. The mines would shut down for two weeks off over Christmas and the miners and their families would go away for their holidays. The miners used to be part of the community, they would play sport on the weekends and volunteer but now with the 12 hour shifts and the rosters, the mine workers are separate to the community. One of my sons works on roster at Mangoola and I don't know when to call him. I can't call in the evening because he goes to bed early after spending precious time with his family, and I can't call him during the day because he's not allowed to have his phone on him at work. The hours and shift work keep mine workers from their friends and family, unless their friends and family are working those hours too. (Jim Lonergan, Kayuga, SIA)

Some people are driving up to two hours to get to work, leaving at 4am working a 12 hour shift and then driving two hours home, getting home at about 8pm to turn around and do it again the next day. This is one of the impacts of moving from an eight hour to a 12 hour shift work. When people were working an 8 hour shift they were living locally because they were working for longer rosters. The 12 hour shift means people can get their hours done in four days – so they want to spend their four days off on the coast, with their family.

The 12 hour shifts have changed people's family life and their social lives. They can't volunteer anymore – they are either too tired or the organisations they would like to support e.g. their child's sporting team is set up on a Monday to Friday/weekend structure, e.g. week day afternoon training and playing on a Saturday/Sunday which doesn't align with four days on and four days off. The shifts are not aligned to how a community traditionally works.

Muswellbrook has never been larger in population so should be “rich in people” to participate in community organisations, however this is not the case. (Tony McTaggart EHP First National, SIA)

MSC (Scoping SIA) described the impacts of reduced rural community in Castlerock because of Mangoola Coal and the Mount Pleasant Operation has meant a reduction in community volunteering and the need to amalgamate volunteer services to be able to service an area, e.g. rural bushfire brigades, land care groups. This decreases community capacity and creates a loss of sense of place.

Damian Honor, District Officer, Hunter Valley NSW Rural Fire Service described the impact on mining in NSW and his experience in the Hunter Valley:

Where there is mining in NSW, there has been a trend of decreasing RFS volunteer members. This is due to the mining company purchasing a property or properties to mine, and the family/ies who lived on the property usually move out of the area. Rural property owners/agricultural businesses take the responsibility of managing the fire risk on their land seriously, which is why the members of a rural family are more likely to be RFS volunteers. When the family is gone and the mining begins, the membership gap is not usually replaced by the mine workers. If the mine owns properties in the buffer zone around the mine, they usually rent them out to mine workers, but those don't usually participate – they don't have the same level of responsibility to manage the fire risk on the land as much as the previous family or the mining company takes over the responsibility of managing the risk.

Some people who work at the mines do volunteer and their contribution is highly valued. The hardest time to get volunteers is on shift change – they aren't available because they are travelling to or from work. Also shift work can prevent people volunteering, even when they would like too because they are not available to attend in regular meetings or training sessions and this can lead to them feeling like they are missing out on being part of their crew.

11.5 Summary

The Mount Pleasant Operation has contributed to the loss of rural communities due to properties being acquired and people who lived on them moving out of the area. This impact has largely been primarily experienced prior to MACH purchasing the Mount Pleasant Operation, however, there have been subsequent additional losses due to voluntary noise and air related acquisitions upon request. The impact is also cumulative with other mines in the area acquiring properties such as Dartbrook Mine, Bengalla Mine and Mangoola Coal.

The Mount Pleasant Operation has contributed to, or reinforced, the tensions between those people in the local community who support or oppose mining. This can be seen in who has participated in the SIA Community Survey and their comments.

Working rosters and 12-hour shifts has changed how workers interact with their families and how they participate in their community.

12 Equity Impacts

12.1 Selection of indicators

Impacts on equity have been identified based on:

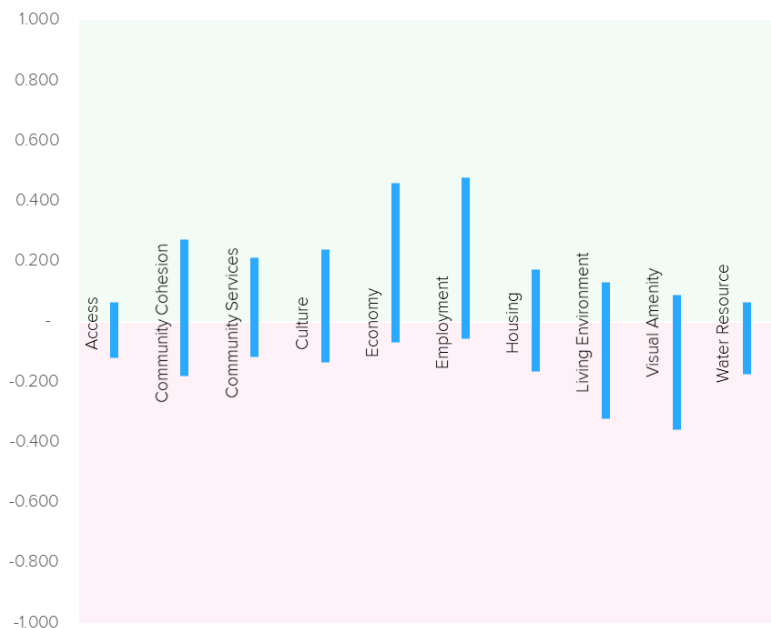
- impact type
- geographic distribution and
- across generations

12.2 Impact type

Respondents to the Community Survey were asked to identify on a Likert scale how they were experiencing 10 categories of impacts from the Mount Pleasant Operation. Responses were assessed based on their 'spread' across the Likert scale to provide guidance on the equity of each of the impacts, as shown in Figure 79. Impacts with the largest inequity (or spread of responses) were:

- employment
- economy
- community cohesion
- living environment and
- visual amenity.

Figure 79: Equity of impacts (community survey)



12.3 Geographic distribution

Based on an analysis of information provided by SIA stakeholders in the Scoping SIA and the SIA, the community survey data and the workforce survey data, how people are impacted is based on:

- where they live and
- their relationship to the Mount Pleasant Operation (employment or a supplier).

People who live closest to the Mount Pleasant Operation are more likely to experience negative social impacts or costs. People who have relationship with Mount Pleasant, either through employment or as a supplier tend to receive the benefits and they are located in Muswellbrook, Aberdeen, Scone, Denman, McCullys Gap, Jerrys Plains, Singleton and beyond.

12.4 Intergenerational

12.4.1 Current population

For those people who completed the Community Survey, there was a trend of younger people experiencing positive impacts while older people were experiencing negative impacts.

12.4.2 Future generations

Some SIA stakeholders reported the impacts likely to be experienced by future generations:

This mine, like other mines in the area will continue to permanently change the landscape. The landscape that I grew up with is different to what the next generation experiences and the ones after that won't be able to experience what I did – it just doesn't exist anymore. (Jim Lonergan, Kayuga, SIA)

For long-term residents, the landscape is no longer recognisable.

The natural features and landmarks are no longer there. Mt Pleasant is essentially 'moving the hills further east' from where they were pre-mining.

We condemn the intergenerational impacts for people who have grown up in the area, who lament what their children and grandchildren will no longer be able to see.

"The house I grew up in and where my children had Sunday dinners with their grandparents and Christmas parties with their cousins, will be in the final void." (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

12.5 Social injustice

SIA stakeholders reported experiences of social injustice associated with government decision making for previous approvals of the Mount Pleasant Operation:

Add to that the deep frustration and horror at the prevailing absence of justice and common sense in the government prioritising foreign profit and quick revenues, before the ongoing wellbeing of people

and land. People are deterred from participating in the environmental approval process because they do not trust the process or the decision makers. The ultimate decision makers, those who decide what is and is not “acceptable” do not live next to the mine or experience the negative social impacts associated with the development. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

What is most concerning is that no matter what is approved with this application, if MACHEnergy want to change it, they just put in an application and we have to go through the whole process again – nothing is certain. (Stakeholder B, SIA)

Sense that the NSW Government has abandoned the Upper Hunter community, its residents and its long- standing locally owned industries such as agriculture in favour of coal mining with no end in sight.

*- Well documented history of corruption associated with mining approvals, current clear pro-mining stance of political leaders including John Barilaro and the clear influence of lobbyists such as the Minerals Council in relation to NSW Government policy (such as the hastily called review into the IPC)
- all impacting confidence in the good governance and fairness of the approvals process for mining.*

... it causes residents to feel that their health and way of life is being placed second to the profits of international coal investors. (Friends of the Upper Hunter Inc, SIA)

12.6 Summary

How people are impacted by the Mount Pleasant Operation is based on:

- where they live and
- their relationship to the Mount Pleasant Operation (employment or supplier).

People who live closest to the Mount Pleasant Operation are more likely to experience negative social impacts or costs. People who have a relationship with the Mount Pleasant Operation, either through employment, as a supplier or service industry tend to receive the benefits.

Impacts with the largest inequity (or spread of responses) were:

- Employment
- Economy
- Community cohesion
- Living environment and
- Visual amenity.

For those people who completed the Community Survey, a generational difference was found, with a trend of younger people identifying positive impacts while older people identified negative impacts.

13 Cumulative Impacts

13.1 Definition of cumulative impacts

The SIA Guideline defines cumulative impact as:

Cumulative impacts are the successive, incremental and combined impacts (both positive and negative) of activities on society, the economy and the environment. They can arise from a single activity, multiple activities or from interactions with other past, current and foreseeable future activities. They can be 'sink' impacts arising from outputs of activities (that is dust, noise, saline water) or 'source' impacts resulting from drawing upon and using the same resources as other industries (for example skilled labour, housing, freshwater).

Cumulative impacts can arise in three main ways:

'Spatial' impacts are those that occur over the same area. For example, trucks from multiple operations may produce a cumulative noise impact along a common haulage route.

'Temporal' impacts are those that vary over time. For example, the construction of multiple large projects over the same timeframe may produce a spike in temporary workers in an area, creating a short-term cumulative shortage of accommodation.

'Linked' impacts involve more complex interactions, such as when an impact triggers another or where a single activity has multiple impacts. For example, a resource project may generate noise and dust, consume local water resources, and increase traffic on local roads and services. The combination of these varied impacts may result in a cumulative impact on the social fabric of a locality. (pg. 6)

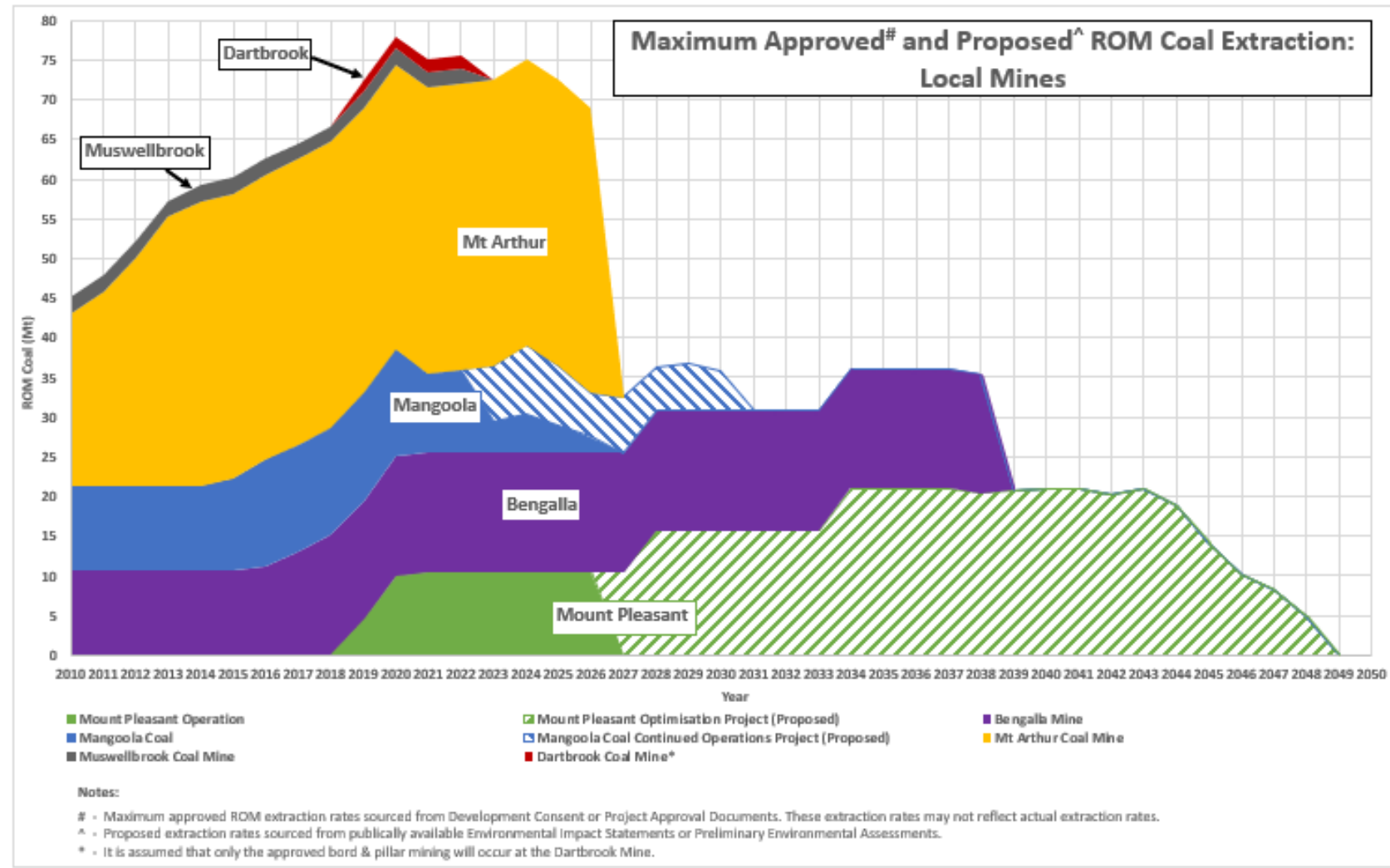
13.2 Cumulative impacts within Mount Pleasant Operation and with the Project

At the time of writing the SIA, people are experiencing cumulative impacts from the Mount Pleasant Operation. These impacts are linked because one impact triggers another. Near neighbours, residents of surrounding rural communities and some residents of Muswellbrook are experiencing multiple impacts such as noise, dust, lighting and blasting impacts. The impacts from mining will continue to be experienced concurrently with the construction of key infrastructure such as the approved Stage 2 rail infrastructure and while the SSD Application is proceeding. Cumulative impacts within the Mount Pleasant Operation and with the Project have been identified and are detailed in Appendices O, P, Q and R.

13.3 Other mines, power stations and large projects

Based on current approvals and applications, other coal mines in the area will be operating as set out in Figure 80. Liddell Power Station is planned to close in 2023. For the purpose of this SIA, it has been conservatively assumed that the Singleton Bypass and the Muswellbrook Bypass have not been constructed. Monitoring of cumulative impacts has been included in the suggested monitoring strategies for the Project proceeds scenario (Appendix Q).

Figure 80: Other operating coal mines in proximity to the Mount Pleasant Operation



SIA stakeholders provided the following comments on cumulative impacts between the Mount Pleasant Operation and the mining industry in the Upper Hunter:

Health, both measurable and unmeasurable must be included. When people are inhaling the dust and losing tangible history, heritage and livelihoods, losing the stars and the blue sky, losing the water on their land, losing the prospect of healthy careers for their sons and daughters, they are also dying of cancer early. It is not only the health impacts of this project but also the cumulative impact on health that needs to be taken seriously. (Denman Aberdeen Muswellbrook Scone Healthy Environment Group, SIA)

We and our members are deeply concerned regarding the cumulative impacts being experienced across the Upper Hunter due to the activity of the existing extensive coal mining operations in the district, including the existing Mount Pleasant operation which is producing 10.5M tonnes of ROM coal per annum less than 3km west of the town of Muswellbrook.

We are also troubled by the six new coal mining expansions and developments in various stages of approval within the Muswellbrook and Upper Hunter Shires despite the price of coal being below the cost of production. Each of these six proposals diverts the attention of local people from their own businesses in order to oppose them and contributes to investment uncertainty for residents and non-mining industries.

To contemplate doubling the production of the Mt Pleasant mine would be to significantly exacerbate the already unacceptable impacts of this mine. (Friends of the Upper Hunter Inc., SIA)

Need to take into consideration:

the planned closure of Liddell Power Station 2023 – 2024 and the loss of local economic support and

what could happen with the sale of Mt Arthur, no one knows what the policies of the new company will be and if or how much they will support the local economy.

The Liddell Closure Committee has been set up to transition from the power industry and identify the future land use. There have been a number of discussions over the past 3 – 4 years, however there isn't a new industry yet. It is unknown if and how the new industries, e.g. solar, wind and pumped hydro will be able to fill the economic gap (local employment and purchasing) left by Liddell.

In November 2019, 2026 was identified as going to be a big year, but now it may be 2023 with the potential approval of Mount Pleasant happening in 2023 and the closure of Liddell Power Station. (MCCI, SIA)

The area is currently preparing for transition with the eventual closure of the Liddell and Bayswater Power Stations and the cessation of mining. It is important to develop a transition plan.

Other major developments – Wind Farm, Hunter gas Pipeline, solar farms, pumped-hydro, Regional Entertainment and Conference Centre are being planned. (MSC, SIA)

We can see the overburden from Mt Arthur, Bengalla and Muswellbrook Coal and now we look directly across the road to the overburden from Mount Pleasant. We wonder what the overburden is doing for the local environment, is it changing how the wind moves around, the amount of dust in the air and the impact upon temperature. (Glen Eden Holsteins Pty Ltd, SIA)

Where there is mining in NSW, there has been a trend of decreasing RFS volunteer members. This is due to the mining company purchasing a property or properties to mine, and the family/ies who lived on the property usually move out of the area. Rural property owners/agricultural businesses take the responsibility of managing the fire risk on their land seriously, which is why the members of a rural family are more likely to be RFS volunteers. When the family is gone and the mining begins, the membership gap is not usually replaced by the mine workers. If the mine owns properties in the buffer zone around the mine, they usually rent them out to mine workers, but those don't usually participate – they don't have the same level of responsibility to manage the fire risk on the land as much as the previous family or the mining company takes over the responsibility of managing the risk.

Some people who work at the mines do volunteer and their contribution is highly valued. The hardest time to get volunteers is on shift change – they aren't available because they are travelling to or from work. Also shift work can prevent people volunteering, even when they would like too because they are not available to attend in regular meetings or training sessions and this can lead to them feeling like they are missing out on being part of their crew. (Damian Honor, District Officer Hunter Valley Rural Fire Service, SIA)

Cumulative impacts are poorly managed in the Upper Hunter, which can be seen by the cumulative impact of the multiple mines when you drive from Singleton, through Muswellbrook and up to Scone. There is a very distinct area of mining and no matter where you live up here, you travel past it, you experience it each time you transition through it.

The cumulative impacts of mining need to be better managed. There needs to be a limit on how much noise, dust etc for an area and then the mines must stay underneath it. Exceedances on limits and deals between nearby landowners need to be stamped out. If there is going to be a new mine or an expansion then they need to stay under the cumulative limit. There is value in the mines working together to reduce their cumulative impacts. (SCCI, SIA)

13.4 Natural disasters – droughts, bush fires and flooding

There is also the cumulative impacts with events in the natural environment, such as droughts, bushfires and flooding. All these features of the natural environment have occurred in the past, however, it is unknown when they will occur in the future and therefore have not been taken into consideration when identifying cumulative impacts. It is recommended that relevant indicators are considered for the social impact monitoring program to be developed as part of the Social Impact Management Plan (SIMP), which is recommended to be prepared if the Project proceeds.

SIA stakeholders have identified the cumulative impacts between natural disasters and the Mount Pleasant Operation:

The drought has broken and after four years of continuous drought conditions the dams are finally full. Beef producers have experienced an increase in demand leading to an increase in price. This contrasts with the drought when there was an oversupply and a substantial reduction in sale price due to producers selling some or all their herds because they were unable to feed and water them.

For some small producers, it is harder to get back into the market because of the increased competition and prices to restock. Some producers who were able to keep all or part of their herd through the drought are relying on natural increases. (Stakeholder B, SIA)

Landholders are still recovering from the drought and there is a low level of confidence that rain will continue. Landholders are still absorbing the financial impact of the drought. The rain earlier this year did not fall in the Glenbawn Dam catchment area here and the region is still on water restrictions.

(Muswellbrook Shire Council, SIA)

We are now seeing improvement from the economic downturn associated with the drought. With the rain in the first quarter and follow up rain in the second quarter, effects of the drought have reduced and the economic shock has reduced. (MCCI, SIA)

13.5 COVID-19

The immediate impacts as experienced by SIA stakeholders are described below, however the longer term impacts are unknown. It is recommended that the social impact monitoring includes indicators relating to COVID-19 so cumulative impact can be identified at the time, especially when completing the SIMP, should the Project proceed.

Anecdotally Council has observed that a few local shops and cafes haven't reopened after the first impact of COVID 19. Of these premise that have reopened, some are on restricted hours and service delivery has been modified due to the requirement to deliver services within the peramiters of the NSW Health Regulations.

It's unknown at this point how many people in the retail and hospitality industry have lost employment, in particular, given the hospitality and service industry has more casual employees.

Covid 19 has placed additional pressure on families during isolation. Community Service Providers have provided feedback that the consumption of alcohol and other drugs has increased and this has placed additional stress on family units. The impact of Covid 19 on families is just starting to be assessed as service providers start to re-engage with people. (MSC, SIA)

Covid 19 is still very relevant. The Muswellbrook area has experienced a higher level of economic stability compared to other areas because of the relatively lower reliance on retail, tourism and

hospitality. Accommodation hasn't been affected like in other areas because accommodation is mainly used by the mining industry rather than tourism.

In response to Covid 19, MCCI has received support for the past three months from BHP Vital Resources Fund - MCCI has received funding to support the Member Services Manager and BHP/C-RES Local Buy Foundation and BHP Futures Fund – videos for local businesses to bounce back from COVID 19.

Many small businesses (e.g. engineering) in the area were considered an essential service because they supported mining and power stations that were able to remain operating. They may be eligible for government support such as tax rebates and tax reductions in the future. If so, this will strengthen the businesses. (MCCI, SIA)

The Scone area has received some rain and there is water in the dams and feed for stock. The three to four years of drought was tough and now to have Covid 19 it's really hard for some businesses. Coupled with this is a newly opened Bypass of the town - been a tough time for all. There has been the threat of Covid 19 up here, it's a bit like a dog where at the moment, the bark appears to be worse than the bite. We were expecting something to occur with everyone travelling during school holidays, but so far so good. (SCCI)

Any changes since the Scoping SIA have been clouded by Covid 19. The two largest race days of the year for the Muswellbrook Race Club did not occur in March because of the Covid 19 restrictions. The Racecourse continued to operate to conduct race meetings however the club was significantly impacted by decreases on non-race day revenue (back to zero) and race day revenue was reduced by as much as 50%. There are plans to increase/expand the non-race day services such as functions and community events as restrictions ease. (Stakeholder A, SIA)

Covid 19 has led to changes in daily life, for example we only went to town once a week to shop and we didn't stay to socialise or have a cup of coffee. There was and still are people who have a genuine fear about Covid 19. A number of businesses (small and large) in town have closed down due to Covid 19 restrictions and not being able to operate. Muswellbrook doesn't look like a prosperous town at the moment. (Stakeholder B, SIA)

14 Summary of social impact indicators

Table 32 contains a summary of the social impacts, indicators, date of data collection, data sources, geographical scale and data source. The development of a SIMP for the Project proceeds scenario should make reference to and include relevant indicators.

Table 32: Summary of Social Impact Indicators

Social impact	Indicator	Date	Geographical scale	Data source
Way of life - employment				
Direct employment	Number of people employed	2020	Site	MACH
	Place of residence	2020	Site	MACH
Standard of living	Average weekly earnings by industry	2020	Australia	ABS
Way of Life - housing				
Reduced access to affordable housing	Number of social houses	2016	MSC LGA	MSC and ABS Census Data
	Waiting time for social housing	30 June 2019	Muswellbrook, Denman, Aberdeen, Scone and Singleton	New South Wales Communities and Justice
	Number of building approvals	2010/11 – 2019/20	MSC LGA, UHSC LGA and SSC LGA	REMPAN
	Rental vacancy number and rates	2005 - 2020	2333, 2337 and 2330	SQM Research
	Median asking rental price	2009 - 2020	2333, 2337 and 2330	SQM Research
	Rental price	September 2017 – March 2020	MSC LGA, UHSC LGA and SSC LGA	New South Wales Communities and Justice
	Asking purchase price	2009 - 2020	2333, 2337 and 2330	SQM Research
	Paid purchase price	September 2017 – May 2020	MSC LGA, UHSC LGA and SSC LGA	New South Wales Communities and Justice
	Level of housing stress (rental and purchase)	2011	MSC LGA, UHSC LGA and SSC LGA	Australian Bureau of Statistics (unique dataset)
	Where the workforce live while at work and when not at work	July – August 2020	As required	Workforce Survey
	Impacts on housing	October-November 2019 and July	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA stakeholder interviews

Social impact	Indicator	Date	Geographical scale	Data source
		– August 2020		
		June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Way of life – how people get around (roads, public transport etc)				
Impacts on road use and congestion	Traffic numbers New England Highway between Singleton and Muswellbrook and travelling through Singleton	2014	n/a	NSW RMS
	Time taken to travel through Singleton	October-November 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
	Average number of Mount Pleasant Operation vehicle movements during the week	February 2020	Mount Pleasant Operation Road	Road Transport Assessment Traffic Survey
	Average number of Mount Pleasant Operation vehicle movements on the weekend	February 2020	Mount Pleasant Operation Road	Road Transport Assessment Traffic Survey
	Impacts on access	July – August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
		October-November 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA stakeholder interviews
	Impacts on train service between Muswellbrook and Newcastle	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Impacts on way of life – how people play (recreational activities)				
Impacts on Muswellbrook Race Club	Patronage and visual/dust impacts	October-November 2019 and July – August 2020	Muswellbrook	Scoping SIA and SIA Stakeholder interviews
NAIDOC Week and Cultural Spectacular	Patronage	July 2019	Upper Hunter	Scoping SIA and SIA Stakeholder interviews Media Reports
Health and wellbeing				
Current levels of health and wellbeing	Various indicators on health	Dependant on data source	MSC LGA, UHSC LGA and SSC LGA	Various, summarised by phn Hunter New England and Central Coast

Social impact	Indicator	Date	Geographical scale	Data source
Physical health	Asthma prevalence in adults and children	2002-2019	Hunter New England Local Health District	HealthStats NSW
	Asthma hospitalisations	2001-2003 to 2017-2019	MSC LGA, UHSC LGA and SSC LGA	SIA stakeholder interviews HealthStats NSW
Current levels of health and wellbeing	Comments in Community Survey	July – August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Stress and mental health	Comments on current health and wellbeing	October-November 2019 and July – August 2020	Near neighbours and surround rural communities	Scoping SIA and SIA Stakeholder interviews
Solastalgia	Feedback from SIA stakeholders	October-November 2019 and July – August 2020	Near neighbours and surround rural communities	Scoping SIA and SIA Stakeholder interviews
Eritalgia	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Health and wellbeing associated with employment	Benefits of work	July – August 2020	As required	Workforce Survey
Health and wellbeing impacts of working 12 hour shifts	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Road crashes and fatigue	Location and casualty severity of crashes and crash data where fatigue was a contributing factor	2014 - 2018	MSC, UHSC and SSC LGAS	Transport NSW
Services and Facilities				
Impacts on community services	Access to basic medical services	2018	MSC, UHSC and SSC LGAS	phn Hunter New England and Central Coast
	Challenges for health services in Hunter New England and Central Coast	2019	Hunter New England and Central Coast Health District	phn Hunter New England and Central Coast Needs Assessment
ACDF Funding	Health programs and organisations supported by ACDF	2017 - 2020	As required	ACDF

Social impact	Indicator	Date	Geographical scale	Data source
Current demand for medical services	Wait times for GP and mental health services	2020	Upper Hunter	Media reports
	Current use of medical services	July – August 2020	As required	Workforce Survey
Current demand for educational services	Current use of educational services	July – August 2020	As required	Workforce Survey
	Enrolment numbers – public schools	2004 - 2014	MSC, UHSC and SSC LGAs	Centre for Education Statistics and Evaluation
ACDF Funding	Education Programs and organisations supported by ACDF	2017 - 2020	As required	ACDF
Childcare	Number of services, vacancies and average cost per day	2020	MSC, UHSC and SSC LGAs	Careforkids.com.au
Current demand for emergency services	Ambulance activities and priorities	2019	Upper Hunter SA3 and Lower Hunter SA3	Bureau of Health Information
Rural Fire Service	Membership numbers, member demographics and available equipment	2020	Kayuga, Wybong and Edinglassie Brigades	RFS – stakeholder interview
Police	Top 20 Offences	2010 - 2020	MSC, UHSC and SSC LGAs	NSW Bureau of Crime Statistics and Research
Workforce participation in community based organisations	Type of community organisations the workforce and their families participate in.	July – August 2020	As required	Workforce Survey
Impacts on community services	Level of impact and comments	July – August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Quality of the living environment				
Quality of the living environment	Experience of impacts	October-November 2019 and July – August 2020	Near neighbours and surround rural communities	Scoping SIA and SIA Stakeholder interviews
	Level and type of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
	Complaints	Ongoing	As relevant	Complaints data

Social impact	Indicator	Date	Geographical scale	Data source
Visual impacts	Experience of impacts	October-November 2019 and July – August 2020	Near neighbours and surround rural communities	Scoping SIA and SIA Stakeholder interviews
	Level and type of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Impact on water	Level of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Socio-economic impacts				
Time lost	Managing environmental impacts	October-November 2019 and July – August 2020	Near neighbours and surround rural communities	Scoping SIA and SIA Stakeholder interviews
Increased housekeeping	Managing environmental impacts	October-November 2019 and July – August 2020	Near neighbours and surround rural communities	Scoping SIA and SIA Stakeholder interviews
Impacts on employment	Level and type of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Local businesses – employment and turnover	Business Counts (staff)	June 2019	MSC LGA, UHSC LGA and SSC LGA	REMPAN
	Business Counts (turnover)			
Local economy	Level and type of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Support for local businesses	Percentage of spend and on which type of businesses	July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Workforce Survey
	MACH local spend	2019	MSC LGA, UHSC LGA and SSC LGA and NSW	Economic Assessment
Increasing costs of goods and services	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Local/regional competition for skilled workers	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews

Social impact	Indicator	Date	Geographical scale	Data source
Impacts on agriculture	Change in land use	1997 - 2020	ML and surrounding properties	Land use maps in EIS'
	Change in access to water - Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Cultural impacts				
Aboriginal culture	Feedback from SIA stakeholders from the Aboriginal community	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Agricultural culture	Industry of employment	2016	MSC LGA	ABS Census data
	Feedback from SIA stakeholders from the agricultural industry	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Change in culture	Level and type of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Family and community				
Loss of rural communities	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Tensions between those who are for and against mining	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Community cohesion	Level and type of impact and comments	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Change in family and social structures	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Equity impacts				
Geographic distribution of impacts	Baseline perception of impact	June to August 2020	MSC LGA, UHSC LGA and SSC LGA	2020 SIA Community Survey
Intergenerational impacts	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews

Social impact	Indicator	Date	Geographical scale	Data source
Social injustice	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Cumulative social impacts				
Other mines	Approved and proposed ROM coal extraction	2019	Mines in proximity to the Mount Pleasant Operation	Environmental approvals/DA
	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
Natural disasters	Feedback from SIA stakeholders	October 2019 and July – August 2020	MSC LGA, UHSC LGA and SSC LGA	Scoping SIA and SIA Stakeholder interviews
COVID-19	Feedback from SIA stakeholders	July – August 2020	MSC LGA, UHSC LGA and SSC LGA	SIA Stakeholder interviews



Appendix O

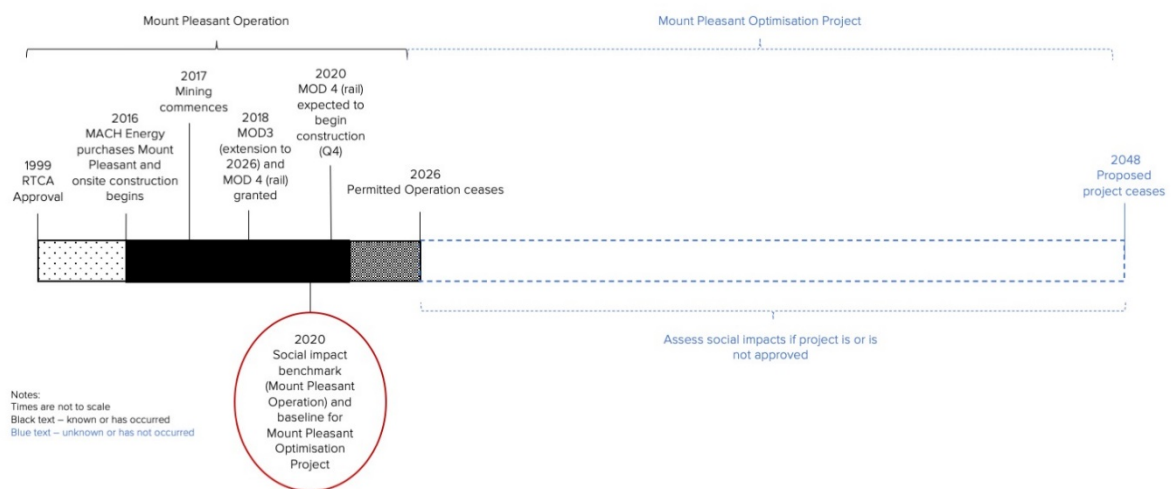
Social Impacts of the Current Mount Pleasant Operation

1 Introduction

The social impacts of the current Mount Pleasant Operation have been identified in Table 1. An overview of the approved Mount Pleasant Operation is provided in Appendix E. The structure for Table 1 is based on Table 6 of the SIA Guideline and modified to assess an operating mine, rather than a greenfield site.

As the maximum disturbance area has not been reached at the time of writing the SIA, the full impact characteristics (extent, duration, severity and sensitivity of the impacts) of the approved Mount Pleasant Operation may not yet have been realised, as shown in Figure 1.

Figure 1: Context of the assessment of social impacts of the Mount Pleasant Operation



The identification of social impacts and their characteristics is made more complex due to their accumulation (spatially and temporally) with social impacts from other mines (namely Bengalla Mine, Dartbrook Mine, Mangoola Coal and Mt Arthur Coal Mine) and the Liddell and Bayswater Power Station. Where possible, an explanation regarding how the impact associated with the Mount Pleasant Operation is experienced in a cumulative context is provided.

Social impacts of the Mount Pleasant Operation are based on data collected from the following sources:

- SIA Scoping Stakeholder Case studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided) and
- Professional experience of the SIA practitioner.

The management of social impacts or the causes of the social impacts are based on the existing conditions and commitments outlined in Development Consent DA 92/97.

2 Social impacts of the Mount Pleasant Operation


The social impacts (positive and negative) of the Mount Pleasant Operation have been identified in Table 1. The impact characteristics, social risk/opportunity rating and comments on the cumulative nature of the impact were assessed under the assumption that the current Mount Pleasant Operation mitigation strategies have been applied.

Environmental conditions for the Mount Pleasant Operation are in place to “minimise the adverse impact of the development may cause through water and air pollution, noise and visual disturbance” (Development Consent DA 92/97). As the aim of the conditions is to minimise rather than avoid environmental impacts, people still experience environmental impacts and the associated social impacts. It is noted that the environmental and social impacts would be anticipated to be higher in the absence of these controls. There are no conditions in Development Consent DA 92/97 designed to minimise social impacts.



⊕ Positive impact ⊖ Negative impact

Table 1: Mount Pleasant Operation – social impacts (no additional mitigation)

Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Impacts on way of life – employment												
Direct employment opportunities	Employment opportunities ⁸ 	C & O	People employed and their families	HR policies and processes and Local Labour Commitment ⁹	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	-

¹ As identified in Table 4 of the NSW SIA Guideline

² See Appendix S for methodology

³ C = Construction, O = Operation

⁴ Categories for severity are High, Moderate and Low based on the scale or degree of change from the existing condition as a result of the impact. The decision of what category the impact is categorised is a professional judgement by the SIA practitioner based on engagement with stakeholders throughout the SIA Scoping and SIA for the EIS phase of work.

⁵ Categories for sensitivity are High, Moderate and Low based on the vulnerability of the affected parties, the receiver or receiving environment or the importance places on the matter being affected. The decision of what category the impact is categorised as was based on SIA engagement in the SIA Scoping and SIA for the EIS phase of work.

⁶ S = significance, C = consequence

⁷ Likelihood categories are C = Almost Certain, L = Likely, P = Possible, U = Unlikely and R = Rare

⁸ ACDF, Blackrock Industries, Workforce Survey and Community Survey

⁹ <https://machenergyaustralia.com.au/community/>



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Employment pathways through the Gundi Program (ACDF funding and direct employment through MACH contractors)	Employment opportunities for men who have participated in the Gundi Program ¹⁰ ⊕	O	Men participating in the Gundi program and their families	Local Labour Commitment ¹¹	Locations where the person lives, predominantly Muswellbrook	Period of employment/ contract	High	High	G2, E3, V1, R2 Significant	Almost certain	A5 Extreme	There are other employers besides MACH's contractors who are employing people who have completed the Gundi Program.
Indirect employment opportunities	Suppliers and service providers are able to employ more people ¹² ⊕	C & O	Local businesses and their employees	Local Supplier Strategy and participation in Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group	Muswellbrook Shire Council (MSC), Upper Hunter Shire Council (UHSC) and Singleton Shire Council (SSC) Local Government Areas (LGAs)	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Bengalla Mine and Mt Arthur Coal Mine also have local purchasing policies.

¹⁰ ACDF, Blackrock Industries, MACH (2020) *pers comms*.

¹¹ <https://machenergyaustralia.com.au/community/>

¹² Blackrock Industries, Supply Solutions Group and Community Survey.



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Impacts on way of life - housing												
Workforce living locally (temporary or permanent)	Unintended impacts on housing availability, appropriateness and affordability ¹³ ⊖	C & O	People living in on low income households in Muswellbrook, Upper Hunter and Singleton LGAs	Not required under current approval	Muswellbrook, Upper Hunter and Singleton LGAs	Life of the operation	Moderate	High	G2, E2, V1, R2 Significant	Likely	B5 Extreme	Other mines and power stations also encourage people to live locally, making it hard to distinguish which proportion of the impact is attributable to the Mount Pleasant Operation workforce.
Workforce living locally (temporary or permanent)	Consistent demand for housing leading to stability of house and land value ¹⁴ ⊕	C & O	Home owners and investors	Not required under current approval	Muswellbrook, Denman, Aberdeen, Scone and Singleton	Life of the operation	Moderate	High	G2, E3, V2, R3 Moderate	Likely	B3 High	Other mines and power stations also encourage people to live locally, making it hard to distinguish which proportion of the impact is attributable to the Mount Pleasant Operation workforce.

¹³ MSC, Wanaruah Local Aboriginal Land Council, ACDF, Earth Connection Indigenous Corporation, Friends of the Upper Hunter Inc., Sincovich (2018) and Community Survey.

¹⁴ Tony McTaggart Edwards Higgens Parkinson First National and Community Survey.



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Impacts on way of life – how people move around (roads, public transport etc)												
Increased number and type of vehicles between New England Highway in Singleton	Increase in travel times, perceived decrease in safety and feelings of frustration and annoyance ¹⁵ ⊖	C & O	Other road users, particularly residents of Muswellbrook and Singleton and emergency services	Not required under current approval	Singleton, Muswellbrook	4am – 8am and 4pm – 7pm (weekdays) for the life of the mine	Low	High	G3, E2, V2, R1 Moderate	Almost Certain	A3 High	Congestion between Muswellbrook and Singleton and in Singleton is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant.
Increased traffic on Bengalla and Wybong Roads	Increase in travel times, perceived decrease in safety and feelings of frustration and annoyance ¹⁶ ⊖	C & O	Other road users and near Neighbours	Mount Pleasant Operation internal Site Access Management Plan ¹⁷	Bengalla and Wybong Roads	Busiest times are 4am – 8am and 4pm – 7pm (weekdays) for the life of the mine	High	High	G3, E3, V2, R1 Moderate	Almost certain	A3 High	Increased road use is also because of Bengalla Mine and Mangoola Coal.

¹⁵ Tony McTaggart Edwards Higgins Parkinson First National, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc, Community Survey and Workforce Survey.

¹⁶ MSC, Moore (Gilgai), Stakeholder B, Community Survey and Workforce Survey.

¹⁷ The Site Access Management Plan (MACH's internal management strategy) includes details of the traffic routes to be used for construction and operation vehicles (both company and personal vehicles); speed limits to be observed along routes to and from the site; measures in place for the safety of road users and construction/operation traffic; a safe interface between site traffic and local traffic; and measures to raise awareness to local traffic users and construction personnel (TTPP 2020).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Increased traffic on the Mount Pleasant Operation Road ¹⁸ ⊖	Feelings of frustration and annoyance and noise impacts from vehicles	C & O	Near Neighbours who share access	MACH internal Site Access Management Plan ¹⁹	Mount Pleasant Operation Road	Busiest times are 4am – 8am and 4pm – 7pm (weekdays) for the life of the mine	High	High	G3, E3, V2, R1 Moderate	Almost certain	A3 High	-
Increased train movements ⊖	Increased number of trains that could impact on the passenger service between Muswellbrook and Newcastle ²⁰	O	People who catch the train to and/or from Muswellbrook to Newcastle	N/A (ARTC) ²¹	-	-	-	-	-	-	--	-
Impacts on way of life – how people play (recreational activities) ²²												
Dust, visual impacts on the Muswellbrook Race Course and trainers in Racecourse Road ⊖	Impacts on the patronage of the Muswellbrook Race Club ²³	C & O	Trainers, owners, membership, visitors on a race day	Final land form with macro- and micro-relief	Muswellbrook Race Course	Until landform is rehabilitated	Medium	Medium	G3 E3 V2 R2 Moderate	Unlikely	D3 Moderate	This is an impact of the Mount Pleasant Operation and Bengalla Mine and Mt Arthur Coal Mine .

¹⁸ Moore (Gilgai) and Stakeholder B.

¹⁹ The Site Access Management Plan includes details of the traffic routes to be used for construction and operation vehicles (both company and personal vehicles); speed limits to be observed along routes to and from the site; measures in place for the safety of road users and construction/operation traffic; a safe interface between site traffic and local traffic; and measures to raise awareness to local traffic users and construction personnel (TTPP 2020).

²⁰ MCCI, Denman Aberdeen, Muswellbrook, Scone Healthy Environment Group.

²¹ This impacted has been recorded and it has been suggested that it be monitored, however it is the responsibility of ARTC to manage the impacts of the train movements along the railway line and passenger trains have priority.

²² The currently approved ML does not directly impact on the Bicentennial National Trail. The Bicentennial National Trail runs to the north, north-west and west of the ML.

²³ Stakeholder A



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
ACDF Funding and MACH donations	Free NAIDOC celebrations and biennial Cultural Spectacular. ²⁴ ⊕	O	Residents and visitors to the Hunter Region	N/A (ACDF)	Hunter Region	Once a year/ biennial	High	High	G2, E2, V1, R1 Significant	Almost Certain	A5 Extreme	-
Impacts on health and wellbeing												
Participation in the environmental approval process. Time to participate, including reading EIS reports, writing submissions, meeting with proponents, appear at IPC Hearings	Decrease in health due to the stress of participating in the environmental approval process in the hope of influencing the decision of the original DA and subsequent modifications are approved and what conditions may be put on them. ²⁵ ⊖	Original DA and subsequent modifications	Neighbouring landholders and people from the surrounding villages and communities concerned about the environmental and social impacts of the mine	MACH internal Community Engagement Plan	Near neighbours and residents of surrounding rural communities and Muswellbrook, particularly for those people who do not want the Project to proceed	Original DA and modification s	Low	High	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Other mines and projects around Muswellbrook which are or will impact on the same people experiencing this impact.

²⁴ ACDF and MACH *pers comms*

²⁵ Moore, Stakeholder B, Jim Lonegran, Kayuga, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc. and Moffatt and Baker (2013)



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Permanent changes to the landscape (overburden and void)	Decrease in health and wellbeing, including identity and connection to country ²⁶ ⊖	C & O	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices, Aboriginal Heritage Management Plan and Water Management Plan	Surrounding rural communities, Muswellbrook and other villages and towns	Since construction began on the site	High	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Decrease in health and wellbeing (stress, solastalgia, eritalgia, levels of homeliness and change in connection to land or place) ²⁷ ⊖	C & O	Residents who experience amenity impacts	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	Nearby neighbours, surrounding rural communities, Muswellbrook	Since construction began on the site	High	High	G2, E3, V2, R2 Moderate	Likely	B3 High	Cumulative impacts from Mount Pleasant Operation and other mines

²⁶ Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.

²⁷ MSC, Moore, Stakeholder B and Stakeholder D, ACDF, CCC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., Community Survey, Higginbotham et al 2010, Cottle 2013, Moffat and Baker (2013).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Landscape changes through construction and mining operations e.g. creation of a void and construction of overburden emplacements (eastern side of ML)	Decrease in health and wellbeing (stress, solastalgia and eritalgia) ²⁸ ⊖	C & O	Near neighbours and residents of surrounding rural communities, Muswellbrook and Aberdeen	Visual Impact Management Plan	Nearby neighbours, surrounding rural communities, Muswellbrook and Aberdeen	Since construction began on the site	Hlgh	High	G2, E3, V2, R2 Moderate	Likely	B3 High	Cumulative impacts from Mount Pleasant Operation and other mines
Employment	Mainten or increase in health and wellbeing due to being employed (sense of purpose, self esteem and able to provide for self and family) ²⁹ ⊕	C & O	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families	HR policies and processes and Local Labour Commitment ³⁰	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Hlgh	High	G2, E3, V2, R3 Moderate	Possible	C3 Moderate	Other mines in the Upper Hunter also use local suppliers of goods and services

²⁸ MSC, ACDF, Moore, Stakeholder B, Jim Lonegran, Kayuga, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc, SCCI, complaints data, community survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

²⁹ Workforce Survey

³⁰ <https://machenergyaustralia.com.au/community/>

Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Mine workforce - 12-hour shifts	Decrease in health and wellbeing ³¹ ⊖	O	MACH workforce (including contractors) and their familie	HR policies and processes, OH&S requirements and Local Labour Commitment ³²	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	Moderate	G2, E3, V2, R3 Moderate	Rare	E3 Low	This is an impact experienced by workers in the mining industry and not just a result of Mount Pleasant Operation
Mine workforce – increased traffic on roads	Perceived increased risk of an accident due to mine workers being fatigued ³³ ⊖	O	Other road users (particularly during shift change). Emergency services if there is an accident	HR policies and processes, OH&S requirements and Local Labour Commitment ³⁴	Roads between the Mount Pleasant site and where the workers live	4am – 8am and 4pm – 7pm for the life of the mine	High	High	G2, E3, V2, R3 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Impacts on services and facilities												
Mine workforce and their families accessing medical services	Increased demand on local medical services (including mental health services) in Muswellbrook and other	O	Other people accessing medical services	Not required under current approval	Muswellbrook and other villages and towns.	Life of the mine	Low	Moderate	G2, E1, V2, R3 Major	Likely	B4 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant

³¹ Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Cottle (2013) and Sincovich et al (2018).

³² <https://machenergyaustralia.com.au/community/>

³³ MSC, SSC, ACDF, Denman Aberdeen Muswellbrook Scone Healthy Environment Group and Cottle and Keyes (2014)

³⁴ <https://machenergyaustralia.com.au/community/>



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
	villages and towns ³⁵ ⊖											
Mine workforce and their families accessing medical services	Increased demand on local medical services (including mental health services) in Muswellbrook and other villages and towns ³⁶ ⊕	O	Other people accessing medical services	Not required under current approval	Muswellbrook and other villages and towns.	Life of the mine	Low	Moderate	G2, E1, V2, R3 Major	Likely	B4 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Mine workforce and their families accessing educational and childcare services	Increased demand for educational services (child care through to high school) ³⁷ ⊖	O	Child care and education service providers	Community contributions (donations and sponsorships)	Muswellbrook and other villages and towns	Life of the mine	Moderate	Minor	G2, E1, V2, R3 Major	Likely	B4 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant.
Mine workforce and their families access educational and childcare services	Increased demand for educational services (child care through to high school) ³⁸ ⊕	O	Child care and education service providers	Community contributions (donations and sponsorships)	Muswellbrook and other villages and towns	Life of the mine	Moderate	Minor	G2, E1, V2, R3 Major	Likely	B4 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant

³⁵ Workforce Survey, MSC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Cottle (2013), Sincovich et al (2018)

³⁶ Workforce Survey, MSC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Cottle (2013), Sincovich et al (2018)

³⁷ Workforce survey

³⁸ Workforce survey



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Landowners and their families relocating out of the district due to land acquisition ⊖	Decrease in membership and participation in Rural Fire Services (RFS) ³⁹	C & O	RFS and people reliant on RFS services	Not required under current approval	Areas covered by the Kayuga, Wybong and Edinglassie brigades	Life of mine	Moderate	Moderate	G3, E1, V2, R2 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Mine workforce and their families accessing emergency services ⊖	Increased demand for emergency services (police, fire, RFS, ambulance and SES).	O	Emergency service providers	Ongoing engagement with emergency service providers	Muswellbrook and other villages and towns	Life of mine	Low	Minor	G3, E3, V2, R3 Insignificant	Possible	C1 Low	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Mine workforce and their families participating in community-based organisations ⊕	Participation and support for local community groups ⁴⁰	O	Community groups and organisations	Not required under current approval	Muswellbrook, Upper Hunter and Singleton Shire Council LGAs	For the time the family participates	Moderate	High	G3, E1, V2, R3 Minor	Likely	B3 Moderate	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Support for local community-based organisations (community contributions) ⊕	Continued funding to provide services and facilities	C & O	Organisations who receive donations from MACH and the people they support	Funding Guidelines	Muswellbrook, Upper Hunter and Singleton LGAs, NSW and nationally	Life of mine	Moderate	Moderate	G3, E1, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation

³⁹ MSC, Damian Honour NSW RFS Hunter Valley District

⁴⁰ Workforce survey



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Voluntary Planning Agreement (VPA) payments	Funding to MSC to be able to be spent on community services and facilities ⊕	C & O	Residents living in the MSC LGA	As per VPA	Muswellbrook and other villages and towns	Life of mine	Moderate	Moderate	G3, E2, V2, R1 Moderate	Almost Certain	A3 High	-
Management of Biodiversity Offsets	Small increase in the number of people local services and facilities and supporting local organisations ⊕	-	People living and working on the BMA properties and the services they access	Offset Management Plan and Re-establishment Plan	Merriwa and Cassilis district	Life of the Offset Management Plan and Re-establishment Plan	High	High	G3, E3, V2, R3 Insignificant	Possible	C1 Low	-
Impacts on the quality of the living environment (surroundings)												
Mining – dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Decreased level of amenity and decreased quality of the living environment in which people live, work and play ⁴¹ ⊖	C & O	Near neighbours and residents of surrounding rural communities and Muswellbrook	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	Nearby neighbours, surrounding rural communities, Muswellbrook and Aberdeen	Since construction began on the site	Moderate	High	G2, E3, V2, R2 Moderate	Almost Certain ⁴²	A3 High	Cumulative impacts from Mount Pleasant Operation and other mines

⁴¹ MSC, ACDF, CCC, Moore, Stakeholder B, Glen Eden Holsteins Pty Ltd, Stakeholder D, Tony McTaggart Edwards Higgens Parkinson First National, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., complaints data, Community Survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

⁴² Based on environmental monitoring data for noise, dust, blasting and visual and complaints data.



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Visual impacts (the mine and overburden emplacement on eastern side of ML)	Decrease in visual amenity from the western side of Muswellbrook ⁴³ ⊖	O	People who live, work, play or travel through the western side of Muswellbrook	Rehabilitation of overburden using geofluid design	Area from which the overburden can be seen	Both temporary and permanent effects	High	High	G3, E2, V2, R1 Moderate	Almost certain	A3 High	Cumulative with overburden at Mt Arthur Coal Mine and Bengalla Mine
Management of Biodiversity Offsets	Achieving biodiversity outcomes. ⊕	-	On behalf of the Australian population (EPBC Act)	Offset Management Plan and Re-establishment Plan	Merriwa and Cassilis district	Life of the Offset Management Plan and Re-establishment Plan	High	High	G3, E3, V2, R3 Insignificant	Possible	C1 Low	-
Socio-economic impacts												
Mine operation	Time and money spent and opportunities lost due to management the impacts of the Mount Pleasant Operation. ⁴⁴ ⊖	C & O	Near neighbours and residents of surrounding rural communities and Muswellbrook who are impacted by the Project	Not required under current approval	Near neighbours	Life of the mine	Low	Moderate	G3, E3, V2, R2 Moderate	Likely	B3 High	-

⁴³ Moore, Stakeholder C, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Community Survey, SCCI

⁴⁴ Moore, Stakeholder B, Glen Eden Holsteins Pty Ltd, and Denman Aberdeen Muswellbrook Scone Healthy Environment Group.



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Mining – dust impacts (air)	Increased housekeeping and cleaning workload due to deposited dust ⁴⁵ ⊖	O	Residents who experience dust impacts.	Air Quality and Greenhouse Gas Management Plan	Nearby neighbours, surrounding rural communities and Muswellbrook	Life of mine	Moderate	High	G3, E3, V2, R2 Moderate	Likely	B3 High	Depending on the wind and climatic conditions people can experience dust from other mines and from agriculture in the region
Opportunities for employment and comparative higher wages to other potential employers in the Upper Hunter region (e.g. Council or small business)	Higher standard of living and increased financial choices ⁴⁶ ⊕	C & O	Current employees and contractors	HR policies and processes and Local Labour Commitment ⁴⁷	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	High	G2, E3, V2, R2 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Mine – workforce and families continue to live locally (temporary or permanent residents)	Support for local business from workers and their families buying locally ⁴⁸ ⊕	O	Local businesses in Muswellbrook, Upper Hunter and Singleton Shire Council LGAs	Local Labour Commitment	Muswellbrook, Upper Hunter and Singleton LGAs	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	-

⁴⁵ MSC, Moore, Stakeholder B and Stakeholder D, Community Survey.

⁴⁶ Workforce Survey

⁴⁷ <https://machenergyaustralia.com.au/community/>

⁴⁸ MCCI, SCCI, Community Survey and Workforce Survey.



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Mine– local spend by Mount Pleasant Operation	Continued support for local businesses ⁴⁹ ⊕	O	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Local Supplier Strategy and participation in Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group	Muswellbrook, Upper Hunter and Singleton LGAs	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	-
Attraction to employment in mining because of the higher wages compared to other potential employers in the Upper Hunter (e.g. Council or small business)	Local/regional competition for skilled workers ⁵⁰ ⊖	C & O	Employers who have lost workers to the Mount Pleasant Operation	Not required under current approval	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Until the role can be filled	Dependant on the business or service provider	High	G3, E3, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Management of Biodiversity Offsets	Contribution to the local economy via BMA properties and MACH ⊕	-	Businesses in Merriwa and Cassilis	Offset Management Plan and Re-establishment Plan	Merriwa and Cassilis district	Life of the Offset Management Plan and Re-establishment Plan	High	High	G2, E3, V2, R3 Moderate	Possible	C3 Moderate	-

⁴⁹ CCC, MCCI, Blackrock Industries and Supply Solutions Group.

⁵⁰ MSC, UHSC, Wanaruah Local Aboriginal Land Council, MCCI and Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Hossain *et al* 2013 and Petrova and Marinova (2013).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Cultural impacts												
Mining - reduction in health due to impacts on country and waters	Reduction of cultural identity, connection to country and self-esteem ⁵¹ ⊖	C &O	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	Surrounding rural communities, Muswellbrook and other villages and towns	Since construction began on the site	High	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Mining providing the opportunity to connect with country and waters by undertaking land management	Increase in cultural identity and self-esteem, ⁵² ⊕	O	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	Surrounding rural communities, Muswellbrook and other villages and towns	From cultural burn in July 2020	High	High	G2, E1, V1, R2 Significant	Almost Certain	A5 Extreme	-
ACDF	Funding for programs to promote cultural, educational, economic and health outcomes development ⁵³ ⊕	C & O	Aboriginal community	N/A (ACDF)	MSC and SSC LGAs	Ongoing (funding for ACDF)	High	High	G2, E1, V1, R2 Significant	Almost Certain	A5 Extreme	-

⁵¹ Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation and Cottle (2013).

⁵² Wanaruah Local Aboriginal Land Council.

⁵³ ACDF



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Landowners taking up voluntary acquisitions and moving away ⊖	Loss of agricultural culture ⁵⁴	C & O	Landowners taking up voluntary acquisitions and relocating out of the district	Offering for landholders to remain on properties and lease back from MACH Retaining the original land use where practical	Near neighbours and surrounding rural communities.	Permanent	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Management of Biodiversity Offsets ⊕	Maintaining agricultural culture	-	People living and working on the BMA properties and the services they access	Offset Management Plan and Re-establishment Plan	Merriwa and Cassilis district	Life of the Offset Management Plan and Re-establishment Plan	High	High	G3, E3, V2, R3 Insignificant	Possible	C1 Low	-
Impacts on family and community												
The decision-making process and landowners taking up voluntary or compulsory acquisitions ⊖	Loss of social networks, community cohesion and reinforces social differentiation and inequity ⁵⁵	C & O	Properties identified as having "acquisition rights" and their near neighbours and surrounding rural communities	Offering for landholders to remain on properties and lease back from MACH.	Near neighbours and surrounding rural communities	Permanent	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant

⁵⁴ MSC, Stakeholder B, Jim Lonergan, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., Mcmanus and Connor (2013), Moffatt and Baker (2013) and Askland (2018).

⁵⁵ MSC, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Mcmanus and Connor (2013) and Moffatt and Baker (2013).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Purchase of rural properties for the Project – people moving away ⊖	Loss of rural communities ⁵⁶	C & O	Property owner, their family and friends and remaining landholders/ community members	Offering for landholders to remain on properties and lease back from MACH Retaining the original land use where practical	Dependant on the individual and dependant on the management strategy or measures	Permanent	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Changing demographic from agriculture to mining ⊖	Tensions as the area changes from agricultural or rural area to mining area ⁵⁷	O	Residents of Muswellbrook, Aberdeen and Scone	Not required under current approval	Muswellbrook, Aberdeen and Scone	Life of mine	Moderate	Moderate	G3, E1, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Mine workforce - presence of temporary resident mining workers in Muswellbrook and other villages and towns ⊖	A change in community identification and connection and loss of social networks and social capital ⁵⁸	O	Existing residents of Muswellbrook and other villages and towns	Not required under current approval	Muswellbrook and other villages and towns.	Life of mine	Moderate	Moderate	G3, E1, V2, R1 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant

⁵⁶ MSC, Stakeholder B, Jim Lonegran, Kayuga, Glen Eden Holsteins Pty Ltd, Stakeholder C, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc, Community Survey, Mcmanus and Connor (2013) and Askland (2018).

⁵⁷ Stakeholder A, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., Community Survey, Moffatt and Baker (2013) Sincovich *et al* (2018) and Pini 2010.

⁵⁸ CCC, ACDF, Stakeholder D, Tony McTaggart (EHP First National) and Petrova and Marinova (2013).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Differences in perspectives and beliefs on the coal industry ⊖	Community division and continuation of community cohesion ⁵⁹	C & O	People who support mining or oppose mining	Community contributions (donations and sponsorships)	MSC, UHSC and SSC LGAs	While mining is occurring	High	High	G2, E2, V2, R1 Major	Almost Certain	A4 Extreme	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Mine – workforce working 12 hour shifts limiting participation in community - based organisations ⊖	Change in social networks, community identification, connection and cohesion ⁶⁰	O	Volunteer based community organisations and the people they provide services too	Not required under current approval	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	Moderate	G3, E2, V2, R1 Moderate	Possible	C3 Moderate	
Mine workers living away from their family while working ⊖	Alteration of family structure ⁶¹	O	Mine workers and their family	Local Labour Commitment	Locations where the workforce live Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	Moderate	G3, E2, V2, R1 Moderate	Rare	E3 Low	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation.

⁵⁹ Stakeholder A, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., Community Survey, Moffatt and Baker (2013), Sincovich et al (2018).

⁶⁰ Jim Lonegran, Kayuga, Tony McTaggart Edwards Higgins Parkinson First National, RFS, MSC, Community Survey, Workforce Survey, Cottle (2013) and Sincovich et al (2018).

⁶¹ Jim Lonegran, Kayuga, Tony McTaggart Edwards Higgins Parkinson First National, Workforce survey and Cottle (2013).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Management of Biodiversity Offsets	Enhancement of the community composition, cohesion and character of the local district ⊕	-	People living and working on the BMA properties and the services they access	Offset Management Plan and Re-establishment Plan	Merriwa and Cassilis district	Life of the Offset Management Plan and Re-establishment Plan	High	High	G3, E3, V2, R3 Insignificant	Possible	C1 Low	
Impacts on personal and property rights												
Perceived sterilisation of property market - inability of landowners to sell (due to lack of acquisition rights)	Feelings of powerlessness, stress, uncertainty and self-image ⁶² ⊖	O	Property owners who are impacted by Mount Pleasant Operation but who have not been determined to have acquisition rights	Not required under current approval	Near neighbours and surrounding rural communities.	Life of mine	Moderate	High	G3, E3, V2, R1 Moderate	Almost Certain	A3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of the Mount Pleasant Operation
Impacts on decision making systems												
NSW Government and MACH decision making process	Feeling unable to affect the decision whether the Project goes ahead or not, leading to uncertainty and powerlessness ⁶³ ⊖	Original Development Consent DA 92/97 and subsequent modifications	Neighbouring landholders and people from the surrounding villages and communities concerned about the environmental and social impacts of the mine	Communication about the Mount Pleasant Operation and proposed modifications	Near neighbours and residents of surrounding rural communities and Muswellbrook, particularly for those people who do not want the Project to proceed	Original Development Consent DA 92/97 and subsequent modifications	Moderate	High	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	There are a number of mines or potential projects around Muswellbrook which are or will impact on the same people experiencing this impact

⁶² MSC, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., and Moffatt and Baker (2013).

⁶³ Moore, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc. and Moffatt and Baker (2013).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Frustration of continuing dust, noise, blasting and lighting impacts and the need to lodge a complaint/s with no perceived change in impact	People stop complaining ⁶⁴ ⊖	C & O	Near neighbours, surrounding rural communities and residents of Muswellbrook	Complaints process and (including following up with each complainant) and complying with Development Consent DA 92/97 conditions	Extent of people who feel they experience environmental impacts of the mine	Life of mine	Moderate	Moderate	G3, E3, V2, R1 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Equity impacts												
Distributional impacts	Change in social networks, community cohesion and reinforcement of social differentiation and inequity ⁶⁵ ⊖	C & O	Near neighbours, surrounding rural communities and residents of Muswellbrook and other villages and towns	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan ⁶⁶	Extent of people who feel they experience environmental impacts of the mine	Life of mine	Low	Moderate	G2, E3, V2, R1 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation.

⁶⁴ Stakeholder B and Stakeholder D.

⁶⁵ Community survey, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Sincovich et al (2018) and *Land and Environment Court* (2019).

⁶⁶ Although the Mount Pleasant Operation operates within its environmental limited as stipulated in the environmental conditions, people still experience environmental impacts. The environmental conditions are designed to reduce the risk to physical health and not general wellbeing or psychosocial impacts such as quality of life; ability to enjoy one's home, property, the environment and relationships in those places which are often written off as NIMBY, irrational fears (Edelstein, M 2017).



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Mine life – changes to the landscape	Intergenerational impacts ⁶⁷ ⊖	C & O	Current and future generations	Visual Impact Management Plan.	Extent of people who experience landscape impacts of the mine	Life of mine	Low	Moderate	G2, E3, V2, R1 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation.
Gender impacts												
12-hour shifts and DIDO	Increased workload for partner “at home” with family responsibilities ⁶⁸ ⊖	O	Partner of mine work “at home”, predominantly women	Not required under current approval	Locations where the workforce live Maitland, Cessnock, Newcastle, Central Coast, etc.	Period of employment/ contract	Moderate	Moderate	G3, E1, V2, R1 Moderate	Possible	C3 Moderate	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant Operation
Fears and aspirations												
Failure of dams, especially the Fines Emplacement Area	Fear of losing home and livelihood ⁶⁹ ⊖	O	Properties downstream of the mine on the Sandy Creek catchment	Dam design and construction	Sandy Creek Catchment	Life of mine	Low	Moderate	G2, E1, V2, R2 Major	Likely	B4 High	-

⁶⁷ Stakeholder B, Stakeholder D and Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

⁶⁸ Cottle (2013) and Sincovich et al (2018).

⁶⁹ Stakeholder B



Cause/ matter ¹	Impact description			Current Mitigation Strategy	Impact characteristics (before additional mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Timing ³	Affected Parties		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Management of Biodiversity Offsets	Fear that the BMA properties will change from being working agricultural properties to being; 'locked up' ⊕	-	BMA property and neighbouring owners and managers and the Merriwa and Cassilis district	Offset Management Plan and Re-establishment Plan	Merriwa and Cassilis district	Life of the Offset Management Plan and Re-establishment Plan	High	High	G2, E3, V2, R3 Moderate	Possible	C3 Moderate	-

3 Suggested Management and Monitoring Strategies

Development Consent DA 92/97 does not require MACH to implement any management strategies or monitoring frameworks specific to social impacts at the Mount Pleasant Operation.

Notwithstanding, as documented in Table 1, MACH implements a number of mitigation strategies to reduce the existing social impacts associated with the Mount Pleasant Operation. These include community engagement in accordance with MACH's various community engagement mechanisms and strategies (CCC, complaints management, quarterly newsletter, website and MACH's internal Community Engagement Plan and Environmental Management Framework), ACDF, VPA, and implementation of the approved Mount Pleasant Operation site-wide environmental management plans.

Some of the management and monitoring measures suggested in Appendix Q for the Project proceeds scenario may have some application to the existing Mount Pleasant Operation. These include:

- Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop ways of engagement that suits them and the development of management measures that are reasonable and feasible.
- Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. air quality work), participate/advocate for developing and implementing management strategies for material impacts from an industry perspective.
- Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land.
- Review of human resource data to clarify impacts on the housing market.

The management and monitoring measures suggested in Appendix Q that are applicable to the existing Mount Pleasant Operation could also be applied to minimise/enhance and monitor the existing social impacts of the Mount Pleasant Operation.



Appendix P
Assessment of Potential
Social Impacts -
Project Planning/SSD
Application

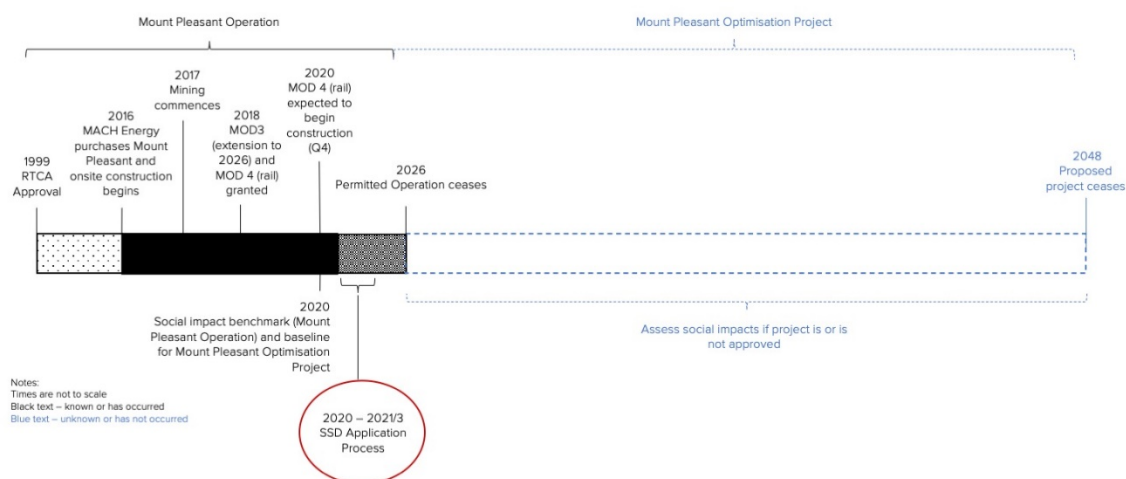
1 Introduction

The social impacts of the SSD process have been identified in Table 1. The structure for Table 1 is based on Table 6 in the NSW SIA Guideline and modified to assess an operating mine, rather than a greenfield site.

People will be experiencing the impacts of the construction associated with MOD 4 Mount Pleasant Operation (i.e. Stage 2 Rail) during the SSD application process. The identification, management and monitoring of impacts of MOD 4 are outside the scope of this SIA. MACH has prepared a Stakeholder Engagement Strategy for the construction of MOD 4 which will assist in reducing social impacts.

The identification, management and monitoring of social impacts associated with the SSD is included in this scope given the requirement of the SIA to identify impacts at all Project stages (NSW SIA Guideline 2017). The context of the identification and evaluation social impacts of the SSD application process is shown in Figure 1.

Figure 1: Context of the assessment of social impacts of the SSD process



The identification of social impacts and their characteristics is made more complex due to their accumulation (spatially and temporally) with social impacts already experienced (Appendix O), with the approved Mount Pleasant Operation, from other mines (namely Bengalla Mine and Mt Arthur Coal Mine) and the Liddell and Bayswater Power Station. Where possible, an explanation regarding how the impact associated with Mount Pleasant Operation is experienced in a cumulative context is provided.

Social impacts of the during the planning/SSD Application process are based on data from the following sources:

- SIA Scoping Stakeholder Case studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided) and
- Professional experience of the SIA practitioner.

2 Social impacts of the Project planning phase/SSD Application

The social impacts (positive and negative) of the Project planning/ SSD Application process are identified in Table 1. The impact characteristics, social risk/opportunity rating and comments on the cumulative nature of the impact were assessed under the assumption that the current Mount Pleasant Operation mitigation strategies have been applied.

⊕ Positive impact ⊖ Negative impact

Table 1: Potential social impacts if the Mount Pleasant Optimisation Project – Planning Stage/SSD Application process

Cause of likely social impact (matters¹)	Impact description		Current Mitigation Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating²			Cumulative
	Impact	Affected party³		Extent	Duration	Severity⁴	Sensitivity⁵	S/C⁶	L⁷	Rating	
Impacts on health and wellbeing											
SSD Application process	Continued negative impact on health and wellbeing due to uncertainty of Project⁸ ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook, particularly for those people who do not want the Project to proceed	Meetings with stakeholders as required Information on the Project webpage Information in the MACH Quarterly newsletter	Near neighbours, surrounding rural communities, Muswellbrook and other villages and towns	Until there is a legal decision whether the Project can proceed or not and secure Project funding (estimated to be 2022/ 2023)	High	High	G3 E3 V2 R2 Moderate	Likely	B3 High	Ongoing impacts with Mount Pleasant Operation, including MOD4 construction, operation of Mt Arthur Coal Mine and Bengalla Mine and the uncertainties of Covid 19

¹ As identified in Table 4 of the SIA Guideline.

² See Appendix S for methodology.

³ Based on affected groups identified in Section 5.2.1 of this SIA.

⁴ Categories for severity are High, Moderate and Low based on the scale or degree of change from the existing condition as a result of the impact. The decision of what category the impact is categorised is a professional judgement by the SIA practitioner based on engagement with stakeholders throughout the SIA Scoping and SIA for the EIS phase of work.

⁵ Categories for sensitivity are High, Moderate and Low based on the vulnerability of the affected parties, the receiver or receiving environment or the importance places on the matter being affected. The decision of what category the impact is categorised as was based on SIA engagement in the SIA Scoping and SIA for the EIS phase of work.

⁶ S = significance, C = consequence

⁷ Likelihood categories are C = Almost Certain, L = Likely, P = Possible, U = Unlikely and R = Rare

⁸ Jim Lonergan, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group and Moffatt and Baker (2013).

Cause of likely social impact (matters ¹)	Impact description		Current Mitigation Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Affected party ³		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
SSD Application process	Increase in health and wellbeing due to anticipation of positive impacts associated with the Project ⁹ ⊕	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families	Workforce Briefings Meetings with stakeholders as required Information on the Project webpage Information in the MACH Quarterly newsletter	Muswellbrook Shire Council (MSC), Upper Hunter Shire Council (UHSC) and Singleton Shire Council (SSC) Local Government Areas (LGAs)	Until there is a legal decision whether the Project can proceed or not and until the Project funding is secured (estimated to be 2022/2023)	Subject to the individual and dependant on the management strategy or measures developed	High sensitivity to the coal industry's future in the Upper Hunter	G2 E3 V2 R3 Moderate	Possible	C3 Moderate	Ongoing impacts with Mount Pleasant Operation, including MOD4 construction, mining in the Upper Hunter and the uncertainties of Covid 19
Participation in the environmental approval process. Time to participate, including reading EIS reports, writing submissions, meeting with proponents, appear at IPC Hearings	Decrease in health due to the stress of participating in the environmental approval process in the hope of influencing the decision of the original DA and subsequent modifications are approved and what conditions may be put on them ¹⁰ ⊖	Neighbouring landholders and people from the surrounding villages and communities concerned about the environmental and social impacts of the mine	MACH internal Community Engagement Plan	Near neighbours and residents of surrounding rural communities and Muswellbrook, particularly for those people who do not want the Project to proceed	Until there is a legal decision whether the Project can proceed or not	Low	High	G3 E3 V2 R2 Moderate	Almost Certain	A3 High	Other mines and projects around Muswellbrook which are or will impact on the same people experiencing this impact

⁹ Workforce Survey

¹⁰ Moore, Stakeholder B, Jim Lonegran, Kayuga, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc. and Moffatt and Baker (2013)

Cause of likely social Impact (matters')	Impact description		Current Mitigation Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Affected party ³		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Cultural impacts											
Landowners considering or taking up acquisition on request	Continued loss of agricultural culture ¹¹ ⊖	Landowners taking up voluntary acquisitions and relocating out of the district	Offering for landholders to remain on properties and lease back from MACH Retaining the original land use where practical	Properties identified as having “acquisition rights”	Permanent	Moderate	High	G2 E3 V2 R1 Moderate	Almost Certain	A3 High	Historic and ongoing impacts with Mount Pleasant Operation, including MOD4 construction, mining in the Upper Hunter and the uncertainties of Covid 19
Impacts on family and community											
The decision-making process and landowners taking up acquisition on request	Continued loss of social networks, community cohesion and reinforces social differentiation and inequity ¹² ⊖	Properties identified as having “acquisition rights” and their near neighbours and surrounding rural communities	Offering for landholders to remain on properties and lease back from MACH Retaining the original land use where practical	Properties identified as having “acquisition rights”	Permanent	Moderate	High	G2 E3 V2 R1 Moderate	Almost Certain	A3 High	Historic and ongoing impacts with Mount Pleasant Operation, including MOD4 construction, mining in the Upper Hunter and the uncertainties of Covid 19
Property acquisition leading to families moving away	Continued loss of rural communities ¹³ ⊖	Property owner, their family and friends and remaining landholders/	Offering for landholders to remain on properties and lease	Surrounding rural communities.	Permanent	Dependant on the individual and dependant	High	G2 E3 V2 R1	Almost Certain	A3 High	Ongoing impacts with Mount Pleasant Operation, including MOD4

¹¹ MSC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Mcmanus and Connor (2013). Moffatt and Baker (2013).


¹² MSC, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Mcmanus and Connor (2013) and Moffatt and Baker (2013).

¹³ MSC, Stakeholder B, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Community Survey, Mcmanus and Connor (2013).

Cause of likely social impact (matters ¹)	Impact description		Current Mitigation Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Affected party ³		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
		community members.	back from MACH Retaining the original land use where practical			on the management strategy or measures		Moderate			construction, mining in the Upper Hunter and the uncertainties of Covid 19
Differing perspectives and beliefs on the coal industry	Continued community division and continuation of community cohesion ¹⁴ ⊖	People who support mining or oppose mining	Community contributions (donations and sponsorships)	Surrounding rural communities, Muswellbrook and other villages and towns, MSC, UHSC and SSC LGAs	While mining is occurring	High	High	G2 E2 V2 R1 Major	Almost Certain	A4 Extreme	Ongoing impacts with Mount Pleasant Operation, including MOD4 construction, mining in the Upper Hunter and the uncertainties of Covid 19
Impacts on personal and property rights											
Perceived sterilisation of property market - inability of landowners to sell (due to lack of acquisition rights)	Continued feelings of powerlessness, stress, uncertainty and self-image ¹⁵ ⊖	Property owners who are impacted by Mount Pleasant Operation but who have not been determined to have acquisition rights	None	Near neighbours and surrounding rural communities	Until there is a legal decision whether the Project can proceed or not and secure Project funding (estimated to be 2022/2023)	Moderate	High	G3 E3 V2 R1 Moderate	Almost Certain	A3 High	Ongoing impacts with Mount Pleasant Operation, including MOD4 construction, mining in the Upper Hunter and the uncertainties of Covid 19

¹⁴ Stakeholder A, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Community Survey, Moffatt and Baker (2013), Sincovich et al (2018).

¹⁵ MSC, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Moffatt and Baker (2013).

Cause of likely social impact (matters¹)	Impact description		Current Mitigation Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating²			Cumulative
	Impact	Affected party³		Extent	Duration	Severity⁴	Sensitivity⁵	S/C⁶	L⁷	Rating	
Impacts on decision making systems											
NSW Government and MACH deciding whether the Project proceeds or not and what conditions may be placed on the Project if it does proceed	Feeling unable to affect the decision whether the Project goes ahead or not. Leading to uncertainty and powerlessness ¹⁶ 	People impacted by the Project	NSW environment approval process	Near neighbours, surrounding rural communities, residents of Muswellbrook and surrounding villages and towns	Until there is a legal decision whether the Project can proceed or not and secure Project funding (estimated to be 2022/2023)	High	High	G3 E3 V2 R2 Moderate	Almost Certain	A3 High	Previous approvals and approval process for Mount Pleasant, ongoing impacts with Mount Pleasant Operation, including MOD 4 construction, operation of Mt Arthur Coal Mine and Bengalla Mine and the uncertainties of Covid 19

¹⁶ Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Moffatt and Baker (2013).

Cause of likely social impact (matters ¹)	Impact description		Current Mitigation Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ²			Cumulative
	Impact	Affected party ³		Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
NSW project approval process ¹⁷	Residents to feel that their health and way of life is being placed second to the profits of international coal investors ⊖	People who may be negatively impacted if the Project proceeds	NSW environment approval process	Near neighbours, surrounding rural communities, residents of Muswellbrook and surrounding villages and towns	Until there is a legal decision whether the Project can proceed or not and until the Project funding is secured (estimated to be 2022/2023)	High	High	G3 E3 V2 R2 Moderate	Almost Certain	A3 High	Previous approvals and approval process for Mount Pleasant, ongoing impacts with Mount Pleasant Operation, including MOD4 construction, operation of Mt Arthur Coal Mine and Bengalla Mine and the uncertainties of Covid 19

¹⁷ Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., Stakeholder B.

3 Suggested Management and Monitoring Strategies

During the Project planning/ SSD Application process, Mount Pleasant Operation would continue to operate in accordance with the Development Consent DA 92/97.

Development Consent DA 92/97 does not require MACH to implement any management strategies or monitoring frameworks specific to social impacts at the Mount Pleasant Operation.

Notwithstanding, as documented in Table 1, MACH implements a number of mitigation strategies to reduce the existing social impacts associated with the Mount Pleasant Operation. These include community engagement in accordance with MACH's various community engagement mechanisms and strategies (CCC, complaints management, quarterly newsletter, website and MACH's internal Community Engagement Plan and Environmental Management Framework), ACDF, VPA, and implementation of the approved Mount Pleasant Operation site-wide environmental management plans.

Some of the management and monitoring measures suggested in Appendix Q for the Project proceeds scenario may have some application to the Project planning/ SSD Application phase. These include (Appendix Q):

- Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible.
- Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible.
- Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land.
- Review and consideration of feedback received through an established dialogue with relevant stakeholders including local community groups (including Aboriginal community groups), neighbouring residents, community service and facility providers, and local suppliers.

The management and monitoring measures suggested in Appendix Q that are applicable to the Project planning/SSD Application phase could also be applied to minimise/enhance and monitor the assessed social impacts.



Appendix Q
Assessment of Potential
Social Impacts
and Provisional SIMP -
Project is approved

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1 Introduction

Appendix C2 of the SIA Guideline sets out the requirement to describe and analyse the predicted nature and scale of the potential social impacts and post closure.

The potential social impacts of the Project, if it proceeds, are set out in Table 3. The structure for Table 4 is based on Table 6 in the SIA Guideline (2018) and is modified to assess an operating mine, rather than a greenfield site.

It is expected that the social environment will be different from the time the Social Baseline Study being undertaken and the start of construction associated with the Project. This difference is increased due to the uncertainty associated with

- COVID 19
- closure of the Liddell Power Station and
- unknown future of other mines and major projects in the area.

It is also unknown what conditions may be placed on the Project if it is approved. To address this uncertainty, and to enable the prediction of social impacts and their evaluation, some assumptions have been made, which are outlined in Section 2.

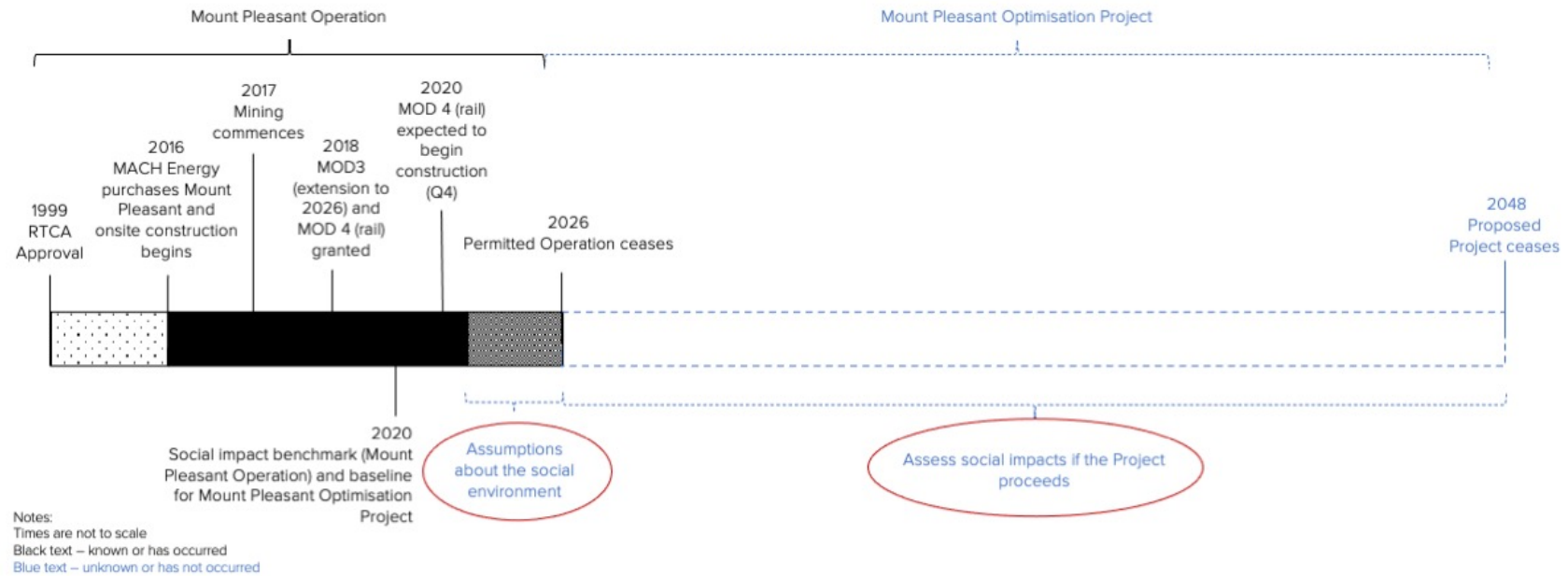
It should be noted that if any of these assumptions change or the social baseline changes, then the impacts may or may not occur or may occur at a different level of consequence. It is for this reason, we highly recommended that if the project proceeds a SIMP is developed in the first 12 months following Project determination.

The potential social impacts of the Project are assessed based on data from the following sources:

- SIA Scoping Stakeholder Case Studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided)
- Professional experience of the SIA practitioner.

The context for the identification of social impacts in the “Project proceeds” scenario is shown in Figure 1.

Figure 1: Context of the assessment of social impacts of the “Project proceeds” scenario



2 Assumptions

Assumptions made to identify social impacts across the phases of the Project are set out below.

2.1 Mount Pleasant Operation and MOD 4

The Mount Pleasant Operation, including the works approved under MOD4 will be operational.

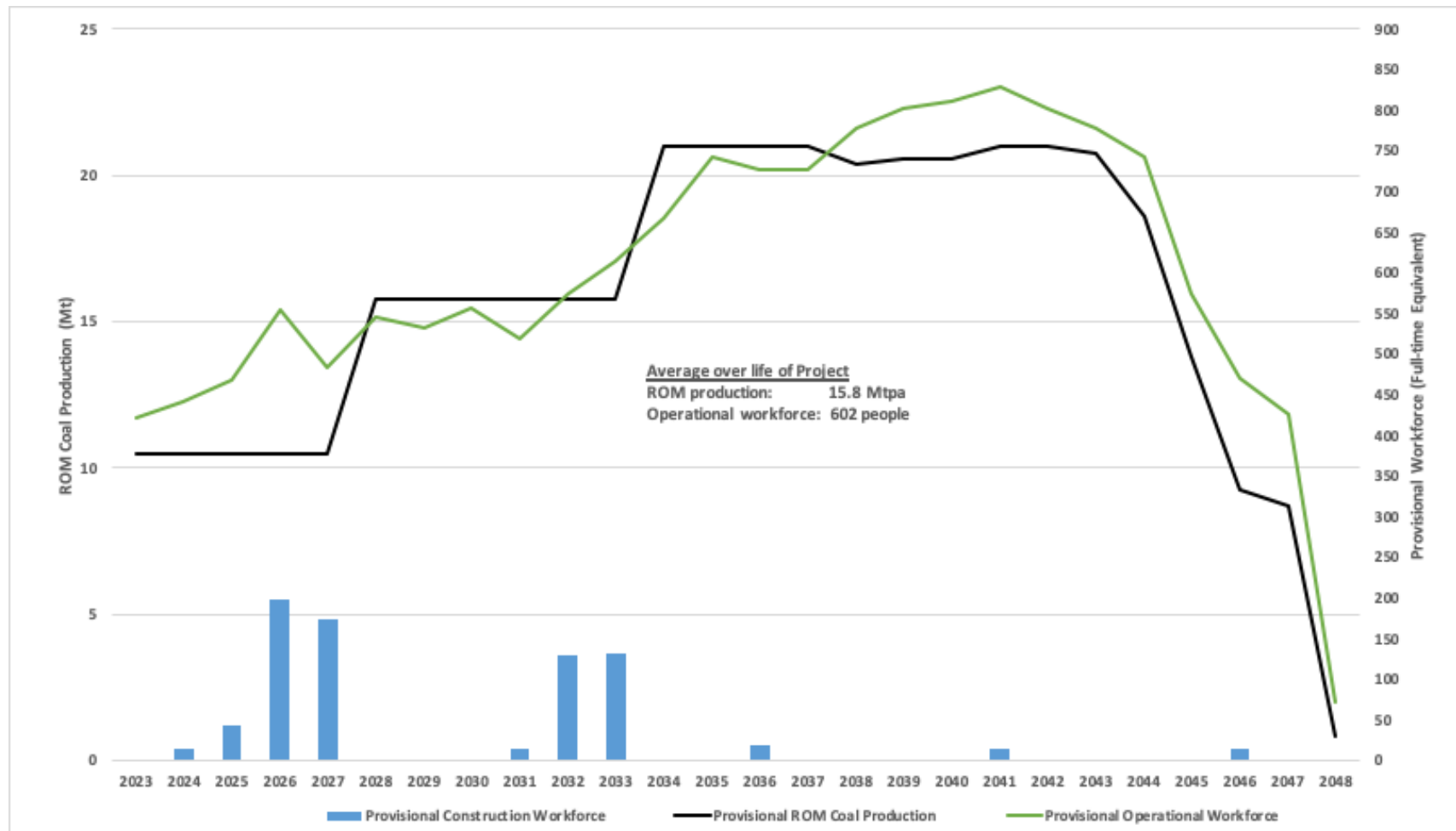
2.2 Landform

The overburden will still be under construction with final height of approximately 350 m reached in the latter part of the mine life.

2.3 Workforce

The workforce will increase over the life of the Project, approximately as shown in Figure 2.

Figure 2: Estimated workforce for the Mount Pleasant Optimisation Project



2.4 Estimated operational workforce and population impacts

Table 1 sets out the assumptions about the workforce at different points across the operation of Project. These assumptions are based on the current workforce at the Mount Pleasant Operation.

It is assumed that the Project workforce would continue to be paid more than those not employed in the mining industry.

Table 1: Assumptions about the operational workforce

Characteristic	Assumption		
	2026	2036	2041
Estimated additional workforce associated with the Project ¹	175	172	103
Muswellbrook Shire Council LGA			
Estimated % of the workforce will be residing in the Muswellbrook Shire Council LGA/number of workers ²	33% 58 workers	33% 57 workers	33% 34 workers
Estimated Mount Pleasant workforce and their families in the Muswellbrook Shire Council LGA (includes existing estimates of workers and their families) ³	177 people	174 people	104 people
Estimated population change in the Muswellbrook Shire Council LGA (additional workers and families only) ⁴	1%	1%	1%
Upper Hunter Shire Council LGA			
Estimated % of the workforce will be residing in the Upper Hunter Shire Council LGA /number of workers ²	16% 28 workers	16% 28 workers	16% 16 workers
Estimated Mount Pleasant workforce and their families in the Upper Hunter Shire Council LGA (includes existing estimates of workers and their families) ³	86 people	85 people	51 people
Estimated population change in the Upper Hunter Shire Council LGA (additional workers and families only) ⁴	1%	1%	1%
Singleton Council LGA			
Estimated % of the workforce will be residing in the Singleton Council LGA/number of workers ²	21% 37 workers	21% 36 workers	21% 22 workers
Estimated Mount Pleasant workforce and their families in the Singleton Council LGA (includes existing workers and their families) ³	115 people	111 people	66 people
Estimated population change in the Singleton Shire Council LGA (additional workers and their families only) ⁴	<1%	<1%	<1%

Table 1 (Continued): Assumptions about the operational workforce

Characteristic	Assumption		
	2026	2036	2041
Living in other LGAs (DIDO)			
Estimated % of the workforce staying in the Muswellbrook Shire Council LGA while on shift (temporary population)	30% 53 workers	30% 52 workers	30% 31 workers
Estimated temporary population change in Muswellbrook Shire Council LGA ^{4,5}	1%	1%	1%

Notes:

¹ As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA.

² Estimates of percentage workforce are based on an average of 2019 and 2020 workforce data, data from the Workforce survey.¹

³ 11% of workforce will be single, 25% of the workforce will be couples no children, 57% will be couples with 2 children, 4% will be one parent with 2 children and 3% will be people living in share houses or other family type.

⁴ Population projections are based on Department of Planning, Infrastructure and Environment population projections available from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

⁵ Assumes only half the DIDO workforce will be in MSC LGA at any one time.

2.5 Estimated construction workforce

Construction activity is expected to occur over several distinct periods throughout the life of the Project as shown in Table 2. Each period of construction will require a construction workforce in addition to the ongoing operational workforce. There are extended periods throughout the Project when no construction activity will occur. Table 2 summarises the anticipated construction periods and the average and peak construction workforce expected to be required for each construction period.

Table 2: Estimated construction workforce schedule

Activity	Start	End	Average workforce	Peak workforce
Mine Water Dam (MWD) 2 Construction	January 2024	December 2024	14	30
Northern Link Road	January 2025	December 2025	44	104
Mine Infrastructure Area (MIA) Expansion Stage 2a CHPP Stage 2a Fines Emplacement Area Raise 2	January 2026	December 2027	186	414
Fines Emplacement Area Raise 3	January 2031	December 2031	14	30
MIA Expansion Stage 2b CHPP Stage 2b	January 2032	December 2033	129	309
Fines Emplacement Area Raise 4 MWD3 Construction	January 2036	December 2036	19	40
Fines Emplacement Area Raise 5	January 2041	December 2041	14	30
Fines Emplacement Area Raise 6	January 2046	December 2046	14	30

¹ It is assumed that the data provided includes an unknown percentage of workers reporting that they permanently live in Muswellbrook when they are only temporary residents.

The following assumptions have been made about the construction:

- Workforce:
 - The majority of the construction workforce will be from out of the Muswellbrook Shire Council LGA and will reside in temporary accommodation such as hotels in Muswellbrook.
 - The majority of the construction workforce will commute from accommodation in Muswellbrook to site via shuttle buses (TTPP 2020).
- Hours of work:
 - Construction will largely be undertaken during the day.
 - Night works would generally be limited to works with minimal potential for off-site impacts such as electrical works, and activities in the Mine Infrastructure Area that are remote from private receivers.

2.6 Impacted landholders

The number and location of landholder who will receive voluntary acquisition rights was not known at the time of finalising the SIA.

2.7 Local Supplier Strategy

The MACH's Local Supplier Strategy would continue.

2.8 Voluntary Planning Agreement (VPA) with Muswellbrook Shire Council (MSC)

A new VPA would be negotiated between MACH and MSC. The new VPA would be similar to or above the existing agreement for the Mount Pleasant Operation.

2.9 Community contributions

Community contributions would continue to be in the order of \$100,000 per year and will be applied in the following categories:

- Sport
- Education
- Community
- Health
- Charity and
- Corporate.

2.10 Aboriginal Community Development Fund

The Aboriginal Community Development Fund (ACDF), or a similar Aboriginal community development organisation that is active in the community, would continue to be supported by MACH.

2.11 Environmental Initiatives

Existing EPBC Act Biodiversity Offsets would continue to be managed under the Offset Management Plan and Re-establishment Management Plan.

Aboriginal Heritage Conservation areas would continue to be managed and would include cool burning or other maintenance programs.

2.12 Management of Environmental Impacts

MACH adopted a staged approach to developing Mount Pleasant Operation mining rate after conducting air quality and noise modelling studies and review of mine planning alternatives in 2019. The progressive staging of the production rate has been adopted by MACH as a central component of the Project design. Staging the increases in mining rate as the mine moves westwards away from Muswellbrook and the Hunter River floodplain minimises potential increases in amenity impacts at the nearest private receivers. This would also be enhanced by the waste rock emplacement development, which over time would increasingly screen views and also act to mitigate potential amenity impacts to the east.

The management of environmental impacts would generally remain in line with Development Consent DA 92/97 or improved in accordance with the requirement of the Project Development Consent. This includes (but is not limited to) environmental performance conditions for the following:

- Properties are identified for acquisition on request
- Properties are identified for additional noise and dust mitigation on request
- Noise
- Blasting
- Air quality and greenhouse gas
- Meteorological monitoring
- Soil and water
- Biodiversity
- Heritage
- Transport
- Visual
- Bushfire management
- Waste
- Rehabilitation

- Procedures for the notification of landowners, independent review, land acquisition and
- Environmental management, reporting and auditing.

2.13 Community Engagement

MACH's approach to community engagement (including MACH's internal Community Engagement Plan) would continue to have the same or similar broad objectives:

- Retain favourable community relationships by building positive and enduring relationships through open and transparent communication
- Manage impacts, responsibly, consistently and in an effective manner through effective risk identification and mitigation and
- Achieve social performance goals and commitments.

The objectives would continue to be achieved by assessing, reporting and demonstrating MACH's social contribution to the community and having a clear and consistent understanding of MACH's Projects in the key deliverable areas of:

- Operational and environmental impact mitigation
- Employment of local residents
- Engagement of local suppliers and subcontractors to ensure full, fair and reasonable opportunity to participate and
- Community investment through direct financial and or contribution which targets community health and wellbeing in the areas of Aboriginal affairs and education.

Key community engagement activities would continue and will include:

- Ongoing meetings with key stakeholders
- MACH website
- Quarterly newsletter
- Community Consultative Committee and
- Complaints process.

2.14 Cumulative influences

Cumulative impacts would continue both with the current operation (blasting and/or noise and/or dust and/or light etc) and across the life of the Project.

Liddell Power Station would have closed at the end of 2023 and the site would be undergoing rehabilitation. Other coal mines in the area would be operating as set out in Section 5.3.12 of the main text of the SIA. .

It has also been assumed that the Singleton Bypass and the Muswellbrook Bypass have not been constructed. Once these major road projects have completed, it is anticipated that congestion at peak hours would be materially reduced.

There are also the cumulative impacts associated with the natural environment, such as droughts, bushfires and flooding. All these features of the natural environment have occurred in the past and are expected to occur in the future, however it is unknown when they will occur in the future. It is recommended that the social impact monitoring includes indicators on these features so their cumulative impact can be identified at the time.

3 Operation

3.1 Potential social impacts (no additional mitigation)

The potential social impacts during the operational phase of the Project are set out in Table 3. The identification of social impacts takes into consideration the conditions which are already applied to the Mount Pleasant Operation as outlined in Development Consent DA 92/97 and MACH's current mitigation measures of social impacts such as community engagement (CCC, complaints management, quarterly newsletter and website), ACDF and VPA.

⊕ Positive impact ⊖ Negative impact

Table 3: Potential social impacts if the Project proceeds – social impacts (operation)

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Impacts on way of life – employment											
Continued direct employment opportunities.	Continued employment ⊕	People employed and their families	HR policies and processes and Local Labour Commitment ⁹	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative with other Mount Pleasant Operation employment initiatives
Continued employment pathways through the Gundi Program ¹⁰	Continued employment opportunities ¹¹ ⊕	Men who have participated in the Gundi Program	Local Labour Commitment ¹²	Locations where the person lives, predominantly Muswellbrook	Period of employment/ contract	High	High	G2, E3, V1, R2 Significant	Almost Certain	A5 Extreme	Cumulative across the life of the Mount Pleasant Operation and with employers external to

² As identified in Table 4 of the NSW SIA Guideline

³ See Appendix S for methodology

⁴ Based on affected groups identified in Section 5.2.1 of this SIA.

⁵ Categories for severity are High, Moderate and Low based on the scale or degree of change from the existing condition as a result of the impact. The decision of what category the impact is categorised is a professional judgement by the SIA practitioner based on engagement with stakeholders throughout the SIA Scoping and SIA for the EIS phase of work.

⁶ Categories for sensitivity are High, Moderate and Low based on the vulnerability of the affected parties, the receiver or receiving environment or the importance places on the matter being affected. The decision of what category the impact is categorised as was based on SIA engagement in the SIA Scoping and SIA for the EIS phase of work.

⁷ S = significance, C = consequence

⁸ Likelihood categories are Almost Certain, Likely, Possible, Unlikely and Rare

⁹ <https://machenergyaustralia.com.au/community/>

¹⁰ funding from the ACDF or similar Aboriginal development organisation that is active in the community and direct employment through MACH contractors

¹¹ ACDF, MACH (2020) *pers comms*.

¹² <https://machenergyaustralia.com.au/community/>

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
											MACH/Mount Pleasant
Continued indirect employment opportunities	Suppliers are able to continue to employ more people ⊕	Local businesses and their employees	Local Supplier Strategy and participation in Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group	Muswellbrook, Upper Hunter and Singleton Shire Council LGAs and beyond	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Bengalla Mine and Mt Arthur Coal Mine also have local purchasing policies
Impacts on way of life - housing											
Workforce continue to live locally (temporary or permanent residents)	Continued unintended impacts on available and affordable housing ¹³ ⊖	People living in on low income households in Muswellbrook, Upper Hunter and Singleton LGAs	Not required under current approval	Muswellbrook, Upper Hunter and Singleton LGAs	Life of the operation	Moderate	High	G2, E2, V1, R2 Significant	Likely	B5 Extreme¹⁴	Cumulative across the life of the Mount Pleasant Operation and with other mines and industries encouraging people to live locally

¹³ MSC, Wanaruah Local Aboriginal Land Council, ACDF, Earth Connection Indigenous Corporation, Friends of the Upper Hunter, Sincovich (2018).

¹⁴ This impact has been rated based on the total number of low-income people in the combined MSC, UHSC and SSC LGAs. A more detailed rating of the percentage of low-income people impacted is not able to be undertaken due to a lack of detailed data on where the MACH workforce live. It is assumed that the data provided includes an unknown percentage of workers reporting that they permanently live in Muswellbrook when they are only temporary residents. Given the lack of data, a precautionary approach has been adopted when rating the impact. A detailed assessment of housing impacts is recommended to be undertaken, however this is out of scope of the SIA. A Housing Study has been recommended to inform the ongoing management of housing impacts. Once the actual impact is known it is expected that the rating for this impact will reduce.

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Workforce continue to live locally (temporary or permanent residents)	Continued demand for housing allowing for stability of house and land value ¹⁵ ⊕	Home owners and investors	Not required under current approval	Muswellbrook, Denman, Aberdeen, Scone and Singleton	Life of the operation	Moderate	High	G2, E3, V2, R3 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation and with other mines and industries encouraging people to live locally
Impacts on way of life – how people move around (roads, public transport etc)											
Continued and increased number and type of vehicles on New England Highway in Singleton and between Singleton and Muswellbrook on shift change	Continued increase in travel times and feelings of frustration and annoyance ¹⁶ ⊖	Other road users, particularly residents of Muswellbrook and Singleton and emergency services	Not required under current approval	Singleton, Muswellbrook and New England Highway	4am – 8am and 4pm – 7pm (weekdays) for the life of the mine	Low	High	G3, E1, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Continued and increased traffic on Bengalla and Wybong Roads	Continued increase in travel times, and feelings of frustration and annoyance ¹⁷ ⊖	Other road users and near neighbours	Mount Pleasant Operations Site Access Management Plan ¹⁸	Bengalla and Wybong Roads	Busiest times are 4am – 8am and 4pm – 7pm (weekdays) for the life of the mine	High	High	G3, E2, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation and with Begalla Mine and Mangoola Coal

¹⁵ Tony McTaggart EHP First National.

¹⁶ CCC, MSC, Moore (Gilgai), Stakeholder B, ACDF, Stakeholder D, Denman Aberdeen, Muswellbrook, Scone Healthy Environment Group, Friends of the Upper Hunter, Tony McTaggart (EHP First National, Stakeholder C, complaints data and community survey.

¹⁷ MSC, Moore (Gilgai), Stakeholder B.

¹⁸ The Site Access Management Plan includes details of the traffic routes to be used for construction and operation vehicles (both company and personal vehicles); speed limits to be observed along routes to and from the site; measures in place for the safety of road users and construction/operation traffic; a safe interface between site traffic and local traffic; and measures to raise awareness to local traffic users and construction personnel (TTPP 2020).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Continued and increased traffic on the Mount Pleasant Operation Road	Continued feelings of frustration and annoyance and noise impacts from vehicles ¹⁹ ⊖	Near neighbours who share access	MACH's internal Site Access Management Plan ²⁰	Mount Pleasant Operation Road	Busiest times are 4am – 8am and 4pm – 7pm (weekdays) for the life of the mine	High	High	G3, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative over the life of the Mount Pleasant Operation
Increased train movements	Impact on the passenger service between Muswellbrook and Newcastle ²¹ ⊖	People who catch the train to and/or from Muswellbrook to Newcastle	N/A (ARTC) ²²	-	-	-	-	-	-	-	-
Impacts on way of life – how people play (recreational activities) ²³											
Continued dust, visual impacts on the Muswellbrook Race Course and trainers in Racecourse Road	Continued impacts on the patronage of the Muswellbrook Race Club ²⁴ ⊖	Trainers, owners, membership, visitors on a race day	Final landform with macro- and micro- relief	Muswellbrook Race Course	Until landform is rehabilitated – impacts reducing over time	Medium	Medium	G3, E3, V2, R2 Moderate	Unlikely	D3 Moderate	Cumulative across the life of the Mount Pleasant Operation and with Bengalla Mine and Mt Arthur Coal Mine

¹⁹ MSC, Moore (Gilgai) and Stakeholder B

²⁰ The Site Access Management Plan includes details of the traffic routes to be used for construction and operation vehicles (both company and personal vehicles); speed limits to be observed along routes to and from the site; measures in place for the safety of road users and construction/operation traffic; a safe interface between site traffic and local traffic; and measures to raise awareness to local traffic users and construction personnel (TTPP 2020).

²¹ Denman Aberdeen, Muswellbrook, Scone Healthy Environment Group

²² This impacted has been recorded and it has been suggested that it be monitored, however it is the responsibility of ARTC to manage the impacts of the train movements along the railway line.

²³ The currently approved ML does not impact on the Bicentennial National Trail. The Bicentennial National Trail runs to the north, north-west and west of the ML.

²⁴ Stakeholder A

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Continued funding from ACDF or a similar Aboriginal community development organisation that is active in the community, and MACH donations	Continued free NAIDOC celebrations and biennial Cultural Spectacular ²⁵ ⊕	Residents and visitors of the Hunter Region	N/A (ACDF or a similar Aboriginal community development organisation that is active in the community)	Hunter Region	Once a year	High	High	G2, E2, V1, R1 Significant	Almost Certain	A5 Extreme	Cumulative across the life of the Mount Pleasant Operation
Impacts on health and wellbeing											
Ongoing modifications, including reading EIS reports, writing submissions, meeting with proponents, appearing at IPC Hearings	Continued negative effect on health due to the stress of participating in the environmental approval process in the hope of influencing the decision and what conditions may be put on them ²⁶ ⊖	Neighbouring landholders and people from the surrounding villages and communities concerned about the environmental and social impacts of the mine	MACH internal Community Engagement Plan	MSC, UHSC and SSC LGA	Since the original EIS process in the 1990s	Low	High	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation and with other mines and projects in the Upper Hunter (inc. non mining projects such as the proposed Muswellbrook Bypass)

²⁵ ACDF and MACH *pers comms*.

²⁶ Moore, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter and Moffatt and Baker (2013).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Permanent changes to the landscape (overburden and void)	Continued negative effect on health and wellbeing, including identity and connection to country ²⁷ ⊖	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	Surrounding rural communities, Muswellbrook and other villages and towns	Since construction began on the site	High	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	A cumulative impact of the Mount Pleasant Operation and mining in the Upper Hunter region
Continued dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Continued decrease in health and wellbeing (stress, solastalgia, eritalgia, levels of homeliness and change in connection to land or place ²⁸ ⊖	Residents who experience amenity impacts	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	Surrounding rural communities, Muswellbrook and other villages	Since construction began on the site	High	High	G2, E3, V2, R3 Moderate	Likely	B3 High	Cumulative impacts across the life of the Mount Pleasant Operation, Bengalla Mine, Mt Arthur Coal Mine and agriculture.

²⁷ Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.

²⁸ MSC, ACDF, Moore, Stakeholder B, Jim Lonegran (Kayuga), Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, complaints data, community survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Changes to the landscape through construction and mining operations e.g. construction of overburden (eastern and northern side of ML) and impacts on Castlerock Road ²⁹	Decrease in health and wellbeing (stress, solastalgia and eritalgia) ³⁰ ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook	Visual Impact Management Plan	Nearby neighbours, surrounding rural communities, Muswellbrook and Aberdeen	Since construction began on the site	High	High	G2, E3, V2, R1 Moderate	Likely	B3 High	Cumulative impacts across the life of the Mount Pleasant Operation and impacts from Bengalla Mine and Mt Arthur Coal Mine
Continued employment	Mainten or increase in health and wellbeing due to being employed (sense of purpose, self esteem and able to provide for self and family) ³¹ ⊕	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families	HR policies and processes and Local Labour Commitment ³²	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	High	High	G2, E3, V2, R3 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation

²⁹ Mining through Castlerock Road is already approved under DA 92/97 but will only occur if the Project proceeds.

³⁰ MSC, ACDF, Moore, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, complaints data, community survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

³¹ Workforce Survey

³² <https://machenergyaustralia.com.au/community/>

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Mine workforce working 12-hour shifts	Continued negative impact on health and wellbeing ³³ ⊖	MACH workforce and their families.	HR policies and processes, OH&S requirements and Local Labour Commitment ³⁴	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/contract	Moderate	Moderate	G2, E3, V2, R3 Moderate	Rare	E3 Low	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Continued and increasing traffic on roads	Continued perceived increased risk of an accident due to mine workers being fatigued ³⁵ ⊖	Other road users (particularly during shift change). Emergency services if there is an accident	HR policies and processes, OH&S requirements and Local Labour Commitment ³⁶	Roads between the Mount Pleasant Operation site and where the workers live	4am – 8am and 4pm – 7pm for the life of the mine	High	High	G2, E3, V2, R3 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Impacts on services and facilities											
Mine workforce and their families continue to access medical services	Continued and possible increase in demand on local medical services (including mental health services) in Muswellbrook and other villages and towns ³⁷	Mine workforce, their families and neighbouring landowners and their families and people living in MSC LGA	Not required under current approval	Muswellbrook and other villages and towns	Life of the mine	Low	Moderate	G2, E1, V2, R3 Major	Likely	B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

³³ Earth Connection Indigenous Corporation, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Cottle (2013) and Sincovich et al (2018).

³⁴ <https://machenergyaustralia.com.au/community/>

³⁵ MSC, SSC, ACDF, Denman Aberdeen Muswellbrook Scone Healthy Environment Group and Cottle and Keyes (2014).

³⁶ <https://machenergyaustralia.com.au/community/>

³⁷ Workforce Survey, MSC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Cottle (2013), Sincovich et al (2018).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
	⊖										
Mine workforce and their families continue to access medical services	Continued and possible increase in demand on local medical services (including mental health services) in Muswellbrook and other villages and towns ³⁸ ⊕	Mine workforce, their families and neighbouring landowners and their families and people living in MSC LGA	Not required under current approval	Muswellbrook and other villages and towns.	Life of the mine	Low	Moderate	G2, E1, V2, R3 Major	Likely	B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Mine workforce and their families continue to access educational and childcare services	Continued and possible increase in demand for educational services (child care through to high school) ³⁹ ⊖	Child care and education service providers	Community contributions (donations and sponsorships)	Muswellbrook and other villages and towns	Life of the mine	Moderate	Low	G2, E1, V2, R2 Major	Likely	B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Mine workforce and their families continue to access educational and childcare services	Continued and possible increase in demand for educational services (child care through to high school) ⁴⁰ ⊕	Child care and education service providers	Community contributions (donations and sponsorships)	Muswellbrook and other villages and towns	Life of the mine	Moderate	Low	G2, E1, V2, R2 Major	Likely	B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

³⁸ Workforce Survey, MSC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Cottle (2013), Sincovich et al (2018).

³⁹ Workforce survey

⁴⁰ Workforce survey

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Landowners and their families continue to relocate out of the district due to land acquisition	Decrease in membership and participation in Rural Fire Services (RFS) if current members have to leave due to land acquisition or chose to leave because of impacts ⁴¹ ⊖	RFS and people reliant on RFS services	Not required under current approval	Areas covered by the Kayuga, Wybong and Edinglassie brigades	Life of mine	Moderate	Moderate	G3, E1, V2, R2 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Mine workforce and their families continue to access emergency services	Continued and possible increase in demand for emergency services (police, fire, RFS, ambulance and SES) ⊖	Emergency service providers	Ongoing engagement with emergency service providers	Muswellbrook and other villages and towns	Life of mine	Low	Low	G3, E3, V2, R3 Insignificant	Possible	C1 Low	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Mine workforce and their families continue to participate in community-based organisations	Continued and possible increase in participation and support for local community groups ⁴² ⊕	Community groups and organisations	Not required under current approval	Muswellbrook, Upper Hunter and Singleton LGAs	For the time the family participates	Moderate	Moderate	G3, E2, V2, R2 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation

⁴¹ MSC, Damian Honour, NSW RFS Hunter Valley District

⁴² Workforce survey

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
MACH continued to support for local community-based organisations (community contributions)	Continued funding to provide services and facilities ⊕	Organisations who receive donations from MACH and the people they support	Funding Guidelines	Muswellbrook and other villages and towns	Life of mine	Moderate	Moderate	G3, E1, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation
Continued Voluntary Planning Agreement (VPA) payments	Continued funding to MSC to be able to be spent on community services and facilities ⊕	Residents living in the MSC LGA	As per VPA	Muswellbrook and other villages and towns	Life of mine	Moderate	Moderate	G3, E2, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation
Management of Biodiversity Offsets	Small increase in the number of people local services and facilities and supporting local organisations ⊕	People living and working on the BMA properties and the services they access	Offset Management Plan and Re-establishment Management Plan	Merriwa and Cassilis district	Life of Offset Management Plan and Re-Establishment Management Plan	High	High	G3, E3, V2, R1 Moderate	Possible	C3 Moderate	
Impacts on the quality of the living environment (surroundings)											
Continued dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Continued and potential further decrease in level of amenity and decreased quality of the living environment in which people	Near neighbours and residents of surrounding rural communities and Muswellbrook	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise	Nearby neighbours, surrounding rural communities, Muswellbrook and Aberdeen	Since construction began on the site	Moderate	High	G2, E3, V2, R2 Moderate	Almost Certain ⁴⁴	A3 High	Cumulative impacts within and across the life of the Mount Pleasant Operation and impacts from Bengalla Mine and Mt Arthur Coal Mine

⁴⁴ Based on environmental monitoring data for noise, dust, blasting and visual and complaints data.

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
	live, work and play ⁴³ ⊖		Management Plan								
Continued visual impacts (the mine and overburden on eastern side of ML)	Decrease in visual amenity from the western side of Muswellbrook ⁴⁵ ⊖	People who live, work, play or travel through the western side of Muswellbrook	Rehabilitation of overburden using geofluid design	Area from which the overburden can be seen	Both temporary and permanent changes	High	High	G3, E2, V2, R1 Moderate	Almost certain	A3 High	Cumulative with overburden at Mt Arthur Coal Mine and Bengalla Mine
Continued management of Biodiversity Offsets	Achieving biodiversity outcomes ⊕	On behalf of the Australian population (EPBC Act)	Offset Management Plan and Re-establishment Management Plan	Merriwa and Cassilis district	Life of Offset Management Plan and Re-establishment Management Plan	High	High	G3, E3, V2, R1 Moderate	Possible	C3 Moderate	
Socio-economic impacts											
Continued mine operations	Having to spend time and losing opportunities associated with managing the impacts of the Project ⁴⁶ ⊖	Near neighbours	Not required under current approval	Near neighbours	Life of the mine	Low	Moderate	G3, E3, V2, R2 Moderate	Likely	B3 High	Cumulative impacts across the life of the Mount Pleasant Operation and impacts from Dartbrook Mine and Bengalla Mine

⁴³ MSC, ACDF, CCC, Moore, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, complaints data, community survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

⁴⁵ Moore, Stakeholder C, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Community Survey, SCCI (*pers comms*).

⁴⁶ Moore, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Continued dust impacts (air)	Continued housekeeping and cleaning workload due to deposited dust ⁴⁷ ⊖	Residents who experience dust impacts	Air Quality and Greenhouse Gas Management Plan	Nearby neighbours, surrounding rural communities and Muswellbrook	Life of mine	Moderate	High	G3, E3, V2, R2 Moderate	Likely	B3 High	Cumulative impacts across the life of the Mount Pleasant Operation, Bengalla Mine, Mt Arthur Coal Mine and agriculture
Continued opportunities for employment and comparative higher wages to other potential employers in the Upper Hunter region (e.g. Council or small business)	Continued higher standard of living and increased financial choices ⁴⁸ ⊕	Current employees and contactors	HR policies and processes and Local Labour Commitment ⁴⁹	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	High	G2, E3, V2, R2 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Workforce and families continue to live locally (temporary or permanent residents)	Continued support for local business from workers and their families buying locally ⁵⁰ ⊕	Local businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Local Labour Commitment	Muswellbrook, Upper Hunter and Singleton LGAs	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation

⁴⁷ MSC, Moore, Stakeholder B and Stakeholder D and complaints data.

⁴⁸ Workforce Survey

⁴⁹ <https://machenergyaustralia.com.au/community/>

⁵⁰ Workforce survey, MCCI and SCCI (*pers comms*)

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Continued local spend by Mount Pleasant Operation	Continued and increased support for local businesses ⁵¹ ⊕	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Local Supplier Strategy and participation in Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group	Muswellbrook, Upper Hunter and Singleton LGAs	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation
Continued attraction to employment in mining	Continued competition for skilled workers in the local/regional area ⁵² ⊖	Employers who have lost workers to the Mount Pleasant Operation	Not required under current approval	Muswellbrook, Upper Hunter and Singleton LGAs	Until the role can be filled	Dependant on the business or service provider	High	G3, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Management of Biodiversity Offsets	Contribution to the local economy via BMA properties and MACH ⊕	Businesses in Merriwa and Cassilis	Offset Management Plan and Re-establishment Management Plan	Merriwa and Cassilis district	Life of Offset Management Plan and Re-establishment Management Plan	High	High	G2, E3, V2, R1 Moderate	Possible	C3 Moderate	-
Cultural impact											
Continued reduction in health due to impacts on country and waters	Continued negative impact on cultural identity, connection to country and self-esteem ⁵³ ⊖	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage	Surrounding rural communities, Muswellbrook and other villages and towns	Since construction began on the site	High	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

⁵¹ CCC, MCCI, Blackrock and Supply Solutions Group

⁵² MSC, UHSC, Wanaruah Local Aboriginal Land Council, MCCI and Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Hossain *et al* 2013 and Petrova and Marinova (2013).

⁵³ Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation and Cottle (2013).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
			Management Plan								
The opportunity to connect with country and waters by undertaking land management activities at the Mount Pleasant Operation	Continued positive impact on cultural identity and self-esteem. ⊕	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan, e.g. cool burns	Surrounding rural communities, Muswellbrook and other villages and towns	As determined by person involved	High	High	G2, E1, V1, R2 Significant	Likely	B5 Extreme	Cumulative across the life of the Mount Pleasant Operation
Continuation of ACDF or a similar Aboriginal community development organisation that is active in the community	Continued funding for programs to promote cultural, educational, economic and health outcomes ⊕	Aboriginal community	None (ACDF or a similar Aboriginal community development organisation that is active in the community)	MSC and SSC LGAs	Ongoing (funding for ACDF or a similar Aboriginal community development organisation that is active in the community)	High	High	G2, E1, V1, R2 Significant	Likely	B5 Extreme	Cumulative across the life of the Mount Pleasant Operation
Continuation of landowners taking up voluntary acquisitions	Continued loss of agricultural culture ⁵⁴ ⊖	Landowners taking up voluntary acquisitions and relocating out of the district	Offering for landholders to remain on properties and lease back from MACH Retaining the original land use where practical.	Near neighbours and surrounding rural communities.	Permanent	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

⁵⁴ MSC, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Mcmanus and Connor (2013) and Moffatt and Baker (2013).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Management of Biodiversity Offsets	Maintaining agricultural culture ⊕	People living and working on the BMA properties and the services they access	Offset Management Plan and Re-establishment Management Plan	Merriwa and Cassilis district	Life of Offset Management Plan and Re-Establishment Management Plan	High	High	G2, E3, V2, R1 Moderate	Possible	C3 Moderate	-
Impacts on family and community											
The decision-making process and landowners taking up voluntary or compulsory acquisitions	Continued loss of social networks, community cohesion and reinforces social differentiation and inequity ⁵⁵ ⊖	Properties identified as having "acquisition rights" and their near neighbours and surrounding rural communities	Offering for landholders to remain on properties and lease back from MACH	Properties that are determined to have voluntary acquisition rights	Permanent	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Families taking up voluntary acquisition associated with the Project and moving away	Continued loss of rural communities ⁵⁶ ⊖	Property owner, their family and friends and remaining landholders/ community members	Offering for landholders to remain on properties and lease back from MACH Retaining the original land use where practical	Properties surrounding/impacted by the Mount Pleasant Operation	Permanent	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

⁵⁵ MSC, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Mcmanus and Connor (2013) and Moffatt and Baker (2013).

⁵⁶ MSC, Stakeholder B, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Community Survey, Mcmanus and Connor (2013).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Continuing change in demographic from agriculture to mining	Continued tension in the community and the transition from agricultural or rural town to mining town ⁵⁷ ⊖	Residents of Muswellbrook, Aberdeen and Scone	Not required under current approval	Muswellbrook, Aberdeen and Scone	Life of mine	Moderate	Moderate	G3, E1, V2, R1 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Continued presence of temporary resident mining workers in Muswellbrook and other villages and towns	A change in community identification and connection and loss of social networks and social capital ⁵⁸ ⊖	Existing residents of Muswellbrook and other villages and towns	Not required under current approval	Muswellbrook and other villages and towns.	Life of mine	Moderate	Moderate	G3, E1, V2, R1 Moderate	Likely	B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant
Continuing differences in perspectives and beliefs on the coal industry	Community division and continuation of community cohesion ⁵⁹ ⊖	People who support mining or oppose mining	Community contributions (donations and sponsorships)	MSC, UHSC and SSC LGAs	While mining is occurring	High	High	G2, E2, V2, R1 Major	Almost Certain	A4 Extreme	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

⁵⁷ Community survey, Stakeholder A, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Moffatt and Baker (2013) Sincovich *et al* (2018) and Pini 2010.

⁵⁸ CCC, ACDF, Stakeholder D, Tony McTaggart (EHP First National) and Petrova and Marinova (2013).

⁵⁹ Stakeholder A, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Community Survey, Moffatt and Baker (2013), Sincovich *et al* (2018).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Workforce working 12-hour shifts limiting participation in community - based organisations	Continued negative impact on social networks, community identification, connection and cohesion ⁶⁰ ⊖	Volunteer based community organisations and the people they provide services to	Not required under current approval	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	Moderate	G3, E2, V2, R1 Moderate	Possible	C3 Moderate	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Mine workers continue to live away from their family while working	Alteration of family structure ⁶¹ ⊖	New employees who have not worked a roster/12-hour shifts before and their families	Local Labour Commitment	Locations where the workforce live Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	Moderate	G3, E2, V2, R1 Moderate	Rare	E3 Low	This is an impact of the mining industry and not just a result of Mount Pleasant
Management of Biodiversity Offsets	Enhancement of the community composition, cohesion and character of the local district ⊕	People living and working on the BMA properties and the services they access	Offset Management Plan and Re-establishment Management Plan	Merriwa and Cassilis district	Life of Offset Management Plan and Re-establishment Management Plan	High	High	G2, E3, V2, R1 Moderate	Possible	C3 Moderate	-

⁶⁰ Workforce survey, community survey, Tony McTaggart Edwards Higgins Parkinson First National, RFS, MSC, Cottle (2013) and Sincovich et al (2018).

⁶¹ Workforce survey and Cottle (2013).

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Impacts on personal and property rights											
Continued perceived sterilisation of property market - inability of landowners to sell (due to lack of acquisition rights)	Continued feelings of powerlessness, stress, uncertainty and self-image ⁶² ⊖	Property owners who are impacted by Mount Pleasant but who have not been determined to have acquisition rights	Not required under current approval	Near neighbours and surrounding rural communities	Life of mine	Moderate	High	G3, E3, V2, R1 Moderate	Almost Certain	A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Impacts on decision making systems											
Continued frustration of continuing dust, noise, blasting and lighting impacts and the need to lodge a complaint/s with no perceived change in impact	People stop complaining ⁶³ ⊖	Near neighbours, surrounding rural communities and residents of Muswellbrook	Complaints process and (including following up with each complainant) and complying with DA conditions	Extent of people who feel they experience environmental impacts of the mine	Life of mine	Moderate	Moderate	G3, E3, V2, R1 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Equity impacts											
Continuation of distributional impacts	Continued change in social networks, community cohesion and reinforcement of social differentiation and inequity ⁶⁴	Near neighbours, surrounding rural communities and residents of Muswellbrook and other villages and towns	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise	Extent of people who feel they experience landscape impacts of the mine	Life of mine	Low	Moderate	G2, E3, V2, R1 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry

⁶² MSC, Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019) and Moffatt and Baker (2013).

⁶³ Stakeholder B and D.

⁶⁴ Community survey, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Sincovich et al (2018) and *Land and Environment Court (2019)*.

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
	⊖		Management Plan								
Mine life – changes to the landscape	Continued inter-generational impacts ⁶⁵ ⊖	Current and future generations	Visual Impact Management Plan	Extent of people who feel they experience landscape impacts of the mine	Life of mine	Low	Moderate	G2, E3, V2, R1 Moderate	Likely	B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Gender impacts											
12-hour shifts and DIDO	Increased workload for partner “at home” with family responsibilities ⁶⁶ ⊖	Partner of mine work “at home”, predominantly women	Not required under current approval	Locations where the workforce live Maitland, Cessnock, Newcastle, Central Coast, etc	Period of employment/ contract	Moderate	Moderate	G3, E1, V2, R1 Moderate	Possible	C3 Moderate	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry
Fears and aspirations											
Failure of dams, especially the Fines Emplacement Area	Continued fear of losing of home and livelihood ⁶⁷ ⊖	Properties downstream of the mine on the Sandy Creek catchment	Dam design and construction	Sandy Creek Catchment	Life of mine	Low	Moderate	G2, E1, V2, R2 Major	Likely	B4 High	Cumulative across the life of the Mount Pleasant Operation

⁶⁵ Stakeholder B, Stakeholder D and Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

⁶⁶ Cottle (2013) and Sincovich et al (2018).

⁶⁷ Stakeholder B

Cause/ matter ²	Impact description		Current Management Strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ³			Cumulative
	Impact	Affected Parties ⁴		Extent	Duration	Severity ⁵	Sensitivity ⁶	S/C ⁷	L ⁸	Rating	
Management of Biodiversity Offsets	Fear that the BMA properties will change from being working agricultural properties to being 'locked up' ⊕	BMA property and neighbouring owners and managers and the Merriwa and Cassilis district	Offset Management Plan and Re-establishment Management Plan	Merriwa and Cassilis district	Life of Offset Management Plan and Re-establishment Management Plan	High	High	G2, E3, V2, R3 Moderate	Possible	C3 Moderate	

3.2 Provisional Social Impact Management Plan

This section sets out suggested management strategies for the social impacts likely to be experienced during the operation of the Project. They have been identified based on MACH's existing internal community engagement plan and Environmental Management Framework and are intended to acknowledge the current social impacts of the Mount Pleasant Operation and further develop relationships and management strategies if the Project proceeds.

If the Project proceeds, it will be critical to build on existing relationships and form new ones to collaboratively develop a SIMP that is able address social impacts in a social environment that experiencing a high level of uncertainty and about to go through a major transition process.

Given the expected lag time between the completion of this SIA and the decision whether the Project proceeds or not, it is suggested that management measures applicable for the existing Mount Pleasant Operation begin to be implemented when and if practical, and are periodically updated based on the findings from engagement.

The provisional Social Impact Management Plan (SIMP) includes the following:

- Community and Stakeholder Engagement Strategy
- Workforce Management Strategy
- Housing and Accommodation Strategy
- Local Business Procurement Strategy and
- Community Health and Wellbeing Strategy.

Table 4 identifies the cause of impact, impact, who would be affected, current management strategy applied at the Mount Pleasant Operation, evaluation of the impact, suggested management and SIMP strategy. Table 4 only lists those impacts with an assessed social rating/opportunity rating of high and extreme (i.e. A4, A5 and B5). It is suggested that the impacts listed in Table 4 are prioritised in terms of management.

A list of potential SIMP strategies and impacts they would address are summarised in Section 3.2.

It should be noted that if any of the assumptions listed in Section 2 of this appendix change or the social baseline changes, then the impacts may or may not occur or may occur at a different level of consequence. It is for this reason and consistent with other examples of contemporary approvals of major mining projects in NSW, it is anticipated that development of a SIMP would be required within the first 12 – 18 months following Project determination. The SIMP would be the mechanism to review the social baseline and document management strategies that are reasonable and feasible.

⊕ Positive impact ⊖ Negative impact

Table 4: Suggested management strategies, if the Project proceeds (operation)

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Impacts on way of life – employment							
Increased opportunities for apprenticeships and traineeships	Employment opportunities ⊕	Current and future workforce	HR policies and processes and Local Labour Commitment	Not rated (opportunity identified by SIA stakeholders)	Cumulative with other Mount Pleasant Operation employment initiatives	<i>Workforce Management Strategy</i> Continued traineeships and apprenticeships for local people (adult and school leavers)	C = Significant (G2, E1, V1, R2) L = Likely B5 Major
Continued direct employment opportunities.	Continued employment ⊕	People employed and their families	HR policies and processes and Local Labour Commitment	C=Moderate (G2, E3, V2, R1) L = Almost certain A3 High	Cumulative with other Mount Pleasant Operation employment initiatives	<i>Workforce Management Strategy</i> Work with local organisations to develop a program to employ and train local people who have previously been unemployed. Offer to work with existing stakeholders such as MSC, Wanaruah Local Aboriginal Land Council, ACDF (or a similar Aboriginal community development organisation that is active in the community) and TAFE to develop a program in collaboration.	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High
Continued local employment focusing on unemployment	Opportunity to reduce local unemployment and create an increase in the number of people with skills in the MSC, UHSC and SSC LGAs ⊕	Unemployed people	HR policies and processes and Local Labour Commitment	Not rated (opportunity identified by SIA stakeholders)	Cumulative with other Mount Pleasant Operation employment initiatives	<i>Workforce Management Strategy</i> Work with local organisations to develop a program to employ and train local people who have previously been unemployed. Offer to work with existing stakeholders such as MSC, Wanaruah Local Aboriginal Land Council, ACDF (or a similar Aboriginal community development organisation that is active in the community) TAFE to develop a program in collaboration	C = Significant (G2, E1, V1, R2) L = Likely B5 Extreme

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continued employment pathways through the Gundi Program	Continued employment opportunities for men who have participated in the Gundi Program ⊕	People participating in the Gundi program	Local Labour Commitment	C = Significant (G2, E3, V1,R2) L = Almost Certain A5 Extreme	Cumulative across the life of the Mount Pleasant Operation and with other employers besides MACH's contractors who are employing people who have completed the Gundi Program	<i>Workforce Management Strategy</i> Consult with Corrective Services Industries on how to maximise the opportunities for graduates from the Gundi Program. Work with contractors to identify ways to maximise employment opportunities with them and throughout their networks	C = Significant (G2, E2, V1, R2) L = Almost Certain A5 Extreme
Continued indirect employment opportunities	Suppliers are able to continue to employ more people ⊕	Local businesses and their employees	Local Supplier Strategy and participation in Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group	C = Moderate (G3, E3, V2, R2) L = Almost Certain A3 High	Bengalla Mine and Mt Arthur Coal Mine also have local purchasing policies	<i>Local Business and Procurement Strategy</i> Continue to work with MCCI and the Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group to develop and implement strategies for local spend. Consider approaching SCCI to identify opportunities for businesses in the Scone area who are not already supplying to MACH.	C = Moderate (G3, E3, V2, R2) L = Almost Certain A3 High
Impacts on way of life - housing							
Workforce continue to live locally (temporary or permanent residents)	Continued unintended impacts on available and affordable housing ⊖	People living in on low income households in Muswellbrook, Upper Hunter and Singleton LGAs	Not required under current approval	C = Significant (G2, E2, V1, R2) L = Likely B5 Extreme	Cumulative across the life of the Mount Pleasant Operation and with other mines and industries encouraging people to live locally	<i>Housing and Accommodation Strategy</i> Work with the main contractors on site (i.e. main services and coal processing) to identify ways to: <ul style="list-style-type: none"> prioritise local employment (existing population) develop strategies for people to relocate to MSC and UHSC LGAs Provide information regarding the Project workforce and the associated predicted housing demand to the local councils on a regular basis. . Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. impact on housing and levels of housing stress), participate /advocate for developing and	C = Major (G2, E3, V1, R3) L = Likely B4 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
						implementing management strategies from an industry perspective	
Workforce continue to live locally (temporary or permanent residents)	Continued demand for housing allowing for stability of house and land value ⊕	Home owners and investors	Not required under current approval	C = Moderate (G2, E3, V2, R3) L = Almost Certain A3 High	Cumulative across the life of the Mount Pleasant Operation and with other mines and industries encouraging people to live locally	<p><i>Housing and Accommodation Strategy</i></p> <p>Work with the main contractors on site (i.e. main services and coal processing) to identify ways to:</p> <ul style="list-style-type: none"> prioritise local employment (existing population) develop strategies for people to relocate to MSC and UHSC LGAs <p>Provide information regarding the Project workforce and the associated predicted housing demand to the local councils on a regular basis. .</p> <p>Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. impact on housing and levels of housing stress), participate /advocate for developing and implementing management strategies from an industry perspective</p>	C = Moderate (G2, E3, V2, R3) L = Almost Certain A3 High
Impacts on way of life – how people move around (roads, public transport etc)							
Continuation and increase in the number and type of vehicles leading to congestion and decreased safety on New England Highway in Singleton and between Singleton and Muswellbrook on shift change	Continued increase in travel times, decrease in safety and feelings of frustration and annoyance ⊖	Other road users, particularly residents of Muswellbrook and Singleton and emergency services	Not required under current approval	C = Moderate (G3, E2, V2, R1) L = Almost Certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<p><i>Workforce Management Strategy</i></p> <p>Work with the main contractors on site (i.e. main services and coal processing) to identify ways to:</p> <ul style="list-style-type: none"> prioritise local employment (existing population). develop strategies for people to relocate to MSC and UHSC LGAs. 	C = Moderate (G3, E1, V2, R2) L = Almost Certain A3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continuation and increased traffic on Bengalla and Wybong Roads	Continued and increase in travel times, and feelings of frustration and annoyance ⊖	Other road users and near neighbours	Mount Pleasant Operations Site Access Management Plan	C = Moderate (G3, E2, V2, R1) L = Almost Certain A3 High	Cumulative across the life of the Mount Pleasant Operation and with Begalla Mine and Mangoola Coal	<i>Workforce Management Strategy</i> Continue to induct employees regarding driving regulations to promote good behaviour on local roads.	C = Moderate (G3, E3, V2, R2) L = Likely B3 High
Continued and increased traffic on the Mount Pleasant Operation Road	Continued feelings of frustration and annoyance and noise impacts from vehicles ⁶⁸ ⊖	Near neighbours who share access	MACH's internal Site Access Management Plan ⁶⁹	C = Moderate (G3, E3, V2, R1) L = Almost Certain A3 High	Cumulative over the life of the Mount Pleasant Operation	<i>Community Stakeholder and Engagement Strategy</i> Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible.	C = Moderate (G3, E3, V2, R1) L = Almost Certain A3 High
Impacts on way of life – how people play (recreational activities)							
Continued funding from ACDF or a similar Aboriginal community development organisation that is active in the community, and MACH donations	Continued free NAIDOC celebrations and biennial Cultural Spectacular ⊕	Residents and visitors of the Hunter region	N/A (ACDF or a similar Aboriginal community development organisation that is active in the community)	C = Significant (G2, E2, V1, R1) L = Almost certain A5 Extreme	Cumulative across the life of the Mount Pleasant Operation	<i>Continuation of funding for ACDF or a similar development organisation that is active in the community and has similar funding allocation guidelines as the current ACDF.</i>	C = Significant (G2, E2, V1, R1) L = Almost certain A5 Extreme
Impacts on health and wellbeing							
Continued participation in any future modification, including reading	Continued negative effect on health due to the stress of participating in	Neighbouring landholders and people from the surrounding	MACH internal Community Engagement Plan	C = Moderate (G3, E2, V2, R2) L = Likely	Cumulative across the life of the Mount Pleasant Operation and with other mines and projects in the Upper	<i>Community Stakeholder and Engagement Strategy</i> Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are	C = Minor (G3, E1, V2, R3) L = Likely





⁶⁸ MSC, Moore (Gilgai) and Stakeholder B

⁶⁹ The Site Access Management Plan includes details of the traffic routes to be used for construction and operation vehicles (both company and personal vehicles); speed limits to be observed along routes to and from the site; measures in place for the safety of road users and construction/operation traffic; a safe interface between site traffic and local traffic; and measures to raise awareness to local traffic users and construction personnel (TTPP 2020).

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
EIS reports, writing submissions, meeting with proponents, appearing at IPC Hearings	the environmental approval process in the hope of influencing the decision of the original DA and subsequent modifications approved and what conditions may be put on them ⊖	villages and communities concerned about the environmental and social impacts of the mine		A3 High	Hunter (inc. non mining projects such as the proposed Muswellbrook Bypass)	reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	B2 Moderate
Continued dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Continued decrease in health and wellbeing ⊖	Residents who experience amenity impacts.	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	C = Moderate (G2, E3, V2, R3) L = Likely B3 High	Cumulative impacts across the life of the Mount Pleasant Operation, Bengalla Mine, Mt Arthur Coal Mine and agriculture	<i>Community Health and Wellbeing Strategy</i> Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G2, E3, V2, R3) L = Likely B3 High
Permanent changes to the landscape (overburden and void)	Continued negative effect on health and wellbeing, including identity and connection to country. ⊖	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	C = Significant (G2, E3, V1, R2) L = Likely B5 Extreme	A cumulative impact of the Mount Pleasant Operation and mining in the Upper Hunter region	<i>Community Health and Wellbeing Strategy</i> Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Major (G2, E3, V1, R3) L = Likely B4 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Changes to landscape through construction and mining operations e.g. construction of overburden (eastern and northern side of ML) and impacts on Castlerock Road	Continued solastalgia ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook	Visual Impact Management Plan	C = Moderate (G2, E3, V2, R1) L = Likely B3 High	Cumulative impacts across the life of the Mount Pleasant Operation and impacts from Bengalla Mine and Mt Arthur Coal Mine	<i>Community Health and Wellbeing Strategy</i> Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G2, E3, V2, R1) L = Likely B3 High
Continued environmental impacts associated with open cut coal mining such as air, noise, lighting and blasting	Change in levels of homeliness and change in connection to land or place ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	C = Moderate (G2, E3, V2, R1) L = Likely B3 High	Cumulative impacts across the life of the Mount Pleasant Operation and impacts from Bengalla Mine and Mt Arthur Coal Mine	<i>Community Health and Wellbeing Strategy</i> Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G2, E3, V2, R1) L = Likely B3 High
Continued environmental impacts associated with open cut coal mining such as air, noise, lighting and blasting	Continued eritalgia ⊖	Individuals and families who experience environmental impacts but whose property is not identified for acquisition due to noise or air impacts	Complaints process and relationships with MACH	C = Moderate (G2, E3, V2, R1) L = Likely B3 High	Cumulative impacts within and across the life at the Mount Pleasant Operation and impacts from Bengalla Mine and Mt Arthur Coal Mine	<i>Community Health and Wellbeing Strategy</i> Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G2, E3, V2, R1) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continued employment	Continued positive impact on health and wellbeing due to employment ⊕	MACH workforce (including contractors) and families. MACH suppliers and their associated workforces and families	HR policies and processes and Local Labour Commitment	C = Moderate (G2, E3, V2, R3) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation	<i>Workforce Management Strategy</i> Continue with HR policies and Local Labour Commitment	C = Moderate (G2, E3, V2, R3) L = Likely B3 High
Continued and increasing traffic on roads	Continued perceived increased risk of an accident due to mine workers being fatigued ⊖	Other road users (particularly during shift change). Emergency services if there is an accident.	HR policies and processes, OH&S requirements and Local Labour Commitment	C = Moderate (G2, E3, V2, R3) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Workforce Management Strategy</i> Continue to induct employees regarding driving regulations to promote good behaviour on local roads. <i>Housing and Accommodation Strategy</i> Work with the main contractors on site (i.e. main services and coal processing) to identify ways to: <ul style="list-style-type: none"> prioritise local employment (existing population) develop strategies for people to relocate to MSC and UHSC LGAs 	C = Moderate (G2, E3, V2, R2) L = Likely B3 High
Impacts on services and facilities							
Mine workforce and their families continue to access medical services	Continued and possible increase in demand on local medical services (including mental health services) in Muswellbrook and other villages and towns ⊖	Mine workforce, their families and neighbouring landholders and their families and people living in MSC LGA	Not required under current approval	C = Major (G2, E1, V2, R3) L = Likely B4 High	Cumulative across the life of the Mount Pleasant Operation with the impact from the mining industry in the Upper Hunter region	<i>Community Health and Wellbeing Strategy</i> Consult with relevant medical and community service providers regarding potential Project workforce expansions or continuations and the associated medical and community service demand on a regular basis.	C = Major (G2, E2, V2, R2) L = Possible C4 Moderate

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Mine workforce and their families continue to access medical services	Continued and possible increase in demand on local medical services (including mental health services) in Muswellbrook and other villages and towns 	Mine workforce, their families and neighbouring landholders and their families and people living in MSC LGA	Not required under current approval	C = Major (G2, E1, V2, R3) L = Likely B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community Health and Wellbeing Strategy</i> Consult with relevant medical and community service providers regarding potential Project workforce expansions or continuations and the associated medical and community service demand on a regular basis.	C = Major (G2, E1, V2, R3) L = Likely B4 High
Mine workforce and their families continue to use or increase demand on local education and childcare services	Continued and possible increase in demand for educational services (child care through to high school) 	Child care and education service providers	Community contributions (donations and sponsorships)	C = Major (G2, E1, V2, R2) L = Likely B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community Health and Wellbeing Strategy</i> Consult with relevant medical and community service providers regarding potential Project workforce expansions or continuations and the associated medical and community service demand on a regular basis.	C = Major (G2, E1, V2, R2) L = Likely B4 High
Mine workforce and their families continue to use or increase demand on local education and childcare services	Continued and possible Increase in demand for educational services (child care through to high school) 	Child care and education service providers	Community contributions (donations and sponsorships)	C = Major (G2, E1, V2, R2) L = Likely B4 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community Health and Wellbeing Strategy</i> Consult with relevant medical and community service providers regarding potential Project workforce expansions or continuations and the associated medical and community service demand on a regular basis.	C = Major (G2, E1, V2, R2) L = Likely B4 High
Mine workforce and their families continue to participate in community-based organisations	Continued and possible increase in participation and support for local community groups 	Community groups and organisations	Not required under current approval	C = Moderate (G3, E2, V2, R2) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation	<i>Workforce Management Strategy</i> Develop a Policy to promote and support workers to participate in local community groups in the MSC, UHSC or SSC LGAs (e.g. the RFS).	C = Moderate (G3, E2, V2, R1) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
MACH continued to support for local community-based organisations (community contributions)	Continued funding to provide services and facilities ⊕	Organisations who receive donations from MACH and the people they support	Funding Guidelines	C = Moderate (G3, E1, V2, R1) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation	<i>Community Stakeholder and Engagement Strategy</i> Continue with community contributions program with a similar focus to current program.	C = Moderate (G3, E1, V2, R1) L = Almost certain A3 High
Continued Voluntary Planning Agreement – community contributions	Continued funding to MSC to be able to be spent on community services and facilities ⊕	Residents living in the MSC LGA	As per VPA	C = Moderate (G3, E2, V2, R1) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation	<i>As negotiated between MACH and Muswellbrook Shire Council.</i>	C = Moderate (G3, E2, V2, R1) L = Almost certain A3 High
Landowners and their families continue to relocate out of the district due to land acquisition	Decrease in membership and participation in RFS ⊖	RFS and people reliant on RFS services	Not required under current approval	C = Moderate (G3, E2, V2, R2) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation with the impact from the mining industry in the Upper Hunter region	<i>Workforce Management Strategy</i> Develop a Policy to promote and support workers to participate in local community groups in the MSC, UHSC or SSC LGAs (e.g. the RFS).	C = Minor (G3, E2, V2, R3) L = Likely B2 Moderate
Impacts on the quality of the living environment (surroundings)							
Continued dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Continued and potential further decrease in level of amenity and decreased quality of the living environment in which people live, work and play ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	C = Moderate (G2, E3, V2, R2) L = Almost certain A3 High	Cumulative impacts within and across the life of the Mount Pleasant Operation and impacts from Bengalla Mine and Mt Arthur Coal Mine	<i>Community and Stakeholder Engagement (potential to link with EMP)</i> Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation. Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining	C = Moderate (G2, E3, V2, R2) L = Almost certain A3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
						industry is having on the region (e.g. air quality work), participate/advocate for in developing and implementing management strategies from an industry perspective.	
Continued visual impacts (the mine and overburden on eastern side of ML)	Decrease in visual amenity from the western side of Muswellbrook ⊖	People who live, work or play or travel through the western side of Muswellbrook	Rehabilitation of overburden using geofluid design	C = Moderate (G3, E2, V2, R1) C = Almost Certain A3 High	Cumulative with overburden at Mt Arthur Coal Mine and Bengalla Mine	<i>Community and Stakeholder Engagement (potential to link with EMP)</i> Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G3, E2, V2, R1) C = Almost Certain A3 High
Socio-economic impacts							
Continued mine operations	Time spent and opportunities lost for near neighbours and residents of surrounding rural communities to manage the impacts of the project, including meeting with MACH and undertaking physical works, fencing and manage weeds and pests ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook who will be impacted by the Project	Not required under current approval	C = Moderate (G3, E3, V2, R2) L = Likely B3 High	Cumulative impacts across the life of the Mount Pleasant Operation and impacts from Bengalla Mine	<i>Community and Stakeholder Engagement (potential to link with EMP)</i> Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G3, E3, V2, R1) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continued dust impacts (air)	Continued housekeeping and cleaning workload due to deposited dust ⊖	Residents who experience dust impacts	Air Quality and Greenhouse Gas Management Plan	C = Moderate (G3, E3, V2, R2) L = Likely B3 High	Cumulative impacts across the life of the Mount Pleasant Operation, Bengalla Mine, Mt Arthur Coal Mine and agriculture	<i>Community and Stakeholder Engagement (potential to link with EMP)</i> Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible. Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. air quality work), participate/advocate for in developing and implementing management strategies from an industry perspective.	C = Moderate (G3, E3, V2, R1) L = Likely B3 High
Continued opportunities for employment and comparative higher wages to other potential employers in the Upper Hunter region (e.g. Council or small business)	Continued higher standard of living and increased financial choices ⊕	Current employees and contractors	HR policies and processes and Local Labour Commitment	C = Moderate (G2, E3, V2, R2) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Workforce Management Strategy</i> Continue with HR policies and Local Labour Commitment	C = Moderate (G2, E3, V2, R2) L = Almost certain A3 High
Workforce continue to live locally (temporary or permanent residents)	Support for local business from workers and their families buying locally ⊕	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Local Labour Commitment	C = Moderate (G3, E3, V2, R2) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation	<i>Workforce Management</i> Work with MCCI and SCCI to develop and implement strategies for increasing local spend.	C = Moderate (G3, E3, V2, R1) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continued local spend by Mount Pleasant Operation	Continued and increased support for local businesses ⊕	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Local Supplier Strategy and participation in Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group	C = Moderate (G3, E3, V2, R2) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation	<i>Local Business Procurement</i> Continue to work with MCCI and the Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group to develop and implement strategies for local spend. Consider approaching SCCI to identify opportunities for businesses in the Scone area who are not already supplying to MACH.	C = Moderate (G3, E3, V2, R1) L = Likely B3 High
Continued attraction to employment in mining	Continued competition for skilled workers in the local/regional area ⊖	Employers who have lost workers to the Mount Pleasant Operation	Not required under current approval	C = Moderate (G3, E3, V2, R1) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Local Business Procurement</i> Work with MCCI and the Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group to develop and implement strategies to address competition for workers	C = Moderate (G3, E3, V2, R1) L = Almost certain A3 High
Cultural impacts							
Continued reduction in health due to impacts on country and waters	Continued negative impact on cultural identity, connection to country and self-esteem. ⊖	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	C = Significant (G2, E3, V1, R2) L = Likely B5 Extreme	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Health and Community Wellbeing</i> Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation. Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. impact on the connection to country), participate/advocate for developing and implementing management strategies from an industry perspective.	C = Major (G2, E1, V1, R3) L = Likely B4 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
The opportunity to connect with country and waters by undertaking land management activities at the Mount Pleasant Operation	Increase in cultural identity and self-esteem ⊕	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan, e.g. cool burns	C = Significant (G2, E2, V1, R1) L = Likely B5 Extreme	Cumulative across the life of the Mount Pleasant Operation	<i>Health and Community Wellbeing</i> Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land.	C = Significant (G2, E2, V1, R1) L = Likely B5 Extreme
Continuation of ACDF or a similar Aboriginal community development organisation that is active in the community	Continued funding for programs to promote cultural, educational, economic and health outcomes ⊕	Aboriginal community	N/A (ACDF or a similar Aboriginal community development organisation that is active in the community)	C = Significant (G2, E1, V1, R2) L = Likely B5 Extreme	Cumulative across the life of the Mount Pleasant Operation	<i>Continuation of funding for ACDF or a similar development organisation that is active in the community and has similar funding allocation guidelines as the current ACDF.</i>	C = Significant (G2, E1, V1, R2) L = Likely B5 Extreme
Continuation of landowners taking up voluntary acquisitions	Continued loss of agricultural culture ⊖	Landowners taking up voluntary acquisitions and relocating out of the district	Offering for landholders to remain on properties and lease back from MACH. Retaining the original land use where practical	C = Moderate (G2, E3, V2, R1) L = Almost certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community and Stakeholder Engagement</i> Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G2, E3, V2, R2) L = Almost certain A3 High
Impacts on family and community							
The decision-making process and landowners taking up voluntary acquisitions	Continued loss of social networks, community cohesion and reinforces social differentiation and inequity ⊖	Properties identified as having "acquisition rights" and their near neighbours and surrounding rural communities	Offering for landholders to remain on properties and lease back from MACH	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community and Stakeholder Engagement</i> Continue to provide as much information about the Project, its impacts and benefits as commercially practical. Further invest in relationships to mitigate existing impacts and widen the opportunities for benefits. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	C = Moderate (G2, E3, V2, R2) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continued purchase of rural properties for the Project – people moving away due to a perceived lack of comparable properties in the area	Continued loss of rural communities ⊖	Property owner, their family and friends and remaining landholders/ community members	Offering for landholders to remain on properties and lease back from MACH. Retaining the original land use where practical	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community and Stakeholder Engagement</i> Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible. Support for the agricultural industry e.g. supporting continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.	C = Moderate (G2, E3, V2, R2) L = Likely B3 High
Continuing change in demographic from agriculture to mining	Continued tension of community and the transition from agricultural or rural town to mining town ⊖	Residents of Muswellbrook, Aberdeen and Scone	Not required under current approval	C = Moderate (G3, E1, V2, R1) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Workforce Management</i> Work with the main contractors on site (i.e. main services and coal processing) to identify ways to: <ul style="list-style-type: none"> prioritise local employment (existing population). develop strategies for people to relocate to MSC and UHSC LGAs. Support for the agricultural industry e.g. supporting continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.	C = Moderate (G3, E1, V2, R1) L = Likely B3 High
Continued presence of temporary resident mining workers in Muswellbrook and other villages and towns	A change in community identification and connection and loss of social networks and social capital ⁷⁰ ⊖	Existing residents of Muswellbrook and other villages and towns	Not required under current approval	C = Moderate (G3, E1, V2, R1) L = Likely B3 High	This is an impact of the mining industry in the Upper Hunter region and not just a result of Mount Pleasant	<i>Workforce Management Strategy</i> Work with the main contractors on site (i.e. main services and coal processing) to identify ways to: <ul style="list-style-type: none"> prioritise local employment (existing population). develop strategies for people to relocate to MSC and UHSC LGAs. 	C = Moderate (G3, E1, V2, R1) L = Likely B3 High

⁷⁰ CCC, ACDF, Stakeholder D, Tony McTaggart (EHP First National) and Petrova and Marinova (2013).

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Continuing differences in perspectives and beliefs on the coal industry	Community division and continuation of community cohesion ⊖	People who support mining or oppose mining	Community contributions (donations and sponsorships)	C = Moderate (G2, E2, V2, R2) L = Likely A4 Extreme	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<p><i>Community and Stakeholder Engagement</i></p> <p>Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible.</p> <p>Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible. Work with the main contractors on site (i.e. main services and coal processing) to identify ways to:</p> <ul style="list-style-type: none"> prioritise local employment (existing population). develop strategies for people to relocate to MSC and UHSC LGAs. <p>Support for the agricultural industry e.g. supporting continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.</p> <p>Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. air quality work), participate/advocate for in developing and implementing management strategies from an industry perspective.</p>	C = Moderate (G2, E3, V2, R2) L = Likely B3 High
Impacts on personal and property rights							
Continued perceived sterilisation of property market - inability of landowners to sell (due to lack	Continued feelings of powerlessness, stress, uncertainty and self-image ⊖	Property owners who are impacted by Mount Pleasant but who have not been determined to have	Not required under current approval	C = Moderate (G3, E3, V2, R1) L = Almost Certain A3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<p><i>Community and Stakeholder Engagement</i></p> <p>Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible.</p>	C = Moderate (G3, E3, V2, R2) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
of acquisition rights)		acquisition rights				Support for the agricultural industry e.g. supporting continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.	
Impacts on decision making systems							
Continued frustration of continuing dust, noise, blasting and lighting impacts and the need to lodge a complaint/s with no perceived change in impact	People stop complaining ⊖	Near neighbours, surrounding rural communities and residents of Muswellbrook	Complaints process and (including following up with each complainant) and complying with DA conditions	C = Moderate (G3, E3, V2, R2) L = Almost Certain B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community and Stakeholder Engagement</i> Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible.	C = Moderate (G3, E3, V2, R2) L = Likely B3 High
Equity impacts							
Continuation of distributional impacts	Continued change in social networks, community cohesion and reinforcement of social differentiation and inequity ⊖	Near neighbours, surrounding rural communities and residents of Muswellbrook and other villages and towns	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	C = Major (G2, E3, V2, R1) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	<i>Community and Stakeholder Engagement</i> Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible. Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation. Support for the agricultural industry e.g. supporting continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH. Continue working with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. air quality work), participate/advocate for developing and	C = Moderate (G2, E3, V2, R2) L = Likely B3 High

Cause/ matter	Impact	Affected Parties	Current Mitigation Strategy	Social risk/opportunity rating	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
						implementing management strategies from an industry perspective.	
Mine life - changes to the landscape	Continued intergenerational impacts ⊖	Current and future generations.	Visual Impact Management Plan, Air Quality and Greenhouse Gas Management Plan, Blast Management Plan, Noise Management Plan	C = Moderate (G2, E1, V2, R1) L = Likely B3 High	Cumulative across the life of the Mount Pleasant Operation with the impact from the mining industry in the Upper Hunter region	<i>Community and Stakeholder Engagement</i> Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible.	C = Moderate (G2, E1, V2, R1) L = Likely B3 High
Fears and aspirations							
Failure of dams, especially the Fines Emplacement Area	Continued fear of loss of home and livelihood ⊖	Properties downstream of the mine on the Sandy Creek catchment	Dam design and construction	C = Moderate (G2, E1, V2, R1) L = Likely B4 High	Cumulative across the life of the Mount Pleasant Operation	<i>Community and Stakeholder Engagement</i> Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible.	C = Moderate (G2, E3, V2, R2) L = Likely B3 High

3.2.1 Community and Stakeholder Engagement Strategy

It is suggested that MACH consider updating its Community Engagement Plan in consultation with stakeholders to address existing and continued social impacts. Table 5 provides a summary of the suggested management strategies with the impacts that could be managed if implemented.

Table 5: Community and Stakeholder Engagement Measures

Suggested Management Strategy	Addressed Impacts
Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement methods that suits them and that are reasonable and feasible.	<p>Continued negative impact on health due to the stress of participating in the environmental approval process in the hope of influencing the decision.</p> <p>Time spent and opportunities lost for near neighbours and residents of surrounding rural communities and Muswellbrook to manage the impacts of the Project, including meeting with MACH and undertaking physical works, fencing and manage weeds and pests.</p> <p>Continued feelings of powerlessness, stress, uncertainty and self-image.</p> <p>Continued fear of loss of home and livelihood.</p>
Engage with stakeholders regarding mine closure planning and how the Project can contribute to the Upper Hunter long-term transition from coal mining and power generation.	<p>Continued feelings of frustration and annoyance and noise impacts from vehicles.</p> <p>Continued negative impact on health and wellbeing</p> <p>Continued negative impact on the level of amenity and decreased quality of the living environment in which people live, work and play.</p> <p>Continued feelings of powerlessness.</p> <p>Continued change in social networks, community cohesion and reinforcement of social differentiation and inequity.</p> <p>Continued intergenerational impacts.</p>
Continue to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible.	<p>Continued dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity).</p> <p>Visual impacts (the mine and overburden on eastern side of ML).</p> <p>Continued housekeeping and cleaning workload due to deposited dust.</p> <p>Continued distributional impacts.</p>
Continue to provide as much information about the Project, its impacts and benefits as commercially practical. Further invest in relationships to mitigate existing impacts and widen the opportunities for benefits.	<p>Continued feelings of uncertainty and powerlessness.</p> <p>Continued loss of social networks, community cohesion and reinforcement of social differentiation and inequity.</p>

Suggested Management Strategy	Addressed Impacts
Support for the agricultural industry e.g. supporting continuation of agriculture on land not required for mining operations or temporary trading of water licenses for periods the licences are not required by MACH.	<p>Continued loss of rural communities</p> <p>Continued tension of community and the transition from agricultural or rural town to mining town</p> <p>Community division and continuation of community cohesion</p> <p>Continued feelings of powerlessness, stress, uncertainty and self-image</p> <p>Continued change in social networks, community cohesion and reinforcement of social differentiation and inequity</p>
Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. air quality work), participate/advocate for developing and implementing management strategies for material impacts from an industry perspective.	<p>Continued negative impact on health and wellbeing.</p> <p>Continued housekeeping and cleaning workload due to deposited dust.</p> <p>Continued change in social networks, community cohesion and reinforcement of social differentiation and inequity.</p> <p>Continued intergenerational impacts.</p>

3.2.2 Workforce Management Strategy

It is suggested that MACH develop Workforce Management measures in collaboration with the main contractors on site (i.e. mining services and coal processing). The Workforce Management Strategy would identify roles and responsibilities for managing and monitoring social impacts associated with the workforce. Table 6 summarises management strategies and negative social impacts that could be reduced and enhancement of positive social impacts if the workforce management measures are implemented.

Table 6: Workforce Management Measures

Suggested Management Strategy	Key Addressed Impact
Continued traineeships and apprenticeships for local people (adult and school leavers).	Increased opportunities for apprenticeships and traineeships.
Work with local organisations to develop a program to employ and train local people who have previously been unemployed. Offer to work with existing stakeholders such as MSC, Wanaruah Local Aboriginal Land Council, ACDF (or a similar Aboriginal community development organisation that is active in the community) and TAFE to develop a program in collaboration.	Opportunity to reduce local unemployment and create an increase in the number of people with skills in the MSC, UHSC and SSC LGAs.
<p>Consult with Corrective Services Industries on how to maximise the opportunities for graduates from the Gundi Program.</p> <p>Work with contractors to identify ways to maximise employment opportunities with them and throughout their networks.</p>	Reduced unemployment.
<p>Work with the main contractors on site (i.e. main services and coal processing) to identify ways to:</p> <ul style="list-style-type: none"> prioritise local employment (existing population). develop strategies for people to relocate to MSC and UHSC LGAs. 	<p>Continued presence of temporary resident mining workers in Muswellbrook and other villages and towns.</p> <p>Continued and increased number and type of vehicles leading to congestion, perceived decreased safety on the New England Highway between Singleton and Muswellbrook on shift change.</p>

Suggested Management Strategy	Key Addressed Impact
	Continued change in community identification and connection and loss of social networks and social capital. Continued tension of community and the transition from agricultural or rural town to mining town.
Continue to induct employees regarding driving regulations to promote good behaviour on local roads.	Continued and increase in travel times, decrease in safety and feelings of frustration and annoyance.
Work with near neighbours who share access to identify if there are opportunities to address this impact that are reasonable and feasible.	Continued feelings of frustration and annoyance from noise impacts from vehicles.
Develop a Policy to promote and support workers to participate in local community groups in the MSC, UHSC or SSC LGAs (e.g. the RFS).	Continued participation and support for local community groups. Decrease in membership and participation in RFS.
Work with MCCI to develop and implement strategies for local spend, focused on workers and their families.	Continued change in social networks, community cohesion and reinforcement of social differentiation and inequity.

3.2.3 Housing and Accommodation Strategy

It is suggested that MACH develop Housing and Accommodation Strategy in collaboration with main contractors on site (i.e. main services and coal processing) and stakeholders. The Housing and Accommodation Strategy would identify roles and responsibilities for managing and monitoring social impacts associated with accommodating the workforce. Table 7 summarises the recommended strategies and impacts that could be reduced if the Housing and Accommodation Strategy is implemented.

Table 7: Housing and Accommodation Measures

Suggested Management Strategy	Impact
Work with the main contractors on site (i.e. main services and coal processing) to identify ways to: <ul style="list-style-type: none"> prioritise local employment (existing population). develop strategies for people to relocate to MSC and UHSC LGAs. 	Unintended impacts on housing availability, appropriateness and affordability.
Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. impact on housing and levels of housing stress), participate/advocate for developing and implementing management strategies for material impact from an industry perspective.	Unintended impacts on housing availability, appropriateness and affordability.
Provide information regarding the Project workforce and the associated predicted housing demand to the local councils on a regular basis.	Unintended impacts on housing availability, appropriateness and affordability. Community tensions.
Include local residential workforce as a Key Performance Indicator (KPI) in procurement processes for main contractors with associated management, monitoring and reporting.	Unintended impacts on housing availability, appropriateness and affordability. Community tensions. Participation in community organisations. Local spend.

3.2.4 Local Business and Procurement Strategy

Table 8 summarises the local business and procurement strategies and positive impacts that could be increased if implemented.

Table 8: Local Business and Procurement Measures

Suggested Management Strategy	Impact
Continue to work with MCCI and the Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group to develop and implement strategies for local spend. Consider approaching SCCI to identify opportunities for businesses in the Scone area who are not already supplying to MACH.	Continued and increased support for local businesses.

3.2.5 Community Health and Wellbeing Strategy

It is suggested that MACH develop Health and Community Wellbeing measures in collaboration with main contractors on site (i.e. main services and coal processing) and stakeholders that addresses potential health and wellbeing impacts. Table 9 summarises the health and wellbeing strategies and impacts that could be reduced if Health and Community measures are implemented.

Table 9: Health and Wellbeing Measures

Suggested Management Strategy	Impact
Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land.	Continued negative impact on health and wellbeing, including identity and connection to country. Continued negative impact on cultural identity, connection to country and self-esteem.
Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impacts that are reasonable and feasible.	Continued decrease in health and wellbeing. Continued solastalgia and eritalgia.
Consult with relevant medical and community service providers regarding potential Project workforce expansions or continuations and the associated medical and community service demand on a regular basis.	Potential impacts on medical services.
Continue to work with the Upper Hunter Mining Dialogue to understand the impacts the mining industry is having on the region (e.g. impact on the connection to country), participate /advocate for developing and implementing management strategies from an industry perspective.	Continued negative impact on cultural identity, connection to country and self-esteem.

3.3 Suggested Monitoring Strategies

Given the lag time between the SIA and the decision on whether the Project will proceed or not, it is suggested that a detailed monitoring framework is developed as part of the SIMP. The monitoring framework would be established based on the identified impacts in this SIA and various indicators identified in the Social Baseline Report (Appendix M and N).

The monitoring framework may include, but is not limited to, the following:

- Evaluation of the ACDF, or a similar Aboriginal community development organisation that is active in the community.
- Regular completion of workforce and/or community surveys.
- Implementation of the existing monitoring programs established as part of the various approved Mount Pleasant Operation management plans under Development Consent DA 92/97 as modified by the Project Development Consent.
- Review of human resource, complaints data and any relevant secondary data.
- Review and consideration of feedback received through an established dialogue with relevant stakeholders including local community groups (including Aboriginal community groups), neighbouring residents, community service and facility providers, and local suppliers.

4 Construction (at various times during the Project)

4.1 Potential social impacts

The identification of social impacts during the construction phase of the Project takes into consideration the conditions which are already applied to the Mount Pleasant Operation as outlined in Development Consent DA 92/97 and MACH's current mitigations of social impacts such as community engagement (CCC, complaints management, quarterly newsletter and website), ACDF and VPA.

The potential social impacts of the construction phase of the Project are set out in Table 10.

⊕ Positive impact ⊖ Negative impact

Table 10: Potential social impacts if the Mount Pleasant Optimisation Project proceeds – periods of construction, no additional mitigation (construction)

Cause of likely social impact (matters ⁷¹)	Impact description		Usual mitigation strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ⁷²			Cumulative
	Likely social impact	Affected group ⁷³		Extent	Duration	Severity ⁷⁴	Sensitivity ⁷⁵	S/C ⁷⁶	L ⁷⁷	Rating	
Impacts on way of life - housing											
Construction workforce	Pressure on existing temporary accommodation ⁷⁸ ⊖	Others trying to access temporary accommodation such as tourists or other projects	Workforce Accommodation Strategy	Muswellbrook Shire Council LGA	Periods of construction	Dependant on the management strategy or measures developed	Low	G3, E2, V2, R2 Moderate	Almost Certain	A3 High	Any other workforces being accommodated at the same time in similar accommodation
Impacts on way of life – employment											
Employment	Potential for local people to be employed ⊕	Existing labour force and unemployed	Local employment strategy	MSC, UHSC and SSC LGAs	Length of construction	Dependant on the worker	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	-
Impacts on way of life – how people move around											
Construction traffic	Increased frustration of increased traffic on local roads such as Wybong	Other regular road users.	Construction Transport Management Plan	Wybong and Bengalla Roads	Periods of construction when there are larger	Dependant on the management strategy or	High	G3, E3, V2, R1 Moderate	Almost certain	A3 High	Existing traffic associated with Mount Pleasant Operation, Bengalla Mine

⁷¹ As identified in Table 4 of the SIA Guideline.

⁷² See Appendix S for methodology.

⁷³ Based on affected groups in Appendix M.

⁷⁴ Categories for severity are Very High, High, Moderate and Low based on the scale or degree of change from the existing condition as a result of the impact. The decision of what category the impact is categorised is a professional judgement by the SIA practitioner based on engagement with stakeholders throughout the SIA Scoping and SIA for the EIS phase of work.

⁷⁵ Categories for sensitivity are Very High, High, Moderate and Low based on the vulnerability of the affected parties, the receiver or receiving environment or the importance places on the matter being affected. The decision of what category the impact is categorised as was based on SIA engagement in the SIA Scoping and SIA for the EIS phase of work.

⁷⁶ S = significance, C = consequence

⁷⁷ Likelihood categories are C = Almost Certain, L = Likely, P = Possible, U = Unlikely and R = Rare

⁷⁸ MSC and UHSC.

Cause of likely social impact (matters ⁷¹)	Impact description		Usual mitigation strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ⁷²			Cumulative
	Likely social impact	Affected group ⁷³		Extent	Duration	Severity ⁷⁴	Sensitivity ⁷⁵	S/C ⁷⁶	L ⁷⁷	Rating	
	and Bengalla Roads ⊖				construction workforces	measures developed.					and Mangoola Coal at the time of construction
Construction traffic on Mount Pleasant Operation Road	Continued feelings of frustration and annoyance and noise impacts from vehicles ⊖	Near neighbours who share access	Construction Transport Management Plan	Mount Pleasant Operation Road	During construction	Very High	Very High	G3, E3, V2, R3 Insignificant	Almost certain	A1 Moderate	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction
Health and wellbeing											
Seeing the construction occur	Solastalgia ⁷⁹ ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook.	Construction Environmental Management Plan	Near neighbours, surrounding rural communities, Muswellbrook	Length of construction	Dependant on the individual and dependant on the management strategy or measures developed.	High	G2, E1, V2, R3 Major	Likely	B4 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction
Realignment of Northern Link Road - construction impacts	Decrease in levels of homeliness and connection to place ⊖	Nearby residents	Construction Environmental Management Plan	People living along Dorset Road	2025	Dependant on the management strategy or measures developed.	High	G2, E3, V2, R2 Moderate	Almost certain	A3 High	Existing impacts from the Mount Pleasant Operation at the time of construction
Construction noise and dust	Decrease in physical and mental health ⊖	Residents who experience amenity impacts.	Construction Environmental Management Plan	Nearby neighbours	Periods of construction	Dependant on the individual and dependant on the management strategy or	High	G2, E3, V2, R1 Moderate	Almost certain	A3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction

⁷⁹ MSC, Stakeholder B, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Albrecht et al (2007), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

Cause of likely social impact (matters ⁷¹)	Impact description		Usual mitigation strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ⁷²			Cumulative
	Likely social impact	Affected group ⁷³		Extent	Duration	Severity ⁷⁴	Sensitivity ⁷⁵	S/C ⁷⁶	L ⁷⁷	Rating	
						measures developed.					
Employment	Positive health and wellbeing impacts of being employed ⊕	Construction workers	Local Labour Commitment	Dependant on residential location of worker	Length of contract	Dependant on the individual and dependant on the management strategy or measures developed.	Unknown, depends on the economic/employment situation at the time	G2, E2, V2, R3 Major	Almost certain	A4 Extreme	-
Impacts on the quality of the living environment (surroundings)											
Construction of the Mine Water Dam and upgrades to the Fines Emplacement Area.	Noise and dust impacts leading to a decrease in level of homeliness and connection to place ⁸⁰ ⊖	Near neighbours (western side of ML)	Construction Environmental Management Plan	Near neighbours downstream of the dams on Sandy Creek catchment.	For the length of construction.	Subject to the individual and if mitigation measures in place.	High	G2, E3, V2, R1 Moderate	Almost certain	A3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction.
Socio-economic impacts											
Construction workforce	Local spend ⊕	Local businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Not required under current approval	Muswellbrook, Upper Hunter and Singleton LGAs.	During periods of construction	Dependant on number of workers	High	G3, E1, V2, R2 Moderate	Likely	B3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction.
Local spend by construction workers	Increased turnover for local businesses ⊕	Local businesses	Local Procurement Policy	Muswellbrook, Upper Hunter and Singleton LGAs.	During periods of construction	High	High	G3, E1, V2, R2 Moderate	Likely	B3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the

⁸⁰ Moore, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group

Cause of likely social impact (matters ⁷¹)	Impact description		Usual mitigation strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ⁷²			Cumulative
	Likely social impact	Affected group ⁷³		Extent	Duration	Severity ⁷⁴	Sensitivity ⁷⁵	S/C ⁷⁶	L ⁷⁷	Rating	
											time of construction.
Cultural impacts											
Reduction in health due to impacts on country and waters.	Reduction of cultural identity and self-esteem. ⊖	Aboriginal community with connections to the land and waters being impacted ⁸¹	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	Land and waters affected by construction	Permanent	High	High	G2, E2, V1, R2 Significant	Likely	B5 Extreme	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction
Opportunity to connect with country and waters by undertaking land management	Increase in cultural identity and self-esteem. ⊕	Aboriginal community with connections to the land and waters being impacted.	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	Land and that needs to be rehabilitated or managed after construction	Life of the piece of infrastructure	High	High	G2, E2, V1, R2 Significant	Likely	B5 Extreme	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction
Equity impacts											
Residents near the locations of construction experience more impacts than those further away	Change in social networks, community cohesion and reinforcement of social differentiation and inequity ⁸² ⊖	Near neighbours, surrounding rural communities and residents of Muswellbrook	Construction Environmental Management Plan	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project.	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing division in Muswellbrook and Singleton on mining.	G2, E1, V2, R1 Major	Likely	B4 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction

⁸¹ Wanaruah Local Aboriginal Land Council, Earth Connection Indigenous Corporation and Cottle (2013).

⁸² Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Sincovich et al (2018) and *Land and Environment Court (2019)*

Cause of likely social impact (matters ⁷¹)	Impact description		Usual mitigation strategy	Impact characteristics (after mitigation)				Social risk/opportunity rating ⁷²			Cumulative
	Likely social impact	Affected group ⁷³		Extent	Duration	Severity ⁷⁴	Sensitivity ⁷⁵	S/C ⁷⁶	L ⁷⁷	Rating	
Fears and aspirations											
Failure of dams, especially the Fines Emplacement Area	Fear of loss of home and livelihood ⊖	Properties downstream of the mine on the Sandy Creek catchment.	Dam design and construction	Downstream of Sandy Creek	Permanent	Very High	Very High	G2, E1, V2, R1 Major	Likely	B4 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction

4.2 Suggested Management Strategies

This section sets out suggested management strategies for the potential social impacts likely to be experienced as part of the construction phases of the Project.

It is suggested that MACH develops a Construction Community Engagement Plan for the period when there is a large construction workforce required, for example during:

- Mine Infrastructure Area (MIA) Expansion Stage 2a, CHPP Stage 2 and Fines Emplacement Area Raise 2 which is expected to occur from January 2026 through to December 2027, with a peak estimated workforce of 414 people and
- MIA Expansion Stage 2b and CHPP Stage 2b which is expected to occur from January 2032 through to December 2033, with a peak estimated workforce of 309 people.

It is suggested that the Construction Community Engagement Plan be developed in consultation with stakeholders and is based on the IAP2 engagement spectrum. The Construction Community Engagement Plan could, for example, include the following components:

- Objectives, principles and KPIs
- A description of the social environment the construction will be undertaken in
- Negotiables and non-negotiables
- Action Plan and proposed tools and activities and timings
- Processes for incorporating stakeholder feedback into decision making leading up to and during construction
- Roles and responsibilities
- Complaints management process
- Monitoring and Reporting and
- Evaluation.

Table 11 identifies the cause of impact, impact, who would be affected, current management strategy applied at the Mount Pleasant Operation, evaluation of the impact and suggested management strategy. Table 11 only lists those impacts with an assessed social rating/opportunity rating of high and extreme (i.e. A4, A5 and B5). It is suggested that the impacts listed in Table 11 are prioritised in terms of management.

⊕ Positive impact ⊖ Negative impact

Table 11: Suggested management strategies (construction)

Cause/ matter	Impact	Affected Parties	Usual Mitigation Strategy	Social risk/opportunity rating ⁸³	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Impacts on way of life - housing							
Construction workforce	Pressure on existing temporary accommodation ⊖	Others trying to access temporary accommodation such as tourists	Workforce Accommodation Strategy	C = Moderate (G3, E2, V2, R2) L = Almost Certain A3 High	Any other workforces being accommodated at the same time in similar accommodation	Development of a Workforce Management Strategy (as part of the SIMP) in consultation with relevant stakeholders	C = Moderate (G3, E2, V2, R1) L = Almost Certain A3 High
Impacts on way of life - employment							
Local employment through the Gundi Program	Employment opportunities ⊕	Graduates of the Gundi Program	Not required under current approval	Not rated (opportunity identified by SIA stakeholders)	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Consult with Corrective Services Industries on how to maximise the opportunities for graduates from the Gundi Program	C = Significant (G2, E2, V1, R2) L = Almost Certain A5 Extreme
Employment of unemployed local people	Employment opportunities ⊕	Unemployed people and their families	Not required under current approval	Not rated (opportunity identified by SIA stakeholders)	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Include employment of local unemployed people as a KPI in procurement processes for main construction contractors with associated management, monitoring and reporting	C = Significant (G2, E2, V1, R2) L = Almost Certain A5 Extreme
Employment	Potential for local people to be employed ⊕	Existing labour force and unemployed	Local employment strategy	C = Significant (G2, E3, V1, R2) L = Likely B5 Extreme	-	Work with local organisations to develop a program to employ and train local people who have previously been unemployed. Offer to work with existing stakeholders such as MSC, Wanaruah Local Aboriginal Land Council, ACDF (or a similar Aboriginal community development organisation that is active in the community) and TAFE to develop a program in collaboration.	C = Significant (G2, E3, V1, R2) L = Likely B5 Extreme

⁸³ See Appendix S for methodology

Cause/ matter	Impact	Affected Parties	Usual Mitigation Strategy	Social risk/opportunity rating ⁸³	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Impacts on way of life – how people move around							
Construction traffic	Increased frustration of increased traffic on local roads such as Wybong and Bengalla Roads ⊖	Other road users	Construction Transport Management Plan	C = Moderate (G3, E2, V2, R1) L = Almost Certain A3 High	Existing traffic associated with Mount Pleasant Operation, Bengalla Mine and Mangoola Coal at the time of construction	Work with near neighbours who share access to identify if there are opportunities to address this impact that are reasonable and feasible	C = Moderate (G3, E3, V2, R2) L = Likely B3 High
Impacts on health and wellbeing							
Seeing the construction occur	Solastalgia ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook.	Construction Environmental Management Plan	C = Major (G2, E1, V2, R3) L = Likely B4 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impact that are reasonable and feasible	C = Major (G2, E2, V2, R2) L = Likely B4 High
Realignment of Northern Link Road – construction impacts	Decrease in levels of homeliness and connection to place ⊖	Nearby residents	Construction Environmental Management Plan	C = Moderate (G2, E3, V2, R2) L = Almost Certain A3 High	Existing impacts from the Mount Pleasant Operation at the time of construction	Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impact that are reasonable and feasible	C = Major (G2, E2, V2, R1) L = Likely B4 High
Construction noise and dust	Decrease in physical and mental health ⊖	Residents who experience amenity impacts.	Construction Environmental Management Plan	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to address impact that are reasonable and feasible	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High
Employment	Positive health and wellbeing impacts of being employed ⊕	Construction workers	Local Labour Commitment	C = Major (G2, E2, V2, R3) S = Almost Certain A4 Extreme	-	Encouragement of Local Labour Commitment and local suppliers	C = Major (G2, E2, V2, R3) S = Almost Certain A4 Extreme
Impacts on the quality of the living environment (surroundings)							
Construction of the Mine Water Dam and upgrades to	Noise and dust impacts leading to a decrease in level	Near neighbours (western side of ML)	Construction Environmental Management Plan	C = Moderate (G2, E3, V2, R1) L = Almost Certain	Cumulative impacts from Mount Pleasant and impacts from	Continue to work with near neighbours and residents of surrounding rural communities to identify strategies to	C = Moderate (G2, E3, V2, R2) L = Almost Certain

Cause/ matter	Impact	Affected Parties	Usual Mitigation Strategy	Social risk/opportunity rating ⁸³	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
the Fines Emplacement Area	of homeliness and connection to place ⊖			A3 High	other mines at the time of construction	address impact that are reasonable and feasible	A3 High
Cultural impacts							
Reduction in health due to impacts on country and waters.	Reduction of cultural identity, and self-esteem ⊖	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	C = Significant (G2, E2, V1, R2) L = Likely B5 Extreme	Cumulative across the life of the Mount Pleasant Operation plus the Upper Hunter mining industry	Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activated and cultural activities on Aboriginal Heritage Conservation land	C = Major (G2, E1, V1, R3) L = Likely B4 High
Opportunity to connect with country and waters by undertaking land management	Increase in cultural identity and self-esteem ⊕	Aboriginal community with connections to the land and waters being impacted	Involvement of Aboriginal community in land management practices and Aboriginal Heritage Management Plan	C = Significant (G2, E2, V1, R2) L = Likely B5 Extreme	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Continue to work with relevant Aboriginal organisations to develop opportunities for participation in rehabilitation activities and cultural activities on Aboriginal Heritage Conservation land	C = Significant (G2, E2, V1, R1) L = Likely B5 Extreme
Socio-economic impacts							
Construction workforce	Local spend ⊕	Local businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Not required under current approval	C = Moderate (G3, E1, V2, R2) L = Likely B3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Include local procurement as a KPI in procurement processes for main construction contractors with associated management, monitoring and reporting Continue to work with MCCI and the Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group to develop and implement strategies for local spend. Consider approaching SCCI to identify opportunities for businesses in the Scone area who are not already supplying to MACH	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High

Cause/ matter	Impact	Affected Parties	Usual Mitigation Strategy	Social risk/opportunity rating ⁸³	Cumulative	Suggested Management Strategy	Updated Social risk/opportunity rating
Local spend by construction workers	Increased turnover for local businesses ⊕	Local businesses	Local Procurement Policy	C = Moderate (G3, E1, V2, R2) L = Likely B3 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Include local procurement as a KPI in procurement processes for main construction contractors with associated management, monitoring and reporting Continue to work with MCCI and the Upper Hunter Mining Dialogue Joint Economic and Social Development Working Group to develop and implement strategies for local spend. Consider approaching SCCI to identify opportunities for businesses in the Scone area who are not already supplying to MACH	C = Moderate (G2, E3, V2, R1) L = Almost Certain A3 High
Equity impacts							
Residents near the locations of construction experience more impacts than those further away	Change in social networks, community cohesion and reinforcement of social differentiation and inequity ⊖	Near neighbours, surrounding rural communities and residents of Muswellbrook and other villages and towns	Construction Environmental Management Plan	C = Major (G2, E1, V2, R1) L = Likely B4 High	Cumulative impacts from Mount Pleasant and impacts from other mines at the time of construction	Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible	C = Major (G2, E1, V2, R2) L = Likely B4 High
Fears and aspirations							
Failure of dams, especially the Fines Emplacement Area	Fear of loss of home and livelihood ⊖	Properties downstream of the mine on the Sandy Creek catchment	Dam design and construction	C = Major (G2, E1, V2, R1) L = Likely B4 High	Cumulative impacts from Mount Pleasant Operation and impacts from other mines at the time of construction	Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop a way of engagement that suits them and that is reasonable and feasible	C = Moderate (G3, E3, V2, R1) L = Likely B3 High

4.3 Suggested Monitoring Strategies

Given the lag time between the SIA, the decision on whether the Project will proceed or not, and when construction is expected to be undertaken it is suggested that a detailed monitoring framework is developed as part of the SIMP for each phase of construction. The monitoring framework would be established based on the identified impacts in this SIA and various indicators identified in the Social Baseline Report (Appendix M and N).

The monitoring strategies may include, but are not limited to, the following:

- Implementation of the existing monitoring programs established as part of the various approved Mount Pleasant Operation management plans under Development Consent DA 92/97 as modified by the Project Development Consent.
- Review of human resource, complaints data and any relevant secondary data.
- Review and consideration of feedback received through an established dialogue with relevant stakeholders including local community groups (including Aboriginal community groups), neighbouring residents, community service and facility providers, and local suppliers.

5 Post closure

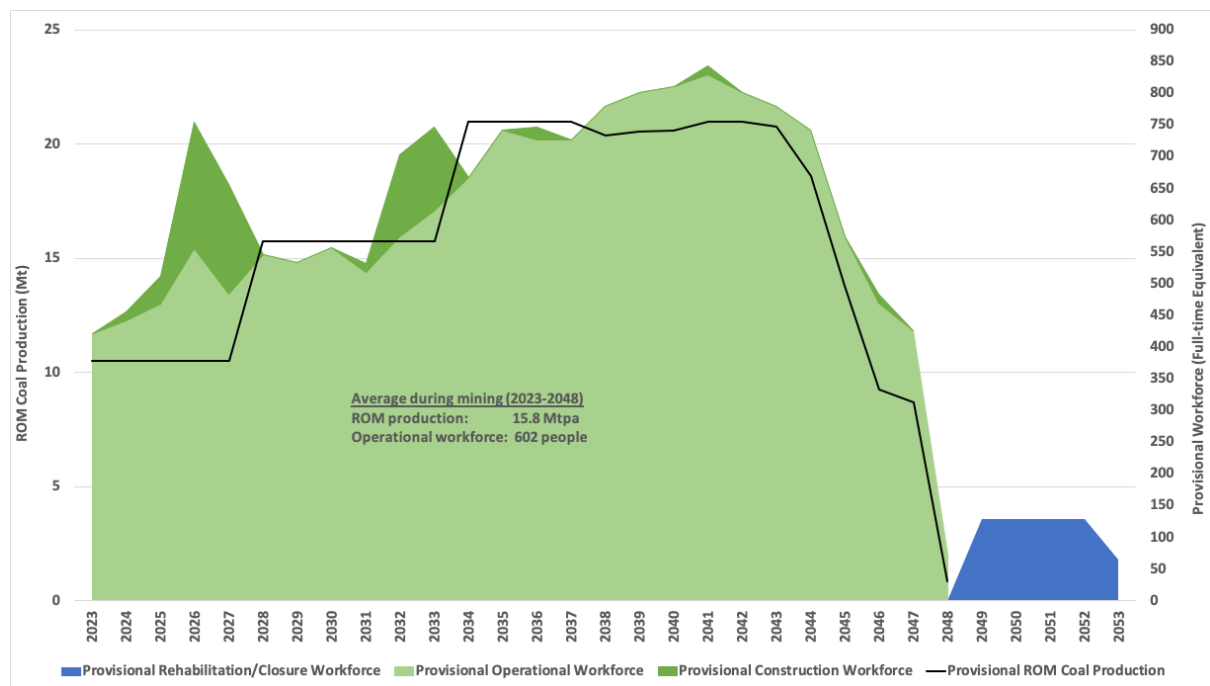
If the Project proceeds, it is assumed that the mine life will continue until 2048, 22 years into the future (or one generation). The social baseline in 2048 is unknown at this point in time and given such a long lead time there is a high level of uncertainty.

The identification of social impacts post closure takes into consideration the rehabilitation conditions which are already outlined in Development Consent DA 92/97 and MACH's current plans for the closure stage of the Project.

Development Consent DA 92/97 sets out broad rehabilitation objectives and includes ensuring public safety and minimising adverse socio-economic effects associated with mine closure.

It is assumed that the majority of the workforce associated with the operation of Mount Pleasant Operation will cease employment in 2048 and there will be a five year mine closure/rehabilitation program, which will involve a mix of previous and new employees. It has been estimated that the average workforce during the closure/rehabilitation program will be approximately 128 people, as shown in Figure 3 below.

Figure 3: Estimated closure/rehabilitation workforce



Source: MACH

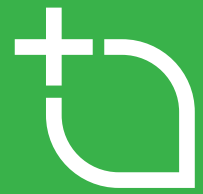
Given the timeframe between this SIA and the planned closure, only high level potential social impacts have been identified in Table 12 in order to inform future discussion with stakeholders about the transition process. Further discussion with stakeholders will identify other social impacts to be further researched. It is recommended that engagement with stakeholders about closure is a continual conversation throughout the operation, particularly given the conversation of transitioning from coal has already begun with the planned closure of the Liddell Power Station.

Table 12: Potential social impacts, post closure

Cause/ matter	Potential social Impacts
Impacts on way of life – how people live, work and play	
No employment associated the Mount Pleasant as a mine	Workers and their families may choose to keep living in the area and seek employment with other employers. DIDO or temporary residents will no longer be travelling to the site. Change in demand for housing in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs.
Impacts on health and wellbeing	
Cessation of environmental impacts associated with open cut coal mining	Improved health and wellbeing for those people who were experiencing the social impacts associated with environmental impacts associated with open cut coal mining.
Final void and overburden	Solastalgia for those people who knew the landscape pre-Mount Pleasant.
Impacts on services and facilities	
Cessation of employment associated the Mount Pleasant as a mine	Decrease in the demand for services and facilities such as medical services and education.
Cessation of the VPA	MSC no longer receives a community contribution.
Impacts on the quality of the living environment (surroundings)	
Final void	Subject to the use of the final void and water management strategies.
Overburden on eastern and northern sides of the ML	Permanent change to the landscape.
Post-closure land use	Subject to the final land use.
Socio-economic impacts	
Cessation of employment associated the Mount Pleasant as a mine	Reduced spend in the Muswellbrook, Upper Hunter and Singleton Shire Council LGAs.
Cessation of contacts for local businesses	Reduced income for businesses who were previously supplying Mount Pleasant.
Availability of water licences	Other people, companies/organisations may have access to the water licences previously held by MACH.
Cultural impacts	
Final land use	Impacts on Aboriginal people who have connection to the land and waters impacted by the land.
Final land use	Impacts on agricultural culture.
Family and community impacts	
No employment associated the Mount Pleasant as a mine	Change in community identity and social connections due to people relocating out of the area.
Personal and property rights	
Change in land ownership	Potential for new and existing businesses to expand on land that was once owned by MACH, e.g. previously owned as a buffer to the mine site.
Decision making systems	
Cessation of all works associated with the mine	Landowners and others may have certainty that the mine is over and no longer have to take it or its impacts into their decision making processes.
Equity impacts	
Overall impacts of closure	Those people who live and work closest to the mine will be impacted the most.
Fears and aspirations	
Hope for a positive transition process	Stakeholders have reported the hope of a more sustainable future after coal mining.

Source: collated from Everingham and Mackenzie (2019), Bainton and Holcobe (2018a &b) Burns and Church (2018), Owen and Kemp (2018), D'Silva and Norman (2015).

It is recommended that MACH undertakes regular monitoring of social impacts in accordance with the prepared SIMP throughout the life of the mine and the SIMP is reviewed, and if necessary revised, regularly. As closure is a predictable stage in the life of a mine, it is recommended that the industry or government guidelines are followed, learning from lessons of other mines likely to close prior to Mount Pleasant Operation.



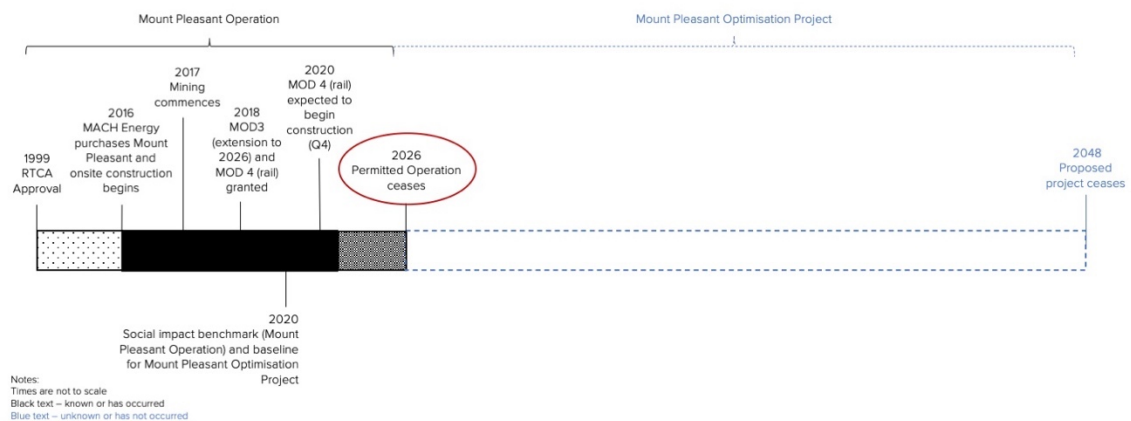
Appendix R
Assessment of Potential
Social Impacts -
Project is not approved

1 Introduction

Appendix C2 of the NSW SIA Guideline, sets out the requirement to describe and analyse the predicted nature and scale of the potential social impacts. The potential social impacts of the Project not proceeding are set out in Table 2. The structure for Table 2 is based on Table 6 of the SIA Guideline and modified to assess an operating mine, rather than a greenfield site.

The context for the identification and evaluation of social impacts in the “Project does not proceed” scenario is shown in Figure 1.

Figure 1: Context of the assessment of social impacts of the “project does not proceed” scenario



There would have been a lag time between the Social Baseline Study and decision as to whether the Project proceeds and the social environment at the time of “closure”, which is likely to be materially different to that described in Appendix M and N. This increases the level of uncertainty of the type of social impact identified and its evaluation. To address this level of uncertainty, and to enable the prediction of social impacts and their evaluation, assumptions have been made and these are outlined below.

It should be noted that if any of these assumptions change or the social baseline changes, then the impacts may or may not occur or may occur at a different level of consequence. It is anticipated this would be addressed in the mine closure processes under Development Consent DA 92/97.

Potential social impacts of the closure of the Mount Pleasant Operation are based on data from the following sources:

- SIA Scoping Stakeholder Case studies and SIA Case Studies (refer to Appendix H)
- Interviews with SIA Stakeholders (refer to Appendix C)
- Results of the SIA Community Survey (refer to Appendix F)
- Results of the Workforce Survey (refer to Appendix G)
- Complaints data (refer to Appendix E)
- Desk based research (references provided) and
- Professional experience of the SIA practitioner.

2 Assumptions

Assumptions made to identify the potential social impacts if the Project does not proceed are set out below.

2.1 Mount Pleasant Operation

The Mount Pleasant Operation would include the works approved under Rail Modification (Mod 4), including:

- product coal transport infrastructure, including a rail spur, rail loop, coal conveyor and rail loading facility
- new water supply infrastructure, including a water pipeline, pump station and associated electricity supply and
- demolishing and removing redundant rail and water supply infrastructure within the Bengalla Mine development consent boundary.

The mine would keep operating at a rate of 10.5Mtpa. The extra two CHPPs and additional MIA upgrades would not be undertaken, although ongoing maintenance would continue.

Closure and rehabilitation would take approximately five years to complete, with all works being completed by 2031.

2.2 Landform

There will be a final void and overburden waste near emplacement on the eastern side of the Mount Pleasant Operation mining leases.

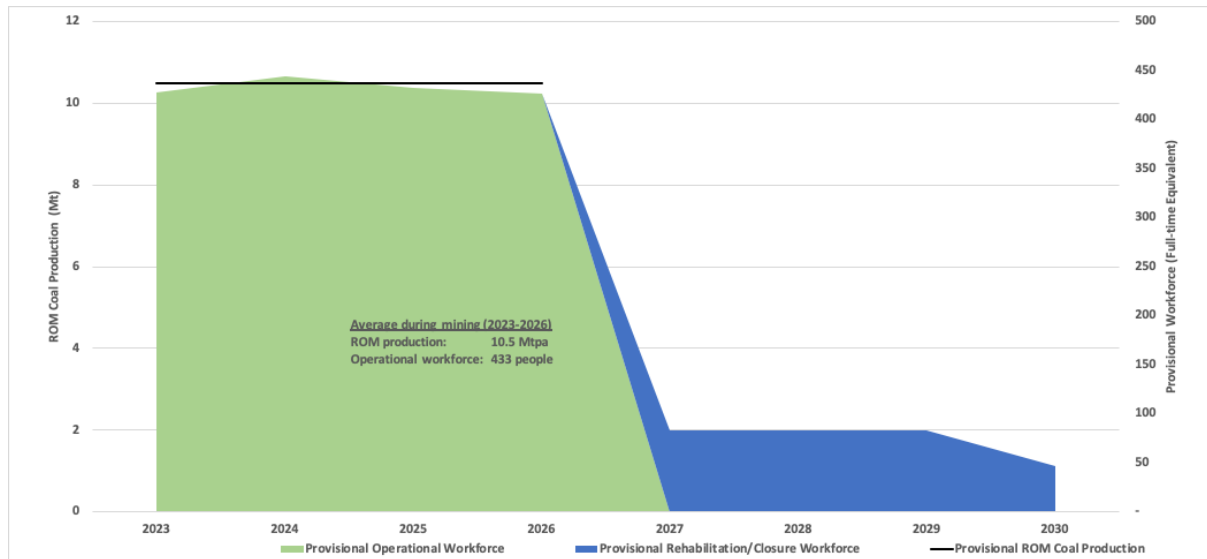
2.3 Land use

Predominantly native woodland or mine landforms and ongoing agricultural uses or un-mined lands.

2.4 Workforce

As the mine will keep operating at a rate of 10.5Mtpa, the workforce will be required to maintain this rate of production until the end of 2026. After 2026 there will be a combination of previous and new employees up to a total 100 people for four years, as shown in Figure 2.

Figure 2: Workforce if the Project does not proceed



2.5 Estimated cessation of workforce and population impacts

Table 1 sets out the assumptions about the workforce if the Project does not proceed. These assumptions are based on the current workforce at the Mount Pleasant Operation. The worst case scenario is that all the workers and their families leave the area prior to 2036.

Table 1: Assumptions about the workforce – project does not proceed

Characteristic	Assumption	
	2026	2036
Estimated total workforce (includes existing workforce) ¹	426	0
Muswellbrook Shire Council (MSC) Local Government Area (LGA)		
Estimated % of the workforce will be residing in the MSC LGA/number of workers ²	33% 140 workers	0
Estimated population change in MSC LGA (includes workers and their families) ³	432	-432
Estimated population change in MSC LGA ⁴	1%	-1%
Upper Hunter Shire Council (UHSC) LGA		
Estimated % of the workforce will be residing in the UHSC LGA/number of workers ²	16% 68 workers	0
Estimated population change in UHSC LGA (includes workers and their families) ³	209	-209
Estimated population change in UHSC LGA ⁴	1%	-1%
Singleton Council (SC) LGA		
Estimated % of the workforce will be residing in the SC LGA/number of workers ²	21% 89 workers	0

Characteristic	Assumption	
	2026	2036
Estimated population change in SC LGA (includes workers and their families ³)	275	-275
Estimated population change in SC LGA ⁴	1%	-1
Living in other LGAs (DIDO)		
Estimated % of the workforce staying in MSC LGA while on shift (temporary population)	30% 123 workers	0
Estimated temporary population change in MSC LGA ^{4,5}	1%	-1%

Notes:

¹ As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people. For the purpose of this SIA, the previously estimated maximum full time equivalent operational workforce of the Mount Pleasant Operation (380 people) has been used as this was the FTE employment at the time of undertaking the SIA.

² Estimates of percentage workforce are based on an average of 2019 and 2020 workforce data, and data from the Workforce survey.

³ 11% of workforce will be single, 25% of the workforce will be couples no children, 57% will be couples with 2 children, 4% will be one parent with 2 children and 3% will be people living in share houses or other family type.

⁴ Population projections are based on DPIE population projections available from <https://www.planning.nsw.gov.au/Research-and-Demography/Population-projections/Projections>

⁵ Assumes only half the DIDO workforce will be in MSC LGA at any one time.

It is assumed that the workforce will continue to be paid more than those not employed in the mining industry.

2.6 Impacted landholders

The impacted landholders will remain generally the same.

2.7 Local Supplier Strategy

MACH's Local Supplier Strategy will continue to be applied until 2030, although the businesses who supply Mount Pleasant may change during closure and rehabilitation as the needs of the Operation will change.

2.8 Voluntary Planning Agreement with Muswellbrook Shire Council

The Voluntary Planning Agreement (VPA) would cease in 2026.

2.9 Community contributions

Community contributions would continue to be in the order of \$100,000/year until 2026 when they will cease.

2.10 Aboriginal Community Development Fund

Aboriginal Community Development Fund would continue until 2026 when it will cease.

2.11 Environmental Initiatives

Biodiversity Offsets would continue to be managed as per the EPBC approval.

Aboriginal Heritage Conservation area would continue to be managed as per Development Consent DA 62/97.

2.12 Management of Environmental Impacts

The management of environmental impacts would continue to be undertaken in accordance with Development Consent DA 92/97 until 2026.

2.13 Community Engagement

Community Engagement activities would continue, which may include the following:

- ongoing meetings with key stakeholders
- MACH website
- quarterly newsletter
- Community Consultative Committee and
- complaints process.

2.14 Cumulative influences

Liddell Power Station would have closed at the end of 2023 and the site would be undergoing rehabilitation. Other coal mines in the area will be operating as set out in Figure 6 in Section 5.3.12 of the main text of the SIA. It has also been conservatively assumed that the Singleton Bypass and the Muswellbrook Bypass have not been constructed.

3 Social impacts if the Project does not proceed

Table 2 contains the likely social impacts to be experienced if the Project does not proceed. A column for current management strategy is not included in Table 2 because the current management strategies are not directed towards the Project not proceeding.

⊕ Positive impact ⊖ Negative impact

Table 2: Potential social impacts if the Project does not proceed - no additional mitigation

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Impacts on way of life – employment										
Loss of jobs currently available at the Mount Pleasant Operation	Loss of employment ⁸ ⊖	People who were employed and their families	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Until alternative employment can be gained	High	High	G2, E3, V2 ⁹ , R1 Moderate	Almost certain	A3 High	
Loss of indirect jobs (employees of businesses who supply to Mount Pleasant)	Loss of employment ¹⁰ ⊖	Local businesses and their employees	MSC, UHSC and SSC LGAs	Until alternative employment can be gained	High	High	G2, E3, V2, R1 Moderate	Almost certain	A3 High	
Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine										

¹ As identified in Table 4 of the SIA Guideline.

² See Appendix S for methodology.

³ Based on affected groups in Appendix M.

⁴ Categories for severity are High, Moderate and Low based on the scale or degree of change from the existing condition as a result of the impact. The decision of what category the impact is categorised is a professional judgement by the SIA practitioner based on engagement with stakeholders throughout the SIA Scoping and SIA for the EIS phase of work.

⁵ Categories for sensitivity are High, Moderate and Low based on the vulnerability of the affected parties, the receiver or receiving environment or the importance places on the matter being affected. The decision of what category the impact is categorised as was based on SIA engagement in the SIA Scoping and SIA for the EIS phase of work.

⁶ S = significance, C = consequence

⁷ Likelihood categories are Almost Certain, Likely, Possible, Unlikely and Rare

⁸ Workforce Survey, MCCI, Moore, MSC, Blackrock Industries.

⁹ It is assumed that the workers due to their skills and experience, will not be long term unemployed, therefore do not fall into the vulnerable category in the significance criteria.

¹⁰ MSC, MCCI, Blackrock Industries, Supply Solutions Group.

Cause of likely social impact (matters¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party³	Extent	Duration	Severity⁴	Sensitivity⁵	S/C⁶	L⁷	Rating	
Impacts on way of life - housing										
Workforce and their families relocating out of the area (potential for downturn in housing market)	Less pressure on affordable housing and change (i.e. decrease) in property values in Muswellbrook and other villages and towns¹¹ ⊕	Low income families currently living in or wanting to relocate to Muswellbrook and other villages and towns	Muswellbrook and other villages and towns	Mining operation will cease in 2026.	Moderate	High	G2, E2, V1, R2 Significant	Likely	B5 Extreme	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Workforce and their families relocating out of the area (potential for downturn in housing market)	Decrease in demand for housing and potential reduction in house and land value¹² ⊖	Home owners and investors	Muswellbrook, Denman, Aberdeen, Scone and Singleton	Until the market turns positive again	Low	High	G2, E3, V2, R3 Moderate	Possible	C3 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Impacts on way of life – how people get around (roads, public transport etc)										
Workers and deliveries no longer accessing the site via New England Highway between Singleton and Muswellbrook¹³	Decrease in travel times, perceived increased safety and less feelings of frustration and annoyance¹⁴ ⊕	Other road users, particularly residents of Muswellbrook and Singleton and emergency services	New England Highway between Muswellbrook and Singleton	Permanent	Low	High	G3, E1, V2, R1 Moderate	Unlikely	D3 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine Subject to the proposed Singleton and Muswellbrook Bypasses

¹¹ MSC and Andrea Young Planning Consultants (2014), community survey professional judgement based on case studies from MSC, Wanaruah Local Aboriginal Land Council, ACDF, Earth Connection Indigenous Corporation, Friends of the Upper Hunter Inc.

¹² MSC, Tony McTaggart EHP First National, community survey.

¹³ Professional judgement based on case studies in Scoping SIA and SIA and Road Transport Assessment.

¹⁴ Professional judgement based on case studies from Tony McTaggart Edwards Higgens Parkinson First National, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc.

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Decreased traffic on Bengalla and Wybong Roads ¹⁵	Decrease in travel times, perceived improved safety and less feelings of frustration and annoyance ⊕	Other road users and near neighbours who use Bengalla and Wybong Roads	Bengalla and Wybong Roads	Permanent	High	High	G3, E1, V2, R1 Moderate	Almost Certain	A3 High	Impacts will still be experienced from workers accessing Bengalla Mine and Mangoola Coal
Decreased traffic on the Mount Pleasant Operation Road	Reduction in feelings of frustration and annoyance and reduced noise impacts from vehicles ¹⁶ ⊕	Near Neighbours who share access.	Mount Pleasant Operation Road	Subject to post-mining land use	High	High	G3, E3, V2, R1 Moderate	Almost Certain	A3 High	-
Decrease in train movements on the Muswellbrook-Ulan Rail Line	Less train movements through Muswellbrook and less maintenance required ¹⁷ ⊕	Residents near train line and people who catch the train to and/or from Muswellbrook to Newcastle	n/a (ARTC) ¹⁸	-	-	-	-	-	-	-
Impacts on way of life – how people play (recreational activities)										
Reduction visual impacts on the Muswellbrook Race Course and trainers in Racecourse Road	Dust no longer impacting on the patronage of the	Trainers, owners, membership, visitors on a race day	Muswellbrook Race Course	Until landform is rehabilitated	Medium	Medium	G3, E3, V2, R2 Moderate	Unlikely	D3 Moderate	-

¹⁵ Professional judgement based on case studies from MSC, Moore (Gilgai), Stakeholder B, Community Survey and Workforce Survey.

¹⁶ Moore (Gilgai), professional judgement based on case studies.

¹⁷ Professional judgement based on case studies.

¹⁸ This impacted has been recorded and it has been suggested that it be monitored, however it is the responsibility of ARTC to manage the impacts of the train movements along the railway line.

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
	Muswellbrook Race Club patronage ¹⁹ ⊕									
Cessation of ACDF funding and MACH donations	Reduction in the ability to fund NAIDOC celebrations and biennial Cultural Spectacular ²⁰ ⊖	Residents and visitors of the Hunter Region	Hunter Region	Post closure	High	High	G2, E2, V1, R1 Significant	Almost Certain	A5 Extreme	-
Impacts on health and wellbeing										
Cessation of mining	Relief and certainty that don't have to participate in approval processes for Mount Pleasant Operation ²¹ ⊕	Neighbouring landholders and people from the surrounding villages and communities concerned about the environmental and social impacts of the mine	MSC and UHSC and SSC LGA	Post closure	Low	High	G3, E3, V2, R2 Moderate	Almost Certain	A3 High	Other projects may continue that impose similar requirements.

¹⁹ Professional judgement based on Stakeholder A.

²⁰ ACDF

²¹ Professional judgement based on case studies Moore, Stakeholder B, Jim Lonegran, Kayuga, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc. and Moffatt and Baker (2013).

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Cessation of dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity)	Increase in health and wellbeing ²² ⊕	Residents who experience amenity impacts	Surrounding rural communities, Muswellbrook and other villages	Post closure	Moderate	High	G2, E3, V2, R3 Moderate	Likely	B3 High	Impacts from Bengalla Mine and agriculture could still be experienced
Cessation of permanent changes to landscape (overburden and void)	Continued negative effect on health and wellbeing, including identity and connection to country ²³ ⊖	Aboriginal community with connections to the land and waters being impacted	Surrounding rural communities, Muswellbrook and other villages and towns	Since construction began on the site	High	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	A cumulative impact of the Mount Pleasant Operation and mining in the Upper Hunter region
Cessation of mining prior to crossing Castlerock Road and cessation of permanent changes to landscape	Reduction in solastalgia, change in levels of homeliness and change in connection to land or place ⊖	Near neighbours and residents of surrounding rural communities and Muswellbrook	Nearby neighbours, surrounding rural communities, Muswellbrook and Aberdeen	Since construction began on the site	Moderate	High	G2, E3, V2, R2 Moderate	Likely	B3 High	Cumulative impacts from Bengalla Mine and Mt Arthur Coal Mine
Cessation of environmental impacts associated with open cut coal mining such as air, noise, lighting and blasting	Reduction in solastalgia, change in levels of homeliness and change in connection to land or place ²⁴ ⊕	Near neighbours and residents of surrounding rural communities and Muswellbrook	Nearby neighbours, surrounding rural communities, Muswellbrook and Aberdeen	Post closure	High	High	G2, E3, V2, R2 Moderate	Likely	B3 High	Cumulative impacts from Bengalla Mine

²² Moore, GILGAI, community survey and professional judgement based on case studies.

²³ Professional judgement based on case studies from Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.

²⁴ Professional judgement based on case studies from MSC, ACDF, Moore, Stakeholder B, Jim Lonegran, Kayuga, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., SCCI, complaints data, community survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Cessation of environmental impacts associated with open cut coal mining such as air, noise, lighting and blasting	Cessation of eritalgia ²⁵ ⊕	Individuals and families who experience environmental impacts but whose property is not identified for acquisition due to noise or air impacts	Nearby neighbours, surrounding rural communities	Since construction began on the site	Moderate	High	G2, E3, V2, R2 Moderate	Likely	B3 High	-
Cessation of Employment	Negative health effects of ceasing employment ²⁶ ⊖	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Until alternative employment can be gained	High	High	G2, E3, V2, R1 Moderate	Likely	B3 High	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Cessation of working 12 hour shifts	Positive impact on health and wellbeing ²⁷ ⊕	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Unless alternative employment includes working 12 hours shifts	Moderate	Moderate	G2, E3, V2, R3 Moderate	Rare	E3 Low	-

²⁵ Professional judgement based on case studies from Jim Lonegran, Kayuga, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc. and MSC.

²⁶ Workforce Survey

²⁷ Workforce Survey

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Decreased traffic on roads	Less fatigued workers on the roads ²⁸ ⊕	Other road users (particularly during shift change). Emergency services if there is an accident	Roads between the Mount Pleasant Operation site and where the workers live	Post closure	High	High	G2, E3, V2, R3 Moderate	Likely	B3 High	Impacts of workers from Bengalla Mine
Impacts on services and facilities										
Workforce and their families relocating out of the area	Decreased demand on local medical services in Muswellbrook and other villages and towns ²⁹ ⊖	Other people accessing medical services	Muswellbrook and other villages and towns	As families begin to relocate out of the area	Low	High	G2, E1, V2, R2 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Workforce and their families relocating out of the area	Decreased demand on local medical services in Muswellbrook and other villages and towns ³⁰ ⊕	Other people accessing medical services	Muswellbrook and other villages and towns	As families begin to relocate out of the area	Low	High	G2, E1, V2, R2 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Cessation of either direct or indirect unemployment	Increased demand for mental health services ³¹ ⊖	People who are no longer employed due to closure	Muswellbrook and other villages and towns	As soon as someone loses their job	High	High	G2, E1, V2, R3 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine

²⁸ Professional judgement based on case studies from MSC, SSC, ACDF, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Workforce Survey and Community Survey.

²⁹ Workforce Survey, Community Survey and professional judgement based on case studies from Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

³⁰ Workforce Survey, Community Survey and professional judgement based on case studies from Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

³¹ Workforce Survey, Community Survey and Blackrock Industries.

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Workforce and their families relocating out of the area	Decreased demand for educational services if families leave the area ³² ⊖	Education providers e.g. childcare centres and schools	Muswellbrook and other villages and towns	As families begin to relocate out of the area	Moderate	Low	G2, E1, V2, R2 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Workforce and their families relocating out of the area	Decreased demand for educational services if families leave the area ³³ ⊕	Education providers e.g. childcare centres and schools	Muswellbrook and other villages and towns	As families begin to relocate out of the area	Moderate	Low	G2, E1, V2, R2 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Workforce and their families relocating out of the area	Decreased demand for emergency services (police, fire, ambulance and SES) due to reducing population ⊖	Emergency service providers	Muswellbrook and other villages and towns	As families begin to relocate out of the area	Moderate	Low	G2, E1, V2, R2 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Workforce and their families relocating out of the area	Decreased demand for emergency services (police, fire, ambulance and SES) due to reducing population ⊕	Emergency service providers	Muswellbrook and other villages and towns	As families begin to relocate out of the area	Moderate	Low	G2, E1, V2, R2 Major	Possible	C4 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Workforce and their families relocating out of the area	Decreased participation in and support for local community groups ³⁴ ⊖	Community organisations reliant on volunteers.	MSC, UHSC and SSC LGAS	As families begin to leave the area	Moderate	Moderate	G3, E1, V2, R2 Moderate	Possible	C3 Moderate	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine

³² Workforce Survey and Community Survey.

³³ Workforce Survey and Community Survey.

³⁴ Workforce Survey

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Cessation of MACH continued to support for local community-based organisations (community contributions)	Cessation of funding to provide services ³⁵ ⊖	Community groups and organisations	Muswellbrook, Upper Hunter and Singleton LGAs	From 2026/2030	Moderate	Moderate	G3, E1, V2, R1 Moderate	Almost Certain	A3 High	-
Cessation of Voluntary Planning Agreement (VPA) payments	Cessation of funding to MSC to be able to be spent on community services and facilities ³⁶ ⊖	Residents living in the MSC LGA	Muswellbrook and other villages and towns	Life of mine	Moderate	Moderate	G3, E2, V2, R1 Moderate	Almost Certain	A3 High	-
Impacts on the quality of the living environment (surroundings)										
Reduction in dust impacts (air) and/or noise and/or blasting and/or lighting impacts(amenity) ³⁷	Increase in health and wellbeing impacts leading to an increase in the level of homeliness and connection to place ³⁸ ⊕	People who experience amenity impacts	Near neighbours, surrounding rural communities, Muswellbrook and other villages and towns	Post closure	Moderate	High	G2, E3, V2, R2 Moderate	Almost Certain	A3 High	Impacts from Bengalla Mine will still be experienced
Socio-economic impacts										
Cessation of mine operations	No longer having to spend time spent and losing	Neighbouring landholders	Near neighbours	Post closure	Low	Moderate	G3, E3, V2, R2 Moderate	Likely	B3 High	-

³⁵ MACH

³⁶ VPA

³⁷ MSC

³⁸ Professional judgement based on case studies from MSC, ACDF, CCC, Moore, Stakeholder B, Glen Eden Holsteins Pty Ltd, Stakeholder D, Tony McTaggart Edwards Higgens Parkinson First National, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., complaints data, Community Survey, Albrecht et al (2007), Moran and Brereton (2013), Moffatt and Baker (2013) and Mcmanus and Connor (2013).

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
	opportunities associated with managing the impacts of the Project ³⁹ ⊕									
Cessation of dust impacts (air)	Reduced housekeeping and cleaning workload due to deposited dust ⁴⁰ ⊕	Residents who experience dust impacts.	Nearby neighbours, surrounding rural communities and Muswellbrook	Post closure	Moderate	High	G3, E3, V2, R2 Moderate	Likely	B3 High	Impacts from Bengalla Mine and agriculture could still be experienced
No longer having the opportunity for employment and comparative higher wages to other potential employers in the Upper Hunter region (e.g. Council or small business)	Decrease in standard of living and increased financial choices ⁴¹ ⊖	Current employees and contactors	Locations where the workforce live, Muswellbrook, Scone, Aberdeen, Denman, Singleton, Maitland, Cessnock, Newcastle, Central Coast, etc	Once no longer have a role at Mount Pleasant	Moderate	High	G2, E3, V2, R2 Moderate	Almost certain	A3 High	-
Workforce and their families relocating out of the area	Decreased support for local business from workers and their families buying locally ⁴² ⊖	Local businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Muswellbrook, Upper Hunter and Singleton LGAs	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost certain	A3 High	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine

³⁹ Professional judgement based on case studies from Moore, Stakeholder B, Glen Eden Holsteins Pty Ltd, and Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

⁴⁰ Professional judgement based on case studies from MSC, Moore, Stakeholder B and Stakeholder D, complaints data and community survey.

⁴¹ Workforce Survey

⁴² Workforce survey, Moore GILGAI, MCCI and SCCI.

Cause of likely social impact (matters ¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party ³	Extent	Duration	Severity ⁴	Sensitivity ⁵	S/C ⁶	L ⁷	Rating	
Cessation of local spend by Mount Pleasant Operation	Decreased support for local businesses ⁴³ ⊖	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs	Muswellbrook, Upper Hunter and Singleton LGAs	Life of mine	Moderate	Moderate	G3, E3, V2, R2 Moderate	Almost certain	A3 High	Cumulative with the closure of Liddell Power Station and potential closure of Mt Arthur Coal Mine
Cultural impacts										
Cessation of permanent changes to landscape (final void and overburden on eastern side of the ML)	Continued negative effect on health and wellbeing, including identity and connection to country ⊖	Aboriginal community with connections to the land and waters being impacted	Surrounding rural communities, Muswellbrook and other villages and towns	Since construction began on the site	High	High	G2, E3, V1, R2 Significant	Likely	B5 Extreme	A cumulative impact of the Mount Pleasant Operation and mining in the Upper Hunter region
ACDF no longer operated or funded	Cessation of funding for programs to promote cultural, educational, economic and health outcomes development ⁴⁴ ⊖	Aboriginal community	MSC and SSC LGAs	Ongoing (funding for ACDF)	High	High	G2, E1, V1, R2 Significant	Almost Certain	A5 Extreme	-
Potential land use change to include agriculture (e.g. expansion of existing agricultural businesses) ⁴⁵	Increase in agricultural culture ⁴⁶ ⊕	Agricultural community	Surrounding rural communities, Muswellbrook and other villages and towns	Post closure	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	-

⁴³ CCC, MCCI, Moore GILGAI, Blackrock and Supply Solutions Group.

⁴⁴ ACDF

⁴⁵ Glen Eden Holsteins Pty Ltd.

⁴⁶ Professional judgement based on case studies from MSC, Stakeholder B, Jim Lonergan, Glen Eden Holsteins Pty Ltd, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter Inc., Mcmanus and Connor (2013), Moffatt and Baker (2013) and Askland (2018).

Cause of likely social impact (matters¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party³	Extent	Duration	Severity⁴	Sensitivity⁵	S/C⁶	L⁷	Rating	
Impacts on family and community										
Cessation of impacts associated with land acquisition and deciding whether to stay or go because of Mount Pleasant Operation	Stability of social networks, community cohesion and agricultural communities ⊕	Property owner, their family and friends and remaining landholders/ community members	Properties surrounding/impacted by the former Mount Pleasant Operation	Post closure	High	High	G2, E3, V2, R1 Moderate	Almost Certain	A3 High	-
Differing perspectives and beliefs on the coal industry	Community division and continuation of community cohesion⁴⁷ ⊖	People who support mining or oppose mining	MSC, UHSC and SSC LGAs	Lead up and during the closure process	High	High	G2, E2, V2, R1 Major	Almost Certain	A4 Extreme	-
Workforce and their families relocating out of the area	Decrease in community cohesion and social networkers ⊖	Families who relocate out of the area and those people left behind	MSC, UHSC and SSC LGAs	Once families start to move away	High	High	G2, E2, V2, R1 Major	Almost Certain	A4 Extreme	-
Unemployment	Alteration of family structure⁴⁸ ⊖	Families of workers who cease employment either directly or indirectly	MSC, UHSC and SSC LGAs	Once the worker has lost their role or know their role will be made redundant	High	High	G2, E2, V2, R1 Major	Almost Certain	A4 Extreme	-
Equity impacts										
Cessation of mining	Those who once experience benefits or positive impacts would wear the cost (negative	Near neighbours, surrounding rural communities	MSC LGA	Leading up to, during and post closure	High	High	G2, E3, V2, R1 Moderate	Likely	B3 High	-

⁴⁷ Stakeholder A, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Friends of the Upper Hunter, Community Survey, Moffatt and Baker (2013), Sincovich et al (2018).

⁴⁸ Workforce Survey and Community Survey

Cause of likely social Impact (matters¹)	Impact description		Impact characteristics				Social risk/opportunity rating ²			Cumulative
	Impact	Affected Party³	Extent	Duration	Severity⁴	Sensitivity⁵	S/C⁶	L⁷	Rating	
	impacts) and those who were experiencing the negative now have those impacts cease⁴⁹ ⊖	and residents of Muswellbrook and other villages and towns								
Final land forms	Continued Intergenerational impacts⁵⁰ ⊖	Current and future generations.	Subject to the future generations							-
Fears and aspirations										
Final void	Long term environmental impacts of the final void and impacts on groundwater quality ⁵¹ ⊖	Land uses and people who rely on the aquifer now and in the future		Life of void	Low	Moderate	G2, E3, V2, R2 Moderate	Likely	B3 High	-

⁴⁹ Community survey, Denman Aberdeen Muswellbrook Scone Healthy Environment Group, Sincovich et al (2018) and *Land and Environment Court (2019)*.

⁵⁰ Professional judgement based on case studies from Stakeholder B, Stakeholder D and Denman Aberdeen Muswellbrook Scone Healthy Environment Group.

⁵¹ Professional judgement based on case study from Stakeholder B

4 Suggested Management and Monitoring Strategies

If the Project does not proceed, Mount Pleasant Operation would continue to operate under the approved Development Consent DA 92/97 until 2026, and continue to apply required management measures (including requirements in relation to mine closure and rehabilitation) in accordance with Development Consent DA 92/97.

Although the Development Consent DA 92/97 does not require MACH to develop or implement a SIMP, MACH implements a number of mitigation strategies to reduce the existing social impacts.

These include community engagement in accordance with MACH's various community engagement mechanisms and strategies (CCC, complaints management, quarterly newsletter, website and MACH's internal Community Engagement Plan and Environmental Management Framework), ACDF, VPA, and implementation of the approved Mount Pleasant Operation site-wide environmental management plans.

Some of the management and monitoring measures suggested in the 'if the Project proceeds'; scenario (Appendix Q) may have some application to the 'Project does not proceed scenario'. These include (Appendix Q):

- Continue to work with the neighbouring landholders and people from surrounding villages and communities to develop ways of engagement that suits them and develop management measures that are reasonable and feasible.
- Continuing to engage with stakeholders who are directly impacted and interested organisations to develop, implement and review environmental management strategies that are reasonable and feasible.
- Engage with stakeholders (including Aboriginal community groups/people) regarding mine closure planning and how the Project can contribute to the Upper Hunter long term transition from coal mining and power generation (with added considering of the social transition planning and management framework shown in Figure 3).

Figure 3: Social transition planning and management



The monitoring strategies suggested in the 'if the Project proceeds' scenario (Appendix Q) could also be applied to minimise/enhance and monitor the existing social impacts in the 'if the Project does not proceed' scenario.



Appendix S

Social Risk/Opportunity

Methodology

1 Introduction

The social risk/opportunity methodology for the Mount Pleasant Operation and Optimisation Project is based on the methodology outlined in Esteves *et al* (2017)¹. The work undertaken by Esteves *et al* builds on the IAIA's SIA Guidance and considers the concept of risk, and differentiates social risk from business risk so it conforms with the United Nations Guiding Principles on Business and Human Rights. The methodology is based on a mining project in Canada (Esteves 2020 *pers comms*) and has been tailored to the Mount Pleasant Project and the social area of influence.

The methodology has four steps:

1. Determine significance (significance and consequence)
2. Estimate likelihood
3. Calculate social risk/opportunity rating and
4. Prioritise.

This methodology has been applied to the impacts identified for the Mount Pleasant Operation (Appendix O), the SSD process (Appendix P), if the project proceeds (Appendix Q) and if the project does not proceed (Appendix R).

¹ Esteves, A. M., Factor, G., Vanclay, F., Götzmann, N. and Moreira, S. (2017) Adapting social impact assessment to address a project's human rights impacts and risks *Environmental Impact Assessment Review* 67 pp. 73-87

2 Step 1 - Determine significance

After social impacts have been identified, the first step is to determine significance. This involves classifying each impact on the basis of significance criteria as set out in Table 1.

Table 1: Significance criteria

Criteria	Description of Level		Level
	Negative impacts	Positive impacts ²	
Gravity	Impact will cause death or adverse health effects that could lead to significant reduction of life/or longevity; and or continued exposure is generally likely to lead to long term illness or disability	n/a	G1
	Infringement of access to: <ul style="list-style-type: none"> Basic life necessities (including education, livelihoods etc.) and/or Cultural, economic, natural or social infrastructure/assets that have been identified as highly valued by identified groups or subject matter experts in the scoping and assessment, including housing and/or Ecosystem services identified as priority to livelihoods, health, safety or culture in scoping and assessment steps of the assessment process 	Increased access to <ul style="list-style-type: none"> Basic life necessities (including education, livelihoods etc.) and/or Cultural, economic, natural or social infrastructure/assets that have been identified as highly valued by identified groups or subject matter experts in the scoping and assessment, including housing and/or Ecosystem services identified as priority to livelihoods, health, safety or culture in scoping and assessment steps of the assessment process 	G2
	All other impacts	All other impacts	G3
Extent ³	> 26,600 ⁴ people or > 50% of an affected group	> 26,600 ⁵ people or > 50% of an affected group	E1
	2,660 – 26,600 people or 5 – 50-% of an affected group	2,660 – 26,600people or 5 – 50-% of an affected group	E2
	<2,660 people or < 5% ⁶ of an affected group	<2,660 people or < 5% of an affected group	E3
Vulnerability ⁷	Will impact vulnerable people (as a group) or the entire community if the community is vulnerable to this impact because of recent trends or events (e.g.	Will impact vulnerable people (as a group) or the entire community if the community is vulnerable to this impact because of recent trends or events (e.g.	V1

² Esteves *et al* does not include descriptions for positive social impacts, benefits or opportunities. These have been developed based on the descriptions in the negative impact column.

³ Refer to the data on Baseline – Affected Groups in Appendix N

⁴ Half of the population in the combined area of MSC, UHSC and SSC LGAs in 2016.

⁵ Half of the population in the combined area of MSC, UHSC and SSC LGAs in 2016.

⁶ Burdge (2004)

⁷ In the context of the Mount Pleasant Operation, Mount Pleasant Optimisation Project, vulnerable people have been identified as those being on low income, Aboriginal or Torres Strait Islander or involved in the Gundi Program.

Criteria	Description of Level		Level
	Negative impacts	Positive impacts ²	
	conflict, natural disasters, ecosystem services, cultural heritage)	conflict, natural disasters, ecosystem services, cultural heritage)	
	Will impact other people who are not necessarily considered vulnerable in the given context	Will impact other people who are not necessarily considered vulnerable in the given context	V2
Ability to remediate or accomplish	Difficult to remediate	Easy to accomplish	R1
	Moderate to remediate	Moderate to accomplish	R2
	Easy to remediate	Difficult to accomplish	R3

Once the gravity, extent, vulnerability and ability to remediate or accomplish the impact has been determined, the consequence category is identified using Table 2.

Table 2: Consequence category

Consequence category	Specification of conditions for assigning consequence category
Significant ⁸	G1 (regardless of any other criteria) or
	G2 and V1 and R1 or R2 (regardless of extent)
Major	G2 and V1 and R3 (regardless of extent) or
	G2 and V2 and E1/E2 and R1/R2
Moderate	G2 and V2 and E3 (regardless of ability to remediate or accomplish) or
	G3 and V1 (regardless of extent and ability to remediate or accomplish) or
	G3 and E1/E2 and R1/R2 (regardless of vulnerability)
Minor	G3 and E1/E2 and V2 and R3
Insignificant	G3 and E3 and R3

⁸ Esteves *et al* used the term severe, we have replaced it with significant so the category can be applied to both positive and negative social impacts and aligns with the category of insignificant.

3 Step 2 - Estimate likelihood

The next step is estimating the likelihood of each social impact occurring using the scale set out in Table 3.

Table 3: Consequence category

Category	Identified by SIA stakeholders ⁹		Identified in third party data ¹⁰		Identified elsewhere ¹¹
Almost Certain	✓	+	✓		✗
Likely	✓	or	✓	+	✗
Possible	✗		✓	+	✓
Unlikely	✓		✗		✗
Rare	✗		✗		✓

⁹ Identified by SIA stakeholders during interviews for the SIA or Scoping SIA, the community survey and/or the workforce survey.

¹⁰ For NSW and include data collected by government departments e.g. ABS, NSW Police or NSW Health; research organisations e.g. University of Newcastle; or research companies e.g. SQM Research, Andrea Young Planning Consultants.

¹¹ Peer reviewed journal articles or SIA practitioner experience.

4 Step 3 - Social Risk/opportunity rating

A social risk/opportunity rating for positive and negative social impacts have been developed based on Esteves *et al* (2017) are set out in Figure 1 and Figure 2 respectively.

Figure 1: Social risk rating (negative impacts)

			Consequence level				
			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Significant
Likelihood level	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
Social risk rating							
	Low		Moderate		High		Extreme

Figure 2: Social opportunity rating (positive impacts)

			Consequence level				
			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Significant
Likelihood level	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
Social risk rating							
	Low		Moderate		High		Extreme

5 Step 4 - Prioritisation

Once social impacts have been allocated a social risk/opportunity rating, the next step is to prioritise the social risks for action as per the hierarchy set out in Table 4.

Table 4: Social risk hierarchy for action

Priority	Definition
1	All social impacts with a high or extreme risk
2	All other social impacts with significant or major consequences, irrespective of likelihood
3	All remaining social impacts with a moderate risk
4	All remaining low risk social impacts are monitored to ensure they do not escalate

In order to provide clarity on the decisions being made for significance the baseline in Table 5 is being used.

Table 5: Estimated numbers of people belonging to affected party

Affected parties	Estimated number	Methodology/data source
Current employees and contactors	380 ¹²	MACH, Thiess and Sedgman employ 380 on site
Graduates of the Gundi Program ¹	45	https://www.thiess.com/en/news/2019/thiess-among-finalists-for-prospect-awards
Unemployment in MSC ¹	603 or 8.2%	2016 ABS Census data
Businesses		
• Muswellbrook LGA	1,012	REMPPLAN
• Upper Hunter LGA	1,712	REMPPLAN
• Singleton LGA	2,059	REMPPLAN
People on low incomes housing in Muswellbrook and Singleton (low income defined as \$400/week/person) <ul style="list-style-type: none"> • Around 1,900 people in Muswellbrook (SA2) are estimated to be living in low income household (rounded to nearest 100 people) • Around 300 people in Muswellbrook Region (SA2) are estimated to be living in low income household (rounded to nearest 100 people) • Around 500 people in Scone (SA2) are estimated to be living in low income household (rounded to nearest 100 people) • Around 800 people in Scone Region (SA2) are estimated to be living in low income household (rounded to nearest 100 people) • Around 1,900 people in Singleton (SA2) are estimated to be living in low income household (rounded to nearest 100 people) • Around 400 people in Singleton Region (SA2) are estimated to be living in low income household (rounded to nearest 100 people) 	5,800	NCOSS
Home owners and investors <ul style="list-style-type: none"> • Around 1,515 dwellings in Muswellbrook (LGA) are owned outright, 1,805 are owned with a mortgage and 1,484 are rented out either through a real estate agent 	15,600	2016 Census Data

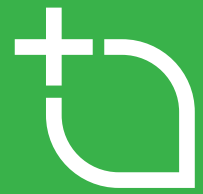
¹² As at mid-2020, MACH advised the full time equivalent operational workforce of the Mount Pleasant Operation had grown to approximately 440 people.

Affected parties	Estimated number	Methodology/data source
<ul style="list-style-type: none"> Around 1,831 dwellings in the Upper Hunter (LGA) are owned outright, 1,645 are owned with a mortgage and 642 are rented out either through a real estate agent Around 2,371 dwellings in the Singleton (LGA) are owned outright, 2,943 are owned with a mortgage and 2,200 are rented out either through a real estate agent 		
Other road users, particularly residents of Muswellbrook and Singleton and emergency services		
<ul style="list-style-type: none"> Traffic on Wybong Road 	average of 1,700 per day (over 7 day week)	Wybong Road and Benalla Road traffic count from TTPP Road Traffic Assessment
<ul style="list-style-type: none"> Traffic on Bengalla Road 	average of 1,156 per day (over a 7 day week)	Wybong Road and Benalla Road traffic count from TTPP Road Traffic Assessment
<ul style="list-style-type: none"> New England Highway – Singleton 	Around 26,000 vehicles per day	Singleton traffic count sourced from Transport for NSW
Near Neighbours who share access	2 properties	Land Use map
People who catch the train to and/or from Muswellbrook to Newcastle In 2019, an average number of 2,770 people travelled on the Hunter Line each day and used an Opal card. It is unknown what proportion of these people were from Muswellbrook. It is assumed it would be between 100 and 1000 people each day.	Estimated to be between 100 and 1,000/day	Transport for NSW Train Patronage – Monthly Figures, available from https://www.transport.nsw.gov.au/data-and-research/passenger-travel/train-patronage/train-patronage-monthly-figures
Trainers, owners, membership, visitors to the	Estimated to be between 1,000 and 2,000 people	Stakeholder A (Scoping SIA)
Residents and visitors of the Hunter Region	500 people	Number of people reported attending the 2019 NAIDOC week and celebration, Singleton Shire Council (2019)
Number of general public and special interest group objections and support for	Estimated to be 250	
<ul style="list-style-type: none"> MOD 3 (250 objections and 85 support) 		Department of Planning and Environment Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 3)
<ul style="list-style-type: none"> MOD4 3 objecting and 44 supporting 		Department of Planning and Environment Modification Assessment Report for Mt Pleasant Coal Mine section 75W Modification (DA 92/97 MOD 4)

Affected parties	Estimated number	Methodology/data source
<p>Aboriginal community with connections to the land and waters being impacted, people who identified as Aboriginal or Torres Strait Islander¹ in:</p> <ul style="list-style-type: none"> • Muswellbrook LGA 1,342 • Upper Hunter LGA 723 • Singleton LGA 1,302 <p>This is an estimate only and does not identify people who can speak for country.</p>	Estimated to be 3,367	2016 Census
Residents who experience amenity impacts.	Estimated to be 6,000	A combination of near neighbours, and residents from surround rural communities (e.g. Wybong and Kayuga) and Muswellbrook (SIA stakeholder engagement, complaints data and community survey).
Near neighbours and residents of surrounding rural communities and Muswellbrook	Estimated to be 6,000	A combination of near neighbours, and residents from surround rural communities (e.g. Wybong and Kayuga) and Muswellbrook (SIA stakeholder engagement, complaints data and community survey).
MACH workforce (including contractors) and their families	1,482	380 x 3.9 (average size family in the MSC, UHSC and SSC LGA is 3.9 people (ABS 2016 Census)
MACH suppliers and their associated workforces and families	67 FTE in MSC, UHSC and SSC LGAs	Economic Assessment
Population of MSC LGA	16,086	ABS 2016 Census
Population of UHSC LGA	14,112	ABS 2016 Census
Population of SSC LGA	22,987	ABS 2016 Census
Population of children <4 in Muswellbrook LGA	1,242	ABS 2016 Census
Population of children <4 in Upper Hunter LGA	858	ABS 2016 Census
Population of children <4 in Singleton LGA	1,537	ABS 2016 Census
Properties identified as having “acquisition rights” and their near neighbours and surrounding rural communities	28 (Noise only), 30 (Noise and Air), or 32 (Air only - Bengala influence)	Mount Pleasant Consolidated Consent

Notes:

¹Identified as vulnerable



Appendix T

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