

MACH Energy

Mount Pleasant Optimisation Project

SIA Scoping Report

December 2019



Prepared by

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Quality Information

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Executive Summary

The purpose of this Social Impact Assessment (SIA) Scoping Report is to inform the New South Wales (NSW) Department of Planning, Industry and Environment (DPIE) in its preparation of the Secretary's Environmental Assessment Requirements (SEARs) for MACH Energy's proposed Mount Pleasant Optimisation Project (the Project).

This SIA Scoping Report has been prepared to meet the requirements of Section 3 of the DPIE's *Social impact assessment guideline for State Significant mining, petroleum production and extractive industry development (September 2017)* (the SIA Guideline).

Section 3 of the SIA Guideline describes the two core objectives that should be met during the scoping phase of the SIA:

1. Potentially affected people and the project's area of social influence are to be identified and understood.
2. Social impacts needing further investigation in the Environmental Impact Statement (EIS) are identified and assigned a proportionate level of assessment.

This SIA Scoping Report is intended to meet the requirements of the SIA Guideline and has been undertaken using an exploration approach in order to maximise the description and understanding of the current social environment, existing impacts of the Mount Pleasant Operation and likely social impacts of the Project. Key to the meeting the core objectives of the SIA Scoping Phase was the participation of SIA Scoping Stakeholders.

Based on a 'whole of project' approach, the Project's social influence will extend across a geographical area from Murrurundi in the north, to Newcastle in the south-east and to Merriwa in the west. This includes impacts associated with the mine site, workforce, transport of coal via rail to Newcastle, Biodiversity Offset Areas and the Aboriginal Heritage Conservation Area.

The existing Mount Pleasant Operation, with the addition of cumulative impacts from the coal mining industry and social and economic trends, related and unrelated to coal mining in the Upper Hunter makes identifying the social area of influence challenging, so it will need to be reviewed as part of the SIA for the Project EIS.

Because of these challenges that this is a scoping exercise, the precautionary principle has been applied when identifying likely social impacts. During the SIA for the Project EIS, when more information is known about the social baseline and environmental impacts, a more informed assessment will be able to be made.

Based on field work (including engagement with stakeholders) and desk-based research, people who are likely to be impacted by the Project have been identified as:

- Near neighbours
- Surrounding rural communities
- Aboriginal people and associated organisations who have a connection to the land and waters within and connected to the Mount Pleasant Operation
- Surrounding villages and towns
- Muswellbrook Shire Council (MSC)



- Upper Hunter Shire Council (UHSC)
- Singleton Council
- Community services providers - including medical and mental health, schools and childcare, emergency services (police, fire and ambulance, State Emergency Services) and voluntary organisations (community and sporting)
- Agriculture, thoroughbred and viticulture industries
- Mount Pleasant Operation workforce (including contractors) and their families
- MACH Energy suppliers and their associated workforces and families
- Other business and industries (e.g. hospitality and retail) in the MSC, UHSC and Singleton Council Local Government Areas (LGAs).

The engagement with stakeholders has identified the range of differential impacts and issues which will need to be further explored with a wider range of stakeholders as part of the SIA for the Project EIS. These include:

- The area surrounding the mine will experience the greatest number and a higher intensity of likely social impacts, both positive and negative
- The likely negative impacts (such as social impacts associated with environmental impacts including dust, noise, lighting and blasting) are expected to be the most intense around the mine site
- Negative social impacts are expected to decrease in number and intensity as the distance from the mine site increases
- Social impacts associated with the Mount Pleasant Operation local supplier strategy and community contributions are expected to be focused on Muswellbrook and the broader MSC LGA and extend into the Upper Hunter and Singleton Council LGAs
- Social impacts associated with the Mount Pleasant Operation workforce (e.g. local spend, impacts on affordable housing, demand for community and emergency services) will depend on where the worker is living and whether they are choosing to drive in and out each day or each roster.

The application of the DPIE Scoping Tool, in the scenario where the Project proceeds, has indicated that the majority of likely social impacts require standard assessment. However, comprehensive assessment is identified for the likely social impacts associated with the following matters: amenity (i.e. distribution of environmental impacts); heritage (i.e. agricultural culture); community (i.e. services and facilities, cohesion, capital and resilience, community identification and connection, housing, impacts of 12-hour shift/roster and personal and property rights) and socio-economic (i.e. income inequality) aspects.

The application of the DPIE Scoping Tool, in the scenario where the Project does not proceed, has also indicated that the majority of the likely social impacts require standard assessment. However, comprehensive assessment is identified for the likely social impacts associated with some community aspects (i.e. health, services and facilities, cohesion, capital and resilience, housing and reduction of population).

The completion of this scoping exercise has identified a wide range of potential stakeholders that would be targeted in engagement activities during the SIA for the Project EIS and ways to engage with them.



1 Introduction

1.1 The Proposed Project

MACH Energy is proposing further development of their Mount Pleasant Operation to extend the life of the mine. This proposed Mount Pleasant Optimisation Project (the Project) includes the following development:

- Increased open cut extraction within the Mining Leases (MLs) obtained in support of the approved Mount Pleasant Operation to allow 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 (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. Coal would continue to be transported to the Port of Newcastle via the Muswellbrook to Ulan railway line
- 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 615 people, with a peak of approximately 840 people
- Ongoing exploration activities
- Other associated infrastructure, plant, equipment and activities.



1.2 Background

As required by the New South Wales (NSW) Department of Planning and Environment's (DPE) *Social impact assessment guideline for State Significant mining, petroleum production and extractive industry development* (DPE 2017) (the SIA Guideline), this Social Impact Assessment (SIA) Scoping Report has focused on identifying the social area of influence and the likely social impacts of the Project. In order to do this, the Project needs to be put in context with the current Mount Pleasant Operation and its history.

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

MACH Energy Australia Pty Ltd (MACH Energy) acquired the Mount Pleasant Operation from Coal and Allied Operations Pty Ltd (Coal & Allied) on 4 August 2016. MACH Energy 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)¹.

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 run-of-mine (ROM) coal. Up to approximately 9 trains per day with thermal coal products from the Mount Pleasant Operation run 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 5.1.1.

1.3 Purpose

The purpose of this SIA Scoping Report is to inform the NSW Department of Planning, Industry and Environment (DPIE) in its preparation of the Secretary's Environmental Assessment Requirements (SEARs) for the proposed Project.

The SIA Scoping Report has been developed to meet the requirements of Section 3 of the DPIE's the SIA Guideline.

Section 3 of the SIA Guideline describes the two core objectives that should be met during the scoping phase of the SIA:

1. Potentially affected people and the Project's area of social influence are to be identified and understood
2. Social impacts needing further investigation in the EIS are identified and assigned a proportionate level of assessment.

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



For the purposes of the SIA Scoping 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)

1.4 Structure of the Report

The structure of this SIA Scoping Report is outlined below:

1. Introduction – context of the SIA Scoping Report
2. Methodology – overview of the methodology undertaken to develop the SIA Scoping Report
3. The Optimisation Project – a description of the Project being assessed by the SIA Scoping process
4. Existing social environment – a description of the area likely to be impacted by the Project
5. Social area of influence – a description of the different social groups likely to be affected, identification of places of social value or importance, identification of current and expected social trends, a description of the history of the proposed Project and social impacts currently being experienced
6. Summary of social impacts – identification of likely social impacts if the Project proceeds and if it does not
7. Initial assessment of cumulative impacts
8. Completed scoping tool – completed tool as provided by DPIE
9. SIA Component of the EIS – a description of key issues to be further investigated and the SIA stakeholders to be invited to participate as part of the EIS engagement process
10. Conclusion
11. Reference List.

2 Methodology

2.1 SIA Guideline

The methodology for the SIA Scoping Report is based on the SIA Guideline.

The SIA Scoping Report addresses the two core objectives set by DPIE during the scoping phase of the SIA:

1. Potentially affected people and the project's area of social influence are to be identified and understood
2. Social impacts needing further investigation in the EIS are identified and assigned a proportionate level of assessment.

In order to achieve these objects, this SIA Scoping Report has been prepared in accordance with the following sections of the SIA Guideline:

- Section 1 “Social impact assessment for State Significant resource projects”
- Section 2 “Community engagement for social impact assessment”
- Section 3 “Scoping the social impact assessment component of the environmental impact statement”
- Appendix A “Scoping tool”
- Appendix B “Scoping methodology for negative social impacts”
- Appendix D “Review Questions”.

A response to the Appendix D “Review Questions” is provided in Appendix A.

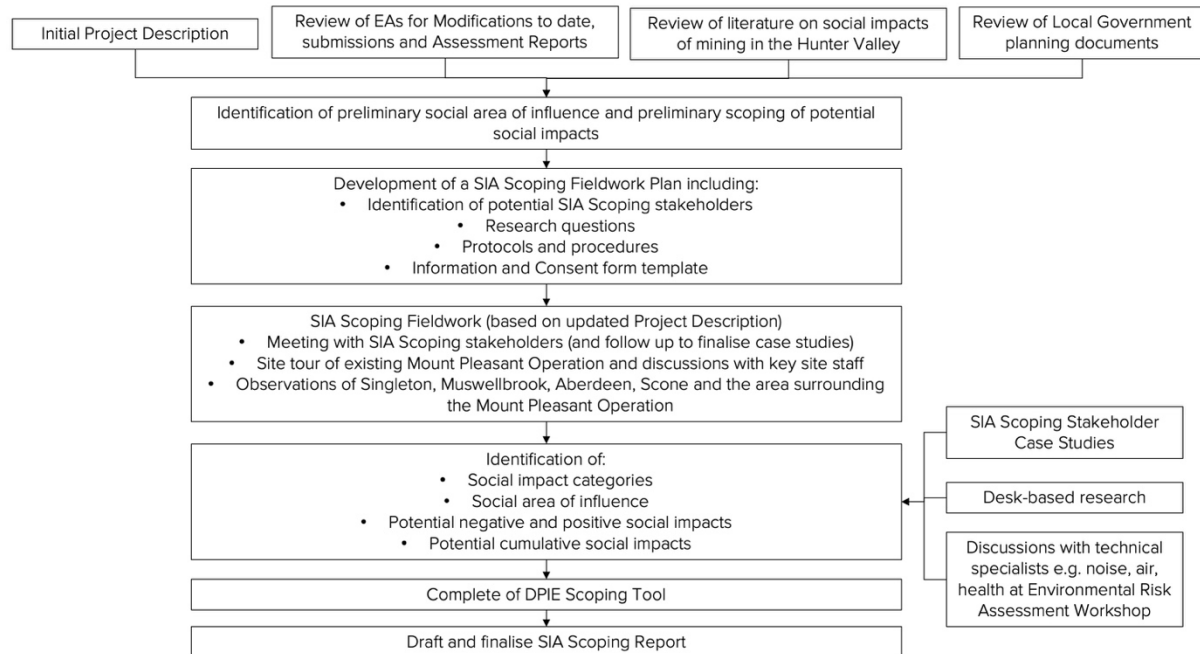
2.2 SIA Scoping Methodology

The process undertaken to complete the SIA scoping process is shown on Figure 1. An exploration approach was used in order to maximise the:

- Description and understanding of the current social environment
- Identification of existing positive and negative social impacts of the approved Mount Pleasant Operation and their differential distribution
- Identification of the likely positive and negative impacts of the proposed Project and their differential distribution
- Identification of cumulative impacts.

The identification of stakeholders to be invited to participate in the Stakeholder Scoping Case Studies was undertaken jointly with MACH. Further detail on the SIA Scoping methodology, including details on the field work, process used to identify social area of influence and conceptual model to identify social impacts is provided in Appendix C.

Figure 1: Summary of the SIA Scoping Methodology



2.3 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 Guideline provides a list of social impact categories, 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. These categories have been modified to allow for the social impacts likely to be experienced from the Project based on:

- Definitions of social impacts provided in van Schooten, Vanclay and Slootweg (2013)
- Submissions on previous Modifications
- Existing complaints
- The Stakeholder Scoping Case Studies undertaken for the SIA Scoping Phase
- Literature review on social impacts caused by mining projects in the Hunter Valley
- SIA practitioner experience.

The understanding of 'social impact' and 'consequence experienced by people' as referenced in the SIA Guideline is further defined for the purposes of this report by Vanclay et al (2015) who state:

"The International Principles for Social Impact Assessment considers that social impacts include all the issues associated with a planned intervention (i.e. a project) that affect or concern people, whether directly or indirectly. Specifically, a social impact is considered to be something that is experienced or felt in either a perceptual (cognitive) or a corporeal (bodily, physical) sense, at any level, for example at the level of an individual person, an economic unit (family/household), a social group (circle of friends), a workplace (a company or government agency), or by community/society generally. These different levels are affected in different ways by an impact or impact-causing action.

Because 'social impact' is conceived as being anything linked to a project that affects or concerns any impacted stakeholder group, almost anything can potentially be a social impact so long as it is valued by or important to a specific group of people."

Based on this, the categories of likely impacts used in this report are:

- 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)
- 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 complaint, remedy and grievance mechanisms
- Equity impacts – distribution of impacts across the community and 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.

2.4 Limitations

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

1. Findings of this report are based on the information available at the time of writing the Report
2. The findings of this SIA Scoping Report are based on the social environment and the results of Stakeholder Case Studies undertaken in late 2019. Stakeholder Case Studies included a range of people who identify as being impacted by the approved Mount Pleasant Operation. Depending on when the SIA for the Project EIS is undertaken, the social environment may change, therefore the social area of influence and potential social impacts could also be expected to change.
3. Some existing Mount Pleasant Operation workforce data was received from MACH after the SIA Scoping field work had been completed. This means:
 - Discussions with stakeholders about the impacts of the existing workforce were more general than specific and
 - The areas included in the social environment were broadened to include some additional towns, after data had been received.
4. Other technical studies for the Project had not been undertaken at the time of the SIA Scoping study (e.g. Noise and Blasting Assessment, Visual Assessment, Air Quality and Greenhouse Gas Assessment and Human Health Risk Assessment). These technical studies and others will be completed as part of the EIS for the Project.
5. The Stakeholder Case Studies (Appendix G) are based on the available Project information at the time of the stakeholders' participation and will be further investigated as part of the SIA for the Project EIS.
6. Not all stakeholders invited to participate in the Stakeholder Case Study accepted the invitation to participate, and of those that did, not all case studies were able to be finalised by the participants in time to be included in this report.
7. Consultation with the Mount Pleasant Operation employees and contractors did not occur as part of the SIA Scoping Phase. These consultations will take place during the SIA for the EIS.
8. Consultations with local businesses in the MSC, Upper Hunter and Singleton Council LGAs did not occur as part of the SIA Scoping Phase. An overarching view of businesses in Muswellbrook was sought from the Muswellbrook Chamber of Commerce and Industry Inc. supported by a review of the businesses who made submissions to the Mount Pleasant Operations or presented at the Independent Planning Commission Public Meeting for Modification 3. Consultations with local businesses will take place as part of the SIA for the EIS.



2.5 Assumptions

There are a number of assumptions in this report:

1. The workforce for the Project will reside in a potentially different pattern to the Mount Pleasant Operation workforce data presented in Section 5.1.2.2. This is because the workforce data contained in Section 5.1.2.2 is a mix of construction and operational workforces. It is assumed that once the construction is completed, a higher percentage of the workforce will live in either the MSC, UHSC or the Singleton Council LGA areas.
2. Where the SIA stakeholders were not able to participate, or chose not to participate in the SIA Scoping process, we have assumed that their opinions will be generally consistent with the views presented in their submission to Mount Pleasant Modification 3 and submissions and/or presentations to the Independent Planning Commission Hearing (refer to Section 5.1.1 for a description of Modification 3).
3. We have assumed that the opinions of businesses will remain consistent with those who made submissions to Mount Pleasant Modification 3 and submissions and/or presentations to the Independent Planning Commission Hearing for Modification 3 (refer to Section 5.1.1).
4. All information provided by MACH and stakeholders was accurate at the time the information was provided, including knowledge, data and reports.

3 The Project

3.1 Project location

The aim of the Project is 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 and ML 1708).

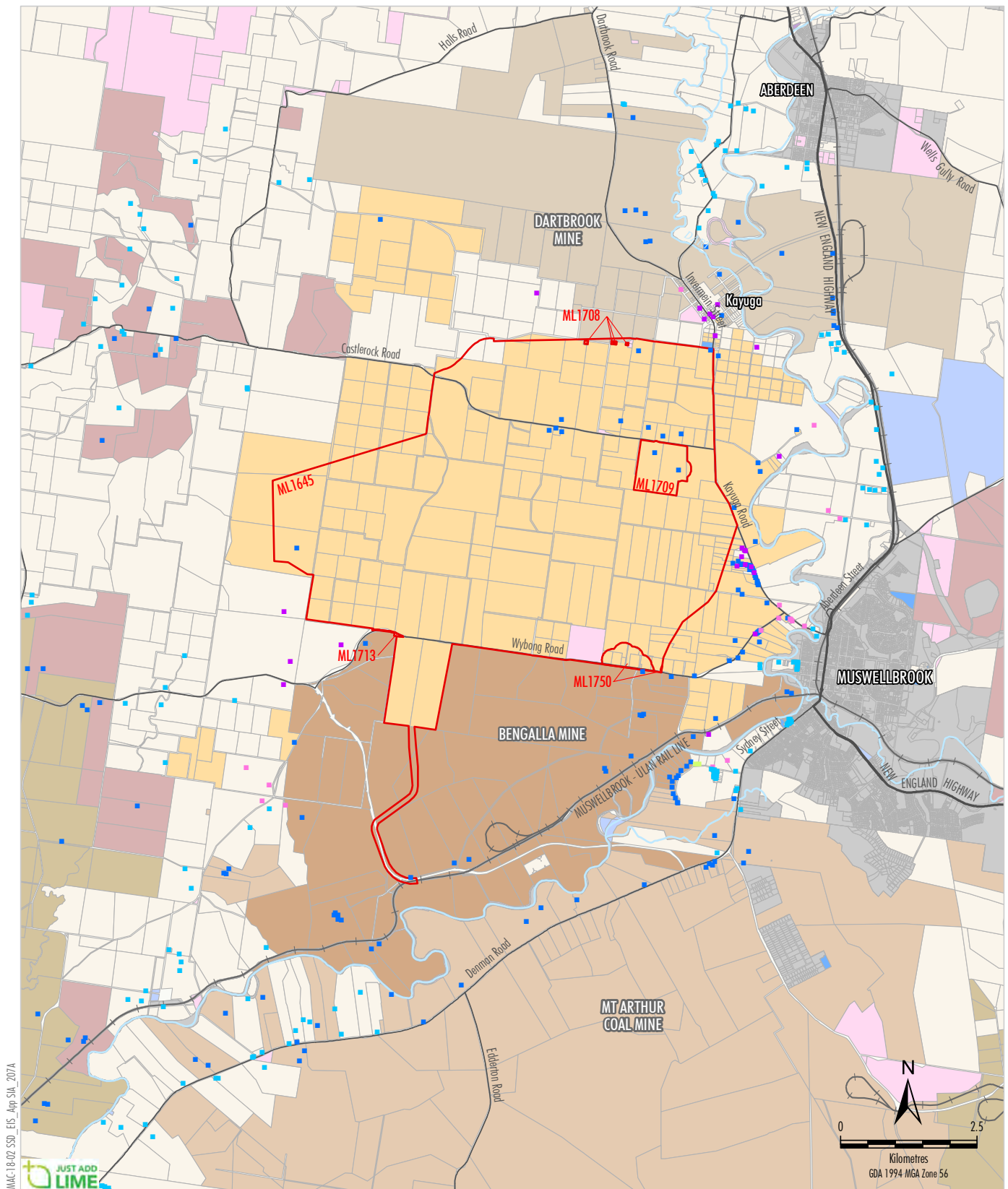
The Mount Pleasant Operation is located in a significant mining region of the Sydney Basin that includes a wide range of existing operational coal mines and a number of proposed coal mining projects. The Mount Pleasant Operation MLs are wholly within the Muswellbrook LGA.

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 (Figure 2). The nearest towns to the Mount Pleasant Operation are Muswellbrook to the east, the village of Aberdeen to the north and the village of Denman to the south-west. Dartbrook underground coal mine is located to the north, to the south is the Bengalla Mine (open cut coal mine), and to the south-east is the open cut Mount Arthur Coal Mine.

A number of regional roads surround and/or cross the Mount Pleasant mining lease, including Wybong, Kayuga, Dorset and Castlerock Roads. 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
- Rented out through real estate agents in Muswellbrook
- Used to house MACH staff and/or contractors.



MACHEnergy
MOUNT PLEASANT OPTIMISATION PROJECT
Land Ownership Overview

Figure 2

3.2 Extraction methods used

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

According to the NSW Minerals Council (2013), open-cut mining is undertaken where mineral deposits are sufficiently close to the surface. It involves blasting and removing surface layers of soil and rock to reach the mineral deposit. In the case of coal deposits, the coal seams are exposed, mined and transported to a coal preparation plant. At the coal preparation plant the coal is crushed and washed to remove impurities and then railed and shipped to customers. Open-cut mining can be more effective than underground methods, generally recovering over 90% of an ore reserve, and accounts for about 65% of raw coal production in NSW.

3.3 Scale and nature of the Project

3.3.1 Existing Mount Pleasant Operation

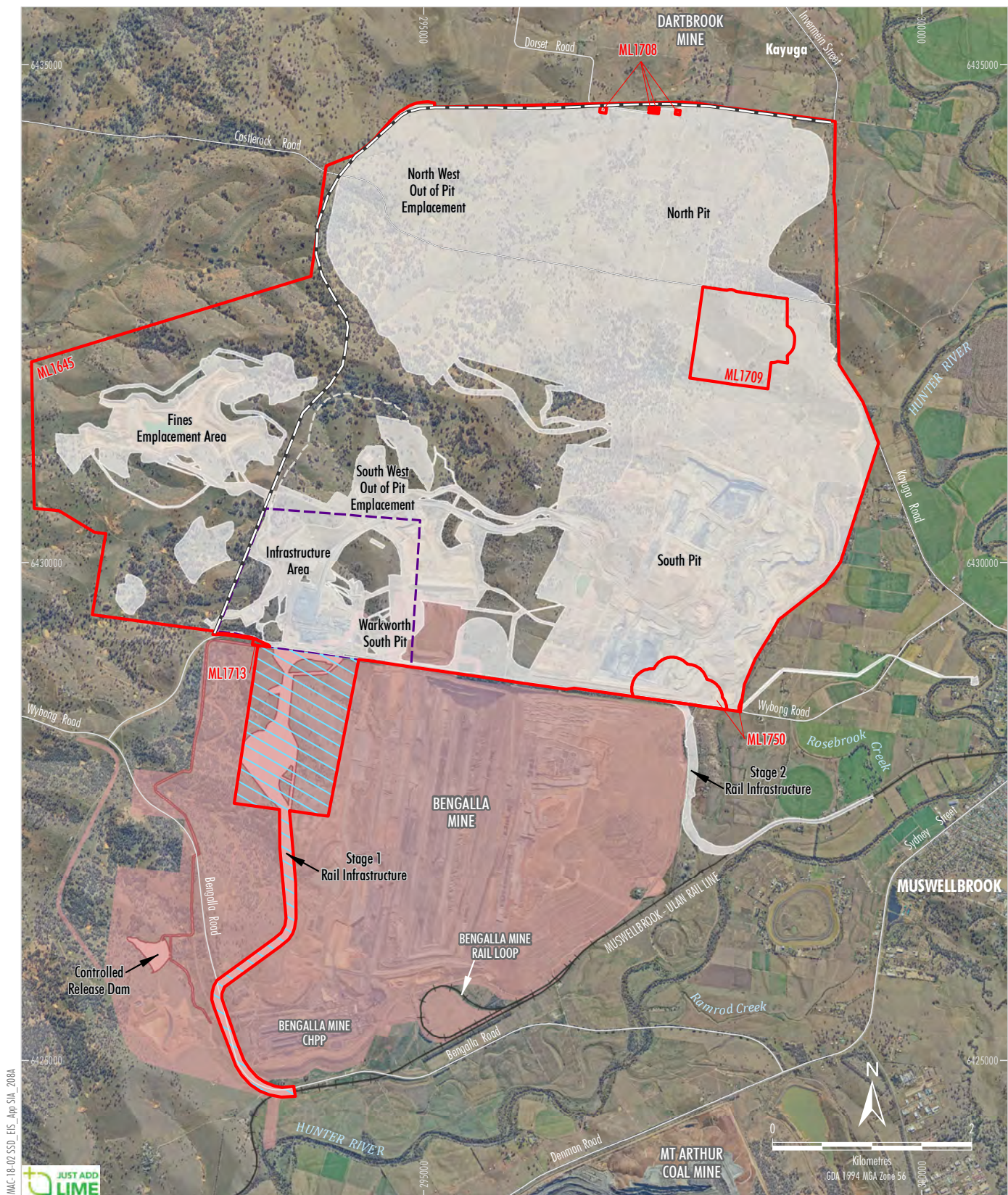
Given the purpose of the proposed Project is to optimise the existing Mount Pleasant Operation, an overview of the existing Mount Pleasant Operation is provided in Section 5.1.1. This includes a description of its history, current status of its development and its current social impacts.

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

The Project would also include continuation of the following elements:

- Aboriginal Community Development Fund (ACDF)
- Community Consultative Committee (CCC)
- Management of Biodiversity Offsets
- Aboriginal Heritage Conservation and
- Community contributions.

Further information about each of these elements is included in Section 5.1.2.



LEGEND

- Mining Lease Boundary
- 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 (DA92/97 or SSD-5170)

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 (2019); NSW Spatial Services (2019); Department of Planning and Environment (2016)
Orthophoto: MACH Energy (June 2019)

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

Figure 3

3.3.2 Comparison of the existing 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	Optimisation Project
Mine Life	Originally 21 years from the date of grant of Development Consent DA 92/97 (i.e. from 22 December 1999 until 22 December 2020). Extended to 22 December 2026 in 2018 (via Modification 3).	Until 22 December 2048 (i.e. extension of 22 years).
Mining Method	Open cut mining method incorporating truck and shovel and dragline operations (dragline not envisaged prior to 2026).	Open cut mining method comprising truck and excavator and/or dragline operation.
ROM Coal Production	ROM coal production at a rate of up to 10.5 Mtpa.	Increased ROM coal production up to 21 Mtpa.
Total Resource Recovered	Approximately 197 Mt of ROM coal.	Increase to approximately 447 Mt of ROM coal.
Waste Rock Production	Waste rock removal at a rate of up to approximately 53 million bank cubic metres (Mbcm) per annum.	Ongoing waste rock removal at an increased rate of up to approximately 88 Mbcm per annum.
Waste Emplacements	Waste rock emplaced both in-pit, and in four major out-of-pit emplacement areas.	Minor waste emplacement extension in the east, one integrated waste emplacement landform. Relinquishment of the North West Out-of-Pit Emplacement area.
Coal Beneficiation	Beneficiation of ROM coal in the on-site CHPP.	Staged upgrades to the CHPP to allow the handling and processing of additional ROM coal.
Coal Transport	An average of six and a maximum of 18 train movements per day (i.e. an average of three and maximum of nine departures).	An approximately doubling of product coal movements at peak coal production.
Coal Rejects	Coarse rejects are to be placed within mined out voids and out-of-pit emplacements, and used to build walls of the Fines Emplacement Area. Fine rejects are to be stored in the Fines Emplacement Area.	As approved, plus fine reject dewatering infrastructure would be installed so a proportion of dewatered fine rejects can be co-disposed with coarse rejects.
Biodiversity Offsets	As per the Offset Management Plan (OMP), see Section 5.1.4.1.	Continued to be managed as part of the OMP, see Section 5.1.4.1.
Aboriginal Cultural Heritage Management	As per the Aboriginal Heritage Management Plan, see Section 5.1.4.2.	Continued to be managed as part of the Project, see Section 5.1.4.2.

Source: Mount Pleasant Optimisation Project Scoping Report.

4 Existing social environment

This section provides an introduction 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. The section has been developed from desk-based research and findings from the Stakeholder Case Studies (Appendix G). This section is not intended to be a Social Baseline Study (as set out in Appendix C1 of the SIA Guideline), rather it is intended to provide the context for the preliminary identification of the likely social impacts of the Project.

4.1 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 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 2010’s nearly 95% of Australia’s thermal coal exports came 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 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 Project (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 Project
- Muswellbrook No 2, which is still operating as Muswellbrook Coal Mine
- 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 1998 with the Bengalla Mine. Mangoola Coal began operating in 2010 and currently has a State Significant Development (SSD) application with DPIE to expand. Mount Pleasant Operation began construction in 2016 and began mining in 2017. The development of coal mines to the west of Muswellbrook has formed a 'coal mining precinct' that is evident in the land ownership shown in Figure 2.

4.2 Mount Pleasant Operation near neighbours and surrounding rural communities

4.2.1 Property purchases within Mount Pleasant Operation and surrounding area

Property purchases within the Mount Pleasant Operation (MLs 1645, 1708, 1709, 1713 and 1750) 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 already occurred by the time MACH purchased project 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 the Development Consent DA 92/97.

4.2.2 Near neighbours – privately owned residences

There are 21 privately owned residences outside the Mount Pleasant MLs for which owners can seek an acquisition on request (see Table 2).

Table 2: Land ownership – Privately owned residences surrounding the Mount Pleasant Operation

Property	Amount
Privately owned residence with Mount Pleasant Operation acquisition upon request (outside the MLs)	21
Privately owned residence with Mount Pleasant Operation mitigation on request (outside the MLs)	16

Source: Development Consent DA 92/97.

MACH has indicated any future 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.

4.2.3 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). Information from the Stakeholder Case Studies (Appendix G) indicates that 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.

The communities include:

- To the north, Dorset Road community
- To the north-east, Blairemore 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
- To the north-west, the Castlerock community.

In their Stakeholder Case Studies (Appendix G), 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 don't have a choice due to the aggregation of environmental impacts such as noise, dust, ground water and blasting.” (MSC)

Land use of the area surrounding the Mount Pleasant Operation varies, and is linked to the specific environment. For example, Blairemore Lane, Kayuga, and Collins Lane 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. Dorset Road, Wybong community and Castlerock are on higher ground with different soils to the floodplain, 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.

Based on the Stakeholder Case Studies (Appendix G) and complaints data provided by MACH, near neighbours and people living in these communities are experiencing impacts of the approved Mount Pleasant Operation, along with cumulative impacts from the Bengalla Mine and Mt Arthur Coal Mine. Reported social impacts include, but are not limited to impacts on:

- Quality of the living environment from environmental impacts, dust, noise, lighting and blasting impacts
- Health and wellbeing associated with environmental impacts, dust, noise, lighting and blasting impacts
- Community and family composition from people moving out of the area because a mining company has purchased a property
- Health and wellbeing from living near multiple coal mines and associated impacts on the quality of life.

A further description of social impacts experienced by near neighbours and surrounding rural communities is provided in Section 5.1.6.

4.3 Surrounding villages and towns

4.3.1 Overview

There are a number of villages and towns surrounding the Mount Pleasant Operation including 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	Muswellbrook	Aberdeen	Scone	Denman	Singleton
Short description	Mining town	Agricultural village	Horse capital of Australia ²	Thoroughbred/ Tourism focused village	Mining town
Distance from mine site	3km	5km	17km	18km	50km
Direction to the mine site	North-west	South-southwest	South	North-east	North-west
Population (2016)	10,404	1,894	4,956	1,311	13,214
Males/Females (2016)	50.2%/49.8%	50%/50%	48.8%/51.2%	48.9%/51.1%	49.7%/50.3%
Median Age (2016)	35	37	40	41	35
Families (2016)	2,682	499	1,248	339	3,442
Private dwellings (2016)	4,895	856	2,267	659	5,638
Median weekly household income (2016)	\$1,284	\$1,286	\$1,274	\$1,068	\$1,506
Median monthly mortgage repayment (2016)	\$1,608	\$1,578	\$1,733	\$1,600	\$1,733
Median weekly rent (2016)	\$240	\$240	\$250	\$260	\$260

Source: ABS (2019a, b, d, e and g)

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 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 three years old so it is expected that the 2019 population of the towns and villages may have changed.

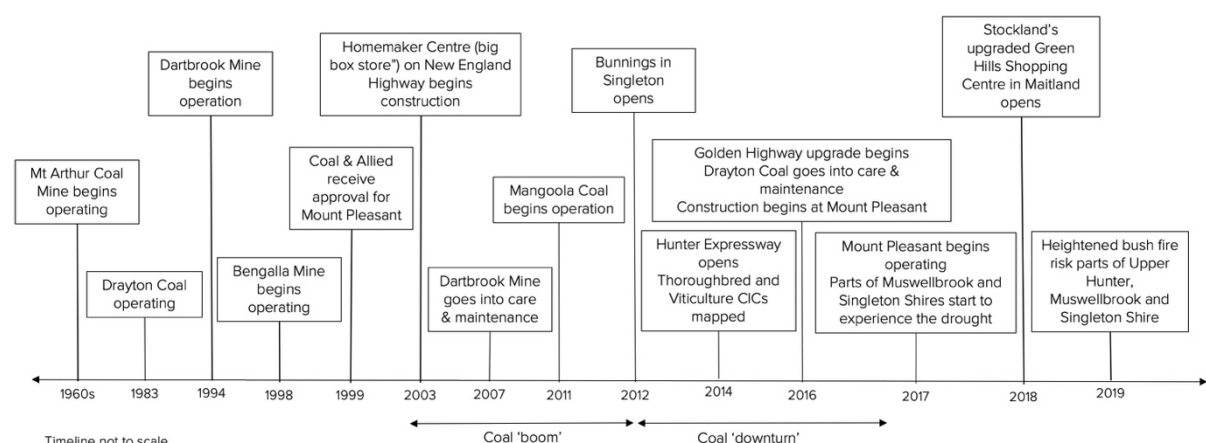
² As described by UHSC on their website <http://upperhunter.nsw.gov.au>

Based on the Stakeholder Case Studies (Appendix G), there are a number of factors influencing the people living in 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 and Mt Arthur Coal Mine) causing social and cumulative impacts to occur. Figure 2 shows the geographical proximity of the Bengalla Mine and Mt Arthur Coal Mine to the Mount Pleasant Operation and Muswellbrook.
- The Upper Hunter region is in the third year of a 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 is experiencing unprecedented levels of bush fire risk
- 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 and 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.

These factors are shown on a timescale in Figure 4.

Figure 4: Timescale of significant local and regional events



Based on the Stakeholder Case Studies (Appendix G), local government publications, Mount Pleasant Operation complaints and workforce data, these towns and villages are already experiencing social impacts associated with the Mount Pleasant Operation and other mining operations. Impacts include, but are not limited to:

- Impacts on the quality of the living environment from dust, noise, lighting and blasting impacts in Muswellbrook
- Workforce impacts such as:
 - change in local spend
 - change in community composition through either workers and their families living in the area or workers living in the town/village on a temporary rather than permanent basis
- Impacts on community services and facilities supported by the Mount Pleasant Operation community contributions.

A further description of social impacts experienced by people living in Muswellbrook and other surrounding towns and villages is provided in Appendix 5.1.6.

4.3.2 Muswellbrook

This sub-section focuses on the town of Muswellbrook given its proximity to the Mount Pleasant Operation. Research to further develop a social baseline for Muswellbrook and research to develop the social baselines for Aberdeen, Scone, Denman and Singleton will be undertaken as part of the SIA for the Project EIS (see Section 9).

4.3.2.1 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 1890's. 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 G).

4.3.2.2 Description of Muswellbrook

From Stakeholder Case Studies (Appendix G), 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).

"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).

*"Muswellbrook is known as a mining town."
(ACDF)*

"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)

4.3.2.3 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)

"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)

Demographic trends described by Stakeholder Case Study participants 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 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 Muswellbrook LGA.

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)

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)

The lower average weekly wage may be a reflection of the choice those 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 the 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 Stakeholder Case Studies (Appendix G).

"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)

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)

This weekday use of local housing was supported by the Wanaruah Local Aboriginal Land Council in their Stakeholder Case Study (Appendix G):

"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)

4.3.2.4 Low income residents

At this point, "low income" has not been defined as a quantifiable demographic cohort, but rather drawn from comments made in the Stakeholder Case Studies (Appendix G). Given the vulnerability of individuals and families with low incomes and the pressure on affordable housing, this issue will be further explored as part of the SIA for the Project EIS.

MSC in their Stakeholder Case Study (Appendix G) 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)

In their Stakeholder Case Studies (Appendix G), 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)

4.3.2.5 Changing Muswellbrook economy

The Muswellbrook Chamber of Commerce and Industry (MCCI) explained in their Stakeholder Case Study (Appendix G) 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)

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 (Appendix G).

4.3.3 Regional context

This sub-section provides an overview of the Muswellbrook LGA and an introduction to the Upper Hunter and Singleton Council LGAs. Research to develop the social baselines for the LGAs will be undertaken as part of the SIA for the Project EIS (see Section 9).

The geographical context of the Mount Pleasant Operation in relation to each of the LGAs is shown in Figure 5.

4.3.3.1 Muswellbrook Shire

The Mount Pleasant Operation is located within the Muswellbrook Shire (see Figure 5) and a high proportion of the Mount Pleasant Operation workforce reside in the area (refer to Section 5.1.2.2). A demographic snapshot of the Muswellbrook Shire LGA is provided in Table 4.

Table 4: Demographic snapshot of MSC 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 6).



- 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)

Source: MACH Energy (2019); NSW Spatial Services (2019)

MACH Energy
 MOUNT PLEASANT OPTIMISATION PROJECT
 Location of the Mount Pleasant Operation
 and the Muswellbrook Shire Council,
 Upper Hunter and Singleton LGAs

Figure 5

Figure 6: Unemployment Rate and Coal Price

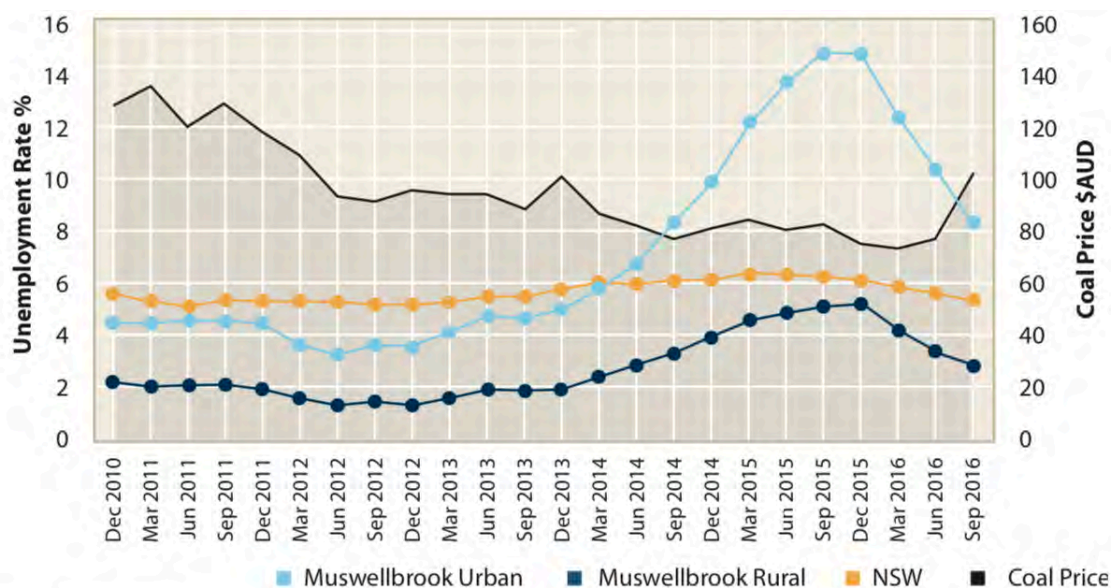


Figure 18: Unemployment Rate and Coal Price/Source: Department of Employment Labour Market Information Portal, 2017; Index Mundi, 2017

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 down turn in the coal industry (post 2012), was experienced in the Muswellbrook LGA by "a strong and sustained reversal in the long term projections for traded thermal coal and substantial local job losses" (MSC 2016). This included the closure of Drayton Coal in November 2016. The planned closures of other coal mines will have a substantial impact on the local economy and local employment. MSC expects that the loss of local employment will be partially offset by 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 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 3 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 (Appendix G) participants raised their concerns about the lack of economic development in Muswellbrook, 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)

“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)

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 Muswellbrook Shire. Economic diversification was the more frequently mentioned challenge (22%) (Jetty Research 2009). 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 2009). 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 2009).

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 is reared within the Shire (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 5.

Table 5: Local issues and mega trends in the Muswellbrook Shire (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. A description of social impacts experienced by people living within MSC LGA in proximity of the mine is provided in Section 5.1.6.

4.3.3.2 Upper Hunter Shire

Although the Mount Pleasant Operation is not located in the Upper Hunter Shire Council (UHSC) LGA (see Figure 5), a significant number of the current workforce live there (refer to Section 5.1.2.2). A proportion of the Mount Pleasant Operation workforce are expected to continue to live in the Upper Hunter Shire if the Project proceeds. A demographic snapshot of the Upper Hunter Shire LGA is provided in Table 6.

Table 6: 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 Upper Hunter Shire 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 Upper Hunter Shire 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 7.

Figure 7: 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.

4.3.3.3 Singleton Council Local Government Area

Although the Mount Pleasant Operation is not located in the Singleton Council LGA (see Figure 5), a significant number of the current workforce live there (refer to Section 5.1.2.2). 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 7.

Table 7: 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 (Appendix G) 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)

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 no date), 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)

4.4 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 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 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, Blairemore 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 Muswellbrook (3km), Aberdeen (5km), Scone (17km), Denman (18km) and Singleton (50km). Each town and village has 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 Shire.

5 Preliminary social area of influence

The Project's preliminary 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 analytical process used to determine the preliminary social area of influence is provided in Appendix C.

5.1 Social impacts of the Mount Pleasant Operation and other mines

This section outlines how the people living and working near the Mount Pleasant Operation are experiencing social impacts of the mine and other mines in the area.

5.1.1 History of the Mount Pleasant Operation

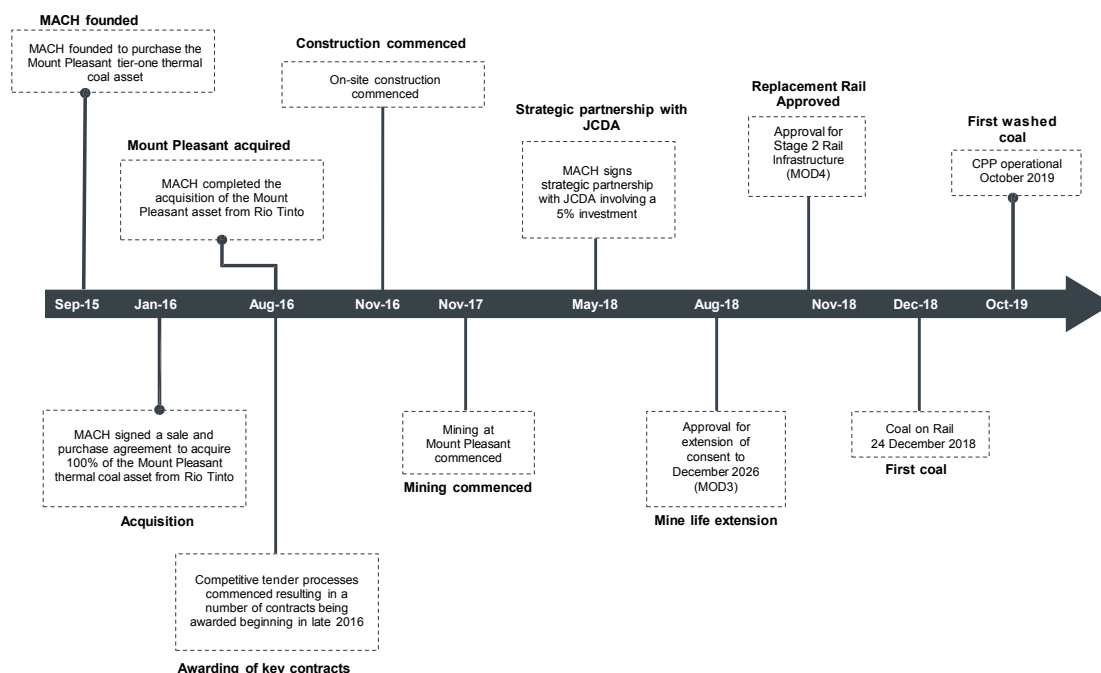
The Mount Pleasant Project was originally approved under the NSW Environmental Planning and Assessment Act in December 1999 and included:

- 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 Project as proposed by Coal & Allied was approved 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 8 outlines the recent history of the Mount Pleasant Operation.

Figure 8: History of the Mount Pleasant Operation



Source: MACH, Mount Pleasant Optimisation Project Conceptual Project Development Plan.

To date there have been four approved Modifications of the Mount Pleasant Operations. A summary of the Modifications is provided in Table 8 with further information, including a summary of submissions on each Modification, provided in Appendix E.

Table 8: Summary of Modifications

MOD #	Applicant	Summary of Modification	Approval authority	Approval Date
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 loop*. Relocation of mine infrastructure. 	Department	19 September 2011
MOD 2	MACH Energy	<ul style="list-style-type: none"> Relocation of the South Pit Haul Road. 	Department	29 March 2017
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

MOD #	Applicant	Summary of Modification	Approval authority	Approval Date
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

* 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)

5.1.2 Mount Pleasant Operation

This sub-section describes the current status of the Mount Pleasant Operation, focusing on:

- Works on site
- Current workforce
- Community contributions
- ACDF
- CCC
- Biodiversity Offsets and
- Aboriginal Heritage Conservation.

A summary of complaints received to date is also provided.

5.1.2.1 Works on site

At the time of writing the SIA Scoping Report (December 2019), the current status of the Mount Pleasant Operation was:

- The operation was producing and transporting coal
- Construction of the CHPP was completed, however workforce data used to inform this report is for November 2019 when the CHPP was in its final stages of construction
- The Modification 3 landform design with micro-relief (waste rock emplacement or bund) was completed to construction detail and construction was proceeding

- The Modification 4 rail engineering studies were largely completed, and the Construction Environmental Management Plan was under review with the intent to begin the construction of Stage 2 rail in 2020
- Some proximal private owners had initiated initial land acquisition or noise mitigation rights.

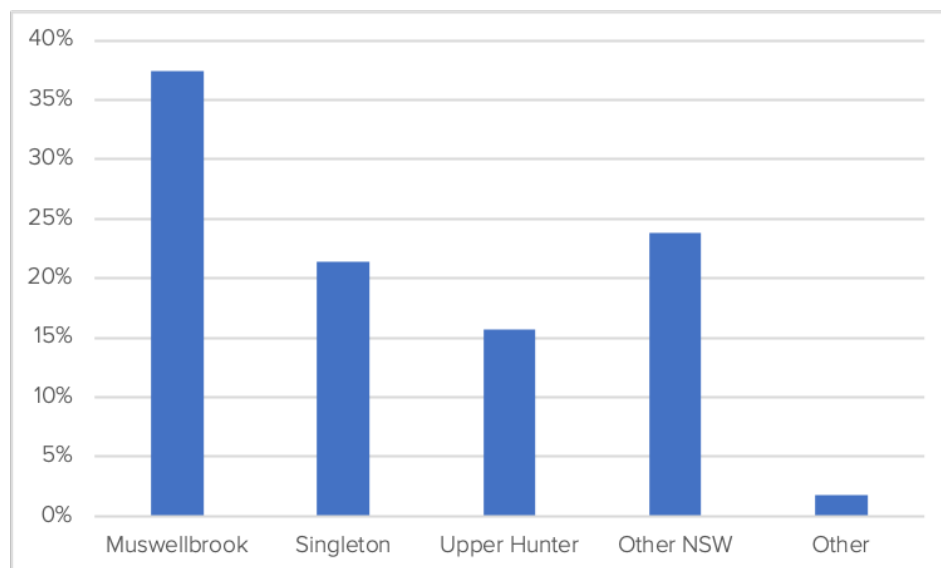
5.1.2.2 Current workforce

In November 2019, the workforce at the Mount Pleasant Operation was mostly comprised of employees of:

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

A snapshot of the Mount Pleasant Operation workforce data is shown in Figure 9. Of these people, the majority (74%) have an address of either Muswellbrook (37%), Singleton (21%) or Upper Hunter (16%) LGAs. Other workers come from other surrounding LGAs or beyond.

Figure 9: Snapshot of Mount Pleasant Operation workforce and contractor weekday address



Source: MACH

On their website, MACH makes the following commitment regarding local labour:

“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.”

5.1.2.3 Local Supplier Strategy

On their 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.

In their Stakeholder Case Study (Appendix G), MCCI states:

“MPO [Mount Pleasant Operation] has a history of strong engagement with local businesses and the community. Local procurement and employment are evident.” (MCCI)

5.1.2.4 Community contributions and support

MACH has a community contributions program and supports organisations, programs and projects across a wide geographical area, with a focus on Muswellbrook (47 donations). MACH has provided 87 donations to a total of \$166,848 over 2017, 2018 and part of 2019. The majority of donations, both by number and value, occurred in 2019. Support to community and sporting organisations received the highest contribution from MACH.

5.1.3 Aboriginal Community Development Fund

MACH oversees commitments relating to the ACDF. The Fund was amongst the community benefits identified in 2005 as part of a Native Title Agreement with the Wonnarua People, as represented by Victor Perry. MACH advises that it welcomes the opportunity this provides to make a meaningful contribution to the sustainability and well-being of Aboriginal communities in the Upper Hunter Valley.

Established in 2006, the ACDF had a starting fund of \$500,000, which is indexed against Consumer Price Index (CPI) each year (MACH Energy 2019). Since that time, the Fund has invested more than \$4 million 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 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.

The ACDF participated in the SIA Scoping Phase and their Stakeholder Case Study is included in Appendix G.

5.1.4 Environmental Initiatives

5.1.4.1 Biodiversity Offsets

The Mount Pleasant Operation has been granted permission to clear no more than 2,591 hectares (ha) of native vegetation from the proposed disturbance footprint for mining activities. This native vegetation includes 572 ha of the Box Gum Woodland and 2019 ha of Derived Native Grassland, which are considered to form an important part of the White Box–Yellow Box–Blakely’s Red Gum Grassy Woodland (Box Gum Grassy Woodlands) and Derived Native Grassland ecological community. This ecological community is listed under the EPBC Act as a critically endangered ecological community (CEEC).

To offset the impact of the vegetation clearing, 12,875 ha of land comprising similar ecological communities and habitat quality, are to be managed for biodiversity offsets. this area (12,875 ha) of the BMAs is to be secured as an Offset Area, with a legally binding mechanism for enduring protection. This will significantly increase the area of Box Gum Grassy Woodlands within the protected area estate in Australia. It will also provide the largest known area of contiguous Box Gum Grassy Woodlands managed principally for conservation in Australia. It will also contribute to regional strategies for improved catchment health and function administered by Local Land Services (LLS). The Offset Area must also protect at least 8,475 ha (as part of the 12,875 ha) of verifiable habitat for the Swift Parrot, Regent Honeyeater, Spotted-tail Quoll and Greater Long-eared Bat listed under the EPBC Act.

Three Biodiversity Management Areas (BMAs) have been established which include the land (12,875 ha) to be secured, as well as land which continues to sustain a viable agricultural enterprise (2,715 ha).

The BMA’s are:

- Namoi BMA (Gunnedah LGA)
- Merriwa West BMA (UHSC LGA, properties are St Antoine and Wahrane)
- Merriwa East BMA (UHSC LGA, properties are Black Rock, Clare Park and Gum Ridge).

The biodiversity offset areas are shown in Figure 12 in Section 5.1.5.2.

The BMAs were productive farming properties and will continue to be managed as agricultural enterprises with conservation as the principle outcome. The intention is to demonstrate the ability to sustain a viable agricultural enterprise whilst protecting and enhancing biodiversity values. The OMP will provide the framework for this integrated management approach. The BMAs are located near the NSW townships of Merriwa and Cassilis in Upper Hunter Valley and near Gunnedah.

Social impacts (positive and negative) from the biodiversity offsets will be further explored as part of the detailed SIA.

5.1.4.2 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 this plan, there would be a staged implementation of Aboriginal Heritage Conservation Strategy to provide MACH with the ability to resolve long-term management issues associated with overlapping/neighbouring projects. The three stages are:

- Stage 1 Conservation Area A – approximately 329 ha as guaranteed for the 2016-2020 development of the Mount Pleasant Operation (is shown in Figure 12 in Section 5.1.5.2)
- Stage 2 Conservation Area C – approximately 235 ha to be considered for the post 2020 development at the Mount Pleasant Operation
- Stage 3 Conservation Area B – approximately 150 ha as potential, subject to further consideration.

As part of establishing the Aboriginal Heritage Conservation Areas, MACH will develop specific management measures for the management of Aboriginal heritage as required by Condition 33, Schedule 3 of Development Consent DA 92/97 and relating to the protection of cultural values.

The Stakeholder Case Studies of the Aboriginal stakeholders who participated in the SIA Scoping Phase are provided in Appendix G. Social impacts (positive and negative) from the Aboriginal Conservation Area (Stage 1, Conservation Area A) will be further explored as part of the detailed SIA for the Project EIS.

5.1.5 Community Engagement

5.1.5.1 Community Consultative Committee

A Community Consultative Committee (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, 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.

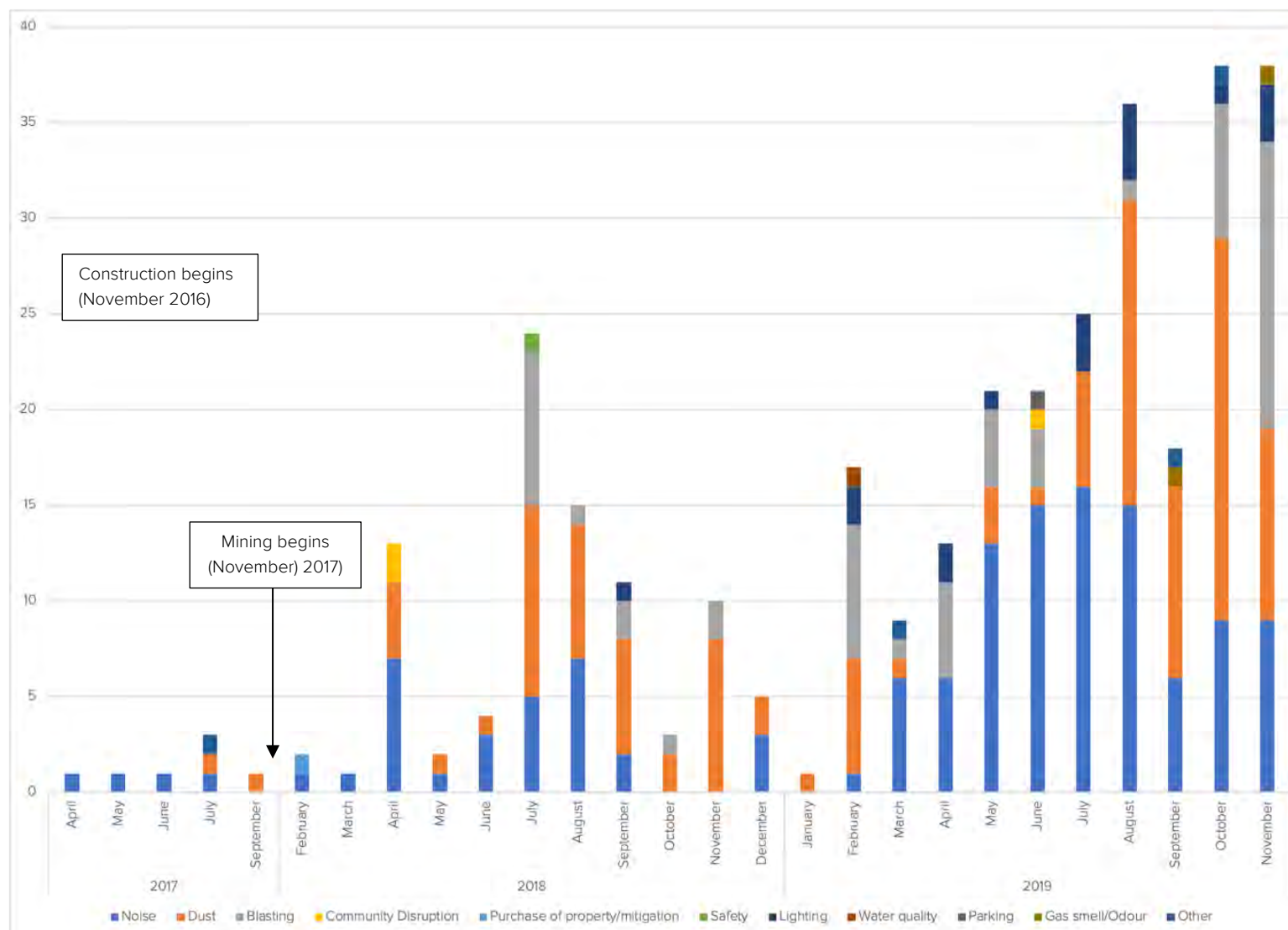
The CCC participated in the SIA Scoping Phase and their Stakeholder Case Study is provided in Appendix G.

5.1.5.2 Complaints data

MACH publishes its complaints data on its website, with data starting in 2017. To November 2019, there have been 324 complaints. 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.

As shown in Figure 10, the number of complaints has increased consistent with an increase in the activities being undertaken on site. Construction on site began in November 2016 and mining began in November 2017. Since April 2017, MACH has received a number of complaints with the majority being for noise (130), dust (117), blasting (57) and lighting (16).

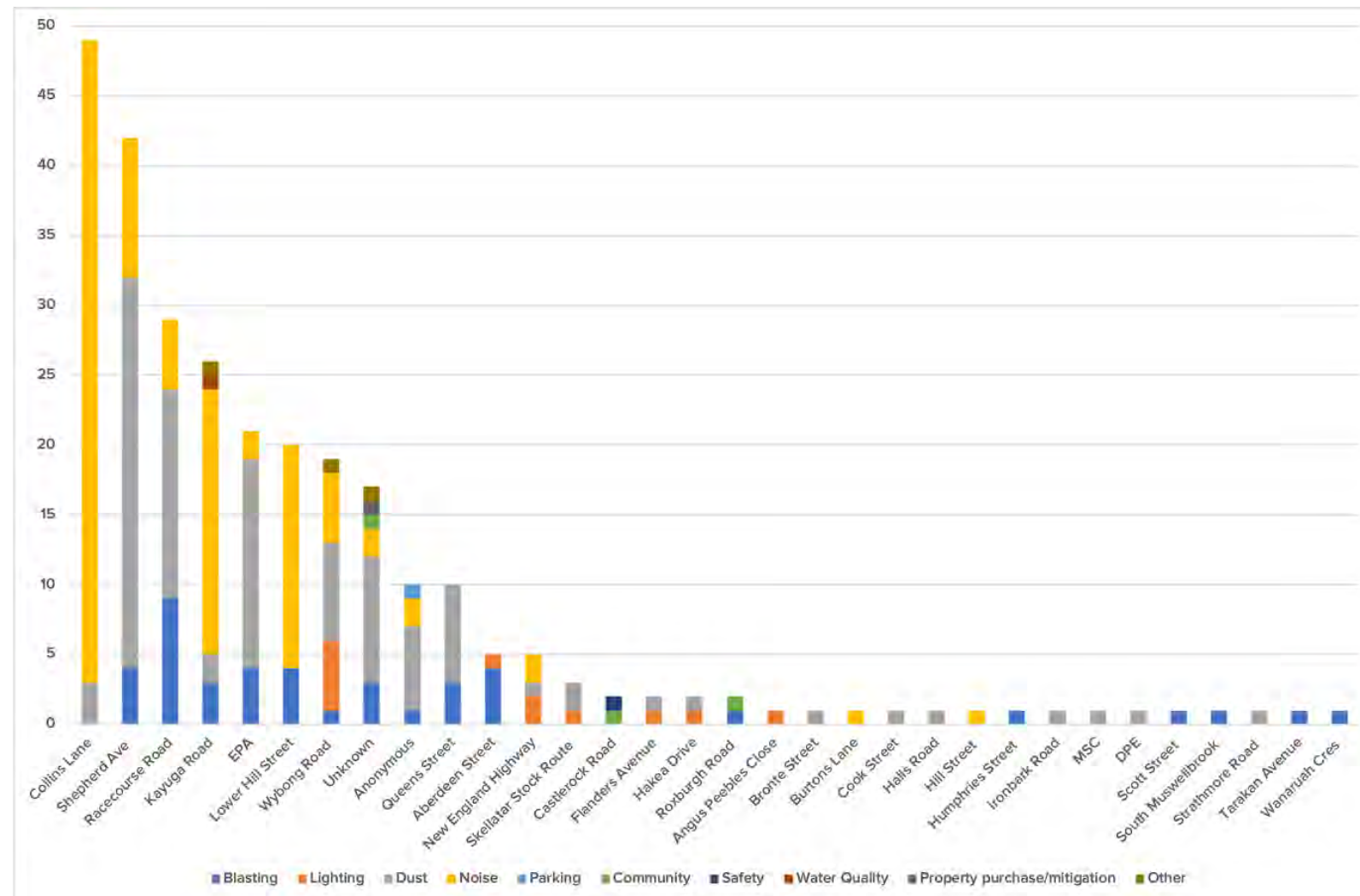
Figure 10: Mount Pleasant Operation complaints over time



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

Figure 11 shows the location of complaints and type of complaints. The majority of complaints were from the eastern side of the Mount Pleasant Operation, Collins Lane (49), Sheppard Avenue (42), Racecourse Road (29) and Kayuga Road (26). Complaints from Environment Protection Authority (EPA), DPIE or MSC are generated when a complaint has been lodged with the government department and passed on to MACH to address. A more detailed assessment of complaints will be undertaken as part of the SIA for the Project EIS, including the number of complainants and the geographical source of complaints.

Figure 11: Mount Pleasant Operation complaints by location



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

5.1.6 Social Impacts of the current Mount Pleasant Operation

As a wide range of stakeholders has not been included in the SIA scoping (e.g. local businesses, the Mount Pleasant workforce, service providers or community organisations have not been included), this sub-section is not designed as a comprehensive assessment of social impacts. Rather it provides an insight into the existing differential distribution of positive and negative social impacts to inform the identification of the social area of influence and a preliminary identification of social impacts for the Project.

To provide a point of comparison on the differing positive and negative social impacts that could occur, a short summary of the impacts identified by speakers at the Independent Planning Commission (IPC) public meeting for the Modification 3 (IPC 2018) (extension of the mine life to 2026) application is provided below.

Of the 20 speakers:

- Nine speakers recommended that the IPC reject the Modification due to expected environmental, social and cumulative impacts within the area surrounding the mine site or in Muswellbrook or issues with the lapse in time between in the original approval in 1999 by Coal & Allied and MACH's commencement of construction and Modification application
- Seven speakers recommended the IPC support the Modification based on opportunities for increased employment, opportunities for local businesses and the flow on benefits to the Muswellbrook area, benefits from the ACDF funding and benefits from the community contributions and support such as donations
- Four speakers did not articulate their recommendation to the IPC to either reject or support the Modification.

Examples of the existing social impacts as identified by the stakeholders in their Stakeholder Case Studies (Appendix G) are provided in Table 9.



Table 9: Examples of social impacts from Stakeholder Case Studies – Mount Pleasant Operation

Category of social impact	Quotes from SIA Stakeholders providing examples on how social impact is experienced ³
Way of life	<p><i>"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.</i></p> <p><i>Other impacts (in order of priority) are, but not limited to:</i></p> <ol style="list-style-type: none"> <i>1. Changes to surface water downstream of the tailings dam on the northern catchment of Sandy Creek.</i> <i>2. Recent increase in noise due to construction work.</i> <i>3. An increase in the number of feral animals, these include kangaroos, feral pigs (particularly in the last 10 years), wild dogs and deer.</i> <i>4. An increase in the amount of traffic along Wybong and Bengalla Road with the workers travelling to work.</i> <i>5. an increase in the amount of rubbish (e.g. takeaway food wrappers) on the new Wybong Road. People stop on the road because it is a good spot for mobile phone coverage.</i> <i>6. replacement and realignment of the old Wybong Road which did address drainage issues into the property."</i> (Moore, Gilgai) <p><i>"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).</i></p> <p><i>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."</i> (Stakeholder D)</p> <p><i>"Adequate housing – 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."</i> (MSC)</p> <p><i>"Impacts on participation on social/sporting events – Muswellbrook Cup and other local race days"</i> (Stakeholder A)</p> <p><i>"Importance of water and impacts on water. "The water is our blood". The mussels (sp) in the creeks and river are culturally important. All the land and the living beings of the land are culturally important to the Aboriginal community."</i> (Wanaruah Local Aboriginal Land Council)</p>

³ This is not a comprehensive list, rather a selection to provide an initial understanding of the range of positive and negative social impacts stakeholders are experiencing.



Category of social impact	Quotes from SIA Stakeholders providing examples on how social impact is experienced ⁹
Health and wellbeing	<p><i>"The air quality of Muswellbrook and surrounding area had declined, the community express that they can feel the impacts of dust on their health and wellbeing level. This is exacerbated with the visual impact of seeing the dust being displaced off Mount Pleasant."</i> (MSC)</p> <p><i>"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."</i> (Wanaruah Local Aboriginal Land Council)</p>
Services and facilities	<p><i>"The reduction of population impacts on the critical mass population, goods and services are being established elsewhere or often relocating, this impacts on the initial assessments that individuals and families make about moving to the area and further to this it places stress on existing community members who may now need to have access to reliable transport to access goods and services."</i> (MSC)</p>
Quality of the living environment (surroundings)	<p><i>"... community members of the Castlerock, Dorset Road and Wybong communities are constantly impacted by the presence and dominance of the mining industry when they commute and move about the Shire and reminded of the constant change to their environments further development will increase these stress levels."</i> (MSC)</p> <p><i>"It is noted that there will be an improvement to the visual impact when the eastern bund wall of the existing Mount Pleasant Operations is rehabilitated and stabilised."</i> (MSC)</p> <p><i>"The most significant impact of mining Jonathan and Elisabeth have experienced to date is the cumulative dust. GILGAI is impacted by dust from Mount Pleasant, Bengalla and Mount Arthur mining operations. Jonathan and Elisabeth explained that as a result of the PAC hearing for the Bengalla Continuation Project (in 2014), it was determined that between the three mines, the Moore's were to firstly approach the Mount Pleasant mine and were put in their zone of acquisition before approaching Bengalla and Mount Arthur mines."</i> (Moore, Gilgai)</p> <p><i>"In some environmental conditions, the racecourse and racecourse precinct can experience dust effects from Mount Pleasant, Mt Arthur and Bengalla mining operations. When Bengalla was mining closer to the racecourse, they would stop mining on the day of the Muswellbrook Cup to allow workers to attend the event and reduce the likelihood of dust impacts on the day."</i> (Stakeholder A)</p> <p><i>"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)</i></p>



Category of social impact	Quotes from SIA Stakeholders providing examples on how social impact is experienced ⁹
Socio-economic impacts	<p><i>"MPO has a history of strong engagement with local businesses and the community. Local procurement and employment are evident."</i> (MCCI)</p> <p><i>"It's good that employment opportunities are advertised locally first."</i> (MCCI)</p> <p><i>"The Mount Pleasant Operation has been good for local employment."</i> (CCC)</p> <p><i>"The level of employment is not reflected in the advancement of the local economy and increase of activity in particular the central business district ie lack of business start-ups or people utilising the space. Lack of economic diversity prolongs the vulnerability of the local economy."</i> (MSC)</p> <p><i>"The benefits of mining are not flowing to the people who need it the most, the low-income families and homeless people. The low-income families and homeless people are the ones being negatively impacted the most."</i> (Wanaruah Local Aboriginal Land Council)</p>
Cultural impacts	<p><i>"It is an opportunity to practice cultural maintenance (such as cool burning), making the land and people healthy by reconnecting with country. With connection to country comes identity. If people don't have a connection to country, then they lose their identity and this can lead to addiction. People need to have some hope, some baseline on which to make good decisions."</i> (Wanaruah Local Aboriginal Land Council)</p> <p><i>"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."</i> (Wanaruah Local Aboriginal Land Council)</p>
Family and community	<p><i>"There appears to be a reduction in the number of people living and working in the coal industry in Muswellbrook Shire Council Local Government Area (MSC LGA) over the past 10 years ago. People seem to be leaving, it would be good to understand if people are leaving any why they are leaving. It could be that there are not the facilities to keep and/or attract people to Muswellbrook. With all the mining in the MSC LGA, you would think the town would want for nothing. Mudgee is a good benchmark for the type of facilities Muswellbrook should have."</i> (Stakeholder A)</p> <p><i>"Most of the people who sold to the mining companies have moved away from the Upper Hunter Valley area. The rural communities that was (sic) 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 Coal open cut mine."</i> (Stakeholder B)</p>
Personal and property rights	<p><i>"Existing MACH Energy mining operations and the proposed Optimisation Project have sterilised the current property market for proximal and surrounding land owners. Often these owners don't want to leave their property as it is their home and in some cases their business."</i> (MSC)</p> <p><i>"Proximal and surrounding landowners often have 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."</i> (MSC)</p> <p><i>"Decrease in the efficiency of Gilgai to operate and manage during drought conditions."</i> (Moore, Gilgai)</p>



Category of social impact	Quotes from SIA Stakeholders providing examples on how social impact is experienced ⁹
Decision making systems	<p><i>"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'".</i></p> <p><i>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."</i> (MSC)</p> <p><i>"It feels like a one-way process with the mines and government asking us what we think the impacts will be. The mines should be telling us what their impacts will be and try to reduce them."</i> (Moore, Gilgai)</p>
Equity impacts	<p><i>"A higher proportion of people with lower incomes living closer to the Mount Pleasant Operation, including the flood plain west of Bridge Street and the area south of Sydney Street in Muswellbrook, these cohorts of the community are experiencing the aggregation of environmental impacts such as noise, dust and blasting this will be further exacerbated by the expansion of the mining operation."</i> (MSC)</p>
Gender impacts	None identified.
Fears and aspirations	<p><i>"Community members are experiencing solastalgia, in particular the perceived loss of control of the environment in which they live. This distress is exacerbated by localised activities such as mining."</i> (MSC)</p> <p><i>"Other near neighbours made submissions on the EIS and raised their concerned 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."</i> (Moore, Gilgai)</p>

It is acknowledged that the social environment and the impacts people experience at the commencement of the Project (nominally 2023) may be quite different, as the approved Mount Pleasant Operation would have been a fixture in the local socio-economic and environmental context for some six to seven years. The initial development and rehabilitation of the Eastern Out-of-Pit Emplacement that is designed to provide visual and noise impact shielding for Muswellbrook may be having its intended effect, and the depth of mining and proximity to potential receivers would be expected to change over time. It is also uncertain what activities will be undertaken by other mines in proximity and the potential cumulative impacts of those or ability to attribute specific impacts only to the Mount Pleasant Operation.

These temporal and locational factors may alter the perception of the Mount Pleasant Operation and the proposed Project, and the potential social impacts that may arise. A figure showing the planned landforms, voids and mine layout for 2025 is provided in Appendix H.

A further, more detailed assessment of the social impacts of the Mount Pleasant Operation will be undertaken as part of the SIA for the Project EIS, based on the findings of engagement with a wider range of stakeholders (as outlined in Section 9). Once there is a better understanding of the social impacts with the currently approved operation, a more accurate assessment of potential social impacts associated with the proposed Project will be able to be undertaken.

5.2 Different social groups likely to be affected

Based on an understanding of the Project (Section 1.1), the existing social environment (Section 4), information from the Stakeholder Case Studies (Appendix G), an understanding of the social impacts currently being experienced (Section 5.1.6) and desktop research, social groups most likely to be affected by the Project are considered to be:

- Near neighbours
- Surrounding rural communities:
 - Dorset Road community
 - Blairemore Lane
 - Residents living at Kayuga
 - 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 Aboriginal Land Council)
- Surrounding villages and towns:
 - Muswellbrook
 - Denman
 - Aberdeen

- Scone
- Singleton
- Merriwa
- Local Governments:
 - MSC
 - UHSC
 - Singleton Council
- Community services providers:
 - Health and wellbeing including medical and mental health
 - Schools and childcare
 - Emergency services (police, fire and ambulance, SES)
 - Voluntary organisations (community and sporting)
- Other industries:
 - Agriculture
 - Thoroughbreds
 - Viticulture
- 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 Council LGAs.

How some of these social groups are currently impacted is described in Section 5.1.6 and how they are likely impacted by the Project (whether is it approved or not), based on currently available information, is described in Section 6.

5.3 Places of social value or importance

This sub-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.

Based on the Stakeholder Case Studies (Appendix G), a review of submissions to previous Modifications, and a review of literature including local government planning documents, the built and natural features located near the Project site or surrounding region that have been identified as having social value or importance are listed and described in Table 10.

Table 10: 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.
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 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	Location of country races and social events such as the Melbourne Cup.	People who attend the races or social events at the racecourse.
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.

5.4 Identification and description of current and expected social trends or social change

5.4.1 Demographic trend in Muswellbrook

A key demographic trend in Muswellbrook has been the out-migration of permanent resident mine workers and their families (from the coal downturn and choice to drive in and out for work) and influx of low income individuals and families to take advantage of affordable housing.

There was an increase in population with the coal boom leading up to 2012 and increased pressure on the existing housing market, leading to new housing development to meet the demand. The downturn in the coal mining industry meant a decrease in population, some housing developments were left incomplete, and lower prices for housing due to decreased demand. People on low incomes moved into the area to take advantage of the affordable housing, changing the demographic profile of the town.

Since the Newcastle Expressway has opened, Muswellbrook has been experiencing the environmental impacts of open cut coal mining (predominantly dust) and there have been significant developments in the lower Hunter Valley, which are providing a more attractive location to live. The Hunter Expressway and Golden Highway upgrade in 2016 have also reduced the travel time between those other centres and Muswellbrook.

This has led a proportion of mine workers and their families choosing the option to drive-in/drive out (DIDO) to work. There is an unknown proportion of the workforce living in Muswellbrook on a temporary basis. Some miners commute on a daily basis, either side of their 12-hour shift, and others choose to live in Muswellbrook for their time 'on roster' (nominally a 4-day on and 4-day off, or Monday to Friday working with Saturday and Sunday off) and then returning to families outside the LGA. An unknown proportion of the DIDO workforce may have relocated out of the area during the coal downturn and have since taken up employment as the jobs have become available, commuting from their home base back to Muswellbrook.

This trend is unintentionally encouraged by mining companies requiring their workforce to live locally. To meet this requirement, workers rent in town gain a local address. It is assumed that those workers who have invested in housing outside of Muswellbrook (e.g. purchasing housing in the Lower Hunter and other areas) have so because their families are located there. The cheapest option of 'living' in Muswellbrook is to live in a share house with other miners. This may be having the unintentional consequence of driving rents up because of an increase in demand for family sized homes, which are often better suited to group/shared households. This trend may not be present in the 2016 Census data due to the closure of the Drayton Coal mine in 2016.

The increasing proportion of low-income individuals and families may present a change in the need for social services to that of what was a "mining town" only a few years ago. This trend will need to be further investigated as part of the SIA for the Project EIS. Demographic trends in other nearby towns and villages will also need to be investigated as part of the SIA in the EIS.

5.4.2 Economic trends

A key economic trend in Muswellbrook has been the increasing reliance on the coal and electricity generation industries. The MSC (2016 and 2018) is expecting these industries to decrease in size in the future and there is an identified need to diversify the economy. The reduction in the coal and electricity generation industries will have flow on effects to the Upper Hunter and Singleton LGAs.

There has been a number of non-mining developments that have impacted on people living in the Upper Hunter, including the development of the retail industry, in particular the 'big box' retail outlets, and upgrade of the Greenhills Shopping Centre in Maitland in 2003 and 2018, respectively. In addition, the construction of the Hunter Expressway in 2014 and upgrade of the Golden Highway in 2016 made travelling between the Lower and Upper Hunter Valley easier and faster. The Scone Bypass will impact that town and the surrounding areas, as will the Scone Regional Airport Upgrade.

According to DPI (2013a) and submissions to previous Modifications by the Hunter Thoroughbred Breeders Association and horse studs from the area (e.g. Godolphin), there remains uncertainty for the thoroughbred and viticulture industries with the potential continuation of mining in the Muswellbrook Shire and Singleton Council LGAs.

5.4.3 Drought and bush fires

The drought is likely to continue to impact all three LGAs, with prolonged social and economic impacts for farmers from loss of income, leading to poverty, inability to leave the property, intra-family conflicts and reduction in interactions with the community. There are also flow on impacts to local and regional businesses through reduced spending (Alston and Kent 2004).

A heightened bushfire risk has already been experienced during the SIA Scoping Study. People have been impacted by the increased bushfire risk by volunteering and being on standby for the local rural brigades, having local events cancelled due to a bush fire risk and increased levels of anxiety.

5.5 Social Area of Influence

The social area of influence (from a geographical perspective) has been defined as the areas shown on Figure 12. The social area of influence has been determined by considering:

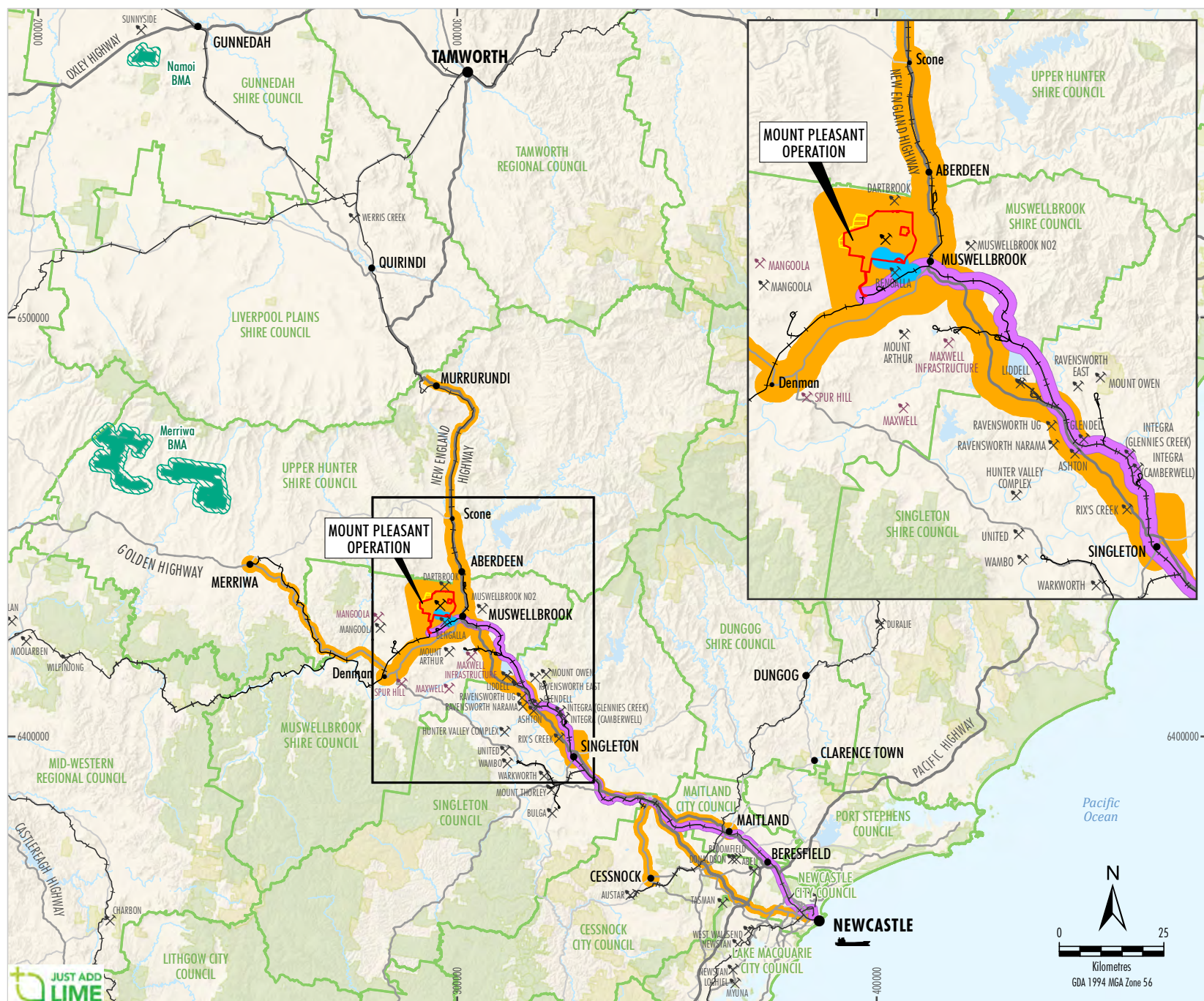
- Current Mount Pleasant Operation and the proposed Project that includes:
 - Mine site and associated workforce
 - Rail (transport of coal from site to port)
 - Biodiversity Offset Areas and associated lessees and their families and
 - Aboriginal Heritage Conservation Area.
- Information contained in Stakeholder Case Studies
- Properties identified for mitigation on request for previous Modifications (see Figure 2)
- Noise and dust contours for Modification 3
- Known workforce data (as at November 2019, this contains data on operational and construction workforces for MACH, Thiess and Sedgman).

The Project would have 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 west of Merriwa. The social area of influence will also be reviewed as part of the next phase.

Based on a review of submitters to previous Modifications and submitters to the recent SSD Applications in the area (e.g. Dartbrook Mine and Maxwell Underground), other stakeholders/organisations who may be interested in the Project but are outside the geographical area shown in Figure 12 are:



- Lock the Gate Alliance
- Hunter Environment Lobby
- Climate Action Newcastle.



- 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 (2019); NSW Spatial Services (2019)

MACHEnergy
 MOUNT PLEASANT OPTIMISATION PROJECT
 Geographical Social Area of Influence

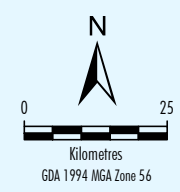


Figure 12

6 Summary of likely social impacts

6.1 The Project scenarios being assessed during the SIA Scoping Phase

Two Project scenarios are being assessed as part of the SIA Scoping Phase. These are:

- The Project is approved and is developed as per the Project Description in Section 3
- The Project is not approved

Following the direction of the SIA Guideline (Appendix B1), those social impacts that are considered likely to occur have been reported in the SIA Scoping Report. Likely impacts are when “...*there is a real chance or possibility that the adverse impact will occur*”. The term “likely” is also being used for positive impacts, so is applied when there is a real chance or possibility that the benefit will occur.

Given this is a scoping exercise, the precautionary principle has been applied when identifying likely social impacts. During the SIA for the Project EIS, when more information is known about the social baseline and environmental impacts, a more informed assessment will be made.

The social environment and the impacts people experience at the commencement of the Project (nominally 2023) may be quite different, as the approved Mount Pleasant Operation would have been a fixture in the local socio-economic and environmental context for some six to seven years. The initial development and rehabilitation of the Eastern Out-of-Pit Emplacement that is designed to provide visual and noise impact shielding for Muswellbrook may be having its intended effect, and the depth of mining and proximity to potential receivers would be expected to change over time. These temporal and locational factors may alter the perception of the Mount Pleasant Operation and the proposed Project, and the likely social impacts that may arise. A figure showing the approved conceptual layout of landforms and open cut for 2025 is provided in Appendix H.

6.2 Project is approved

Based on the existing experiences of stakeholders, who participated in the scoping phase, and desktop research, the main components of the Project most likely to cause a differential distribution of positive and negative social impacts are:

- The mine and its operation
- Mine workforce
- Realignment of the Northern Link Road
- The rail and the transportation of coal
- Community contributions
- Biodiversity Management Areas (BMAs)
- Aboriginal cultural heritage management.



People likely to experience the differential distribution of positive and negative social impacts of the Project are the same as those currently experiencing impacts of the Mount Pleasant Operation and additional people as the mining moves north and to the west. People who are expected to experience social impacts are listed in Section 5.2. The social groups likely to be affected by the proposed Project and likely causes of social impacts are outlined in Table 11.

Table 11: 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						
• Aberdeen		x						
• Scone		x						
• Singleton		x			x			
• Merriwa							x	
Local Governments								
• MSC	x	x	x					
• 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 and ambulance, SES)	x	x						
• Voluntary organisations (community and sporting)		x				x		
Other industries								
• Agriculture	x		x	x			x	



Stakeholder	Mine	Mine workforce	Northern Link Road	Coal transport	Mine Local spend	Community contributions	BMAs	Aboriginal cultural heritage
• Thoroughbreds	x							
• Viticulture	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 Shire, Upper Hunter Shire and Singleton Council LGAs	x	x			x			

Matters likely to be impacted, activities causing impacts, likely social impacts and their material effect rating, and source of evidence for the assessment of social impacts if the Project is approved are detailed in Appendix I and summarised below. Likely social impacts were identified based on the Stakeholder Case Studies (Appendix G) and desk based research. Methodology of the social impact identification process is provided in Appendix C.

A detailed assessment of who is likely to be impacted, how and when, and the severity of the impacts across the life of the Project will be undertaken as part of the SIA for the Project EIS.

6.2.1 Impacts on way of life

Impacts on people's way of life (i.e. how they live, work, play and interact with each other). Likely social impacts on way of life of the Project are:

- The unintended impact of reducing access to affordable housing and changing (i.e. increasing) property values in Muswellbrook and other nearby villages and towns, impacting on low income individuals, families and property owners
- Increased frustration of road users because of increased traffic on local roads such as Wybong and Bengalla Road and the New England Highway between Muswellbrook and Singleton, particularly on shift change
- Decreased in the levels of homeliness and connections to place during the construction of the Northern Link Road and increase in traffic once construction completed for the residents of Dorset Road
- Feelings of frustration and annoyance for people who have to travel longer and further on the Northern Link Road due to Castlerock Road being closed and/or feelings of relief due to improved road infrastructure
- Time and cost to make complaints impacting on day to day life for people experiencing noise, dust, blasting and/or lighting impacts.

6.2.2 Health and wellbeing impacts

Health and wellbeing impacts include physical and mental health, including psycho-social impacts such as solastalgia. Likely social impacts on health and wellbeing of the Project are:

- A decrease in health and wellbeing associated with the Project uncertainty for near neighbours and residents of surrounding rural communities and Muswellbrook, and particularly for those people who do not want the Project to proceed. This will be felt concurrently with the impacts of the Mount Pleasant Operation (dust, noise, blasting and lighting) and its associated construction works (e.g. construction of Stage 2 rail)
- A converse increase in health and wellbeing for those people who are likely to benefit if the Project goes ahead, e.g. job security for workers post 2026, contracts for local suppliers, etc
- Mining severing or damaging connections to country and water leading to a decrease in health and wellbeing (identity and self-esteem) for Aboriginal people who have a connection to the land and waters that are being impacted
- A decrease in levels of homeliness and connection to place due to dust, noise, blasting and lighting impacts leading to a potential decrease in physical and mental health. Particularly as this impact is



experienced at night for near neighbours and residents of the surrounding rural communities and Muswellbrook

- Health and wellbeing impacts of being employed for MACH workforce (including contractors) and their families and MACH suppliers and their associated workforce and families
- An increased safety risk for road users travelling between the mine site and Muswellbrook and Singleton due to an increased number of mine workers using the roads, and their level of fatigue after a 12-hour shift (if workers and their families do not live in Muswellbrook)
- Health and wellbeing implications for workers working 12-hour shifts.

6.2.3 Impact on services and facilities

Impacts on services and facilities including 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. Likely social impacts on services and facilities of the Project are:

- Increased demand on local medical services in Muswellbrook and other nearby villages and towns by the increasing mine workforce impacting on the service provider and their existing clients
- Demand for mental health services from people negatively impacted by the Project and the workforce and their families
- Increased demand for educational services if workers relocate their families to Muswellbrook or surrounding towns and villages
- Increased demand for emergency services (police, fire, ambulance and SES) if mine workers relocate their families to Muswellbrook or surrounding towns and villages
- Continued support for community services and facilities via MACH's community contributions for community-based organisations and programs to provide services
- Voluntary Planning Agreement payments by the Mount Pleasant Operation.

6.2.4 Impact on the quality of the living environment

Impacts on the quality of the living environment include access to and use of ecosystem services, public safety and security, access to and use of the natural and built environment, and its aesthetics and/or amenity. Likely social impacts on quality of the living environment of the Project are:

- Near neighbours and residents of surrounding rural communities and Muswellbrook witnessing continued change to the landscape, seeing the dust impacts, light pollution and lighting impacts leading to solastalgia
- Dust and/or noise and/or blasting and/or lighting impacts from mine operation, increased rail movements and/or construction of the Mine Water Dam and upgrades to the Fines Emplacement Area leading to a decreased level of homeliness and loss of connection to place.

6.2.5 Socio-economic impacts

Socio-economic impacts include the standard of living, level of affluence, economic prosperity and resilience, property values, employment, replacement costs of environmental functions and economic dependency. Likely socio-economic impacts of the Project are:



- Time spent and opportunities lost for impacted 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
- Increased housekeeping and cleaning workload for near neighbours and residents of surrounding rural communities and Muswellbrook, who experience dust impacts
- Increased workload for near neighbours and residents of surrounding rural community to manage weeds and pests
- Loss of surface water leading to a decrease in water availability/ replacement cost of environmental function
- Continued and increased business for local retailers from workers and their families buying locally
- Continued and increased support for local businesses from MACH (Local Supplier Strategy)
- Increased employment opportunities for people living in Muswellbrook, Upper Hunter and Singleton LGAs
- Increased cost of goods and services (including affordable rental accommodation) in Muswellbrook, Upper Hunter and Singleton LGAs
- Reduced access to qualified, skilled and experienced labour pool for local businesses and residents due to competition for skilled labour with the mines
- Lower local spend by the workforce because they are not living in the area full time (i.e. their permanent address is outside the area)
- Uncertainty for the thoroughbred industry due to customer perceptions of environmental impacts impacting on Thoroughbred CIC
- Uncertainty for the viticulture industry due to customer perceptions of environmental impacts impacting on Viticulture CIC.

6.2.6 Cultural impacts

Cultural impacts including shared beliefs, customs, values and stories, and connections to land, places and buildings (including Aboriginal culture and connection to country). Likely cultural impacts of the Project are:

- Reduction on cultural identity and self-esteem with the destruction of country and impact on waterways
- A converse opportunity to increase in cultural identity and self-esteem through practicing cultural land management such as cool burning on the Aboriginal Heritage Conservation Area
- Loss of agricultural culture due to agricultural landowners taking up voluntary acquisition options, and moving away from the area due to a lack of suitable alternative properties in the area.

6.2.7 Family and community impacts

Family and community impacts include its composition, cohesion, character, how it functions and sense of place. Likely family and community impacts of the Project are:



- A loss of social networks and community cohesion which can reinforce social differentiation and inequity experience during the decision-making process and process of mining companies acquiring land (either when decision is a compulsory acquisition process or a voluntary one)
- A loss to their community when rural families leave an area
- A change in community identification and connection, and loss of social networks and social capital when there is an increase in temporarily resident mine workers in Muswellbrook and other nearby villages and towns
- A reduction in volunteering and amalgamation of volunteer-based community services due to 12-hour working shifts which can lead to change in social networks, community identification, connection and cohesion
- Divisions with the community and loss of community cohesion from differing perspectives and beliefs about the coal industry
- Alteration of family structure for the families of workers living away while working on the mine.

6.2.8 Impacts on personal and property rights

Personal and property rights – including whether their economic livelihoods are affected, and whether they experience personal disadvantage or have their civil liberties affected. Likely impacts on personal and property rights of the Project are:

- Perceived sterilisation of property market and an inability of landowners to sell (due to lack of acquisition rights) leading to feelings of powerlessness, stress, uncertainty and self-image
- Decreased ability to manage agricultural properties, especially in times of drought and associated increase workload, stress and feelings of powerlessness.

6.2.9 Impacts of decision making systems

Impacts on decision making systems include particularly the extent to which people impacted by a project either positively or negatively can have a say in decisions that affect their lives, and have access to complaint, remedy and grievance mechanisms. Likely impacts on decision making systems for the Project are:

- Inability to affect the decision whether the Project goes ahead or not, leading to feelings of uncertainty and powerlessness for near neighbours, surrounding rural communities and residents of Muswellbrook
- Frustration of continuing dust, noise, blasting and lighting impacts and the need to lodge a complaint leading to feelings of frustration, annoyance, uncertainty and powerlessness of the near neighbours, surrounding rural communities and residents of Muswellbrook.

6.2.10 Equity impacts

Equity impacts include the distribution of impacts across the community and generations (inter-generational impacts). Likely equity impacts for the Project are:

- Income inequality while paying the same price for goods and services leading to a change in social networks, community cohesion and reinforces social differentiation and inequity for near neighbours, surrounding rural communities and residents of Muswellbrook and other villages and towns



- A change in social networks, community cohesion and reinforcement of social differentiation and inequity between near neighbours, surrounding rural communities and residents of Muswellbrook and other nearby villages and towns as residents living near the mine experience more impacts than those living further away from the mine
- Changes to the physical landscape over the life of the mine causing intergenerational impacts for people who can remember the landscape prior to the Bengalla Mine, Mt Arthur Coal Mine and Mount Pleasant Operation, those who witness the changes, and those who live with the resulting landscape (including final voids).

6.2.11 Gender impacts

Gender impacts include the distribution of impact across men and women. Likely gender impacts for the Project are:

- An increased workload for the partner “at home” with family responsibilities for families of mine workers living away and/or working 12-hour shifts
- Increased workload for the person who cleans and maintains the house, car, garden etc, for households experiencing dust impacts.

6.2.12 Fears and aspirations

Fears and aspirations relate to one or a combination of the impact categories, or about the future of people’s communities. Identified fears and aspirations associated with the Project are:

- Failure of dams (especially the fine rejects dam), which could lead to loss of homes and livelihood for properties downstream of the mine within the Sandy Creek catchment. This is considered as a fear rather than an impact, as the likelihood of dam failure is extremely low, however the consequence is extremely high
- The aspiration of Aboriginal people with a connection to the land and waters impacted by the Project to use cultural management practices within the Aboriginal Cultural Heritage Area and Biodiversity Management Areas. If cultural management practices are undertaken in these areas, it will lead to an increased connection to country, cultural identity and self-esteem.

6.3 Project is not approved

If the Project is not approved, the same social groups identified in Section 5.2 will be affected, as shown in Table 12, however they will be impacted differently as the Project components causing social impacts will be different.

If the SSD Application is not successful, the Mount Pleasant Operation will cease in 2026. The Eastern Out-of-Pit Emplacement is already under construction and incorporates micro-relief shaping to make it look more natural, to increase drainage stability and to avoid engineered drop structures. There will be a single void, located in the south-east of ML 1645.

Activities causing social impacts include:

- Mine closure
- Reduction of workforce



- Rehabilitation of site
- Cessation of community contributions
- Cessation of Voluntary Planning Agreement payments and road maintenance payments to MSC
- Management of biodiversity offsets
- Management of Aboriginal cultural heritage.

If the Project is not approved, other mines, for example the Bengalla Mine will continue to operate. It is assumed that for some people, they will continue to experience the positive and/or negative social impacts from mining, due to the cumulative nature of impacts being experienced.

A detailed assessment of who is likely to be impacted and how, and the severity of the impact if the Project does not proceed will be undertaken as part of the SIA for the Project EIS.

Table 12: Social groups likely to be affected (positive and/or negative social impacts) if the project is not approved

Stakeholder	Mine closure	Reduction of workforce	Rehabilitation of site	Cessation of Community contributions	Cessation of VPA and road maintenance payments	Biodiversity offset management	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					
• Aberdeen		x					
• Scone		x					
• Singleton		x					
• Merriwa						x	
Local Governments							
• MSC	x	x	x		x		
• 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 and ambulance, SES)	x	x		x			
• Voluntary organisations (community and sporting)		x		x			
Other industries							

Stakeholder	Mine closure	Reduction of workforce	Rehabilitation of site	Cessation of Community contributions	Cessation of VPA and road maintenance payments	Biodiversity offset management	Aboriginal cultural heritage
• Agriculture	x		x	x		x	
• Thoroughbreds	x						
• Viticulture	x						
MACH workforce (including contractors) and their families		x					
MACH suppliers and their associated workforces and families	x	x	x				
Other business and industries (e.g. hospitality and retail) in the Muswellbrook Shire, Upper Hunter Shire and Singleton Council LGAs	x	x					



Matters likely to be impacted, activities causing impacts, likely social impacts and their material effect rating, cumulative impacts and source of evidence for the assessment of social impacts if the Mount Pleasant Operation is not approved, and the Project does not proceed are detailed in Appendix J and summarised below. Likely social impacts were identified based on Stakeholder Case Studies (see Appendix G) and literature review. Methodology of the social impact identification process is provided in Appendix C.

6.3.1 Impacts on way of life

Impacts on people's way of life (how they live, work, play and interact with each other). Likely impacts on the way of life if the Project does not proceed are:

- Less pressure on affordable housing and change (i.e. decrease) in property values in Muswellbrook and other nearby villages and towns
- Decreased traffic volumes along Wybong and Bengalla Road and between Muswellbrook and Singleton with fewer workers travelling to site
- Reduction in mining workers in Muswellbrook and other nearby villages and towns
- Loss of employment for MACH workforce (including contractors) and their families
- Loss of business for MACH suppliers and their associated workforces and families.

6.3.2 Health and wellbeing impacts

Health and wellbeing impacts include physical and mental health, including psycho-social impacts such as solastalgia. Likely impacts on health and wellbeing if the Project does not proceed are:

- Increase in health and wellbeing due to a decrease in dust, noise, blasting and lighting impacts and concerns for the future for near neighbours and residents of surrounding rural communities and Muswellbrook
- Increase in health and wellbeing for Aboriginal community with connections to the potentially impacted land and water
- Increased safety travelling between Muswellbrook and Singleton with fewer fatigued mine workers on the roads
- Health and wellbeing implications for unemployed mine workers and the need to seek other employment.

6.3.3 Impact on services and facilities

Impacts on services and facilities include 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. Likely impacts on services and facilities if the Project does not proceed are:

- Decreased demand on local medical services in Muswellbrook and other villages and towns
- Decreased demand for mental health services from people who were experiencing impacts associated with the Mount Pleasant Operation, however this may conversely be an increased demand for mental health services for those people becoming unemployed
- Decreased demand for educational services if families leave the area



- Decreased demand for emergency services (police, fire, ambulance and SES) due to reducing population
- Cessation of funding to provide services impacting on the organisations and programs who benefit from donations from MACH.

6.3.4 Impact on the quality of the living environment

Impacts on the quality of the living environment include access to and use of ecosystem services, public safety and security, access to and use of the natural and built environment, and its aesthetics and/or amenity. Likely impacts on quality of the living environment if the Project does not proceed are:

- Increase in health and wellbeing impacts leading to an increase in the level of homeliness and connection to place with a reduction in dust, noise, blasting and lighting impacts.

6.3.5 Socio-economic impacts

Socio-economic impacts include the standard of living, level of affluence, economic prosperity and resilience, property values, employment, replacement costs of environmental functions and economic dependency. Likely socio-economic impacts if the Project does not proceed are:

- Decreased frequency in the required housekeeping and cleaning due to dust for nearby neighbours, however this will be dependant the dust impacts from other mining operations and the environment (e.g due to drought)
- Reduced economic activity on local expenditure and employment due to the cessation of MACH's Local Supplier Strategy
- Loss of employment opportunities for employees and contractors
- Increased access to qualified, skilled and experienced labour pool for other local businesses and residents due to decreased demand
- Loss of local spend by mine workforce and/or their families.

6.3.6 Cultural impacts

Cultural impacts include the shared beliefs, customs, values and stories, and connections to land, places and buildings (including Aboriginal culture and connection to country). Likely cultural impacts if the Project does not proceed are:

- Increase in cultural identity and self-esteem for Aboriginal people who have a connection to the land and waters that are being rehabilitated
- Retention of agricultural/rural community.

6.3.7 Family and community impacts

Family and community impacts include its composition, cohesion, character, how it functions and sense of place. Likely family and community impacts if the Project does not proceed are:

- Reduction in population causing a change in social networks, community identification, connection and cohesion
- Community divisions between those people who support mining and those who do not.



6.3.8 Fears and aspirations

Fears and aspirations relate to one or a combination of the impact categories, or about the future of people's communities. Fears and aspirations for the Project if it does not proceed are:

- Participation in the rehabilitation of the mine site by Aboriginal people with a connection to the land and waters impacted by the Mount Pleasant Operation.

7 Initial assessment of cumulative impacts

An initial assessment of potential cumulative impacts has been undertaken to inform the completion of the DPIE scoping tool (see Section 8). A more detailed assessment will be undertaken as part of the SIA for the Project EIS.

7.1 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)

7.2 Cumulative impacts with Mount Pleasant Operation Construction

At the moment, 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. These impacts from mining will be experienced concurrently with the construction of key infrastructure such as the approved Stage 2 rail spur and loop (which was approved under Modification 4).

7.3 Cumulative impacts between the Mount Pleasant Operation and the Project

The Mount Pleasant Operation will be operating (i.e. mining coal) and constructing key infrastructure while developing the SSD Application for the Project. Consultation for the SSD and SIA have already created some uncertainty for near neighbours, residents of surrounding rural communities and some residents of Muswellbrook. This uncertainty will be felt on top of the impacts people are already experiencing with the Mount Pleasant Operation.

The SSD Application involves preparing an EIS. Various technical studies for the Project EIS will involve various field works, such as the SIA, flora and fauna surveys, noise and dust monitoring. There will be a level of disruption to near neighbours, residents of surrounding rural communities and some residents of Muswellbrook during those field works.

7.4 Cumulative impacts with other operating coal mines

Mount Pleasant is approved to 2026 and currently operating at its closest proximity to Muswellbrook. The Project would result in additional impacts and to the extension of some existing impacts for a longer timeframe. The social environment and the impacts people experience at the commencement of the Project (nominally 2023) may be quite different, as the approved Mount Pleasant Operation would have been a fixture in the local socio-economic and environmental context for some six to seven years. The initial development and rehabilitation of the Eastern Out-of-Pit Emplacement that is designed to provide visual and noise impact shielding for Muswellbrook may be having its intended effect, and the depth of mining and proximity to potential receivers would be expected to change over time. These temporal and locational factors may alter the perception of the Mount Pleasant Operation and the proposed Project, and the likely social impacts that may arise. A figure showing the approved conceptual layout of landforms and open cut for 2025 is provided in Appendix H.

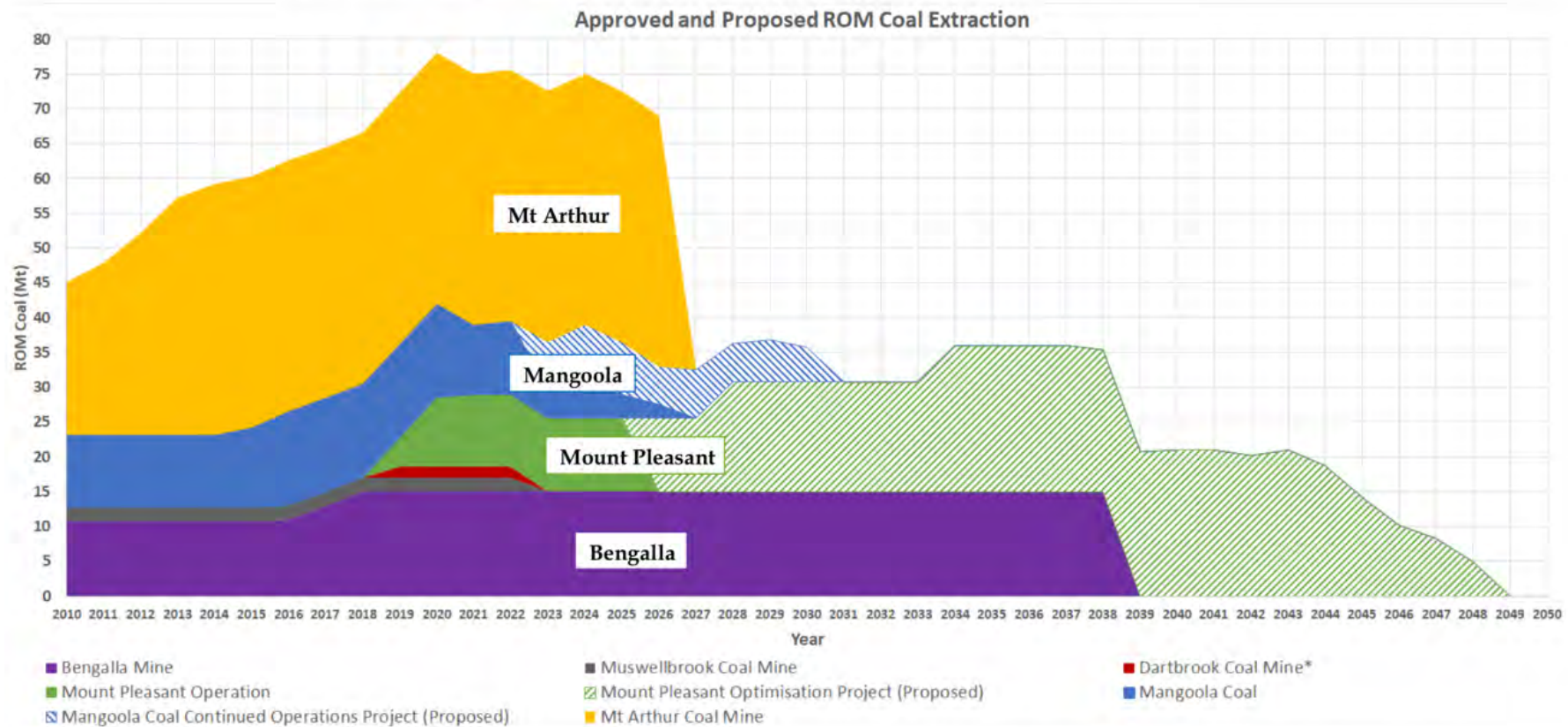
People affected by the Mount Pleasant Operation are also affected by the Bengalla Mine and Mt Arthur Coal Mine, which operate in close proximity to the Mount Pleasant Operation and the distant Mangoola Mine. Further challenging the ability to attribute impacts to specific operations, each of the mines (i.e. Mount Pleasant, the Bengalla Mine and Mt Arthur Coal Mine) have different conditions in their EPL. For example, Mount Pleasant must cease dust creating activities in certain environmental conditions while the Bengalla Mine and Mt Arthur Coal Mine do not.

Figure 13 shows the likely life of other coal mines operating in proximity to the Mount Pleasant Operation and their expected mine life based on their approved or currently proposed ROM production profiles as of December 2019.

During the Stakeholder Case Studies, the participating stakeholders were asked about the cumulative impacts of the mining industry in the Upper Hunter region. All stakeholders who participated in the SIA scoping process self-nominated dust as the biggest cumulative impact. Many referred to the EPA open day held at the dust monitor in Muswellbrook on 24 October 2019 (one week prior to the SIA scoping field work) and described people's feedback to the EPA.

Figure 13: Other operating coal mines in proximity to Mount Pleasant

Local Mines - ROM Coal Production Profiles



* Assumes only the recently approved bord and pillar mining in the Kayuga Seam occurs

Source: MACH

Other cumulative impacts nominated during the Stakeholder Case Studies were:

- Changing landscape from rural/agricultural to mining
- Loss of people in surrounding rural/agricultural communities
- Noise and blasting
- Decrease in health and wellbeing
- Increased pressure on affordable housing
- Increased traffic on the New England Highway between Muswellbrook and Singleton.

Responses from stakeholders during the Stakeholder Case Study (Appendix G) included:

Many people in Muswellbrook can remember when there was no Mount Arthur, Mangoola or Bengalla, this would have been in the mid-1980s. Impacts of these open cut mines started when the mining companies started to purchase rural properties. The mining companies bought all the fertile alluvial river flats. (Stakeholder B)

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. There are only three dairy farms in the Muswellbrook area, the others have been bought out by the mines. (Stakeholder B)

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 a relaxed pace. This lifestyle choice has been compromised by mining activity.

There has been an increase in mental illnesses in particular employees working in the mining industry in recent years. This is a high level of domestic violence reported in the community compared to other areas.

... people's amenity and way of life are 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 their fear around the impacts on ecological systems such as waterways, drinking water etc. (MSC).



The visual impacts of the mines and being able to see them from the New England Highway when driving between Singleton and Muswellbrook is a big thing.

There has been a noticeable increase in the number of people who commute to and from the mines on a daily basis or either at the end of shift, leading to congestion on the roads and accidents.

Increased demand for housing. People are moving to Singleton as a step to get a job in the mines because of local employment policies. (ACDF)

Impacts on affordable housing. Impacts on the cost of living. Increasing rate of homelessness. Decrease in water and air quality. Inability to safely swim in the rivers, the past time of many children in the past, without risk of sickness. 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. (Wanaruah Local Aboriginal Land Council)

The biggest impact is dust and the reduction in air quality. Everybody sees the dust. Everybody knows about the dust, including the mining companies and all levels of government, but no one does anything about it. Now is the time to do something about it because the balance is no longer there. (Earth Connection Indigenous Corporation)

An increase or accumulation of dust impacts (Bengalla dust + Mt Arthur dust + Mount Pleasant (existing) dust + Mount Pleasant Optimisation dust). (Moore, Gilgai)

Some [horse] trainers would prefer to be in Scone to avoid the impacts of mining on themselves and their horses. Some horse owners do not want their horses to be stabled in Muswellbrook because of the perception of dust impacting on the health of their horse(s). (Stakeholder A)

7.5 Cumulative impacts with drought and increased risk of bush fires

As well as cumulative impacts from the mining industry, the Stakeholder Case Studies (Appendix G) indicate that some people are also experiencing impacts of the drought and the increased risk of bushfires.

Decrease in the efficiency of Gilgai to operate and manage during drought conditions. (Moore, Gilgai)

Due to the continuation of the drought conditions and social impacts from climate change over the last 10 years, and particularly the last 3 years, water from the Hunter River via the Glenbawn Dam which is at 43.6% capacity on 21.11.2019, (re. the Land Newspaper). Use of large quantities of water to wash coal for overseas markets/owners will result in large social impacts on the Australian people in the future due to all aspects of life requirements. (Stakeholder B)

8 Completed Scoping Tool

Two Project scenarios are being assessed as part of the SIA Scoping Phase. These are:

- The Project is approved and is developed as per the Project Description in Section 3
- The Project is not approved.

8.1 If the Project is approved

DPIE provides a Scoping Tool as part of the SIA Guideline and this format has been used for Table 13. Table 13 has been completed based on Stakeholders Case Studies (see Appendix G) and desk-based research. Methodology of the social impact identification process is provided in Appendix C.

Table 13: Completed DPIE SIA Scoping Tool – if the Project is approved

Social and environmental matters	Outline of Impact	Is a material effect on the matter expected? ⁴	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Amenity							
Acoustic	From blasting and machinery	Yes	Yes - identified in Stakeholder Case Studies, complaints and submissions to Modification	Way of life, quality of the living environment, health and wellbeing	Yes - Noise and Blasting Assessment	Yes – in part	Standard SIA
Visual	Landscape changes, dust and lighting	Yes	Yes - identified in Stakeholder Case Studies, complaints and submissions to Modifications	Way of life, quality of the living environment, health and wellbeing	Yes - Air Quality and Greenhouse Gas Assessment and Visual Assessment	Yes – in part	Standard SIA
Odour	Unlikely	No	No	No	n/a	n/a	n/a
Microclimate	Unlikely	No	Yes - identified in Stakeholder Case Studies	No	n/a	n/a	n/a
Other – The distribution of environmental impacts and how these change over distance.	Change in social networks, community cohesion and reinforces social differentiation and inequity.	Yes	Yes - identified in Stakeholder Case Studies	Equity impacts	No	No	Comprehensive SIA
Other - Intergenerational impacts	Varying impacts on different generations	Yes	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Way of life, quality of the living environment, health and wellbeing, and socio-economic	Yes - Economic Assessment	Yes – in part	Standard SIA
Access							
Access to property	Unlikely	No	No	No	n/a	n/a	n/a

⁴ Determined by the EIS worksheet of the DPIE Scoping Tool and determined prior to management strategies or measures being applied.

Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁴	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Utilities and public transport	Unlikely	No	No	No	n/a	n/a	n/a
Road and rail	Impact from workers travelling from home/accommodation to site and return	Yes	Yes - identified in Stakeholder Case Studies, complaints and previous submissions	Way of life, health and wellbeing	Yes Road Transport Assessment	Yes – in part	Standard SIA
Offsite parking	Construction workers parking in Muswellbrook to catch a bus to site.	Yes	Yes - identified in a Stakeholder Case Study and in a complaint	Way of Life	Yes Road Transport Assessment	Yes – in part	Standard SIA
Built environment							
Public domain -- Footpaths, streets and roads (local, State and Federal)	Visual impacts from public spaces	Yes	Yes - identified in Stakeholder Case Studies and complaints	Way of life, quality of the living environment and health and wellbeing	Yes Visual Assessment	Yes – in part	Standard SIA
Public infrastructure	Unlikely	No	No	No	n/a	n/a	n/a
Other built assets	Impact of blasting on dwellings and other buildings	Yes	Yes - identified in Stakeholder Case Studies and complaints	Way of life, quality of the living environment and health and wellbeing	Yes Noise and Blasting Assessment	Yes – in part	Standard SIA
Heritage							
Natural	Impact on natural landscape and its aesthetic value	Yes	Yes - identified in Stakeholder Case Studies	Way of life and cultural impacts	Yes Biodiversity Assessment Report, Aboriginal Cultural Heritage Assessment	Yes – in part	Standard SIA
Cultural	Impact on agricultural culture	Yes	Yes - identified in Stakeholder Case Studies	Health and wellbeing and community and family	No	No	Comprehensive SIA

Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁴	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Aboriginal cultural	Impact on connection to country and water	Yes	Yes - identified in Stakeholder Case Studies	Health and wellbeing and community and family	Yes Aboriginal Cultural Heritage Assessment	Yes – in part	Standard SIA
Built	Unlikely	No	No	No	n/a	n/a	n/a
Community							
Health	Impact on physical health and mental wellbeing	Unlikely	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Health and wellbeing	Human Health Risk Assessment	Yes – in part	Standard SIA
Safety	Impact of drivers on roads between mine site and home/accommodation of the workforce, particularly after working a 12-hour shift	Yes	Yes - identified in Stakeholder Case Studies	Health and wellbeing	Road Transport Assessment	Yes – in part	Standard SIA
Services and facilities	Impact on health, education, emergency services and community services and facilities	Yes	Yes - identified in Stakeholder Case Studies	Services and facilities	No	No	Comprehensive SIA
Cohesion, capital and resilience	Reinforcement of existing community division, straining of social capital and testing of community resilience	Yes	Yes - identified in Stakeholder Case Studies	Community and family	No	No	Comprehensive SIA
Community identification and connection	Change in community identification and connection, and loss of social networks and social capital	Yes	Yes – identified in Stakeholder Case Studies	Community and family	No	No	Comprehensive SIA
Housing	Impact on affordable housing	No	Yes - identified in Stakeholder Case Studies	Way of life and equity impacts	No	No	Comprehensive SIA

Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁴	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Other - Impacts of 12-hour shift/roster on family	Alteration of family structure	Yes	Yes - identified in Stakeholder Case Studies	Health and wellbeing for worker and family, gender impacts	No	No	Comprehensive SIA
Other - Impacts on personal and property rights	Feelings of uncertainty and powerlessness	Yes	Yes - identified in Stakeholder Case Studies	Health and wellbeing	No	No	Comprehensive SIA
Socio-Economic							
Natural resources used	Loss of access to water associated with catchment excision	Yes	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Socio-economic	Land and Soil Assessment Surface Water Assessment	Yes – in part	Standard SIA
Livelihood	Loss or reduction of livelihood or increase in livelihood (depending on stakeholder)	Yes	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Socio-economic	Economic Assessment	Yes – in part	Standard SIA
Opportunity cost	Unlikely	Unknown	No	No	Economic Assessment	n/a	n/a
Other – The distribution of socio-economic benefits and how these change over distance.	Impacts associated with employment, local employment commitment, Local Supplier Strategy and community contributions	Yes	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Equity impacts	Economic Assessment	Yes – in part	Standard SIA
Other - Income inequality while paying the same price for goods and services	Change in social networks, community cohesion and reinforces social differentiation and inequity	Yes	Yes - identified in Stakeholder Case Studies	Socio-economic, health and wellbeing and equity impacts	No	No	Comprehensive SIA



Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁴	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Air							
Particulate matter, gases, atmospheric emissions	Impact on physical health and mental wellbeing	Yes	Yes - identified in Stakeholder Case Studies, complaints and submissions to Modifications	Way of life, health and wellbeing, quality of living environment and socio-economic impacts.	Air Quality and Greenhouse Gas Assessment and Human Health Risk Assessment	Yes – in part	Standard SIA
Biodiversity							
Native vegetation and fauna	Impact on flora and fauna and its aesthetic value	Yes	Yes - identified in Stakeholder Case Studies	Way of life, quality of the living environment and cultural impacts	Biodiversity Assessment Report, Aboriginal Cultural Heritage Assessment	Yes – in part	Standard SIA
Land							
Stability/structure, soil chemistry, land capability, topography	Impact on the landscape	Yes	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Way of life, quality of the living environment and cultural impacts	Land and Soil Assessment and Geomorphological Landform Stability Assessment	Yes – in part	Standard SIA
Water							
Quality, availability, hydrological flows	Impact on surface water in Sandy Creek catchment and the Hunter River	Yes	Yes - identified in Stakeholder Case Studies and submissions to Modifications	Way of life, quality of the living environment and cultural impacts	Surface Water Assessment and Groundwater Assessment	Yes – in part	Standard SIA

8.2 If the Project is not approved

DPIE provides a Scoping Tool as part of the SIA Guideline and this format has been used for Table 14. Table 14 has been completed based on Stakeholders Case Studies (see Appendix G) and desk-based research. Methodology of the social impact identification process is provided in Appendix C.

If the SSD Application is not successful, the Mount Pleasant Operation will cease in 2026. The Eastern Out-of-Pit Emplacement is already under construction and incorporates micro-relief shaping to make it look more natural, to increase drainage stability and to avoid engineered drop structures. There will be a single void, located in the south-east of ML 1645. If the Project is not approved, other mines, for example the Bengalla Mine, will continue to operate. It is assumed that for some people, they will continue to experience the positive and/or negative social impacts from mining, due to the cumulative nature of impacts being experienced.

Table 14: Completed DPIE SIA Scoping Tool – if the Project is not approved

Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁵	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Amenity							
Acoustic	Cessation of noise from blasting and machinery	Yes	Concerns about the creation of noise in identified in Stakeholder Case Studies, complaints and submissions to Modification	Way of life, quality of the living environment, health and wellbeing	No – cessation of predicted impacts as described in Modification 3 Noise and Blasting Assessment	Yes – in part	Standard SIA
Visual	Final landform and void	Yes	Concerns about the final landform and void identified in Stakeholder Case Studies, complaints and submissions to Modification	Quality of the living environment	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA
Odour	Unlikely	No	No	No	n/a	n/a	n/a
Microclimate	Unlikely	No	No	No	n/a	n/a	n/a
Access							
Access to property	Unlikely	No	No	No	n/a	n/a	n/a
Utilities and public transport	Unlikely	No	No	No	n/a	n/a	n/a
Road and rail	Cessation of workers travelling from home/accommodation to site and return	Yes	Concerns about workers impacting on roads were identified in Stakeholder Case Studies, complaints and previous submissions	Way of life, health and wellbeing	No – cessation of predicted impacts as described in Modification 3 Road Transport Assessment	Yes – in part	Standard SIA
Offsite parking	Unlikely	No	No	No	n/a	n/a	n/a

⁵ Determined by the EIS worksheet of the DPIE Scoping Tool and determined prior to management strategies or measures being applied.

Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁵	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Built environment							
Public domain -- Footpaths, streets and roads (local, State and Federal)	Visual impacts from public spaces of final landform	Yes	Concerns about the final landform and void identified in Stakeholder Case Studies, complaints and submissions to Modification	Quality of the living environment	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA
Public infrastructure	Unlikely	No	No	No	n/a	n/a	n/a
Other built assets	Cessation of blasting on dwellings and other buildings	Yes	Concerns about blasting impacts identified in Stakeholder Case Studies and complaints	Way of life, quality of the living environment and health and wellbeing	No – cessation of predicted impacts as described in Modification 3 Noise and Blasting Assessment	Yes – in part	Standard SIA
Heritage							
Natural	Impact on natural landscape and its aesthetic value	Yes	Concerns about the final landform and void identified in Stakeholder Case Studies, complaints and submissions to Modification	Way of life and cultural impacts	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA
Cultural	Impact on agricultural culture	Yes	Concerns raised about the Project' impact on agricultural culture in Stakeholder Case Studies	Health and wellbeing and community and family	Yes – approved final land use Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA
Aboriginal cultural	Impact on connection to country and water	Yes	Identified in Stakeholder Case Studies	Health and wellbeing and community and family	Yes – approved final land use Aboriginal Cultural Heritage Management Plan	Yes – in part	Standard SIA
Built	Unlikely	No	No	No	n/a	n/a	n/a



Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁵	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Community							
Health	Impact on physical health and mental wellbeing of workers, their families and friends, and those reliant on mining related revenue	Yes	Concern about the Project's impact on people's health and wellbeing identified in Stakeholder Case Studies and submissions to Modifications	Health and wellbeing	No	No	Comprehensive SIA
Safety	Cessation of workers on roads between mine site and home/accommodation of the workforce, particularly after working a 12-hour shift	Yes	Concerns raised about workers driving after 12-hour shifts identified in Stakeholder Case Studies	Health and wellbeing	No – cessation of predicted impacts as described in Modification 3 Road Transport Assessment	Yes – in part	Standard SIA
Services and facilities	Impact on health, education, emergency services and community services and facilities	Yes	Concerns raised by in Stakeholder Case Studies about the impact on services and facilities	Services and facilities	No	No	Comprehensive SIA
Cohesion, capital and resilience	Reinforcement of existing community division, straining of social capital and testing of community resilience	Yes	Concerns raised in Stakeholder Case Studies about the impact on cohesion, capital and resilience	Community and family	No	No	Comprehensive SIA
Housing	Impact on affordable housing	No	Concerns raised in Stakeholder Case Studies about the impact on affordable housing	Way of life and equity impacts	No	No	Comprehensive SIA
Other – Reduction of population if workers and their families move away	Change to community structure	Yes	Stakeholders identified negative social impacts associated with previous mine closures in case studies	Way of life, community and family, health and wellbeing for the worker their family and friends and gender impacts	No	No	Comprehensive SIA

Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁵	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Socio-Economic							
Natural resource used	Final land use, landform and final void	Yes	Concerns and aspirations raised Stakeholder Case Studies and submissions to Modifications	Socio-economic and cultural	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA
Livelihood	Loss or reduction of livelihood or increase in livelihood (depending on stakeholder)	Yes	Stakeholder Case Studies and submissions to Modifications	Socio-economic and gender impact	Economic Assessment	Yes – in part	Standard SIA
Opportunity cost	Unlikely	Unknown	No	No	Economic Assessment	n/a	n/a
Other – The loss of employment and socio-economic benefits and how these change over distance.	Impacts associated with employment, local employment commitment, Local Supplier Strategy and community contributions	Yes	Concerns raised about the loss of socio-economic benefits identified submissions to Modifications	Way of life, socio-economic, health and wellbeing, family and community, equity and gender impacts	Economic Assessment	Yes – in part	Standard SIA
Air							
Particulate matter, gases, atmospheric emissions	Impact on physical health and mental wellbeing	Yes	Concerns about the impacts of dust identified in Stakeholder Case Studies, complaints and submissions to Modification	Way of life, quality of the living environment, health and wellbeing	No - cessation of predicted impacts as described in Modification 3 Air Quality and Greenhouse Gas Assessment	Yes – in part	Standard SIA
Biodiversity							
Native vegetation and fauna	Impact on flora and fauna and its aesthetic value	Yes	Concerns and aspirations raised Stakeholder Case Studies and submissions to Modifications	Quality of the living environment and cultural impacts	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA



Social and environmental matters	Outline of impact	Is a material effect on the matter expected? ⁵	Are there community or other stakeholder concerns regarding the impact or activity?	Is there a social impact? If yes, outline the social impact?	Are the impacts on the matter expected to require a non-SIA specialist study?	Will the non-SIA specialist study address the social impacts?	Level of assessment for the social impact in the SIA
Land							
Stability/structure, soil chemistry, land capability, topography	Impact on the landscape	Yes	Concerns and aspirations raised Stakeholder Case Studies and submissions to Modifications	Quality of the living environment and cultural impacts	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA
Water							
Quality, availability, hydrological flows	Impact on surface water in Sandy Creek catchment and the Hunter River	Yes	Concerns and aspirations raised Stakeholder Case Studies and submissions to Modifications	Quality of the living environment and cultural impacts	Yes – approved final landform and void Rehabilitation Strategy and Rehabilitation Management Plan	Yes – in part	Standard SIA



9 SIA Component of the EIS

The next piece of work to be undertaken after the SEARs is to undertake an SIA for the Project EIS. This section outlines the additional work to be undertaken as part of the social baseline study, key issues to be developed as part of a standard and comprehensive SIAs and stakeholders to invite to participate in the SIA.

9.1 Additional topics for research in the social baseline study

In addition to the requirements for a social baseline study outlined in C1 of the SIA Guideline, further research in the social baseline study should include:

- A Review of the Project's social area of influence
- A detailed description of near neighbours, surrounding rural communities, Muswellbrook and other nearby villages and towns listed in Section 5.2
- Identification of how many people live and or work in the near and neighbouring properties and surrounding rural communities so an estimation of the number of people likely to be impacted can be made
- A detailed investigation of complaints data and mapping it with the dust and noise monitoring data
- Further research into the changing demographics of Muswellbrook
- Further research into the impact of 12-hour shifts, rosters and road safety around the Mount Pleasant Operation
- Definition of 'low income' and 'affordable housing' in the context of the Upper Hunter region and identifying if there is a change in the demand for affordable housing and community services due to demographic changes
- Further research into understanding the industries that the Project could adversely impact such as agriculture (dairy and grazing), thoroughbred/horse racing, wineries and tourism
- Identification of the local spend of MACH and its contractors and their families in the Muswellbrook, Upper Hunter and Singleton LGAs
- Identification of the social impacts associated with MACH's commitment to employ local people first, MACH's local supplier strategy, community contributions and support and the Aboriginal Community Development Fund
- Identification of the social areas of influence and social impacts of the existing Biodiversity Management Areas and the Aboriginal Heritage Conservation Area.

Once the social baseline has been completed, including a more detailed assessment of the social impacts of the Mount Pleasant Operation, a more accurate assessment of potential social impacts associated with the proposed Project will be able to be undertaken. This will include engagement with a wider range of stakeholders. Identification of social impacts associated with the Project will include:

- Identifying how the causes of social impacts are likely to develop, how social impacts are likely to be experienced and what the appropriate management strategy would be, for example:
 - If there is a gradual increase of the operational workforce and their families living in Muswellbrook and surrounding towns and villages, what does this mean for community services and facilities, is there a 'trigger point' for which impacts (positive and negative) can no longer be absorbed within the current service structure and changes will need to be made. How is this best managed by not only MACH, but the services providers as well
 - How are the social impacts associated with environmental impacts (e.g. impacts on the quality of the living environment and health and wellbeing) likely to change over the life of the Project, particularly once all outstanding the works for previous Modifications have been completed (e.g. Stage 2 rail infrastructure)
- Identifying the likely social impacts at specific milestones across the life of the Project, for example the peaks in operational and construction workforce and include project closure, post closure and unexpected care and maintenance
- Further investigation and identification of potential social impacts if the Project does not proceed
- Further investigation and identification of cumulative social impacts.

9.2 Key issues to be addressed

The SIA Guideline describes a standard assessment as being required when most of the information and analysis needed to predict, evaluate and develop a response to the social impact will be provided by another specialist study or section in the EIS. However, it will need to be supplemented with further evidence gathering and analysis to fill any gaps and obtain a complete picture from a SIA perspective.

Two Project scenarios are being assessed as part of the SIA Scoping Phase. These are:

- The Project is approved and is developed as per the Project Description in Section 3
- The Project is not approved.

9.2.1 If the Project is approved

9.2.1.1 Standard Assessment

Based on the completed SIA Scoping Tool in Section 8.1, the key issues to be addressed in a standard assessment in the scenario where the Project proceeds are:

- Amenity:
 - Acoustic impacts from blasting and machinery impacting on way of life, quality of the living environment, health and wellbeing
 - Visual impacts of landscape changes, dust and lighting impacting on way of life, quality of the living environment, health and wellbeing
 - Intergenerational impacts
- Access:



- Impact from workers travelling from home/accommodation to site and return impacting on way of life, health and wellbeing
- Construction workers parking in Muswellbrook to catch a bus to site impacting on way of life
- Built environment:
 - Visual impacts on the public spaces, including footpaths, streets and roads (local, State and Federal) impacting on way of life, quality of the living environment and health and wellbeing
 - Impact of blasting on homes and other buildings impacting on way of life, quality of the living environment and health and wellbeing
- Heritage:
 - Impacts on natural heritage, changes to the natural landscape and its aesthetic value, impacting on way of life and cultural impacts
 - Impact on Aboriginal culture by impacting on the connection people have with land and water with impacts on health and wellbeing, community and family
- Community:
 - Impacts on physical health and mental wellbeing
 - Impacts of drivers on roads between mine site and home/accommodation of the workforce, particularly after working a 12-hour shift
- Socio-Economic:
 - Impacts on natural resource - loss of access to soil and water causing socio-economic impacts
 - Impacts on livelihoods - loss or reduction of livelihood or increase in livelihood (depending on stakeholder)
 - The distribution of socio-economic benefits and how these change over distance from impacts associated with employment, local employment commitment, Local Supplier Strategy and community contributions
- Air:
 - Particulate matter, gases, atmospheric conditions impacting on way of life, health and wellbeing, quality of living environment and socio-economic impacts
- Biodiversity:
 - Impacts on flora and fauna and its aesthetic values impacting on way of life, quality of the living environment and cultural impacts
- Land:
 - Impacts on the landscape impacting on way of life, quality of the living environment and cultural impacts
- Water:
 - Impact on surface water in Sandy Creek catchment and the Hunter River impacting on way of life, quality of the living environment and cultural impacts.



9.2.1.2 Comprehensive Assessment

Based on the completed SIA Scoping Tool in Section 8.1, key issues to be addressed in comprehensive SIA for the Project EIS assessment in the scenario where the Project proceeds are:

- Amenity
 - The distribution of environmental impacts and how these change over distance
- Heritage
 - Impact on agricultural culture and impacts on health and wellbeing, and community and family
- Community:
 - Impacts on services and facilities including education, emergency services and community services and facilities
 - Changes to community cohesion, capital and resilience, reinforcement of existing community division, straining of social capital and testing of community resilience
 - Change in community identification and connection, and loss of social networks and social capital
 - Impacts on availability of affordable housing having an impact on way of life and equity impacts
 - Impacts of 12-hour shift on family structure impacting on health and wellbeing for the worker and their family and gender impacts
 - Impacts on personal and property rights leading to feelings of uncertainty and powerlessness impacting on health and wellbeing
- Socio-economic
 - Income inequality while paying the same price for goods and services impacting on social networks, community cohesion and reinforces social differentiation and inequity.

9.2.2 If the Project is not approved

9.2.2.1 Standard Assessment

Based on the completed SIA Scoping Tool in Section 8.2, the key issues to be addressed in a standard assessment in the scenario where the Project does not proceed are:

- Built Environment
 - Visual impacts from public spaces of final landform impacting on the quality of the living environment
 - Cessation of blasting on dwellings and other buildings and impacts on way of life, quality of the living environment and health and wellbeing
- Amenity
 - Cessation of noise from blasting and machinery and impacts on way of life, quality of the living environment, health and wellbeing



- Final landform and void impacting on the quality of the living environment
- Access
 - Cessation of workers travelling from home/accommodation to site and return impacting on way of life and health and wellbeing
- Heritage
 - The natural landscape and its aesthetic value and its impact on way of life and cultural impacts
 - Agricultural culture and impacts on health and wellbeing and community and family
 - Aboriginal culture, connection to country and water and impacts on health and wellbeing, community and family
- Community
 - Safety, cessation of workers on roads between mine site and home/accommodation of the workforce, particularly after working a 12-hour shift impacting on health and wellbeing
- Socio-economic
 - Impacts of the final land use, landform and final void on natural resources
 - Loss or reduction of livelihood or increase in livelihood (depending on stakeholder)
 - The loss of employment and socio-economic benefits and how these change over distance impacting on way of life, socio-economic, health and wellbeing, family and community, equity and gender impacts
- Air
 - Impact on physical health and mental wellbeing, impacting on way of life and quality of the living environment
- Biodiversity
 - Impact on flora and fauna and its aesthetic value and impact on the quality of the living environment and cultural impacts
- Land
 - Impacts on the landscape and impacts on the quality of the living environment and cultural impacts
- Water
 - Impact on surface water in Sandy Creek catchment and the Hunter River and impacts on the quality of the living environment and cultural impacts.

9.2.2.2 Comprehensive Assessment

Based on the completed SIA Scoping Tool in Section 8.2, key issues to be addressed in comprehensive SIA for the Project EIS assessment in the scenario where the Project does not proceed are:

Community

- Physical health and mental wellbeing of workers, their families and friends, and those reliant on mining related revenue

- Services and facilities and changes to demand on health, education, emergency services and community services and facilities and the people accessing the services
- Reinforcement of existing community division, straining of social capital and testing of community resilience
- Impact on affordable housing
- Reduction of population if workers and their families move away.

9.3 Potential SIA stakeholders

Potential stakeholders to invite to participate in the SIA for the Project EIS have been identified based on the feedback from the Stakeholder Case Study participants and identification of likely social impacts. Potential SIA stakeholders are listed in Table 15.

Table 15 Potential SIA Stakeholders

Stakeholder Group	Stakeholder
"The community"	The Mount Pleasant Operation Community Consultative Committee
Aboriginal Stakeholders	ACDF Wanaruah Local Aboriginal Land Council – CEO, Executive Members and Members Hunter Valley Aboriginal Corporation – Executive Members and Members Ungaroo Aboriginal Corporation Earth Connection Indigenous Corporation Registered Aboriginal Parties (RAPs) Other independent interested Aboriginal parties such as business owners who utilise country in their teachings and practices
Directly impacted residents	Neighbouring residents
Surrounding rural communities	Dorset Road community Blairmore Lane community Residents living at Kayuga Collins Lane community Residents of Muswellbrook who live on the floodplain of the Hunter River Racecourse Road community Wybong community Castlerock community
Nearby towns and villages	Muswellbrook Aberdeen Scone Denman Singleton
Local Councils	MSC (Councillors and staff) UHSC (Councillors and staff) Singleton Council (Councillors and staff)



Stakeholder Group	Stakeholder
Community and Emergency Services and Facilities	<p>Health - Hunter New England Local Health District/Hunter New England Population Health, including:</p> <ul style="list-style-type: none"> • Hunter New England Health Service • Muswellbrook District Hospital • Community Health <p>Childcare centres Education (Primary and secondary schools) TAFE in Muswellbrook Police Fire including CFS Ambulance SES Aged care facilities Upper Hunter Community Services Upper Hunter Family Support Services Upper Hunter Homeless Support Hunter Drug and Alcohol Health Service Compass Housing – providers of social housing PCYC Sporting groups Muswellbrook Race Club (General Manager)</p>
Community Groups	<p>Landcare groups Friends of the Upper Hunter Inc Hunter Communities Network Denman, Aberdeen, Muswellbrook and Scone Healthy Environment Group Hunter Environment Lobby Inc</p>
Local businesses	<p>Muswellbrook Chamber of Commerce and Industry Inc. Denman Development Association Singleton Business Chamber Scone Chamber of Commerce and Industry Inc. Earth Medicine and Cultural Connection Businesses in Bridge Street, Muswellbrook Local real estates Post office</p>
Other industries	<p>Hunter Thoroughbred Breeders Association Vinery, Arrowfield, Godolphin, Coolmore and Newgate Hunter Valley Wine and Tourism Association 2 Rivers Vineyard</p>



9.4 Provisional proposed engagement for the SIA

An SIA methodology will be developed based on the SEARs and this SIA Scoping Report. The SIA will include a social baseline study, a prediction of social impacts, an evaluation of significance, response and monitoring and management framework.

Similar to the SIA Scoping methodology, the SIA methodology will include engagement with SIA stakeholders.

Potential SIA engagement techniques may involve (but will need to be discussed with SIA stakeholders):

- The formation of working groups for the different geographical areas/communities potentially impacted
- Semi-structured interviews with Mount Pleasant Operation workers followed up with an online survey
- Semi-structured interviews with Mount Pleasant Operation suppliers followed up with an online survey
- Semi-structured interviews with community service providers followed up with an online survey
- Local researcher program, where local people become the social researcher, using their local social knowledge to develop appropriate data collection techniques and their networks to collect data. This technique can be useful when working with “hard to reach/vulnerable communities”
- Further desk-based research.

10 Conclusion

This SIA Scoping Report has focused on identifying the social area of influence and the likely social impacts of the Project. The social area of influence and likely social impacts have been identified based on field work, including engagement with stakeholders and desk-based research.

Given the Project is a brown field site, is operating within a precinct of other large scale open cut coal mines (Mt Arthur Coal Mine and Bengalla Mine) and in a dynamic social environment with changing demographic and economic trends and forecasts and in a current climate of drought and heightened risk of bush fires, the task of identifying the social area of influence and potential impacts specific to the proposed Project has also been challenging.

Based on a 'whole of project' approach, the Project's social influence will extend across a geographical area from Murrurundi in the north, to Newcastle in the south-east and west of Merriwa. This includes impacts associated with the mine site, workforce, transport of coal via rail to Newcastle, Biodiversity Offset Areas and the Aboriginal Heritage Conservation Area. Given the challenges of identifying the social area of influence, it should be reviewed as part of the SIA for the Project EIS.

Because of the challenges outlined above and this is a scoping exercise, the precautionary principle has been applied when identifying likely social impacts.

The application of the DPIE Scoping Tool, in the scenario where the Project proceeds, has indicated that the majority of likely social impacts require standard assessment. However, comprehensive assessment is required for the likely social impacts associated with the following matters: amenity (i.e. distribution of environmental impacts); heritage (i.e. agricultural culture); community (i.e. services and facilities, cohesion, capital and resilience, community identification and connection, housing, impacts of 12-hour shift/roster and personal and property rights) and socio-economic (i.e. income inequality) aspects.

The application of the DPIE Scoping Tool, in the scenario where the Project does not proceed, has also indicated that the majority of the likely social impacts require standard assessment. However, comprehensive assessment is required for the likely social impacts associated with some community aspects (i.e. health, services and facilities, cohesion, capital and resilience, housing and reduction of population).

The completion of this scoping exercise has identified a wide range of potential stakeholders that will be targeted in engagement activities during the SIA for the Project EIS and ways to engage with them.



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Appendix A

Response to Appendix D of SIA Guideline

Appendix D of the SIA Guideline outlines the following questions when checking if their SIA follows the guideline.

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 16.

Table 16: Application of SIA principles

Principle	Description	Application
Action-orientated	Delivers outcomes that are practical, achievable and effective.	<p>Social impacts of the existing Mount Pleasant Operation were discussed with the stakeholders participating in the scoping phase of the SIA. Where social impacts were identified and not managed or mitigated, MACH offered to follow up with the stakeholder (if MACH representative was present for the discussion) or SIA Practitioner followed up with MACH (if MACH representative was not present for the discussion).</p> <p>Social impacts of the proposed Project were discussed with MACH as part of the development of the SIA Scoping Report. Where relevant, strategies to avoid, minimise or manage these impacts have begun and it is intended that these discussions will continue and form part of the SIA for the Project EIS.</p>
Adaptive	Establishes systems to actively respond to new or different circumstances and information and support continuous improvement.	Adapting the Stakeholder Case Studies and the Stakeholder Case Study process to suit the needs of stakeholders.
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.	<p>Likely social impacts have been identified across:</p> <ul style="list-style-type: none"> • Different stakeholders • Different geographical areas • Different age groups • Different generations • Different genders <p>It is acknowledged that these impacts will need to be further researched as part of the SIA for the Project EIS.</p>
Impartial	Is undertaken in a fair, unbiased manner and follows relevant ethical standards.	<p>A cross section of SIA stakeholders invited to participate in the SIA Scoping Phase.</p> <p>Information and Consent forms to cover the SIA Scoping process and the provision of information by the SIA stakeholders. A copy of the Information and Consent form template is provided in Appendix D.</p>

Principle	Description	Application
		An assessment undertaken of likely social impacts for the Project being approved and not being approved.
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>A cross section of the stakeholders invited to participate in the SIA Scoping Phase. The stakeholders were asked who to include in the SIA phase of the Project EIS.</p> <p>Meetings with stakeholders held at a time and place which they felt most comfortable with.</p> <p>The stakeholders had the choice whether MACH representatives stayed for the meeting after they had provided the Project overview and answered any initial questions. Stakeholders were asked who to include in the SIA for the Project EIS.</p>
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 for the Project were not undertaken at the time of the SIA Scoping study as they will be completed as part of the EIS. The SIA practitioner participated in an Environmental Risk Assessment workshop, where discussion was held with the other technical leads.
Life cycle focus	Seeks to understand potential impacts (including cumulative impacts) at all project stages, from preconstruction to post closure	<p>Social impacts identified for:</p> <ul style="list-style-type: none"> • Current operation • Proposed Project – if it proceeds • Proposed Project – if it does not proceed. <p>Further work will be undertaken as part of the SIA for the EIS to understand the impacts at Project milestones including closure and post closure. Further work will also be undertaken to build on the initial assessment of cumulative impacts.</p>
Material	Identifies which potential social impacts matter the most, and/or post the greatest risk to those expected to be affected.	<p>Likely social impacts have been described using Table 5 in the SIA Guideline, including their extent, duration, severity and sensitivity. Prioritisation of impacts will be undertaken as part of the SIA for the Project EIS.</p>
Precautionary	If there is a threat of serious or irreversible damage to the environment ⁶ , 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 deciding on the Project's social area of influence and likely social impacts.
Proportionate	Scope and scale should correspond to the potential social impacts.	The SIA Scoping process and level of detail in the 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 methodology, including social science methods and evidence based on primary research, is provided and a reference list is provided in the report.

⁶ 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.'

Principle	Description	Application
Transparent	Information, methods and assumptions are explained, justified and accessible; and people can see how their input has been considered.	The SIA Scoping methodology is provided in the report. Data sources have been identified and a reference list provided. The SIA Stakeholders Case Studies are attached to the report.

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

Box 2 of the DPIE SIA Guideline “Who should do the scoping?” states:

The SIA scoping approach is designed to be used by the applicant and/or their study team. The applicant and/or study team should have demonstrated understanding of impact assessment, engagement, primary data collection methods and the approach to SIA outlined in this guideline. Including someone with suitable qualifications in a social science discipline and/or a demonstrated experience in SIA theory and practices in the study team is strongly encouraged, particularly where multiple social impacts or complex social impacts are expected to be involved.

The lead SIA practitioner for the SIA Scoping is Rachel Maas. Rachel Maas is a Certified Environmental Practitioner, Impact Assessment Specialist (CenvP IA), holds a Bachelor’s degree in Australian Environmental Studies, a Post Graduate Diploma in Social Impact Assessment and a Masters of Evaluation. Rachel has been conducting SIA’s in Australia and New Zealand over the past twenty years. Rachel’s full CV is provided in Appendix B.

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

Not applicable to the SIA Scoping Phase.

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?

Not applicable to the SIA Scoping Phase.

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 17.

Table 17: Meeting engagement objectives

DPIE SIA Engagement Objective	How addressed in the SIA Scoping Phase
<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 • The EIA process for State significant projects in NSW and how SIA contributes to that process 	<p>Information and Consent forms sent to all SIA stakeholders prior to agreeing to participate in the scoping phase.</p> <p>The Information and Consent forms outlined:</p> <ul style="list-style-type: none"> • The proposed Project. • The SIA scoping process and its context within the SIA Guideline and EIS process. • How information will be used in the SIA scoping processes. <p>During the meeting/workshop with the SIA stakeholder:</p> <ul style="list-style-type: none"> • A representative from MACH explained the proposed Project and answered any initial questions. • 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>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>	<p>The SIA Scoping process was designed to make the SIA stakeholders feel as comfortable as possible.</p> <p>The SIA Scoping Phase focused on collecting qualitative data through informal semi-structured interviews that were held more in a conversational style than question and answer format.</p> <p>A list of research questions was sent to stakeholders prior to the meeting so they had an idea of the questions/topics that would be discussed, and they could prepare if they chose to.</p> <p>Information from the stakeholders were written up as case studies as evidence to the SIA Scoping Report.</p> <p>Draft case studies were sent to all stakeholders to be modified/approved before being included in the SIA Scoping Report.</p> <p>Copies of the Stakeholder Case Studies are provided in Appendix G.</p>



DPIE SIA Engagement Objective	How addressed in the SIA Scoping Phase
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>The SIA Scoping process was designed to make the SIA stakeholders feel as comfortable as possible.</p> <p>The SIA Scoping Phase focused on collecting qualitative data through informal semi-structured interviews that were held more in a conversational style than question and answer format.</p> <p>A list of research questions was sent to the SIA Scoping stakeholders prior to the meeting, so they had an idea of the questions/topics that would be discussed, and they could prepare if they chose to.</p> <p>Information from the SIA stakeholders were written up as case studies as evidence to the SIA Scoping Report.</p> <p>Draft case studies were sent to all stakeholders to be modified/approved before being included in the SIA Scoping Report.</p> <p>Copies of the case studies are provided in Appendix G.</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>Information provided by stakeholders has been used to identify the Project's social area of influence and likely social impacts.</p>
Confirming data, assumptions, findings and recommendations.	<p>The Stakeholder Case Studies were written up as draft case studies and sent to each of the SIA stakeholders for their review.</p> <p>Once the stakeholders were happy with the Stakeholder Case Study, it was finalised and used to inform the SIA scoping process.</p> <p>Copies of the case studies are provided in Appendix G.</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>
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.	n/a for the scoping phase.
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 would like to be identified in the SIA Scoping Report, which includes the ability to remain anonymous.</p> <p>A copy of the Information and Consent form template is provided in Appendix D.</p>

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?

The aim of identifying the SIA stakeholders for the scoping phase was to get a cross section of people or organisations who represent those who are impacted by the current Mount Pleasant Operation and/or likely to be impacted by the Project.

To do this, the following tasks were undertaken:

1. Review existing Mount Pleasant Operation information, including submissions on previous Modifications.
2. Literature review of social impacts of mining in the Hunter Valley.
3. Review of other SIAs undertaken for mining projects in the Hunter Valley.
4. Undertake a preliminary scoping of potential social impacts of the current Mount Pleasant Operation and the proposed Project.
5. Develop a list of stakeholders and how they were expecting to be impacted based on their submissions.
6. Review a list of the potential SIA stakeholders with MACH.

The following process to engage with the SIA Scoping stakeholders was undertaken:

1. Where there is an existing relationship with MACH, MACH set up meetings with stakeholders.
2. Where there is no existing relationship or the existing relationship may impact negatively on the stakeholder's participation in the SIA, direct contact from Rachel Maas as the SIA practitioner to invite them to participate in the SIA.
3. MACH Energy or the SIA Practitioner e-mailed an Information Pack to each of the stakeholders. The Information Pack included:
 - Information and Consent form to participate in the SIA.
 - List of questions to guide the discussion with the stakeholders.
4. Follow up phone call/e-mail from either MACH/SIA practitioner (whomever was relevant) to confirm the stakeholder's willingness to participate in the scoping phase of the SIA and organise meeting time and place.

A schedule of the SIA Fieldwork is provided in Appendix C.

Case studies developed with the SIA stakeholders are provided in Appendix G.

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

One of the aims of the SIA Scoping Phase was to identify who is currently being impacted by the current Mount Pleasant Operation and/or cumulatively from other mines in the area.

The stakeholders were asked who was being impacted and who to include in the SIA for the Project EIS.

The stakeholders identified a number of vulnerable groups who are currently being impacted either by the Mount Pleasant Operation and/or cumulatively from other mines in the area. The stakeholders also nominated a number of organisations to contact for the SIA for the Project EIS.

The SIA team will endeavour to work with these organisations to ensure relevant engagement techniques are developed and implemented as part of the SIA for the EIS. Refer to Section 9.4 for further details.

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

Refer to Section 5.2.

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?

Refer to Section 5.3.

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?

Refer to Section 5.4.

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?

Refer to Section 5.1.

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?

Refer to Appendix I and J for detail and Section 6 for summary.



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?

Refer to Section 2.3, Appendix C, Appendix I and Appendix J.

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

Refer to Section 7.



Appendix B

CV of SIA Practitioner

Rachel Maas



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LIME**

- 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

CURRICULUM VITAE

Rachel Maas

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

Rachel has completed over 30 SIAs under relevant State legislation across Australia and 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.

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

Undertake 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

Rachel undertook a deskbased 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)

Rachel worked with C7 Systems IT&C to develop 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. 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. The project involves proposed widening the existing state highway and potential bypasses to increase driver safety and increase the networks resilience.

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

QUALIFIED AND CONNECTED

- Certified Environmental Practitioner (CEnvP) Impact Assessment Specialist



- Currently studying 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 Australian Evaluation Society (AES)

CURRICULUM VITAE

Papakura, South Auckland. 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, landholders, indigenous parties, local and state government and development companies 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.

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CURRICULUM VITAE

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. This included further development of the Northern Region Community Relations Plan with internal and external stakeholders, providing strategic advice on environmental approvals and Mining Lease Applications for projects in the Bowen Basin.

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;
- 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.


While employed 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

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CURRICULUM VITAE

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.

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Appendix C

SIA Scoping Methodology

SIA Scoping Fieldwork

Timeframes

SIA fieldwork was undertaken from Monday 28 October 2019 through to Friday 1 November 2019.

Tasks undertaken during the field work were:

- Meeting with the SIA Scoping Stakeholders and conducting semi-structured interviews with the aim of producing a Stakeholder Case Study of their experiences.
- A site tour of the existing Mount Pleasant Operation with discussions with key site staff to understand how the mine works and their experiences.
- Observations of Singleton, Muswellbrook, Aberdeen, Scone and the area surrounding the Mount Pleasant Operation to gain an orientation of key features and locations mentioned by the SIA stakeholders.

Engagement objectives

Field work was undertaken in accordance with Section 2.1 of the SIA Guideline “Engagement objectives for social impact assessment”. How these objectives were met during the field work is provided in Appendix A.

The aim of identifying SIA stakeholders for the scoping phase was to get a cross section of people or organisations who represent those who are impacted by the current Mount Pleasant Operation and/or likely to be impacted by the Project.

The SIA stakeholders identified for the scoping phase are set out in Table 18. These stakeholders were identified based on a review of submissions on previous Modifications.

Table 18: SIA Stakeholders for potential involvement in the Scoping Phase

SIA Stakeholder Group	SIA Stakeholder
Mount Pleasant statutory groups	Community Consultative Committee Aboriginal Community Development Fund
Near neighbours	As per MACH's records.
Native title holders	Wonnarua Nation Aboriginal Corporation
Aboriginal stakeholders	Wanaruah Aboriginal Land Council
Local Councils	Muswellbrook Shire Council Upper Hunter Shire Council Singleton Council
Environmental/community groups	Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group Friends of the Upper Hunter Hunter Communities Network
Industry groups	Muswellbrook Chamber of Commerce Hunter Thoroughbred and Breeders Association Muswellbrook Race Club
State Government Departments	Department of Planning, Infrastructure and Environment Department of Health Department of Education

Fieldwork schedule

A schedule of the SIA Fieldwork is outlined in Table 19. Where “SIA Stakeholder” is listed, the SIA stakeholder has chosen to remain anonymous.

Table 19: SIA Scoping Fieldwork Schedule

Date	Task
Monday 28 October 2019	Tour of the current Mount Pleasant Operation Meeting with SIA Stakeholder/s
Tuesday 29 October 2019	Aboriginal Community Development Fund Upper Hunter Shire Council (CEO and Director of Corporate Services)
Wednesday 30 October 2019	Meeting with SIA Stakeholder/s Meeting with Jonathon and Elisabeth Moore from Gilgai
Thursday 31 October 2019	Meeting with Mount Pleasant Community Consultative Committee Meeting with Wonnarua Nation Aboriginal Corporation (CEO) Meeting with Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group (initial Project briefing only) Meeting with Wanaruah Aboriginal Land Council (Board members and CEO) Initial briefing with Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group
Friday 1 November 2019	Meeting with Muswellbrook Chamber of Commerce & Industry Inc. (President and Treasurer) Muswellbrook Shire Council (Community Partnerships Coordinator, Manager Integrated Planning, Risk and Governance and Assistant Director Environment and Community Services) Meeting with SIA Stakeholder/s
Wednesday 20 November 2019	Telephone discussion with Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group

The Singleton Council and Department of Health were unable to meet during the scoping phase of the SIA, however, they are expected to be available during the SIA of the Project EIS. Other initially identified stakeholders were contacted and invited to participate in the SIA but did not respond to invitations. They will be invited again to participate in the SIA of the Project EIS.

Results of the SIA Fieldwork

The Stakeholder Scoping Case Studies specific to each stakeholder was developed and these are provided in Appendix G. Eleven case studies were developed. Input from Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group was included in Appendix I as personal communications. The Upper Hunter Shire Council did not complete the Stakeholder Case Study process.

Results of the Stakeholder Scoping Case Studies are to be considered in the context that this was the first time the respondents had heard about the Project and are to be used as a scoping process only. Furthermore, detailed engagement with the SIA stakeholders will take place in the next phase of work (as outlined in Section 9.4).

The results of the field work have been used to:

- Identify social impact categories (as described in Section 2.3).
- Identify the social area of influence (as described in Section 5.5).

- Identify negative and positive social impacts (summarised in Section 6 details contained in Appendix I and J).
- Identify cumulative impacts (as described in Section 7).

Identification of Social Area of Influence

Analysis undertaken to develop the proposed Project's social area of influence is provided in Table 20.

Table 20: Analysis undertaken to identify the proposed Optimisation Project's social area of influence

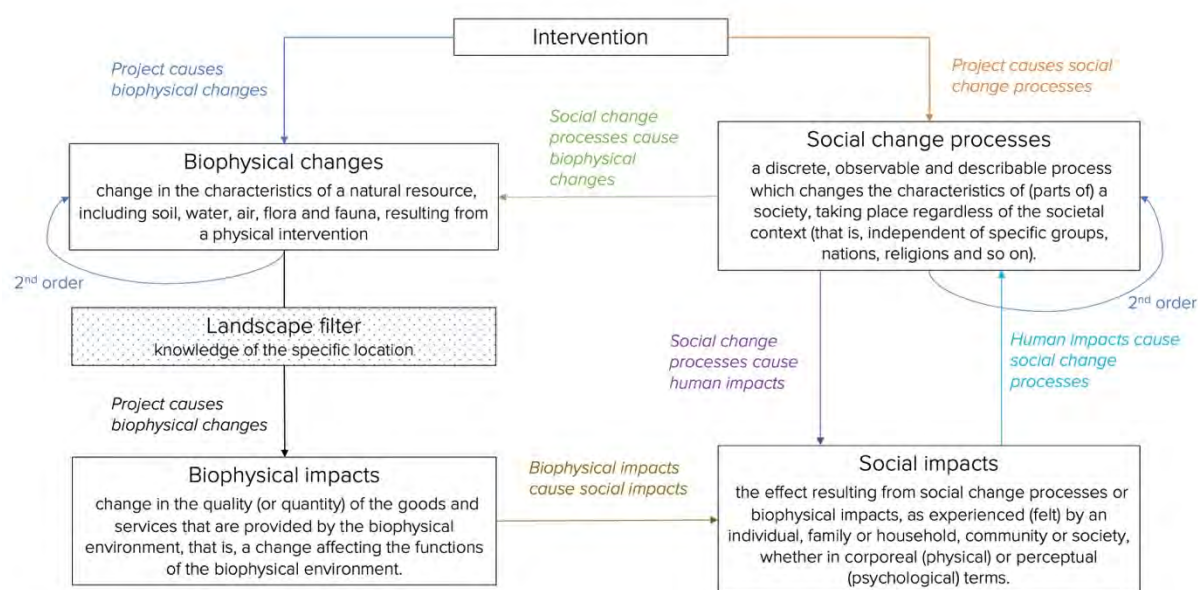
SIA Guidance (p. 18)	How the analysis will be undertaken
Analysis of the scale and nature of the proposed project, its associated activities (including ancillary infrastructure), potential direct impacts, potential indirect impacts that may extend from the project site (e.g. transport and logistical corridors, downstream water users) and potential cumulative impacts.	Review proposed Project plans and designs, briefings from MACH and MACH's technical advisor. Review submissions on Modifications to the Mount Pleasant Operation and other mining operations in the Muswellbrook Shire Council area. Field work – engagement with the SIA stakeholders to understand social impacts of current operation and potential social impacts of proposed Project.
Analysis of who may be affected by the project, how they are expected to be affected, and their relevant interests, values and aspirations	Review submissions on Modifications to the Mount Pleasant Operation and other mining operations in the Muswellbrook Shire Council area. Field work – engagement with the SIA stakeholders to understand social impacts of current operation and potential social impacts of the proposed Project.
Analysis of any potentially affected 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, including key infrastructure, facilities and amenities.	Review local, State and Federal strategic plans and policies. Field work – engagement with the SIA stakeholders to identify any potentially affected built or natural features located on or near the existing Mount Pleasant site ⁷ or in the surrounding region that have social value or importance.
Analysis of relevant social trends or social change processes being experienced by communities near the project site and within the surrounding region, for example, trends in availability of rented accommodation, changes to relative employment in different industries, changing land uses over time, population and demographic changes.	Review local, State and Federal strategic plans and policies. Review SIAs of other projects in the region. Review demographic and other relevant data. Field work – engagement with the SIA stakeholders to understand social trends or social change processes being experienced by communities near the Project site and within the surrounding region.
Analysis of the history of the proposed project and how communities near the project site and within the surround region have experienced the project and others like it to date.	Review submissions on Modifications to the Mount Pleasant Operation and other mining operations in the Muswellbrook Shire Council area. Field work – discuss the history of the Mount Pleasant Operation and the proposed Project and others like it to date.

⁷ The proposed Project is within the existing Mount Pleasant Operation Mining Leases.

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 Sloodweg et al 2013. The Sloodweg model (see Figure 14) identifies the pathways by which environmental and social impacts may result from proposed projects.

Figure 14: Sloodweg impact identification model



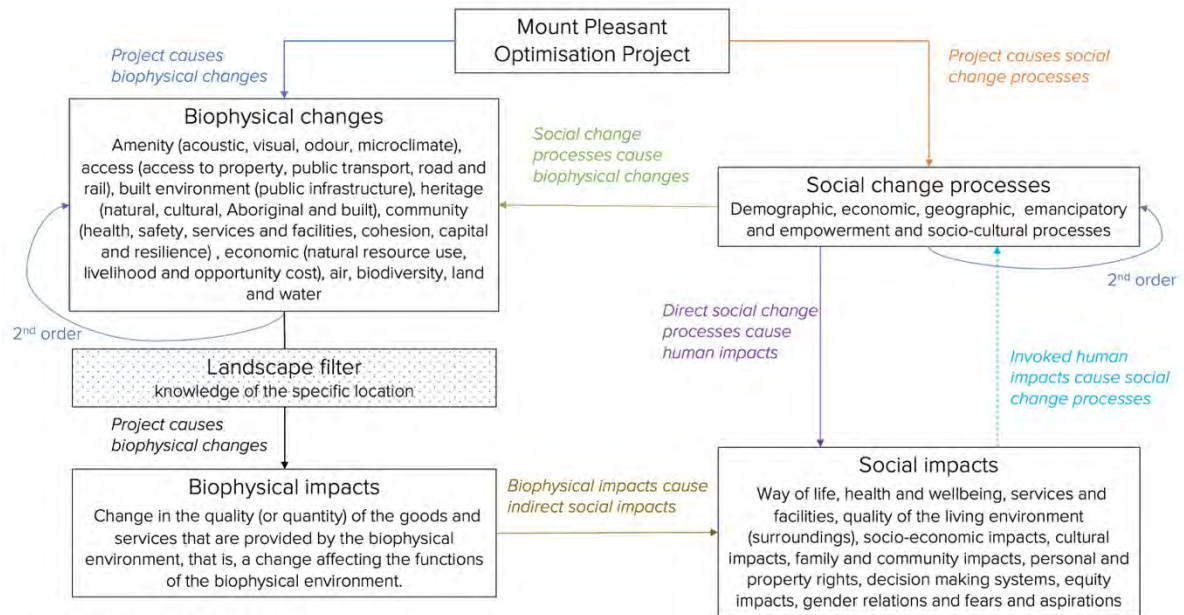
Based on Sloodweg et al 2013:78

A second conceptual model has been developed (based on the Sloodweg model) to be applied to the Project. The Project specific conceptual model has been developed taking into consideration:

- The SIA Guideline, principally the list of social impacts provided in Section 1.1 of the guideline and the checklist of matters in Appendix B.
- Submissions on previous Modifications.
- The Stakeholder Scoping Case Studies (Appendix G).
- Literature review on social impacts caused by mining projects in the Hunter Valley.
- SIA practitioner experience.

The conceptual model for identifying social impacts for the Mount Pleasant Optimisation Project is shown in Figure 15.

Figure 15: Mount Pleasant Optimisation Project social identification model



Based on Slootweg et al 2013:78



Appendix D

Information and Consent Form



Social Impact Assessment (SIA) - Scoping phase Information and Consent Form

Introduction

Just Add Lime has been contracted by MACH Energy to undertake the Scoping Phase of the Social Impact Assessment (SIA) 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 Scoping Phase of the SIA. I can be contacted on either 0418 728 895 or rachel.maas@justaddlime.com.au

The MACH Energy Mount Pleasant Optimisation Project

The Project would include the following development:

- Increased open cut extraction within Mining Lease (ML) 1645, ML1708, ML 1709 and ML 1750 to allow 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 (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 615 people, with a peak of approximately 840 people.
- Ongoing exploration activities.
- Other associated infrastructure, plant, equipment and activities.

Figure 1 shows the general arrangement of the Project:

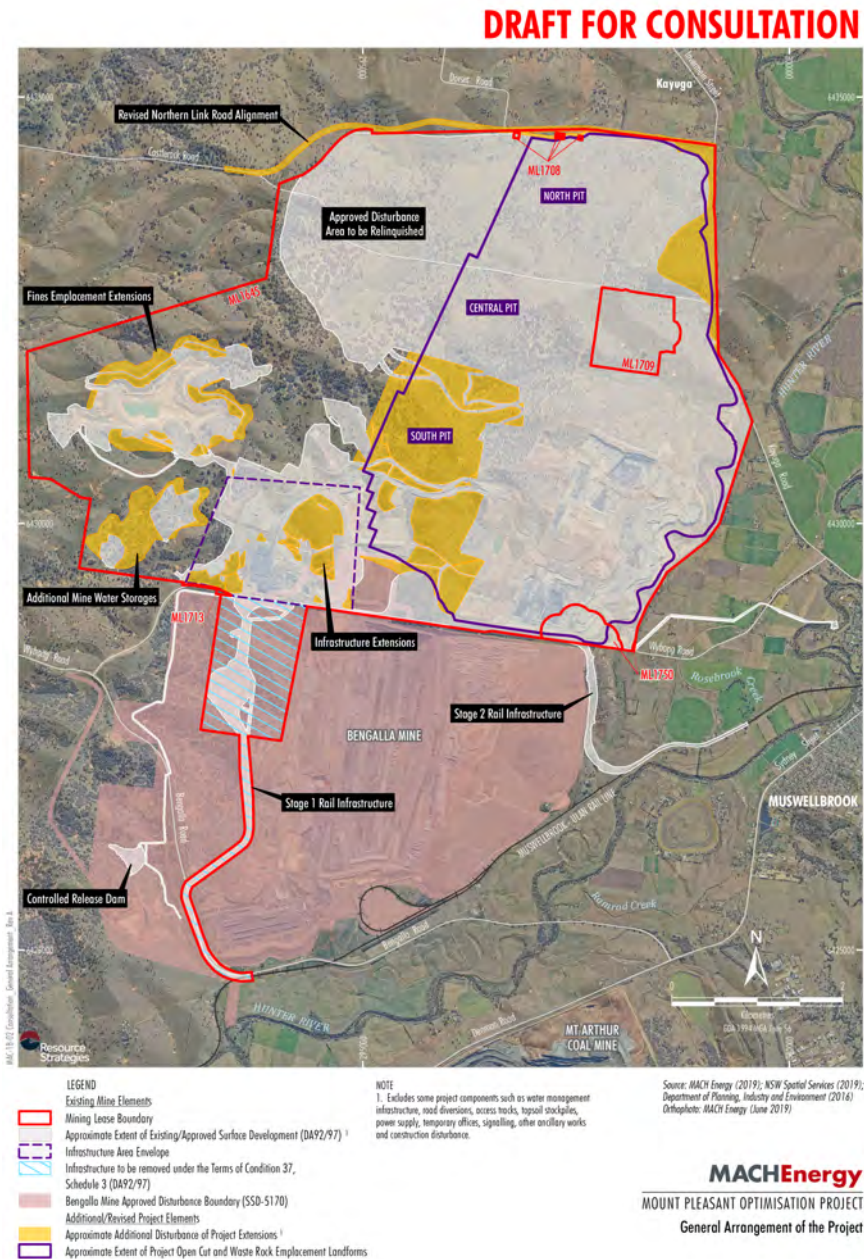


Figure 1 General Arrangement of the Project



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. from 22 December 1999 until 22 December 2020). Extended to 22 December 2026 in 2018 (via Modification 3).	Until 22 December 2048 (i.e. extension of 22 years).
Mining Method	Open cut mining method incorporating truck and shovel and dragline operations (dragline not envisaged prior to 2026).	Open cut mining method comprising truck and shovel and/or dragline operations.
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.
Total Resource Recovered	Approximately 197 Mt of ROM coal.	Approximately 447 Mt of ROM coal.
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 88 Mbcm per annum.
Waste Emplacements	Waste rock emplaced both in-pit, and in four major out-of-pit emplacement areas.	Minor waste emplacement extension in the east, one integrated waste emplacement landform. Relinquishment of the North West Out of Pit Emplacement area.
Coal Beneficiation	Beneficiation of ROM coal in the on-site CHPP.	Staged upgrades to the CHPP to allow the handling and processing of additional ROM coal.
Coal Transport	An average of six and a maximum of 18 train movements per day (i.e. an average of three and maximum of nine departures).	An increase in product coal rail movements (number to be confirmed).
Coal Rejects	Coarse rejects will be placed within mined out voids and out-of-pit emplacements, and used to build walls of the Fines Emplacement Area. Fine rejects will be stored in the Fines Emplacement Area.	As approved, plus fine reject dewatering infrastructure would be installed so a proportion of dewatered fine rejects can be co-disposed with coarse rejects.



Component	Approved Mount Pleasant Operation DA 92/97	Project
Water Supply and Disposal	<p>Water requirements will be met from pit groundwater inflows, catchment runoff and make-up water from the Hunter River and the Bengalla or Dartbrook Mines.</p> <p>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.</p>	Unchanged (increased water demand).
Final Landform and Land Use	<p>A final landform incorporating macro-relief and micro-relief concepts so it does not look "engineered" from Muswellbrook, and avoids major engineered drop structures where practical.</p> <p>One relatively natural-looking 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 in a low-lying area between the two larger final voids.</p>	<p>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.</p> <p>One relatively natural-looking final void would remain.</p>
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.	At full development, employment in the order of 840 operational personnel (including MACH Energy 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 more than 500 people.



Scoping phase for the SIA

MACH Energy is preparing a [State Significant Development Application](#) (SSD Application) for the Project. As part of preparing the SSD Application, MACH Energy is undertaking an Environmental Impact Statement (EIS), including a SIA.

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

The SIA Guideline sets out the key phases of the SIA across the EIS process, with the initial phase being scoping. The scoping phase for the SIA is used to identify the most relevant and important issues for a project as well as to ensure the scale of assessment is proportionate to the importance of the expected impacts.

The SIA Guideline outlines the two core objectives that should be met during the scoping phase of the SIA:

1. potentially affected people and the project's area of social influence are identified and understood; and
2. social impacts needing further investigation in the EIS are identified and assigned a proportionate level of assessment.

Just Add Lime will prepare a Scoping Report for the SIA. The Scoping Report will be provided to the DPIE as part of the request for the Secretary's Environmental Assessment Requirements (SEARs). The SEARs will set out what needs to be assessed in the EIS (including the SIA) for the Project. The Scoping Report will be made public on the DPIE's project webpage.

Your role in the scoping phase of the SIA

Your role in the scoping phase of the SIA will involve participating in a meeting, focus group or workshop and verify the data or information collected.

During the meeting, focus group or workshop we will discuss:

- Who may be impacted by the Project (in a positive or negative way) across the life of the Project and how they are likely to be impacted.
- Any built or natural features located on or near the Project site or in the surrounding region that are valuable or important and could be impacted by the Project, including social infrastructure, facilities and amenities.
- Any relevant social trends or social change processes being experienced near the Project or within the surrounding region (e.g. availability of housing or changing populations).
- Impacts of the existing Mount Pleasant Operation and cumulative impacts of mining and other significant industries or natural events (e.g. droughts) in the region.
- Any other topics you feel is relevant to the scoping phase of the SIA.
- Who to invite to participate in the next phase of the SIA.



During our meeting, focus group or workshop I will be:

- Taking hand-written notes.
- Undertaking a social mapping exercise (marking on a map your local and regional community, places of significance and location of existing and potential social impacts).
- Taking photos (if appropriate).

Information/data collected as part of our meeting, focus group or workshop will be written up as a case study and will be included as an Appendix to the Scoping Report. I will ask you to review your case study which will include:

- A copy of my typed-up notes (based on my hand-written notes) to ensure they are an accurate representation of our discussion. I can provide a scanned copy of my handwritten notes if requested.
- A copy of the map we developed as part of the meeting.
- Any photos taken.

Once you have verified the case study, you will be granting Just Add Lime permission to use it in the Scoping Report.

A copy of your case study will be provided to MACH Energy. Please let me know if there is any data/information you would not like to be provided to MACH Energy.

Data/information provided by you will be used to identify:

- The Project's area of social influence.
- Social impacts (positive and negative) needing further investigation in the EIS.

Your participation in the scoping phase of the SIA is encouraged to ensure the definition the Project's social area of influence and social impacts that require further investigation in the EIS are as accurate as possible.

Voluntary participation

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

Payment

Your participation in the SIA will be on a voluntary basis, however if we meet over lunch or coffee, I will be happy to pay for your refreshments.

If you have any concerns

If you have any concerns about how I am conducting the field work for the scoping phase, you can contact either Ngaire Baker (External Relations Manager) at MACH Energy 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

If after reading the Information and Consent Form you are happy to participate in the scoping phase of the SIA, please initial each page and complete the following:

"I, _____ (please print name) agree to participate in the scoping phase of the social impact assessment for the MACH Energy Mount Pleasant Optimisation Project as outlined in this form."

Signature _____
Company/Organisation _____
Position _____
Date _____

SIA Practitioner _____
Signature _____
Date _____

I will take a photo of the completed Information and Consent Form and an electronic copy will be kept on file at Just Add Lime. You will keep the original form.

Confidentiality

Please select the way in which you wish to be quoted/cited in the Scoping Report (please tick the relevant box):

<input type="checkbox"/>	Acknowledgement by position and company/organisation
<input type="checkbox"/>	Acknowledgement by company/organisation only
<input type="checkbox"/>	Confidential participation (information is de-identified)



Appendix E

Summary of Mount Pleasant Modifications

Modification 1 - 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 loop and relocation of mine infrastructure

On 19 May 2010, Coal & Allied submitted an application to the NSW Department of Planning and Infrastructure, seeking to modify the Minister's consent for the Mount Pleasant mine under section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act).

Coal & Allied were seeking to improve operational efficiencies at the mine and is proposing to:

- Construct a conveyor and service corridor from Mt Pleasant mine to the existing rail facilities at the Bengalla Mine, as an alternative to the approved rail loop, loading facility and conveyor.
- Extend the development consent boundary to accommodate the proposed conveyor/service corridor.
- Relocate approved mine infrastructure within an envelope, rather than the specific locations identified in the Environmental Impact Statement (EIS).
- Contemporise all noise-related conditions in the development consent.

The Department of Planning and Infrastructure Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 1) states that following the exhibition of the Environmental Assessment for the Modification, the Department received 23 submissions on the Modification including:

- Four from public authorities (OEH, NOW, Muswellbrook Shire Council and DRE).
- Six from special interest groups (including Balmoral Park Racing, Anglo American, Stop Open Cut Coal Mining, Construction, Forestry & Mining and Energy Union, Scone Equine Hospital and 1 confidential submission).
- Thirteen from the general public (including 1 confidential submission and 7 form letters).

The Department of Planning and Infrastructure Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 1) summarised the issues raised in their Assessment Report and these are presented in Table 21.

Table 21: Modification 1 – DPI summary of submissions

Stakeholder group	Issue/s raised	Coal & Allied Response
The Office of Environment and Heritage (OEH)	Biodiversity survey effort, proposed biodiversity offsets, Aboriginal heritage consultation and significance assessment; and advised that it was unable to recommend conditions until these concerns were addressed.	To address OEH's concerns, Coal & Allied provided supplementary information and met on several occasions with OEH and the Department. Subsequently, OEH confirmed that the outstanding issues could be resolved and recommended a number of conditions to address biodiversity and Aboriginal heritage. OEH also recommended conditions for noise and blasting.
The NSW Office of Water (NOW)	Recommended a condition requiring Coal & Allied to ensure it has sufficient water supply for all stages of the development and to adjust the scale of its mining operations to match its water supply.	None included in Section 4 of the DPI Assessment Report.

Stakeholder group	Issue/s raised	Coal & Allied Response
Muswellbrook Shire Council	Raised a number of broader concerns regarding the approved Mt Pleasant coal mine, including potential impacts of the mine on local roads and rail, the labour market, social infrastructure, land use conflicts, water resources, and health services. Council recommended a number of conditions to manage these issues and advised it could not support the Modification unless its recommended conditions were implemented.	Coal & Allied subsequently met with Council and negotiated a Voluntary Planning Agreement to provide for road maintenance, community enhancement, employment and environmental management. Subsequent correspondence from Council has confirmed that it is satisfied that the proposed conditions of approval adequately address their initial concerns, and that with the implementation of these conditions it does not object to the proposed Modification.
The Division of Resources and Energy (DRE) within the Department of Trade and Investment, Regional Infrastructure and Services	Had no objections to the Modification.	None included in Section 4 of the DPI Assessment Report.
Special interest groups	Of the 6 submissions from special interest groups, 4 objected, 1 did not object but raised concerns, and 1 (the CFMEU) supported the Modification. 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: <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.
General public	All 13 of the submissions from the general public objected to the proposed Modification. Concerns raised included potential noise and dust impacts, visual and light spill, potential impacts to water resources and road and rail infrastructure, greenhouse gas emissions, and cumulative impacts of coal mining in the region (noise, dust and visual). Many of these concerns were directed towards the potential impacts of the approved mine, rather than the proposed Modification.	Coal & Allied has provided responses to the issues raised in submissions. The Department has considered the issues raised, and Coal & Allied's response to these issues, in its assessment of the proposed Modification.

Source: Department of Planning and Infrastructure Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 1)

Modification 2 – Relocation of the South Pit Haul Road

On 22 December 2016, MACH lodged an application to modify the development consent under section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act). The proposed Modification involves relocation of an approved haul road between the conceptual CHPP and mine infrastructure area and the approved South Pit open cut. All other aspects of the development would remain unchanged.

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. Muswellbrook Shire Council expressed support for the proposal and none of the remaining 3 authorities raised any concerns with the Modification. The Department did not receive any public submissions.

Modification 3 – Mine Optimisation Modification

On 31 May 2017, MACH lodged an application to modify Development Consent DA 92/27 under section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act). The proposed Modification seeks to:

- Extend the life of Development Consent DA 92/97 for an additional six years until 22 December 2026
- Make minor changes to the approved mining methods
- Extend the Eastern Out-of-Pit Emplacement Area (OEA) by approximately 67 hectares (ha) and relinquish the northern portion of the South West OEA
- Increase the construction workforce from 250 to 350 people, to expedite construction; and
- Remove the Mount Pleasant rail loop and associated infrastructure.

The proposed Modification does not seek to change the rates of ROM coal production, coal processing or waste rock production.

The Department of Planning and Environment Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 3) states that following the exhibition of the Environmental Assessment for the Modification, the Department received 355 submissions during the exhibition period, comprising:

- 11 from public authorities, including Muswellbrook Shire Council
- 86 public and Special Interest Group submissions in support
- 250 public and Special Interest Group submissions in objection
- 8 public and Special Interest Group submissions providing comment.

The former Department of Planning and Environment summarised the issues raised in their Assessment Report. The submissions, as summarised by the DPE, are presented in Table 22.

Table 22: Modification 3 – DPE summary of agency submissions

Stakeholder group	Issue/s raised	MACH Energy Response
Environmental Protection Authority (EPA)	<p>Accepted the noise and blast components of the EA, subject to the following matters being addressed:</p> <ul style="list-style-type: none"> • provision of updated tables in Development Consent DA 92/97 listing noise criteria and identifying land/receiver locations; • where additional mitigation is available or land subject to voluntary acquisition; • exceptional meteorological conditions; • modifying factor adjustments to proposed noise limits; and • measurement of meteorological conditions at an onsite weather station. 	In response to the last two matters, MACH stated that modifying factor adjustments would be applied consistently with the applicable policy and that it would use the sigma-theta method at an onsite monitoring station.
	The EPA also noted that no correction factor had been added to noise levels to account for low frequency noise.	MACH responded that, based on experience at other NSW operations, it is unlikely that low frequency noise would be a concern at Mount Pleasant.
	The EPA noted that some of the figures in the EA appeared to depict unlicensed discharges to the Hunter River and Sandy and Rosebrook Creeks. In particular, it was unclear if the EA proposed to discharge from the Fines Emplacement Area (FEA) to Sandy Creek or from various dams to the Hunter River via Dry Creek, on the Bengalla Mine. The EPA recommended that all discharges from the FEA be contained onsite and requested further information regarding the design and nature of potential discharges from dams.	None included in Section 4 of the DPE Assessment Report.
	The EPA also raised concerns regarding the depiction of 'active waste' in figures in the Site Water Balance Review and requested further information on the design criteria of the FEA. Additionally, the EPA requested information in relation to the proposed water supply arrangements with neighbouring mines.	MACH clarified that 'active waste' was a reference to the default catchment type used for hydrology modelling and does not refer to active deposition of waste. Regarding water supply from neighbouring mines, MACH indicated its willingness to consider the option but noted that more information would be required to assess water availability and quality and the availability of this water resource would depend on its neighbouring mines.

Stakeholder group	Issue/s raised	MACH Energy Response
	In relation to air quality, the EPA noted that some receivers on privately-owned land were predicted to experience exceedances of the annual average PM10 criterion in the absence of additional mitigation. Additionally, the EPA noted that 12 receivers could experience additional days above the 24-hour PM10 and PM2.5 criteria, should proactive and reactive management measures not be implemented.	None included in Section 4 of the DPE Assessment Report.
The Department of Industry – Water	Raised no concerns over the proposed Modification, but requested that MACH update the mine's Water, Rehabilitation and Waste Management Plans should the Modification application be approved. DoI Water also advised that a Water Access Licence (WAL) should be obtained to accommodate groundwater inflows into the open cut pit until 2026 and that MACH should update its Groundwater Management Plan to reflect the extended mining period.	The Department notes that, under Development Consent DA 92/97, MACH is already required to revise its relevant strategies, plans and programs following a Modification and to seek any relevant water licences under the Water Act 1912 and/or Water Management Act 2000.
The Department's Division of Resources and Geoscience (DRG)	Verified that the extended mine life would deliver approximately 63 Mtpa of ROM coal and that the proposed product quality, market split and yield are achievable. DRG conducted an assessment of the resource and concluded that the mine plan would adequately recover coal resources and provide an appropriate return to the State. DRG requested clarification regarding sustainable rehabilitation outcomes, post-mining land uses, final landform design, mine layout and scheduling, rehabilitation monitoring, and barriers and limitations to successful rehabilitation.	In response, MACH met with DRG, included a detailed response to the queries in the Response to Submissions and provided a Preliminary Rehabilitation Strategy further detailing rehabilitation and post-mining land use aspects.
Muswellbrook Shire Council	Council considered that the Modification should require reconsideration of Mount Pleasant's overall impacts and that the assumptions underpinning the original development consent had since changed. Council advised that it required a number of experts to assess the impacts of the Modification and as such, had not had enough time to assess the proposal. The Department received further comments from Council following its review of MACH's Response to Submissions.	None included in Section 4 of the DPE Assessment Report.

Stakeholder group	Issue/s raised	MACH Energy Response
	Council's post-Response to Submissions comments included a recommendation that MACH be required to construct an alternate coal transportation route within two years of determination of the Modification. This recommendation came in response to concerns raised by Bengalla Mining Company that the extension of mine life at Mount Pleasant may interfere with the progression of mining operations at the Bengalla Mine.	This matter was subsequently addressed by the Deed of Agreement
	Council recommended that the improved final landform design be confirmed via an updated Rehabilitation Strategy and Closure Plan. The Department notes that, under Development Consent DA 92/97, the Landscape and Rehabilitation Management Plans must be updated following Modification and that compliance with the Eas for previous Modifications, including the descriptions of the final landform, is already included as a consent condition. If Modification 3 is approved, the relevant management plans would be updated accordingly.	None included in Section 4 of the DPE Assessment Report.
	Council advised that the Western Roads Strategy had been superseded by the Mining Affected Road Network Plan and recommended that MACH contribute to Council's review of the plan as it relates to the development and to the design of a link road between Denman Road and the New England Highway. Council also recommended that MACH pay contributions for the construction, renewal or maintenance of road infrastructure, in accordance with Council's Resourcing Strategy for the Funding of Mining Affected Roads. Council recommended conditions of consent imposing restrictions on the use of Wybong Road to the east of Rosebrook Creek and west of the Mangoola Coal Mine Entrance.	None included in Section 4 of the DPE Assessment Report.
Upper Hunter Shire Council	Council referenced the Planning Assessment Commission's refusal of the Drayton South Project as an important precedent for other mining applications. UHSC identified that Mount Pleasant is one of three mines within the Muswellbrook region that are yet to commence coal extraction and raised concern regarding the cumulative impacts of these mines once in operation, as well as their proximity to the town of Aberdeen. Further, UHSC considered that a satisfactory methodology to assess cumulative impacts has not yet been established and that the EPA's air quality	None included in Section 4 of the DPE Assessment Report.

Stakeholder group	Issue/s raised	MACH Energy Response
	monitoring network had recorded exceedances of particulate matter emissions. Cumulative impacts on noise, air quality and visual amenity are discussed in Sections 5.1, 5.2 and 5.6 (in the DPE Assessment Report), respectively. Lastly, UHSC highlighted that the town of Aberdeen would likely encounter a loss of visual amenity from the Mount Pleasant and Dartbrook Mine due to its location.	
NSW Health	Noted that additional receivers would be eligible for mitigation and acquisition rights due to predicted noise criteria exceedances following the proposed Modification and requested that MACH undertake clear and open consultation with these receivers to ensure they are aware of the impacts and their rights.	MACH agreed to this recommendation and advised that consultation had already been undertaken with receiver 136.
	NSW Health raised concerns over licensed discharges of surplus water into the Hunter River via the Hunter River Salinity Trading Scheme (HRSTS), and the potential impacts on the Muswellbrook drinking water supply. Concerns were also raised regarding the use of Hunter River water as potable water onsite.	MACH advised that the proposed Modification does not seek to alter the supply or storage of potable water onsite. However, potable water would be treated to the appropriate standard or supplied by a contractor, in accordance with the Public Health Act 2010.
	NSW Health noted that the mine is located in close proximity to the town of Muswellbrook and that nine privately-owned receivers are predicted to experience exceedances of the current annual average PM10 impact assessment criterion of 25 µg/m ³ . NSW Health emphasised that air quality goals for the development should be consistent with current impact assessment standards and not former development approvals. As noted above, MACH is not required to update impact studies unless they are relevant the scope of Modification.	The Department notes that MACH updated its existing air quality impact assessment (in accordance with the 2005 air quality standard) to verify whether the development would result in increased impacts on air quality since Modification 1.
	NSW Health also requested that the air quality assessment consider future air quality goals that the National Environment Protection Council (NEPC) is planning to implement by 2025. It was requested that isopleth diagrams be updated to reflect potential future air quality standards.	MACH responded that it is unreasonable to assess the proposed Modification against potential future standards that do not currently apply in NSW.

Stakeholder group	Issue/s raised	MACH Energy Response
The Office of Environment and Heritage (OEH)	Raised no concerns over the proposed Modification and noted that Aboriginal heritage sites within the emplacement extension footprint are appropriately managed under existing permits and management plans. OEH acknowledged the improved biodiversity outcomes associated with relinquishment of the northern portion of the South West OEA, which would result in retention of a larger area of land of greater biodiversity value.	None included in Section 4 of the DPE Assessment Report.
Subsidence Advisory NSW	Raised no objections to the proposed Modification, but commented that MACH should ensure it is aware of the proposed changes to the Mine Subsidence Compensation Act 1961, which have since taken effect.	None included in Section 4 of the DPE Assessment Report.
The Heritage Council of NSW	Noted that no State Heritage Register items would be affected as a result of the proposed Modification, and as such, no further comment was required.	None included in Section 4 of the DPE Assessment Report.
The Australian Rail Track Corporation (ARTC)	Raised no objections, noting that the proposed Modification would not affect the rail network capacity nor pose any material change to rail access arrangements for the development.	None included in Section 4 of the DPE Assessment Report.
General public and special interest groups – objections	<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 (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). 	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.

Stakeholder group	Issue/s raised	MACH Energy Response
General public and special interest groups – support	<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.

Source: Department of Planning and Environment Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 3)

Modification 4 – Rail Modification

On 22 September 2017, MACH Energy submitted an application to the NSW Department of Planning and Environment seeking to modify the Minister's consent for the Mount Pleasant mine under section 75W of the Environmental Planning and Assessment Act 1979 (EP&A Act).

MACH Energy were seeking to improve operational efficiencies at the mine and is proposing to:

- 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; and
- demolishing and removing redundant rail and water supply infrastructure within the Bengalla development consent boundary.

No changes were proposed with respect to the number of daily train movements, or approved haulage times.

The Department of Planning and Environment Modification Assessment Report for Mt Pleasant Coal Mine section 75W Modification (Development Consent DA 92/97 MOD 4) states that following the exhibition of the Environmental Assessment for the Modification, the Department received 59 submissions on the Modification including:

- 12 from government agencies;
- 44 public and special interest group submissions in support of the proposal; and
- 3 public and special interest group submissions objecting to the proposal.

The Department of Planning and Environment summarised the issues raised in their Modification Assessment Report. The submissions, as summarised by the DPE are presented in

Table 23.

Table 23: Modification 4 – DPE summary of agency submissions

Stakeholder group	Issue/s raised	MACH Energy Response
ARTC	Did not raise any objections, noting that the proposal would not affect the rail network capacity, and that MACH already had a long term contractual arrangement in place for rail access.	None included in Section 4 of the DPE Modification Assessment Report.
Muswellbrook Shire Council	Did not object to the proposed Modification. However, Council expressed concern that the relocated infrastructure would be closer to the Muswellbrook township, and require additional disturbance of the Hunter River floodplain.	None included in Section 4 of the DPE Modification Assessment Report.
	Council raised concerns regarding potential noise impacts during both the construction and operation of the new rail infrastructure. Council expressed concern that the noise assessment was based on assumptions in the MOD 3 EA, as this application had not been determined. The Department noted that MOD 3 was determined on 24 August 2018.	None included in Section 4 of the DPE Modification Assessment Report.
	Council also questions the adequacy of the rail noise assessment and recommended that the Department impose a condition prohibiting MACH from emitting any brake squeal which is audible at any privately-owned receiver.	MACH did not accept Council's recommendation. However, MACH supplied further clarification regarding the rail noise assessment, and further details regarding proposed brake squeal mitigation measures.
	Council also raised concerns regarding the adequacy of the flood assessment. In particular, Council notes that the assessment appeared to be based on outdated information. Council also expressed concern that the proposed bridge openings could become blocked by debris and exacerbate potential flooding impacts. Following its review of the Response to Submissions, Council advised that it was satisfied with the flood assessment and provided advice regarding recommended conditions.	None included in Section 4 of the DPE Modification Assessment Report.

Stakeholder group	Issue/s raised	MACH Energy Response
	Council also provided recommendations regarding traffic and transport issues, Council notes that the Bengalla Link Road Bridge over the existing railway line would need to be demolished, and the road reserve reinstated, in order to allow stock and pedestrian access. The Department has recommended conditions in this regard. Council also requires that a Construction Traffic Management Plan be prepared for MOD 4 construction works. This is also reflected in the Department's recommended conditions. Council also noted that the proposal would allow Wybong Road to remain open and requested that MACH contribute to future road upgrading and maintenance.	None included in Section 4 of the DPE Modification Assessment Report.
	Council raised concerns regarding potential lighting impacts on Wybong Road, noting that train headlights could affect road safety.	MACH subsequently provided further details with response to potential mitigation measures and amended its Statement of Commitments to require the ongoing maintenance of visual screens.
	Council noted that a number of local heritage items are located close to the proposed rail corridor and recommended a range of conditions to mitigation potential damage during construction, including the preparation of a Heritage Management Plan. This is reflected in the Department's recommended conditions.	None included in Section 4 of the DPE Modification Assessment Report.
	Finally Council expressed concern that MACH did not initially propose to rehabilitate the former rail corridor following the removal of the redundant infrastructure noting that this may result in dust and sediment issues.	MACH subsequently committed to stabilise this area, on an interim basis, prior to its relinquishment to BMC.
The Department of Industry – Water (Dol Water)	Did not raise any concerns regarding the proposed Modification, and provided advice with respect to recommended conditions. Dol Water recommended that the existing Hunter River pump station be decommissioned within six months of the completion of the new pump station. Dol Water also requested notification following the completion of the new water infrastructure and the decommissioning of the existing pump station.	None included in Section 4 of DPE Modification Assessment Report.

Stakeholder group	Issue/s raised	MACH Energy Response
DRG	Did not object to the proposed Modification. While DRG notes that the establishment of the new rail infrastructure would temporarily sterilise some of the Mount Pleasant coal resource, the proposal would facilitate the westward continuation of mining operations at the Bengalla Mine. DRG also recommended that MACH give consideration to future access to the coal resource under the proposed rail look as part of its long-term mine planning.	None included in Section 4 of the DPE Modification Assessment Report.
EPA	Expressed support for the Modification, subject to recommended conditions with respect to construction noise. The EPA noted that the proposed Modification would require a variation to the site's Environmental Protection Licence (EPL).	None included in Section 4 of the DPE Modification Assessment Report.
Hunter New England Population Health (NSW Health)	Expressed concerns regarding air quality impacts and surface water management. NSW Health noted that while the air quality impacts of the proposal were predicted to be minimal, it is important that MACH implements all reasonable and feasible measures to minimise human exposure to particulate matter.	None included in Section 4 of the DPE Modification Assessment Report.
	NSW health also raised concerns regarding the proposed water offtake point from the Hunter River and its potential impacts on Muswellbrook's town water supply. In particular, NSW Health questioned whether the proposed pipeline was intended to be bi-directional (i.e used for both supply and discharge purposes) and expressed concern regarding potential contamination of potable water supplies.	MACH provided additional information confirming that the proposed pipeline would be for supply purposes only, and that all propose discharges would continue to occur via the mine's approved pipeline and licensed discharge point located several kilometres downstream of the offtake point for the Muswellbrook water supply. MACH also advised that in the event that water sourced from the Hunter River was to be used for potable purposes on site, it would be treated to the Australian Drinking Water Guidelines.

Stakeholder group	Issue/s raised	MACH Energy Response
OEH	Did not object to the proposed Modification. However, OEH raised concerns with respect to impacts on biodiversity, flooding and Aboriginal cultural heritage.	<p>MACH provided Biodiversity Development Assessment Reports for both the proposed infrastructure corridors, and for a portion of the South West OEA that it proposes to relinquish for offsetting purposes.</p> <p>Following its review of supplementary flooding modelling provided in the Response to Submissions, OEH advised that flooding impacts had been satisfactorily assessed.</p> <p>Following its review of the Response to Submission, OEH advised that during a meeting held with MACH in June 2018, MACH indicated that the proposal would be amended in order to avoid three newly identified Aboriginal sites. On this basis, OEH advised that Aboriginal cultural heritage matters had been suitably addressed. Following further discussions between the Department and MACH, it appeared that this information was incorrect, and MACH intended to disturb the three sites. As stated in the EA, MACH intends to obtain an Aboriginal Heritage Impact Permit (AHIP) to include the rail and water infrastructure corridors. OEH subsequently advised this approach is acceptable and provided advice regarding draft conditions.</p>
Road and Maritime Service	Raised no objections, noting that the proposed Modification is unlikely to have significant impact on the State road network.	None included in Section 4 of the DPE Modification Assessment Report.
Subsidence Advisory NSW	Did not object to the proposed Modification. However, SA NSW noted that the proposed rail spur would be located within a mine subsidence district, in close proximity to abandoned mine workings associated with the former Overton Colliery. On this basis, SA NSW recommended that geotechnical investigations be undertaken in order to determine the extent of abandoned workings and to ensure that the proposed spur is constructed outside the area of influence.	<p>MACH noted that the proposed rail infrastructure largely avoids known mine workings. However, MACH acknowledged that there is potential for unknown workings in proximity to proposed rail corridor. Consequently, MACH has committed to undertake a detailed geotechnical investigation as part of the detailed engineering design of the rail spur.</p> <p>The Department recommended conditions requiring that MACH provide a detailed report outlining the conclusions of the investigation and providing recommendations to ensure geotechnical stability of the rail spur.</p>
Heritage Council of NSW	No comments regarding the proposed Modification	None included in Section 4 of the DPE Modification Assessment Report.
Resources Regulator	No comments regarding the proposed Modification	None included in Section 4 of the DPE Modification Assessment Report.
Transport for NSW	No comments regarding the proposed Modification	None included in Section 4 of the DPE Modification Assessment Report.

Stakeholder group	Issue/s raised	MACH Energy Response
Community/special interest groups – objections	<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. 	Refer to rows below.
	<p>A resident objected to the Modification on the basis that a separation of Mount Pleasant and the Bengalla Mine would be contrary to the intent of the original Mount Pleasant proposal. The submission also raised concerns regarding the proposed relocation of the rail infrastructure onto the flood plain, noting that increased flood levels would lead to increased insurance costs for the community.</p> <p>The submission also raised concerns regarding the clearing of vegetation, potential 'heat bank' effects and localised climate change.</p> <p>The submission also raised concerns regarding cumulative noise and air quality impacts on the Muswellbrook township, including the potential funnelling of noise, and the costs of dust mitigation for the community.</p> <p>Finally, the submission raised concerns regarding potential social impacts on the Muswellbrook township, including loss of amenity. The submission expressed concern that the potential benefits of the mine are not being felt within the township, as the majority of mine workers appear to reside outside of Muswellbrook.</p>	None included in Section 4 of the DPE Modification Assessment Report.
	<p>The Hunter Thoroughbred Breeder Association (HBTA) objected to the proposed Modification, citing the cumulative impacts of mining operations on the character and reputation of the thoroughbred breeding industry in the Hunter Valley. The HBTA reiterated its previous objections with respect to MOD 3, including potential noise, air quality, heritage and visual impacts, impacts on water courses, as well as impacts on mapped Biophysical Strategic Agricultural Land (BSAL), the equine and viticulture Critical Industry Clusters (CICs) and regional tourism.</p>	None included in Section 4 of the DPE Modification Assessment Report.

Stakeholder group	Issue/s raised	MACH Energy Response
	Godolphin Australia Pty Ltd also objected to the proposal. Godolphin raised concerns regarding MODs 3 and 4 collectively, particularly with response to impacts on the equine CIC, including damage to the reputation and economic viability of breeding operations, and the potential loss of BSAL. Godolphin also raised concerns regarding noise and air quality impacts, as well as potential impacts on biodiversity, water resources, heritage and the local landscape, and potential social impacts (including impacts on the health and wellbeing of residents in close proximity to the mine).	None included in Section 4 of the DPE Modification Assessment Report.
Community/special interest groups – support	44 submissions in support of the proposal. Many of these submissions were provided by mine employees, contractors and associated local businesses.	None included in Section 4 of the DPE Modification Assessment Report.

Source: Department of Planning and Environment Modification Assessment Report for Mt Pleasant Coal Mine section 75W Modification (DA 92/97 MOD 4)



Appendix F

Other Industries in the Muswellbrook Shire Council LGA

Agriculture

According to the original *Mount Pleasant Mine Environmental Impact Statement* published in 1997:

“The Muswellbrook area developed as a rural and primary industry base and agriculture remains the dominant land use. The main activities within the area include beef cattle grazing on native and improved pastures and intensive cultivation and dairying on the river flats. The area is well known for its wine, with vineyards centred around Muswellbrook and nearby Denman. In the 1992-1993 season, there were 228 agricultural establishments in the area with a gross value of production of \$32.7 million. Milk (\$11.4 million), viticulture (\$8.9 million), cattle (\$8.4 million) and lucerne/pasture hay (\$2.8 million) were the major source of revenue.” (ERM Mitchell McCotter:10.3)

According to Moffat and Baker (2013) agricultural production in Australia is risky. There are variable weather patterns, price risks from volatile international commodity markets, and it is an inherently dangerous industry. In addition, the long-term declining terms of trade, then globalisation resulting in the deregulation of agriculture, caused the on-going re-structuring of farming operations and rural communities. The recent rapid expansion of minerals development is the most recent challenge for rural communities.

The landscape that is now the Mount Pleasant Operation used to be used for grazing. Land use on the flood plains, remains predominantly as its original land use prior to acquisition and includes a mix of dairy and grazing.

The presence of extensive areas of land that are owned by the coal mines, which act as buffer lands to that activity, together with the lack of significant amounts of rural residential development in this area presents an opportunity for the establishment of agribusiness (MSC 2018).

Thoroughbred Breeding

According to Muswellbrook Shire Council, Godolphin and Coolmore, two of the largest racing studs in the world are located adjacent to each other to the east of Denman. There are also a number of other studs located in the Muswellbrook Shire Council LGA making the thoroughbred breeding industry the largest contributor to the rural economy (MSC 2018). Other racing studs such as Arrowfield, Sledmere and Newgate are located in the Upper Hunter LGA. The Upper Hunter LGA is additionally regarded as the ‘Horse Capital of Australia’, and not just because of its thoroughbred studs. The Upper Hunter region produces, trains and sells a wide range of equine breeds including heavy draught horses, horses for carriage work, endurance and other sports such as polo and polocrosse, dressage, racing and recreational use. The region also supports nationally recognised specialist equine training, racing, medical and research facilities (DPI 2013a).

According to the DPI (2013a), the unique geography of the Hunter Valley with its long valleys, allows maritime influences to extend much further inland than other coastal catchments. For horses, the key benefit is a reduction in temperature variability.

According to the DPI (2013a), features of Important Equine lands in the Upper Hunter region:

- well drained alluvial soils and highly productive pastures for lactating mares and their foals (Class 1 to 3 Land and soil capability and moderate to high soil fertility);
- adjoining slopes for developing strong boned yearlings and for running dry mares (class 3 to 5 Land and soil capability and moderately low to moderate soil fertility); and

- reliable water sources for equine needs and irrigation (>900mm rainfall or within 2km of the regulated river systems and closely associated with alluvial groundwater).

Equally important features found throughout the Upper Hunter region are:

- temperate climate with low risk of pests and disease;
- clean air and attractive surrounding landscapes and attractive landscapes along the access routes used by clients and investors;
- ready access to quality lucerne hay and to grain supplies;
- ready access to beef cattle enterprises and facilities to support pasture management; and
- established industry clusters with ready access to international airports, racing and training facilities and support services.

The resultant moderate climate, low risk of pests and diseases, topography, and reliable irrigation options are ideal for producing premium quality horses. The region has experienced 200 years of equine development and has the features to further build on that investment (DPI 2013a).

According to the MSC, the Hunter Thoroughbred Breeders Association is concerned about the protection of the thoroughbred industry from coal mining. The protection of the thoroughbred industry from coal mining and coal seam gas is crucial for its survival. Problems from noise and dust as major impacts on the horse industry, particularly the breeding part of the industry and noted that the negative impacts on Coolmore and Godolphin would have flow on economic and social impacts to the equine Critical Industry Cluster (CIC) in the locality (MSC 2018).

In their submission on the Mount Pleasant Operation Modification 3 application (extension of approved mine like 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) and relinquishing the northern portion of the South West OEA, see Appendix E for further information), the Hunter Thoroughbred Breeders Association described the thoroughbred breeding industry as:

The Hunter Valley's Thoroughbred Breeding Industry is 1 of only 3 Thoroughbred Breeding Centres of Excellence in the world alongside Kentucky in the USA and Newmarket in the UK. This in itself is an important fact attesting to the international and national significance of the industry.

The industry is vertically integrated, interdependent and concentrated in a critical mass in the Upper Hunter Valley. It contributes over \$5billion to the national GDP and \$2.6 billion to NSW economy every year. It is a significant regional, state and national industry and employer and the largest agricultural industry and employer in the Hunter Valley.

The production of elite equine athletes requires a unique operating environment combining scenic landscape, plentiful clean water, rich soils and a varied undulating terrain to produce and develop young equine athletes into the champions of the future.

Many studs and broodmare farms, including Godolphin's Kelvinside stud farm, are located in the Upper Hunter Valley, including the Segenhoe Valley, where all of the above characteristics are present. Any threat to this environment (perceived or real) will threaten the fundamental basis of the business model upon which this industry is based.

In their submission, the Hunter Thoroughbred Breeders Association state that the impacts of Mount Pleasant Operation Modification 3 (see Appendix G) would (direct and indirect, static and dynamic)

impact the nearby towns of Muswellbrook and Aberdeen, the local landscape and topography, adding to the cumulative impacts of mining in this area, including its environment, character and reputation.

The Hunter Thoroughbred Breeders Association objected to the Modification the potential and significant impacts this proposal will have on:

1. The Upper Hunter's water systems which are the lifeblood of the Upper Hunter's agricultural industries, including the equine industry.
2. The reputation, operation and future of the Upper Hunter's equine critical industry cluster – particularly those operations that are located in the vicinity including those that are the gateway to the critical cluster operations in the Segenhoe Valley.
3. Air, noise, dust and other mining impacts in the Upper Hunter and the lack of appropriate cumulative environmental and mining assessments undertaken with respect to this proposal.
4. Air and noise exceedances, conceded by the Proponent, and the impacts of those exceedances on the town of Muswellbrook and the health and wellbeing of the local community.
5. The serious and irreversible impacts on Aboriginal and non-Aboriginal heritage associated with this mining application.
6. Strategic Agricultural lands (including biophysical strategic agricultural land "BSAL") and the equine and wine critical industry clusters.
7. Visual amenity for the local community, particularly given its close proximity to the town of Muswellbrook, for the equine and wine critical industry clusters and tourism (both current and future).

Viticulture

McManus (2009) explains the history of winemaking in the Hunter Valley is one of prosperity and decline. The initial plantings occurred in 1825; the area in production expanded rapidly in the latter half of the 19th century, but the region was affected by economic depression in the 1890s and subsequently by the competition from South Australian growers after Federation in 1901. By 1956, only 466 hectares of plantings remained and it was not until 1963 when Max Lake planted the first vineyard in the region for many years that the Lower Hunter began its resurgence as a wine-producing region.

The Hunter region as the oldest wine making region in Australia and states that although it only produces 2% of Australian wine, it focuses on consistent production of premier, award winning wines. Heritage plant stocks of international value are still nurtured in the region, including Shiraz from 1867 and Semillon from 1899 (DPI 2013b).

The regions' recognised branding and proximity to suppliers, domestic markets and export ports, attracts international winemaking expertise and creates marketing options. Its wine heritage and reputation, attractive rural landscapes and accessibility are key factors in supporting a vibrant domestic and international wine tourism sector (DPI 2013b).

DPI lists Statewide viticulture industry pressures include:

- high capital costs to enter the industry due to the infrastructure required and the level of management and marketing to establish a reputation in a highly competitive industry;
- industry rationalisation due to rapid national development over the last decade that exceeded the growth of demand and processing facilities; and
- global downturn and tight marketing pressures.

Hunter based growers face additional challenges from competing land uses and a growing risk of land use conflicts, particularly from residential and coal mining developments. Particular issues of concern for the viticultural industry are the lack of certainty and cumulative impacts of mining and CSG on:

- essential water supplies
- labour availability
- land prices and
- the regional landscape and viticultural reputation.

Reputation and landscape are particularly critical to the sustainability and development prospects for the Hunter viticultural industry. Visitors are attracted to the Hunter by the diverse wine experiences on offer, the attractive rural landscapes and the opportunity to escape urban and industrial environments (DPI 2013b).

According to MSC (2018) the viticulture industry in the Muswellbrook Shire is not very large but it does add to the tourism product, particularly around Denman and Wybong. The key issues for the viticulture industry in the Shire is the same as the thoroughbred sector – lack of land use certainty leads to lack of investment certainty.

Wineries in the vicinity of the Mount Pleasant Operation are (each having their own cellar door) include the:

- Hollydene Estate located at Jerry's Plains
- Small Forest Wines located near Denman and
- Two Rivers Wines located near Denman.

There haven't been any submissions from the viticulture industry on any of the Mount Pleasant Operation Modifications to date, although potential impacts on the industry have been described in numerous submissions, such as the Upper Hunter Shire Council and the Hunter Thoroughbred Breeders Association.

Critical Industry Clusters

DPIE has identified a concentration of equine (horse) and viticulture (wine) industries in the Upper Hunter and mapped these locations as 'Critical Industry Clusters' (CICs). CICs are 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. The creation of these industry clusters aims to protect this high-quality agricultural land from the impacts of coal seam gas (CSG) and mining activities. In January 2014, the NSW Government finalised the CIC maps and introduced a ban on new CSG activity

within the mapped areas. These areas are generally located on the Hunter River alluvial flats and adjacent lands.



Appendix G

SIA Scoping Case Studies

This appendix includes SIA Scoping case studies from:

- Mount Pleasant Community Consultative Committee (CCC)
- Mount Pleasant Aboriginal Community Development Fund (ACDF)
- Wonnarua Nation Aboriginal Corporation
- Wanaruah Local Aboriginal Land Council
- Earth Connection Indigenous Corporation and Earth Medicine and Cultural Connection
- Jonathan and Elisabeth Moore, Gilgai (near neighbour)
- Stakeholder A
- Stakeholder B
- Stakeholder D
- Muswellbrook Shire Council
- Muswellbrook Chamber of Commerce and Industry Inc.

MACH Energy Mount Pleasant Optimisation Project Scoping for SIA

Mount Pleasant Community Consultative Committee

Date	Thursday 31 October 2019
Organisation	Mount Pleasant Community Consultative Committee Wej Paradise Trevor Parkinson Rod Upton Tim Troon
Location	The Conservatorium of Music, Muswellbrook
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager) (introduction only) Rhiannon Jaeger-Michael (External Relations Officer)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

Muswellbrook has changed over the past 40 – 50 years, from a rural community to a mining/industrial community. This can be linked to a number of things:

Change in the type of mining

Change in working environment

Change in demographics

Opening of the Hunter Expressway

Change in the type of mining

Mining in the Hunter Valley has slowly been moving up the Valley (north-westerly direction). Mining started in the lower Hunter, around Newcastle and Cessnock. Mining in this area has ceased and there are no mines in the Cessnock LGA. As the mines opened in the Singleton and Muswellbrook areas, the workforce moved although there were a number of workers living in the lower Hunter who commuted to the northern mines as their mines closed in the lower Hunter.

Mining in the Upper Hunter Valley has changed. It used to be small scale underground mining, the mining companies were good neighbours and the workforce lived locally. Now it is large scale open cut mining (the first open cut mine was in 1985) with 'super pits', people are working 12.5 hour shifts and mostly living near the coast and commuting to work.

People never used to comment on the mines, but now that they are so visual, people talk about them all the time. People started to comment on the mines about 20 years ago, that was then they started to 'stand up and be counted'.

Change in the working environment

The casualisation of the mining workforce has had a big impact, workers no longer have the job security that a permanent role has.

There has been a change from a five-panel roster to a 12.5 hour shifts/four-panel roster. A five-panel roster is better for the community but provides less money for the worker. A four-panel shift provides more money for the worker but is not good if they are not living in town. If they are living away from their family, they may feel social isolation. Social isolation can also come from not having the time to participate in activities outside of work such as playing sport. A four-panel shift has limited benefits to the community because there is a smaller number of people who are available to volunteer their time to community-based organisations.

Change in demographics

People used to be financially secure with only one parent working. In the mining industry it was usually the dad/husband working. But now families need two incomes due to the increased cost of living. Partners of people working in the mining industry usually work in the service industry and these jobs are usually in the regional centres, which happen to be closer to the coast. Because families need two incomes they are choosing to be based where the primary care giver works, where there are schools and a retail industry. If a worker does not live locally then the money the worker earns follows them out of town.

Opening of the Hunter Expressway

The opening of the Hunter Expressway in 2013 impacted on Muswellbrook. The Hunter Expressway has made it easier to commute to work. This can be seen by the number of vehicles at the beginning and end of shifts. It has also made it easier for people living in Muswellbrook to drive to Maitland, Newcastle and Sydney.

Impacts of these changes

The combination of these changes has led to:

- 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 who is participating in anti-social behaviour.
- A change in the physical landscape. In the 1980s, the area around Muswellbrook used to be pastoral, the view from Muswellbrook was farms, whereas now it is mines.
- A decline in the retail industry in town, people are going to Maitland to go shopping or shopping online.

Social housing in Muswellbrook

Social housing in Muswellbrook has also changed, although not as a direct impact of mining. Social housing used to be focused in the southern suburbs of Muswellbrook, but is now scattered through the

town. People who live in social housing only usually stay for 18 months and then move back to the coast when a house becomes available.

Impacts of current Mount Pleasant Operation (MPO)

Rio Tinto sat on the Mount Pleasant project for many years and since MACH Energy have taken it over, they have undertaken a lot, it's all been very quick.

Dust and noise are the main impacts of the current Mount Pleasant Operation.

Muswellbrook is on the western side of a hill that directly faces at the Mount Pleasant Operation. Muswellbrook is in line with the dust during a westerly wind, which seems to be getting more common.

People can see the diggers building the Mount Pleasant bund and can see the dust they are producing. Although Mount Pleasant shuts down because of the dust in certain conditions, people can see the dust when the marching starts up again.

People are aware of the cumulative dust, that the dust comes from other mines as well as Mount Pleasant, but people see Mount Pleasant creating the dust, not the other mines. People also understand that Mount Pleasant has different conditions in their environmental licence and that they have to cease operations in certain conditions. Despite this, people feel that the dust is much worse since Mount Pleasant started.

At the EPA meeting, people raised their concerns about the dust impacts. People are fearful of the dust. They have been told they won't be impacted based on the models predicting impacts, but people can see the dust and believe it is impacting on them.

The Mount Pleasant Operation has been good for local employment. However, most people do not want to live here on a permanent basis. It is good that MACH Energy has people who are employed in senior positions who are living in the Upper Hunter or who have lived in Muswellbrook before.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

It is important to consider the impacts of the power stations. People experience air quality impacts from the power stations, which add to the dust impacts of the mines in the region.

Need to take into consideration that the Liddell Power Station is due to close soon.

Current weather conditions are highlighting the cumulative impact of various factors – drought, mining, lack of vegetation cover, bush fires and strong winds are contributing to rising community concern about the health impacts of all these factors.

Potential impacts of the Mount Pleasant Optimisation Project

The potential impacts of the project are the same as the impacts we are already seeing from the mining industry on the Upper Hunter at present. Significant air quality issues as well as clearing of vegetation are all adding to the current impacts around the town of Muswellbrook.

Social and demographic impacts which consolidate the change from a rural community to an industrial/mining community.

Who to invite to participate in the SIA

Upper Hunter Family Services

Hunter Drug and Alcohol Services

Upper Hunter Shire Councillors

Denman Development Association

2 Rivers Vineyard

Coolmore and other horse studs in the area.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

Aboriginal Community Development Fund

Date	Tuesday 29 October 2019
Organisation	Mount Pleasant Aboriginal Community Development Fund
Location	Singleton
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager) (introduction only) Rhiannon Jaeger-Michael (External Relations Officer)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

The towns of Singleton, Muswellbrook, Denman and Scone are different, each having their own unique characteristics.

Singleton

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. Singleton used to be a large 'army' town with the Singleton Defence Area/Lone Pine Barracks located south of town. The Australian Defence Force has reduced the number of people training in Singleton. People are now being trained in Sydney. The area is also supported by manufacturing and tourism (especially with the wineries and national parks).

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.

Most health services are provided in Singleton with specialists travelling to town from Newcastle and Sydney. There is a gap in mental health services.

There is a high school in Singleton with good connections with the local TAFE. University students have to commute or move to Newcastle, Armidale or Sydney.

The public transport timetables do not make it easy to commute (on a daily basis) to Maitland, Newcastle, Armidale or Sydney for those without private vehicles. There has been a reduction in the number of passenger trains to only two per day. This is expected to increase next year.

People go to Lake St Claire, Appletree Aboriginal Area, Yengo National Park, Barrington Tops National Park, Mount Royal National Park (can get snow in winter) and Nelson Bay for weekends and holidays. People go to Newcastle or Maitland (Green Hills Shopping Centre) on the weekend to do their shopping.

Muswellbrook

Muswellbrook is also known as a mining town.

Aberdeen

Aberdeen can be separated into old and new Aberdeen. Old Aberdeen has connections to agriculture and new Aberdeen is connected to mining and the abattoir.

Scone

Scone is known for the thoroughbreds, equestrian and horse racing. The abattoir is one of the large employers of people in scone.

Denman

Denman is known for the vineyards and horses. It is more focused on tourism.

The Hunter Expressway

The Hunter Expressway allows faster travel times to Sydney by car, it used to take 3 – 4 hours but is now 2 – 2.5 hours.

People now travel to Maitland (Green Hills Shopping Centre) to do their shopping as the travel time is faster and the shops are 'all under one roof'. The Expressway has allowed people to travel to their workplace (no longer have to live in the town where you work), so the population has stabilised.

The Expressway has made it easier and faster for people to commute for working in the mines, people no longer need to live where they work.

Impacts of current Mount Pleasant Operation (MPO)

Dust impacts but there are management strategies in place to minimise the amount of dust created on site and the mine closes down if there is a potential for breaching the environmental licence.

MACH Energy's support for the Gundy Program is a good thing for all the people involved.

Impacts of current Mount Pleasant Operation (MPO) - cumulative

Cumulative impacts in the Upper Hunter need to include the impacts of mines near Singleton including Rix Creek, not just the mines around Muswellbrook.

The visual impacts of the mines and being able to see them from the New England Highway when driving between Singleton and Muswellbrook is a big thing.

Dust/air quality impacts and respiratory/health impacts. It's hard because different mines have different conditions in the environmental licence and different ways for minimising and managing dust. There are also dust impacts from the coal trains on the railway which passes through Singleton.

People experience noise from the mines and the trains that transport coal.

There has been a noticeable increase in the number of people who commute to and from the mines on a daily basis or either at the end of the shift, leading to congestion on the roads and accidents.

Increased demand for housing. People are moving to Singleton as a step to get a job in the mines because of local employment policies.

Potential impacts of the Mount Pleasant Optimisation Project

Importance to employ locally but employ the right people. By employing people already living in the region, the impacts will be reduced.

Fatigue management is important for all workers.

Impacts on the people who live along the railway line with the increase in the number of trains.

Opportunity to continue supporting the Gundy Program.

Who to invite to participate in the SIA

The Board of Wanaruah Aboriginal Land Council.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

Near Neighbour

Date	Wednesday 30 October 2019
Organisation	GILGAI Jonathan and Elisabeth Moore
Location	The Conservatorium of Music, Muswellbrook
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ian Webber (Land and Property Superintendent)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

GILGAI has been in Jonathan's family for two generations. Jonathan's father and now Jonathan have been consistently working to improve the property. Jonathan and Elisabeth built their family home on GILGAI in the early 1980's and chose the location of their home and its design to maximise the southerly breeze in the summer. Initially Muswellbrook Shire Council (MSC) refused the development application for Jonathan and Elisabeth's house on GILGAI in 1981 due to the potential impacts of mining on their house. Jonathan and Elisabeth had to sign a Deed of Indemnity with MSC acknowledging the potential impacts of mining as a condition of their development approval for their house.

Despite the drought and impacts of mining, Jonathan and Elisabeth run a profitable sheep and cattle business from GILGAI. They have made a conscious decision to continue to invest in and develop GILGAI rather than let it deteriorate as the impacts of mining have increased. They are still making every effort to 'drought proof' the property, including installation, maintenance and the upgrade of dams used for stock water. They also have fencing and weed control programs in place. GILGAI has been designed and managed to take advantage of the southern catchment of Sandy Creek. Large dams built for the Mount Pleasant mine in this area would greatly reduce runoff into dams built on GILGAI. The Sandy Creek catchment covers a significant area and goes all the way to Denman.

Although Jonathan grew up in Muswellbrook and was aware of the Muswellbrook Underground Coal mine growing up, 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 (PAC) 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.

Other near neighbours made submissions on the EIS and raised their concerns about the downstream impacts from 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. Jonathon and Elisabeth are concerned that the participation of the local community in the previous PAC meetings, in particular the original PAC meeting in 1999 has/will be lost with the inevitable turnover of staff at MACH Energy.

"It feels like a one-way process with the mines and government asking us what we think the impacts will be. The mines should be telling us what their impacts will be and try to reduce them."

The most significant impact of mining Jonathan and Elisabeth have experienced to date is the cumulative dust. GILGAI is impacted by dust from Mount Pleasant, Bengalla and Mount Arthur mining operations. Jonathan and Elisabeth explained that as a result of the PAC hearing for the Bengalla Continuation Project (in 2014), it was determined that between the three mines, the Moore's were to firstly approach the Mount Pleasant mine and were put in their zone of acquisition before approaching Bengalla and Mount Arthur mines.

The dust impacts are having an effect on Jonathan and Elisabeth's health.

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, as it is getting 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 and Elisabeth rely on rainwater for drinking, and the dust gets washed into their water tanks. Jonathan has had the water tested in 2010 and the results were good so had not requested mitigation measures measured in the past. However, in the future Jonathan and Elisabeth are willing to accept mitigation measures⁸.

Another impact is structural damage to their house due to blasting. Jonathan and Elisabeth feel like this will only increase when Mount Pleasant and the Bengalla mines work towards us in a westerly direction.

It's important that people get involved with the mines (e.g. join the CCCs) because that is one way to find out information, provide feedback from the community and build relationships. However, this isn't for everyone because people have to find the time to volunteer.

⁸ After the meeting with Jonathan and Elisabeth, MACH Energy offered to install a first flush system on their water tanks.

Impacts of current Mount Pleasant Operation (MPO)

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 those impacted do not have to call up to complain. But the dust impacts still occur and is impacting on Jonathan and Elisabeth's health and everyday life.

Other impacts (in order of priority) are, but not limited to:

1. Changes to surface water downstream of the tailings dam on the northern catchment of Sandy Creek.
2. Recent increase in noise due to construction work.
3. An increase in the number of feral animals, these include kangaroos, feral pigs (particularly in the last 10 years), wild dogs and deer.
4. An increase in the amount of traffic along Wybong and Bengalla Road with the workers travelling to work.

An increase in the amount of rubbish (e.g. takeaway food wrappers) on the new Wybong Road. People stop on the road because it is a good spot for mobile phone coverage.

5. Replacement and realignment of the old Wybong Road which did address drainage issues into the property.

Potential impacts of the Mount Pleasant Optimisation Project

The Optimisation Project will impact on the business's profitability, the everyday life and health of Jonathan and Elisabeth.

The two most significant impacts of the proposed Optimisation Project are:

1. An increase or accumulation of dust impacts (Bengalla dust + Mt Arthur dust + Mount Pleasant (existing) dust + Mount Pleasant Optimisation dust); and
2. Loss of surface water into the GILGAI dams.

Besides the accumulation of dust, the most significant impact of the Optimisation Project will be the proposed water storage dam on the southern catchment of Sandy Creek. This will mean GILGAI will be impacted by two of the Mount Pleasant's dams:

- The tailings dam on the northern catchment (already built and operating); and
- The proposed water storage dam on the southern catchment.

The proposed water storage dam on the southern catchment will cut off a large amount of the catchment. This will greatly impact on the water flow into GILGAI and will add to the existing loss of water from the northern catchment from the tailings dam⁹.

⁹ Jonathan and Elisabeth invited representatives from MACH to undertake a property inspection to discuss the potential impacts of the proposed water storage dam on GILGAI and their business which MACH accepted.

Regardless of the management/mitigation strategies developed, there will be a change and loss of surface water into GILGAI's dams. The loss of water will result in:

- Decrease the efficiency of GILGAI to operate and manage drought.
- Potential loss of investments already made.
- Change how the property is managed in relation to the reduced water for cattle and sheep to drink.

Impact of noise will be much greater as the Mount Pleasant mine ramps up and works in a westerly direction towards GILGAI. The main source of noise at the moment is from the mine infrastructure area which is within two kilometres of the house. The CHPP is within the mine infrastructure area. The CHPP operates 24 hours a day. The CHPP is planned to be upgraded as part of the proposed project.

Based on previous experience of being accurate in predicting the impacts of the mines, Jonathan and Elisabeth are expecting the impacts to be worse than they expect.

Who to invite to participate in the SIA

Jonathan and Elisabeth are happy to participate in the next stage of the SIA and are willing to ask other near neighbours and interested people if they would like to participate.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

Muswellbrook Shire Council

Date	Friday 1 November 2019
Organisation	Muswellbrook Shire Council Kim Manwarring, Community Partnerships Coordinator Joshua Brown, Manager Integrated Planning, Risk and Governance Sharon Pope, Assistant Director Environment and Community Services
Location	MSC, Muswellbrook
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ngaire Baker (External Relations Manager) (introduction only)
Resource Strategies	Stirling Bartlam (Senior Environmental Manager) (till 11am)
Just Add Lime	Rachel Maas, Principal Social Scientist
Further individuals consulted	Carolyn O'Brien, Manager of Community Services Aleksandar Mitreski, Policy Analyst Transition and Innovation

*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.*

Way of life

Access to adequate housing;

The most recent rental statistics have indicated that the rental market in Muswellbrook and Denman townships is becoming restricted due to the demand for rental properties. The Muswellbrook Chamber of Commerce have indicated that this demand is coming from individuals and small groups of people requiring short to medium term tenure.

The Muswellbrook Chamber of Commerce also indicated that there has been an increase of investors buying into the residential market for high rental return. This has impacted on the ability of families or individuals to buy into the local residential market and inhibiting families to move to the area. The number of investment and social housing properties currently exceeds the state average for a regional area our size.

Anecdotal evidence suggests that mining industry employees (permanent or contractors) are not buying into the local housing market and subsequently not relocating their families to Muswellbrook.

On an operational level, Council has been made aware of non-compliant accommodation practices that are being implemented to house people who are seeking short to medium term accommodation (i.e. caravans in backyards, hot bedding and the establishment of sleeping quarters in industrial zoned

areas). Further pressure on the existing short to medium term housing market may replicate what occurred in past years, when camping accommodation was considered to be an adequate accommodation option for people and displaced families.

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.

How people work

Council is experiencing a reduction in the local employment market of qualified people. Council have observed that individuals are making employment choices to work in the mining industry due to higher wages and reduced financial stress, rather than being engaged as a local business owner or alternate industries.

Local businesses report that it is increasingly difficult to retain qualified staff due to the competition from with 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.

Cumulatively, the Muswellbrook and Denman economies have experienced several impacts of late closure of other mining operations and the down turn in the mining industry. Anecdotally some individuals and families chose to stay, some were employed in other mines or set up their own businesses, but the majority of people left the local community and stopped contributing to the local economy.

Transport access for young people to retain employment in mining sites, such as the proposed Mount Pleasant Optimisation Project, are often located up to 20km from town, transport services are non-existent and the ability for a young person to retain their employment is reliant on the young person having access to other employees with transport or their own reliable transport.

The same limited transport access issues can be exacerbated for Aboriginal or Torres Strait Islander employees.

Community - including composition, cohesion, character, how it functions and sense of place

A portion of the Castlerock Community connects with the community infrastructure in the Wybong Community (i.e. the local community hall, local interest groups and rural bushfire brigade). The Wybong community population has been severely reduced due to the development of the Mangoola Mine and Glencore's Mangoola Coal Continued Operations Project, which is currently being assessed by the Department of Planning, Industry and Environment.

The Castlerock Community has already experienced an aggregation of environmental impacts from the Mangoola Coal Mine. The proposed Mount Pleasant Optimisation Project will further exacerbate these impacts for the surrounding property owners.

Further to this point, the existing MACH Energy Mount Pleasant 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.

Council is aware that there has been a reduction in community volunteering, and in some cases local volunteer services such as rural bushfire brigades and land care groups needed to be amalgamated to be able to service an area. This decreases community capacity and creates a loss of sense of place.

Access to and use of infrastructure, services and facilities

The reduction of population impacts on the critical mass population, goods and services are being established elsewhere or often being relocated. This impacts on the initial assessments that individuals and families make about moving to the area. Further, this places stress on the existing community members who may now need to have access to reliable transport to access goods and services.

There is limited public transport that provides access in and out of the area. What we have is well used and Council continues to lobby State Government for an increase in public transport, in particular train services.

The transport options in and out of Muswellbrook include two trains to Newcastle and Sydney per day. The bus service around the town is restricted and operates in between school hours as the local transport service has the contract. Muswellbrook has taxis, a ride sharing services and a small community transport service targeted at vulnerable people and people who are ageing. 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.).

The development of the Hunter Expressway has improved people's movability both in and out of the Upper Hunter. Council has noted that there has been a higher rate of vehicle accidents in and around the time of shift change. This is due to fatigue with swapping day to night shift, speed and familiarity of the road. This is supported by Centre Road Safety campaign 'Saving Lives on Country Roads'. NSW statistics indicate that two thirds of fatalities occur on country roads.

It is noted that MACH Energy has implemented group transport practices for contractors, reducing the risk of vehicle accidents. Council supports the use of its infrastructure to drop off employees at focal points in Muswellbrook.

The realignment of Castlerock Road and the subsequent upgrade of Dorset Road will create a visual impact for the community members using these roads.

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.

There is an opportunity for MACH Energy to support employees' purchase of local products and services by using the 'We Live Here' card to invest and spend locally.

Through our recent community surveys local participants continually highlight the need for a variety of shops. For example, Muswellbrook cannot attract a retail shoe shop and the only retail space to buy footwear is Big W. The alternative is to travel out of the area or purchase goods online.

Culture

There is an opportunity for the Mount Pleasant Optimisation Project to:

- promote employees to participate in local services and facilities (i.e. Aquatic & Fitness facilities, sport and recreation groups, Art Centre, Interest Groups, etc.);
- Encourage positive interactions about the area and discourage employees from participating in negative discussions (i.e. Facebook).

Local Aboriginal People need to be consulted on the impact in their culture, in particular on any significant sites that have been identified within the Mount Pleasant Optimisation Project. In addition, discussions should be held with the local Aboriginal Community Members regarding appropriate access to cultural offset areas and ensuring that offset areas value add to the Aboriginal Community and do not create barriers to connection to country or restrain economic use of the designated areas.

Health and wellbeing

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.

In the past few years we have seen an increase in mental health illnesses, in particular amongst employees working in the mining industry. There is a high level of domestic violence reporting in our community in comparison to other like areas.

The aggregation of environmental impacts (e.g. noise, dust, groundwater and blasting) on the surrounding landowners needs to be considered in the proposed Mount Pleasant Optimisation Project. The establishment of a substantial buffer zone between mining and community should be paramount when implementing the Volunteer Land Acquisition & Mitigation Assessment.

Statistical evidence supports that air quality in Muswellbrook and surrounding area has declined. The community has expressed that they can feel the impacts of dust on their health and wellbeing level. This is exacerbated with the visual impact of seeing the dust being displaced off MACH Energy Mount Pleasant Operation.

Further to this, people's amenity and way of life are 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 their fear around the impacts on ecological systems such as waterways, drinking water etc.

Surroundings

The proposed Mount Pleasant Optimisation Project's proximity to the community of Muswellbrook and the surrounding properties will impact on their visual amenity.

Further to this, community members of the Castlerock, Dorset Road and Wybong communities are constantly impacted by the presence and dominance of the mining industry, when they commute and move about the Shire and reminded of the constant change to their environments. Further development will increase these stress levels.

It is noted that there will be an improvement to the visual impact when the eastern bund wall of the existing MACH Energy mining operations is rehabilitated and stabilised.

The issue of public safety was expressed with the noticeable increase in mining traffic and plant equipment utilising public road infrastructure. This increase is the movement of a large number of employees from the MACH Energy mining site as well as mining vehicles moving between sites (i.e. between Wybong Road and Bengalla Link Road).

Personal and property rights

Existing MACH Energy mining operations and the proposed Mount Pleasant Optimisation Project have sterilised the current property market for proximal and surrounding land owners. Often these owners do not want to leave their property as this is their home and in some cases their business.

Further to this, we are seeing community members who have been purchased two and three times by mining companies. These community members purchase other like properties in the area and experience further social impact by being acquired by other mining developments. This fragments the communities and the continual displacement of community members increases the likelihood of chronic stress.

When rural and lifestyle properties need to be purchased by the mine, a like for like replacement property is generally not available in the Shire, so people must move away, and often to locations that are not experiencing the negative impacts of mining on property prices, making it difficult to afford a similar property.

Proximal and surrounding landowners often have 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.

Community members that reside in the Castlerock and Dorset Road area reside in these areas for farming or small lifestyle blocks, usually for the peace and tranquillity that rural properties offer.

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.

It could be perceived that mining companies are taking full advantage of the diminution of property values caused by the impact of mining.

Decision-making systems

Members of the Community have openly expressed that:

- “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”;
- “Mount Pleasant is the ‘straw that broke the camel’s 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.

The Mount Pleasant Optimisation Project needs to be mindful of the timing of lodging the State Significant Development Application and the periods of public notification. Often the timeframes of response is difficult due to the ability of organisation, such as Council, to respond due to the lack of resources.

Fears and aspirations

Community members are experiencing solastalgia, in particular their perceived loss of control of the environments that they live in. This distress is exacerbated by localised activities such as mining.

Who to invite to participate in the SIA

Wanaruah Local Aboriginal Land Council – CEO, Executive Members and Members

Hunter Valley Aboriginal Corporation – Executive Members and Members

Hunter New England Health Services

Muswellbrook District Hospital

Community Health

Community Groups (for example)

Upper Hunter Community Services

Upper Hunter Homeless Service

Drug & Alcohol Health Service

Compass Housing – providers of social housing

PCYC

Sporting groups

Members of Muswellbrook and the surrounding communities of Castlerock and Dorset Road.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SLA

Wanaruah Local Aboriginal Land Council

Date	Thursday 31 October 2019 and Monday 25 November 2019
Organisation	Wanaruah Local Aboriginal Land Council Natasha Kellett (Board member) Kate Wood-Pahuru (Board member) Tania Riley (Board member) Noel Downs (CEO)
Location	Wanaruah Local Aboriginal Land Council, Muswellbrook
MACH Energy	Chris Lauritzen (General Manager, Resource Development)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

Muswellbrook used to be a small country town with a strong sense of community. There is no sense of community anymore. 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.

While staying in town, the miners share a rental property with miners or 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 low 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 are not being built because the permanent population is not growing, leading to a lack of affordable housing.

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.

There is no entertainment. There is a cinema, but it is expensive. Many people cannot afford to pay for the entertainment that is in town. The main entertainment is for adult males. The mines only

support/sponsor the activities that the rich can afford, such as horse racing and sport. There are open days for the community with free BBQ's and fireworks but these are occasional.

Wollombi Road is the main area of social housing. Most of the social housing is managed by Compass. There are drug and alcohol problems in this area. There is a need for a medical centre on the southern side of town. There is need for a range of services to be delivered in south Muswellbrook including a café and general store.

Low income families are struggling with the cost of living in a mining town. 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 ground is the only place that has public showers. The Lions Club is raising money to pay for a 24-hour shower and laundry with the ability to charge a mobile phone and to create safe place to talk to others. This should not be the role of a service organisation and specialist organisations, and services are required to support the homeless. The current services 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 often those with a disability are targeted. Women and children run the risk of sexual and physical abuse.

The benefits of mining are not flowing to the people who need it the most (i.e. the low-income families and homeless people). The low-income families and homeless people are the ones being negatively impacted the most.

As there is nothing for the kids to do in town, there is a growing gang/thug culture. Most people stay away from the parks and the cemetery as this is where they hang out. It would be good if a number of organisations can come together to co-design programs with a sustainability focus (e.g. using materials from the transfer station). These programs can be tailored at getting kids off the street and giving them some skills.

The changes to the TAFE system mean people are not able to take up general interest courses to see if they like a subject or not. TAFE is all about job creation, but TAFE costs a lot of money and what if a student starts and decides the course is not for them. There is a cost to change. Getting kids into training and apprenticeships is important but they need the flexibility to change without penalty.

There are people who live close to town but are not on town water. They do not have 'farms' but still need to truck in water and hay for animals. There are no local hay suppliers anymore. People are not growing hay like they used to, there has been a shift from hay or crops to cattle.

The mines do not suffer like the farmers in drought. Farmers struggle in drought and it is only fair that the mines do as well. Graziers have to decide whether to feed their cattle or themselves. When graziers sell all their stock, they are losing a bloodline that they have been developing for generations. It is a lifetime of hard work and investment.

It's hard to keep good teachers at the schools, there is high competition for labour. For that matter good staff in any local service agency, hospital etc when there is better paying employment with the mines.

Impacts of current Mount Pleasant Operation (MPO)

Land Council would like to be involved in the management of the Aboriginal Cultural Heritage Offset Area on Wybong Road. This should not be restricted to the LALC, who only represent a small number of the Aboriginal population in this area. Other organisations and individuals would like to have a say on how the land they have cared for tens and thousands of years is managed. The following organisations should also be included:

- Hunter Valley Aboriginal Corporation
- Earth Connection Indigenous Corporation
- Registered Aboriginal Parties (RAPs)
- Lore men and women of the area
- Other independent interested Aboriginal parties such as business owners who utilise country in their teachings and practices

It is an opportunity to practice cultural maintenance (such as cool burning), making the land and people healthy by reconnecting with country. With connection to country comes identity. If people do not have a connection to country, then they lose their identity and this can lead to addiction. People need to have some hope, some baseline on which to make good decisions.

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. It would be culturally beneficial if members of the Aboriginal community were involved in ecological studies, to apply local knowledge and facilitate learning of younger people.

Importance of water and impacts on water. "The water is our blood". The mussels in the creeks and river are culturally important. Impacts on water will impact on the land, bush foods and native animals. This in turn impacts on the spirits and our identity.

When undertaking cultural heritage surveys, it would be beneficial to look at the use of significant artefacts, e.g. scarred trees. Because a scarred tree usually has to be removed, having discussions about maximising the use of the tree, e.g. preserve the scarred section and use other parts of the tree for cultural purposes, e.g. using the bark to make canoes, so cultural practices can be taught and passed on are important.

When undertaking cultural heritage surveys, it would be beneficial to have a management plan for the artefacts that are not retrieved but left *in situ*.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

The biggest impact is dust and the reduction in air quality. Everybody sees the dust. Everybody knows about the dust, including the mining companies and all levels of government, but no one does anything about it. Now is the time to do something about it because the balance is no longer there.

Impacts on affordable housing.

Impacts on the cost of living.

Increasing rate of homelessness.

Impacts of 12 hour shifts on the mental health of workers.

Opportunities to contribute to town, its growth and development are lost.

Impact the mines are having on the Muswellbrook microclimate(s).

Decrease in water and air quality. Inability to safely swim in the rivers, the past time of many children in the past, without risk of sickness.

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.

Potential impacts of the Mount Pleasant Optimisation Project

Impacts on the aquifers creeks and catchment. The degradation and contamination of these water sources impact the community and environment not only for the life of the mine but can also impact the community and environment for decades beyond the mine closure. Without access to good quality and adequate quantities of water neither the local community nor the local environment are sustainable.

Important to employ local people, people who are already living here. Mining may bring employment but it can also cause unemployment. People employed in farming often are unable to pick up replacement local employment, and because many are perceived to have objected to the mine to protect their jobs the mining employment is often not immediately available, this is compounded by long construction periods making the majority of positions casual for several years.

Important to buy locally as much as possible.

Need to plan for the accommodation requirements of the miners coming into town. Maybe MACH Energy could build a house for each permanent employee. If the employee does not want to live in the house then the house could be used for social housing. Maybe look at the option of having transportable homes that can be gifted as social housing when they are no longer needed.

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.

Who to invite to participate in the SIA

Upper Hunter Homeless Support.

Hunter Valley Aboriginal Corporation.

Earth Connection Indigenous Corporation.

Registered Aboriginal Parties (RAPs).

Lore men and women of the area.

Other independent interested Aboriginal parties such as business owners who utilise country in their teachings and practices.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

Earth Connection Indigenous Corporation and Earth Medicine and Cultural Connection

Date	Thursday 31 October 2019 and Monday 25 November 2019
Organisation	Earth Connection Indigenous Corporation Kate Wood-Pahuru (Chairperson) Earth Medicine and Cultural Connection Kate Wood-Pahuru (Owner) Natasha Kellett (Community member)
Location	Wanaruah Local Aboriginal Land Council, Muswellbrook and Telephone
MACH Energy	Chris Lauritzen (General Manager, Resource Development) for meeting on Thursday 31 October 2019.
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

Muswellbrook used to be a small country town with a strong sense of community. There is no sense of community anymore. Some long-term families can no longer afford to live in town and have left, are in the process of leaving, are forced into staying with other families causing issues with overcrowding or are 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 going back to their families on the coast on their days off.

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.

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 have closed down, the shoe shop has 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.

There is no entertainment. There is a cinema, but it is expensive. Many people cannot afford to pay for the entertainment that is in town. The main entertainment is for adult males. The mines only support/sponsor the activities that the rich can afford, such as horse racing and sport. There are open days for the community with free BBQ's and fireworks but these are occasional.

Wollombi Road is the main area of social housing. The social housing is managed by Compass. There are drug and alcohol problems in this area but this also occurs in many areas of the township to a lesser degree. There is a need for a medical service that provides mental, physical and spiritual health on the southern side of town.

Low income families are struggling with the cost of living in a mining town, 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.

The benefits of mining are not flowing to the people who need it the most, the low-income families and homeless people. The low-income families and homeless people are the ones being negatively impacted the most.

As there is nothing for the kids to do in town, there is a growing gang/thug culture. Most people stay away from the parks and the cemetery as this is where they hang out. It would be good if a number of organisations can come together to co-design programs with a sustainability focus (e.g. using materials from the transfer station). These programs could be tailored at getting kids off the street and giving them some skills.

The changes to the TAFE system mean people are not able to take up general interest courses to see if they like a subject or not. TAFE is all about job creation, but TAFE costs a lot of money and what if a student starts and decides the course is not for them. There is a cost to change. Getting kids into training and apprenticeships is important but they need the flexibility to change without penalty.

There are people who live close to town but are not on town water. They do not have 'farms' but still need to truck in water and hay for animals. There are not any local hay suppliers anymore. People are not growing hay like they used to, there has been a shift from hay or crops to cattle.

The mines do not suffer like the farmers in drought. Farmers struggle in drought and it is only fair that the mines do as well. Graziers have to decide whether to feed their cattle or themselves. When graziers sell all their stock, they are losing a bloodline that they have been developing for generations. It is a lifetime of hard work and investment.

It is hard to keep good teachers at the schools, there is high competition for labour.

Impacts of current Mount Pleasant Operation (MPO)

Land Council would like to be involved in the management of the Aboriginal Cultural Heritage Offset Area on Wybong Road. This should not be restricted to the LALC, who only represent a small number of the Aboriginal population in this area. Other organisations and individuals would like to have a say on how the land they have cared for tens of thousands of years is managed. The following organisations should also be included:

- Hunter Valley Aboriginal Corporation
- Earth Connection Indigenous Corporation
- Registered Aboriginal Parties (RAPs)
- Lore men and women of the area
- Other independent interested Aboriginal parties such as business owners who utilise country in their teachings and practices

It is an opportunity to practice cultural maintenance (such as cool burning), making the land and people healthy by reconnecting with country. With connection to country comes identity. If people do not have a connection to country, then they lose their identity and this can lead to addiction. People need to have some hope, some baseline on which to make good decisions.

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. It would be culturally beneficial if members of the Aboriginal community were involved in ecological studies, to apply local knowledge and facilitate learning of younger people.

Importance of water and impacts on water. "The water is our blood". All the land and the living beings of the land are culturally important to the Aboriginal community. Impacts on water impact on the spirits and our identity.

When undertaking cultural heritage surveys, it would be beneficial to look at the use of significant artefacts (e.g. scarred trees). Because a scarred tree usually has to be removed, having discussions about maximising the use of the tree (e.g. preserve the scarred section and use other parts of the tree for cultural purposes and/or using the bark to make canoes) so cultural practices can be taught and passed on are important.

When undertaking cultural heritage surveys, it would be beneficial to have a management plan for the artefacts that are not retrieved but left *in situ*.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

The biggest impact is dust and the reduction in air quality. Everybody sees the dust. Everybody knows about the dust, including the mining companies and all levels of government, but no one does anything about it. Now is the time to do something about it because the balance is no longer there.

Impacts on affordable housing.

Impacts on the cost of living.

Increasing rate of homelessness.

Impacts of 12 hour shifts on the mental health of workers.

Opportunities lost to contribute to town, its growth and development.

Impact the mines are having on the Muswellbrook microclimate(s).

Decrease in water and air quality. Inability to safely swim in the rivers, the passtime of many children in the past, without risk of sickness.

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.

Potential impacts of the Mount Pleasant Optimisation Project

Impacts on the underwater springs.

Important to employ local people, people who are already living here.

Important to buy locally as much as possible.

Need to plan for the accommodation requirements of the miners coming into town. Maybe MACH Energy could build a house for each permanent employee. If the employee does not want to live in the house then the house could be used for social housing. Maybe look at the option of having transportable homes that can be gifted as social housing when they are no longer needed.

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.

Who to invite to participate in the SIA

Upper Hunter Homeless Support.

Hunter Valley Aboriginal Corporation

Earth Connection Indigenous Corporation

Registered Aboriginal Parties (RAPs)

Lore men and women of the area

Other independent interested Aboriginal parties such as business owners who utilise country in their teachings and practices.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SLA

Wonnarua Nation Aboriginal Corporation

Date	Thursday 31 October 2019
Organisation	Wonnarua Nation Aboriginal Corporation Laurie Perry (CEO)
Location	Singleton
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Rhiannon Jaeger-Michael (External Relations Officer)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

Can see the impacts of mining from the road, but especially from the air.

Impacts of current Mount Pleasant Operation (MPO)

Conservation Zones should be managed by Aboriginal people and include management tools such as cool burns. This will assist in the revegetation of the land, create jobs and leave a legacy after mining has finished.

Ongoing meetings between Wonnarua Nation Aboriginal Corporation and MACH Energy about the management of the conservation zone.

It is also important that the biodiversity offset areas are managed in a culturally appropriate way.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

Need to think about what the landscape will look like when mining in the Upper Hunter has finished, when the power stations have closed. Could look at Cessnock as an example as all the mines have closed there, but those mines were underground. This could be something for the Upper Hunter Mining Dialogue to consider.

The social programs from mining companies such as employment and contracting of Aboriginal owned businesses are not working as good as they could.

Potential impacts of the Mount Pleasant Optimisation Project

It is important to consider what the mining area will look like in 50 years time, when mining is finished.

Do not let the SSD restrict the impact on Aboriginal people to just the cultural heritage. It is important to engage properly, include discussions around employment, training, contracting, rehabilitation and management of conservation areas.

The main objective is for mining companies to set up a fund to support the development of cultural cool burn rangers on all mining offsets/biodiversity areas across the Hunter Valley which covers over 10,000 hectares of mining offsets land as well.

Ranger programs have been widely recognised in the context of Australian Aboriginal carbon farming as being successful and innovative, contributing to a broad range of social, cultural, economic, environmental, health and political outcomes for Aboriginal people and Australian society.

WNAC has been building relationships with a range of stakeholders to establish the fund, which includes:

- Developing a draft Private Members Bill, “Cultural Cool Burn Bill”, Michael Johnsen MP and further discussions with the legislative assembly.
- Presentation to the Upper Hunter Mining Dialogue about Aboriginal carbon farming.
- Meeting with Aboriginal Carbon Foundation.
- Meeting with the Firesticks Alliance who are working with the five land councils in the Hunter Region and Hunter Local Land Services to develop scholarships.

Who to invite to participate in the SIA

Wonnarua Nation Aboriginal Corporation.

Ungaroo Aboriginal Corporation.

MACH Energy Mount Pleasant Optimisation Project Scoping for SIA

Muswellbrook Chamber of Commerce & Industry Inc.

Date	Friday 1 November 2019
Organisation	Muswellbrook Chamber of Commerce & Industry Inc. Michael Kelly, President Lorraine Skinner, Treasurer
Location	The Conservatorium of Music, Muswellbrook
MACH Energy	Ngaire Baker (External Relations Manager) (introduction only)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

Full membership of the Muswellbrook Chamber of Commerce is based on having a business presence in the Muswellbrook Shire Council Local Government Area (LGA). Associate membership is available for businesses outside the LGA boundary.

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.

Despite this, the fundamentals of running a profitable business are still the same and include:

- good governance and management;
- knowing the market; and
- knowing customers.

Businesses that do not keep to these fundamentals will not be sustainable. Evidence of this was in the coal 'boom' when businesses were expanding and did not take into consideration the 'bust'. MCCI

promotes and encourages good business practices, learning from other businesses. We tend to be a little bit parochial, however, we should remember we are not unique. There are other areas going through similar circumstances and we need to learn from them.

Businesses need good information from the mining companies in order to make informed decisions. Information and communication are the keys to a successful business.

People are shopping elsewhere because they think they can get a better deal. People are heading out of town to do things as a family as, they say, there is not much to do in town. This is despite the fact that Muswellbrook has numerous sporting grounds and Clubs, a picture theatre, a bowling alley, wineries, restaurants, pubs and clubs.

It is hard to get employees that are motivated and interested, as we cannot compete with the wages paid in the mines.

Muswellbrook needs to increase its population. It can either be skills driven or immigration driven. We have missed the boat on 'breed and train'. The government and TAFE are trying to catch up on providing the skills. Apprenticeships are very important. Local businesses are doing what they can, but they need the larger companies and government to also take on apprentices again (like they used to). Learn from the immigration of people to build the power station and a dam in Scone. Workers and their families relocated to the area to work on the construction phase of the projects and they stayed.

Need to create an environment where people want to come and live, work and own/operate businesses. There has been some research undertaken by Tony Borg on where students went after they graduated high school. Some go away for university, some do not see that they have a future in Muswellbrook and move away, others do not want to work in the mines.

Impacts of current Mount Pleasant Operation (MPO)

MPO has a history of strong engagement with local businesses and the community. Local procurement and employment are evident.

Biggest impact is dust, which is made worse with the drought.

It is good that employment opportunities are advertised locally first.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

Mount Pleasant, Bengalla and Mount Arthur all support local businesses.

A drive-in, drive-out workforce and shift work has caused a lot of problems for town and reduces the economic inputs to a community that experiences the negative environmental impacts.

2027 is going to be a big year if Mount Pleasant gets the SSD approved and the question mark over the future of Mount Arthur.

Need to look at the transition from mining to other industries and need a transition plan with viable alternatives for the region.

Potential impacts of the Mount Pleasant Optimisation Project

Where are the workers going to come from? Are they going to be sourced from other mines in the area?

It is important that certain roles are locally based, either in the Upper Hunter, Muswellbrook or Singleton LGAs. Having this policy is good but the challenge is how to make it work. Maybe it is the case of Mount Pleasant providing the housing.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

SIA Stakeholder A

Date	Monday 28 October 2019
Organisation	n/a
Location	The Conservatorium of Music, Muswellbrook
MACH Energy (for introduction and project description only)	Ngaire Baker (External Relations Manager) Rhiannon Jaeger-Michael (External Relations Officer)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

The Hunter region is one of the top three thoroughbred regions in the world. Thoroughbreds (predominantly Yearlings) in the region are usually sold at the Magic Millions on the Gold Coast or through Inglis in Sydney and the majority of horses are sold within Australia or to New Zealand, Hong Kong, Japan or Singapore.

When buyers travel to the Upper Hunter for inspections, they either drive from Sydney or charter a plane to Scone and drive to the horse studs to the south east of Scone/north east of Aberdeen. They would be able to see the mines from the air. The major Thoroughbred studs in this area are Vinery, Arrowfield, Godolphin, Yarraman Park and Newgate.

Horses are trained and raced locally at the Muswellbrook Race Club (MRC). The MRC is one of NSW's oldest race clubs and is the first country racing club up the New England Highway, attracting membership and patronage locally and from Newcastle, the Central Coast and Sydney. Membership currently consists of 50 – 60 local and regional businesses and 150 individual memberships.

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, which can impact on the local membership and patronage of the MRC.

The horse racing industry in the region is becoming more lucrative with more people purchasing shares in racehorses and an increase in prize money. The two largest events on the racing calendar in Muswellbrook are:

- Muswellbrook Cup – March each year. Attracts about 2,000 people to the MRC. 50% local and 50% from Newcastle, Central Coast or Sydney, Patrons mainly from the 25 – 45 age demographic. More working age people attend this event due to the afternoon being a half day public holiday.

- Melbourne Cup – November each year. Attracts about 1,000 people to the MRC. About 35% local and 65% from Newcastle, Central Coast or Sydney. Patrons mainly from 60+ age demographic. More retired people due to the day not being a public holiday in NSW (public holiday in Victoria).

Bengalla and Mount Arthur own and manage a number of properties (including housing and stabling) in the race course precinct which surrounds the racecourse. MRC is often given first choice when properties become available so that horse trainers are given the opportunity to lease the properties.

There appears to be a reduction in the number of people living and working in the coal industry in Muswellbrook Shire Council Local Government Area (MSC LGA) over the past 10 years ago. People seem to be leaving and it would be good to understand if people are leaving and why they are leaving. It could be that there are not enough facilities to keep and/or attract people to Muswellbrook. With all the mining in the MSC LGA, you would think the town would want for nothing. Mudgee is a good benchmark for the type of facilities Muswellbrook should have.

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. The lower average wage may also confirm that many mining employees do not reside in close proximity to the Muswellbrook LGA and are happy to travel some distance away to their home. There needs some more investigation into the reasons why many mining employees do not want to live in the Muswellbrook LGA and the effectiveness of any policies that mining companies put in place to encourage their workers to live locally. This may also reflect an impact of the St Heliers Correctional Centre located to the north of Muswellbrook. When a prisoner is moved to St Heliers (a minimum security institution for men), their family may also relocate to Muswellbrook and live in social housing on the southern side of Muswellbrook. Once the prisoner is released, the family stays together in the social housing.

Impacts of current Mount Pleasant Operation (MPO)

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 lines 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.

Impacts of current Mount Pleasant Operation (MPO) - cumulative

In some environmental conditions, the racecourse and the race course precinct can experience dust effects from Mount Pleasant, Mt Arthur and Bengalla mining operations. When Bengalla was mining closer to the racecourse, they would stop mining on the day of the Muswellbrook Cup to allow workers to attend the event and reduce the likelihood of dust impacts on the day.

Some trainers would prefer to be in Scone to avoid the impacts of mining on themselves and their horses. Some horse owners do not want their horses to be stabled in Muswellbrook because of the perception of dust impacting on the health of their horse(s).

Potential impacts of the Mount Pleasant Optimisation Project

If the Project was to be approved, dust and visual impacts would likely continue on the race course and the racing precinct, however would be expected to reduce over time as:

- mining moves north and then to the west, so dust creating activities move away from the racecourse, houses and stables in the racecourse area.

As the waste rock emplacement landform increases in height and is vegetated, the visual impacts to the racecourse area will reduce somewhat similar to the neighbouring Bengalla Mine.

Who to invite to participate in the SIA

Muswellbrook Race Club (General Manager).

Hunter Thoroughbred Breeders Association.

Thoroughbred studs to the to the south east of Scone/north east of Aberdeen - Vinery, Arrowfield, Godolphin and Newgate.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

SIA Stakeholder B

Date	Wednesday 30 October 2019
Organisation	n/a
Location	The Conservatorium of Music, Muswellbrook
MACH Energy	Chris Lauritzen (General Manager, Resource Development) Ian Webber (Land and Property Superintendent)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

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.

The drought has impacted on graziers and dairy farmers and many have had to sell their cattle and looking how to diversify their property/business to earn an income. The rural industry is on its knees because of the drought. It is nearly impossible to buy fodder/hay these days because the mining companies have bought up large areas of the Hunter River alluvial flats from Aberdeen to Muswellbrook/Mangoola/Denman/Jerry's Plain/Warkworth/Singleton. Approximately 100km of river frontages and on both sides of the river. When mining companies like Bengalla, Mt. Arthur, Mount Pleasant, Dartbrook, Mangoola, Muswellbrook Coal and Malabar extended their exploration licences to include the alluvial river flats, it was because they wanted the water licences from the Hunter River that serviced the individual property owners, and when they were purchased, the price was made up in two identities; (1) land and improvements, (2) water value per mega litre (\$/ML). All of the above coal mines have between 1,500ML/year to 3,300ML/y per each coal mine water allocation, that is mainly used to wash coal in their coal washery plants and subsequently auxiliary plant that is required to produce their end product so it can meet the International export requirement for clean coal. Note, Bengalla use 4 to 5

ML/day river water and Mount Pleasant plan to use 3 to 4 ML/day at current production rate (2019-2020). This information can be found in the initial EIS of the individual coal mines¹⁰.

This has made a massive impact on the availability of fodder/hay production in the Hunter Valley region and in the current drought conditions of the last three years. The only available fodder/hay to be found now is up the east coast of Australia, where available.

Impacts of current Mount Pleasant Operation (MPO)

Dust, noise, blasting, 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).

Lighting impacts on the neighbouring properties.

The kangaroos that use to live on the mining lease are now entering neighbouring properties in very large numbers and causing problems.

Visual impacts of the mine. Muswellbrook looks straight at Mt. Pleasant which is due west. The area to the immediate north, west and south is undulating country and is very visible to the homes on neighbouring properties.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

Many people in Muswellbrook can remember when there was no Mount Arthur, Mangoola or Bengalla, this would have been in the mid-1980s. Impacts of these open cut mines started when the mining companies started to purchase rural properties. The mining companies bought all the fertile alluvial river flats. They not only purchased rural properties but also the water licences for the Hunter River that were associated with those properties. Recently Mt. Pleasant purchased an additional Hunter River developed fodder/hay production property to obtain access to the Hunter River and additional water licences so the proposed continuation project can be achieved (relocation of their existing pumping station to their new purchased property on the Hunter River adjacent to Muswellbrook township, this was required because of the deed of Agreement with Bengalla Open Cut Coal Mine). This is one of the ways that the open cut coal mines were able to build up their holdings of water licences. With the rapid construction of the Mt. Pleasant Operation, this has added to the already growing problem of additional dust, as well the loss of more productive farming 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.

About 90% of the rural properties from Muswellbrook to Denman and Mangoola have gone. These properties used to produce fodder/hay, productive dairy farms and grazing(i.e. sheep and cattle). There is virtually no local fodder/hay for the primary producers to buy. Those properties that do produce fodder/hay are using it to feed their own stock in the current climate conditions and water availability from the Hunter River (high security water and low/general security water and the purchase price).

¹⁰ Ref. Mount Pleasant Project Modification E.A.R dated 1 October 2010 Vol. 1 Main Report, Chapter 1 Figures 1.3, 1.4, 1.5 and 1.6.

There are only three dairy farms in the Muswellbrook area, and the others have been bought out by the mines.

The traffic congestion on the New England Highway, from Muswellbrook to Singleton and on to Maitland, Newcastle is absolutely appalling. There is massive traffic congestion in Singleton every morning and every afternoon, where approx. 12,000 vehicles travel up and down the highway. Another black spot is the intersection of the Golden Highway and the New England Highway, where a number of people have lost their lives due to the grid lock of vehicles. The government is talking about a bypass for Singleton and Muswellbrook but it will be many years before they make a decision.

There has been a shift during the last couple of years from coal mining employees who are actually employed by the mining companies, to the use of contractors and subcontractors. It is estimated that between 60% and 80% of coal mining employees work for a contractor or subcontractor. This has led to job insecurity, and a large number of employees are not settling in Muswellbrook because they do not have job security.

Social impacts of the workforce depend on where their families reside, as many live down the Valley, and the employees who work for contractors are usually short term.

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.

Potential impacts of the Mount Pleasant Optimisation Project

Need to consider the downstream impacts of the proposed dams:

- What will happen if they fail (particularly the tailing dam)?
- What about the change in the natural flow during a rain event?
- Construction impacts when the dams are being built?

The availability of water (high security and low/general security from the Hunter River) during the current extreme drought conditions)

Due to the continuation of the drought conditions and social impacts from climate change over the last 10 years, and particularly the last 3 years, water from the Hunter River via the Glenbawn Dam which is at 43.6% capacity on 21.11.2019, (re. the Land Newspaper). Use of large quantities of water to wash coal for overseas markets/owners will result in large social impacts on the Australian people in the future due to all aspects of life requirements.

Ultimately, the decision makers are the NSW and the Federal Government.

MACH Energy Mount Pleasant Optimisation Project

Scoping for SIA

SIA Stakeholder D

Date	Friday 1 November 2019
Organisation	n/a
Location	Muswellbrook
MACH Energy (for introduction and project description only)	Ngaire Baker (External Relations Manager)
Just Add Lime	Rachel Maas, Principal Social Scientist

Baseline

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 in the mining industry, 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.

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 is 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 are not living here because they do not have to, with the Hunter Expressway they are 1.5 hours from Newcastle and four hours to Sydney. People do not want to live here because of the dust and the associated health impacts.

You do not see local people in the main street like you used to. You only see contractors/miners out and about at night getting dinner and they are people from out of town rather than the locals.

We need something to attract people to live in Muswellbrook. Muswellbrook Shire Council only caters for the minority not the majority. They provide for people interested in music but we are a mining town, people love football.

How can a mining town have four pubs close down? Five years ago, there were seven pubs, now there are only three operating as pubs, one is being used as accommodation for one of the mines and the others are closed. Something is going wrong in town. There used to be an 'early opener' where people off night shift could get breakfast and have a beer, none of the pubs are 'early openers'. Both Denman and Aberdeen have two pubs each with smaller populations.

The shops in town are changing, have to go to Big W, another town or buy online.

There has always been an economic gap between people who live in Muswellbrook. There used to be the 'wealthy', the 'workers' and those who did not 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).

Impacts of current Mount Pleasant Operation (MPO)

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 is 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 is not 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 is the end of our day and we are trying to get to sleep.

There seems to be a disconnection between MACH Energy and Thiess. We would feel more comfortable knowing that MACH Energy was owner/operator.

It is good that the MACH Energy people are approachable and can talk with them. MACH Energy are wearing the brunt of the impacts from Mount Arthur and Bengalla because they are the new kids on the block and the most visible from town. People are aware of the management strategies that Bengalla would use prior to the 'completion' of their bund wall. If there was a complaint about dust, they just stopped the dragline (which was visible) but keep working with other machinery. People knew this because their workforce were living in town. So people question what MACH Energy does given the experience of other mines.

The impacts of the construction workforce for MACH Energy's rail project will be interesting.

Impacts of current Mount Pleasant Operation (MPO) – cumulative

Experience impacts not only from the Mount Pleasant Operation but also Bengalla. We can hear and see the blasting and the dust. When we moved into the area, we were expecting to be impacted by the mines. Because the mines were here first, we were expecting some impact. However, we were not prepared for the extent of the impacts.

There are impacts on the New England Highway and Hunter Expressway with the congestion during shift change.

Potential impacts of the Mount Pleasant Optimisation Project

If MACH Energy is going to dig a big hole in the ground and impact on the people living around that hole, then they need to provide some real benefit back to those people.

If people relocated to Muswellbrook, then there would be an economic benefit to town, if they spent their money locally.

If MACH Energy is going to have a live locally policy they need to think of the intergenerational impacts on the kids now trying to access the housing market in Muswellbrook during the life of the mine – will they be able to afford to purchase a property? Need to learn the lessons from the coal boom.

Who to invite to participate in the SIA

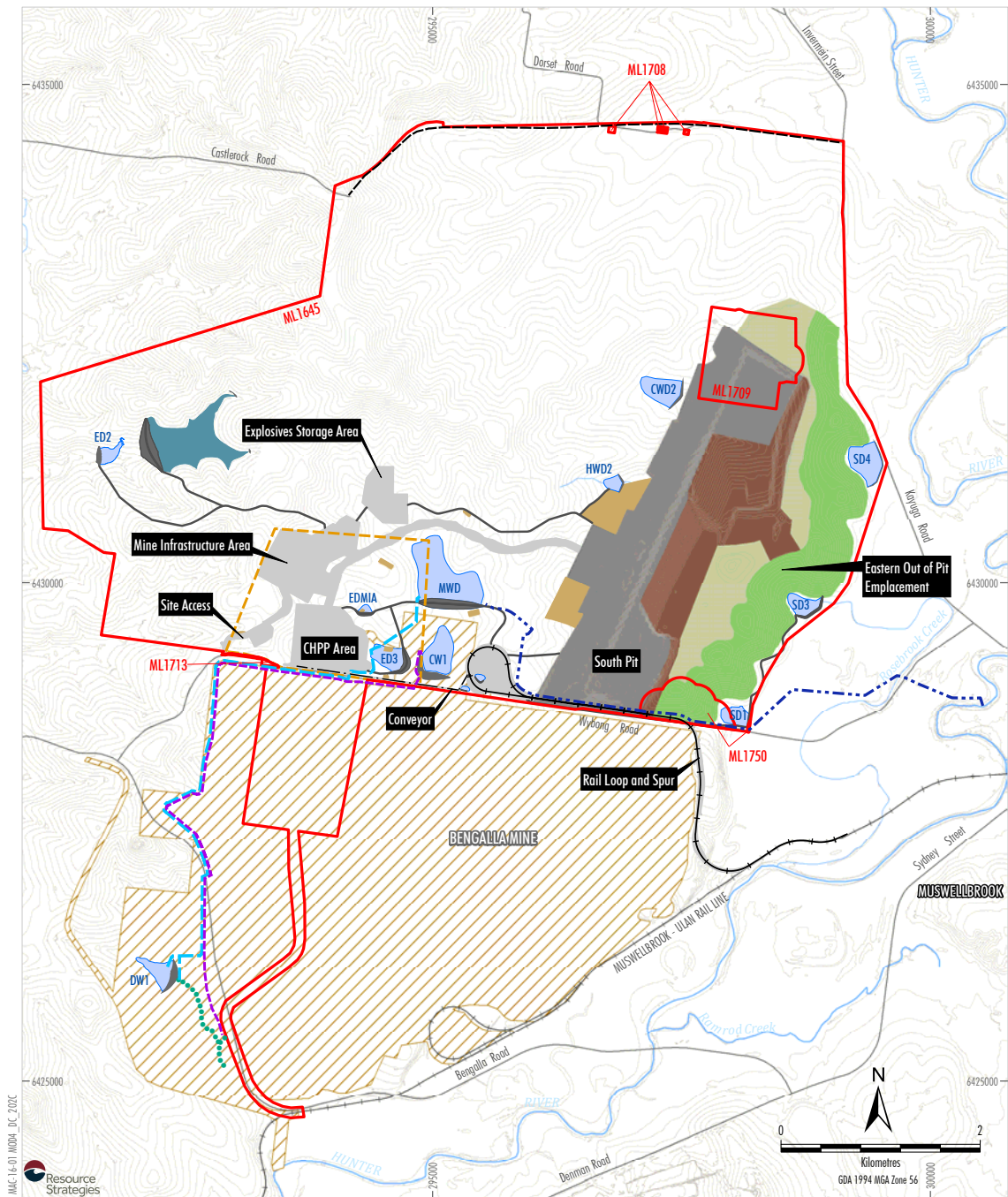
Local real estates – changes in the housing and rental markets and find out about why the pubs have closed.

Post office – changes to mail and increase in online shopping through an increase in the number of packages.



Appendix H

Mount Pleasant Operation - Conceptual 2025 Layout Plan



LEGEND

- Mining Lease Boundary
- Bengalla Mine Approved Disturbance Boundary (SSD-5170)
- Infrastructure Area Envelope
- Active Mining Area
- Active Overburden Emplacement Area
- Topsoil Stockpile
- Initial Rehabilitation
- Established Rehabilitation
- Infrastructure and Borrow/Stockpile Area
- Access Road
- Northern Link Road

Indicative Water Pipeline Alignment

- MPO Hunter River Supply Pipeline
- MPO DW1 Pipeline (Bi-directional)
- Bengalla Mine CW1 Pipeline
- Approximate Extent of Scour Protection
- Water Dam
- Fines Emplacement Area

Source: NSW Land & Property Information (2017); NSW Division of Resources & Energy (2017); MACH Energy (2018)

MACHEnergy

MOUNT PLEASANT OPERATION

Source: NSW Government Development Consent DA 92/97



Appendix I

Assessment of Likely Social Impacts -
Project is approved

Table 24: Likely social impacts if the Mount Pleasant Optimisation Project proceeds

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Way of life								
Mine workforce – living in Muswellbrook and surrounding towns and villages (Local Labour Commitment).	Unintended impact of reducing access to affordable housing and change (i.e. increase) in property values in Muswellbrook and other nearby villages and towns.	Low income individuals and families currently living in or wanting to relocate to Muswellbrook and other villages and towns.	Negative	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the management strategy or measures developed.	High sensitivity due to the existing shortage of affordable housing and the low income individuals and families who are likely to experience it.	SIA case studies by Muswellbrook Shire Council (MSC), ACDF, Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.
Mine workforce – increase in traffic on local, State and Federal roads.	Increased frustration of increased traffic on local roads such as Wybong and Bengalla Road and the New England Highway between Muswellbrook and Singleton particularly on shift change.	Other regular road users.	Negative	Roads used by the workforce.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the management strategy or measures developed.	High sensitivity given the reliance on private vehicles and the existing cumulative impacts.	SIA scoping case study MSC, ACDF, Moore, Stakeholder B and Stakeholder D.
Realignment of Northern Link Road - construction impacts, e.g. noise, workers, delay in accessing property, amenity impacts.	Decrease in levels of homeliness and connection to place.	Residents of Dorset Road.	Negative	People living along Dorset Road.	Construction phase only.	Dependant on the management strategy or measures developed.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry.	Denman, Aberdeen, Muswellbrook, Scone Healthy Environment Group (2019 <i>pers comms</i>).
Realignment of Northern Link Road – expected increased traffic on Dorset Road.	Decrease in levels of homeliness and connection to place.	Residents of Dorset Road.	Negative	People living along Dorset Road.	Life of the road.	Dependant on the management strategy or measures developed.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry.	Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).

¹¹ As identified in Table 4 of the SIA Guideline.

¹² Based on affected groups in Section 5.2.

¹³ Views from the SIA scoping stakeholders and issues raised in submissions to previous submissions have been used to determine level of sensitivity.

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Realignment of Northern Link Road – change in travel times.	Feelings of frustration and annoyance if travel times are increased. Feelings of relief due to improved road infrastructure.	Road users.	Negative or Positive	Dependant on the road user and where they are travelling to and from.	Life of the road	Dependant on the management strategy or measures developed.	Medium sensitivity given the existing cumulative impacts of the mining industry.	Professional judgement and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
Mine optimisation – complaints process.	Time and cost to make complaints impacting on day to day life.	People experiencing environmental impacts such as noise, dust, lighting and blasting.	Negative	Nearby neighbours, surrounding rural communities and Muswellbrook.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity to those experiencing the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Professional judgement based on case studies and review of complaints data.
Health and wellbeing								
SSD Application process.	Decrease in health and wellbeing due to uncertainty of Project.	Near neighbours and residents of surrounding rural communities and Muswellbrook, particularly for those people who do not want the Project to proceed.	Negative	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).	Subject to the individual and dependant on the management strategy or measures developed.	High sensitivity to those experiencing the existing impacts of the Mount Pleasant Operation and impacts experienced from other mining operations in the area.	Moffatt and Baker (2013) and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
SSD Application process.	Increase in health and wellbeing due to anticipation of positive impacts associated with the Project.	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families.	Positive	MSC, UHSC and Singleton Council LGAs.	Until there is a legal decision whether the Project can proceed or not and secure Project funding (estimated to be 2022).	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.	Professional judgement.

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mining – changes to the landscape and waters.	Decrease in health and wellbeing.	Aboriginal community with connections to the land and waters being impacted.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity to those experiencing the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Stakeholder Case Study by Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.
Mining – dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity).	Decrease in physical and mental health.	Residents who experience amenity impacts.	Negative	Nearby neighbours, surrounding rural communities and Muswellbrook.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity to those experiencing the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Case studies by MSC, Moore, Stakeholder B and Stakeholder D, Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>) and complaints data.
Employment.	Health and wellbeing impacts of being employed.	MACH workforce (including contractors) and their families. MACH suppliers and their associated workforces and families.	Positive	MSC, UHSC and Singleton Council LGAs.	Length of employment.	Subject to the individual and their family and friends.	High sensitivity to the coal industry's future in the Upper Hunter.	Professional judgement.
Mine workforce – increased traffic on roads.	Increased safety risk for road users travelling between the mine site and Muswellbrook and Singleton due to an increased number of mine workers using the roads, and their level of fatigue after a 12-hour shift (if workers and their families do not live in Muswellbrook).	Other road users (particularly during shift change). Emergency services if there is an accident.	Negative	Roads between Muswellbrook and Singleton.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependent on the 'home' of the worker and their family and dependant on the management strategy or measures developed.	High sensitivity given the existing cumulative impacts.	Stakeholder Case Study by MSC and ACDF.

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mine workers working 12-hour shifts.	Health and wellbeing implications of working 12-hour shifts.	Mine workforce and their families and friends.	Negative	Individual, their family and friends.	Length of time working 12-hour shifts.	Dependent on the individual and their family and friends and dependent on the 'home' of the worker and their family and dependent on the management strategy or measures developed.	Dependent on the individual and their family and friends.	Cottle (2013). Sincovich et al (2018).
Services and facilities								
Mine workforce and their families.	Increased demand on local medical services in Muswellbrook and other villages and towns.	Other people accessing medical services.	Negative	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependent on the 'home' of workers and their family and dependent on the management strategy or measures developed.	High sensitivity given the existing cumulative impacts.	Case studies from MSC and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
Mine workforce and their families and those experiencing negative social impacts associated with the Project.	Increased demand on local medical services in Muswellbrook and other villages and towns.	Medical service providers.	Negative (if not prepared)	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependent on the 'home' of workers and their family and dependant on the management strategy or measures developed.	Unknown – to be researched as part of the SIA for the Project EIS.	Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Cottle (2013). Sincovich et al (2018).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mine workforce and their families.	Demand for mental health services.	Potentially some mine workers, family members of workers and people negatively impacted by the project.	Negative (if services are not available)	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependent on the 'home' of workers and their family and dependant on the management strategy or measures developed.	Unknown – to be researched as part of the SIA for the Project EIS.	Stakeholder Case Study from MSC.
Mine workforce and their families.	Increased demand for educational services.	Education providers e.g. childcare centres and schools.	Negative (if not prepared)	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependent on the 'home' of workers and their family and dependant on the management strategy or measures developed.	Unknown – to be researched as part of the SIA for the Project EIS.	Professional judgement.
Mine workforce and their families.	Increased demand for emergency services (police, fire, ambulance and SES).	Service providers.	Negative (if not prepared)	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependent on the 'home' of workers and their family and dependant on the management strategy or measures developed.	Unknown – to be researched as part of the SIA for the Project EIS.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.
Support for local community based organisations (community contributions).	Continued funding to provide services and facilities.	Recipients of donations.	Positive	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the organisation and donation	Unknown – to be researched as part of the SIA for the Project EIS	Professional judgement based on a review of donations data.
Voluntary Planning Agreement payments.	Funding to MSC to be able to be spent on community services and facilities.	Residents of MSC LGA.	Positive	MSC LGA	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on MSC.	Unknown – to be researched as part of the SIA for the Project EIS	Professional judgement.

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Quality of the living environment (surroundings)								
Mine optimisation (including increased rail movements) – visual impacts.	Witnessing continued changed to the landscape, seeing the dust impacts and loss of the night sky due to lighting impacts leading to solastalgia.	Near neighbours and residents of surrounding rural communities and Muswellbrook.	Negative	Near neighbours, surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048), taking into consideration the development of the of the Eastern Out-of-Pit Emplacement to 2026.	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity as near neighbours are currently experiencing these impacts either from the Mount Pleasant Operation and/or cumulative impacts of the mining industry and the number of people experiencing impacts could increase with the increase in amount of coal mined and direction of mining.	Stakeholder Case Study from MSC and Stakeholder B. Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Albrecht et al (2007). Moffatt and Baker (2013). Mcmanus and Connor (2013).
Mining – dust impacts (air) and/or noise and/or blasting and/or lighting impacts (amenity).	A decrease in the level of homeliness and loss of connection to place.	People who experience amenity impacts.	Negative	Near neighbours, surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity as near neighbours are currently experiencing these impacts either from the Mount Pleasant Operation and cumulative impacts of the mining industry, and the number of people experiencing impacts could increase with the increase in amount of coal mined and direction of mining.	Case studies from MSC, ACDF, Moore, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Moran and Brereton (2013). Moffatt and Baker (2013). Mcmanus and Connor (2013).
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.	Near neighbours.	Negative	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 sensitivity as impacts on homes and businesses.	Stakeholder Case Study from Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Socio-economic impacts								
Mine operation.	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.	Near neighbours and residents of surrounding rural communities and Muswellbrook who will be impacted by the Project.	Negative	Near neighbours, surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Subject to the individual and if mitigation measures in place.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.
Mining – dust impacts (air).	Increased housekeeping and cleaning workload due to deposited dust.	Residents who experience dust impacts.	Negative	Nearby neighbours, surrounding rural communities and Muswellbrook.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity due to the existing dust impacts either from the Mount Pleasant Operation or cumulative impacts of the mining industry in the region.	Case studies by MSC, Moore, Stakeholder B and Stakeholder D and complaints data.
Mine operation.	Increased workload to manage weeds and pests.	Near neighbours.	Negative	Near neighbours and surrounding rural communities.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity given the potential impact to livelihoods.	Case studies by Moore and Stakeholder B.
Mine Water Dam and Fines Emplacement Area causing impacts to Sandy Creek catchment.	Decreased viability of farms downstream of the Mine Water Dam and Fines Emplacement Area due to decrease in water availability/replacement cost of environmental function.	Properties who rely on water from the Sandy Creek catchment.	Negative	Downstream stakeholders of Sandy Creek.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity given the potential impact to livelihood.	Stakeholder Case Study from Moore and Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mine Optimisation - workforce.	Continued and increased business from workers and their families buying locally.	Local businesses in Muswellbrook, Upper Hunter and Singleton LGAs.	Positive	Muswellbrook, Upper Hunter and Singleton LGAs.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on individual businesses and dependant on the management strategy or measures developed.	High sensitivity given economic situation in MSC, UHSC and Singleton Council LGAs.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.
Mine optimisation – local spend (Local Supplier Strategy).	Continued and increased support for local businesses.	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs.	Positive	Businesses in Muswellbrook, Upper Hunter and Singleton LGAs.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on individual businesses and dependant on the management strategy or measures developed.	High sensitivity given the impacts of the coal downturn.	Stakeholder Case Study from MCCI and professional judgement based on Local Supplier Policy.
Mine optimisation - workforce.	Increased employment opportunities.	People seeking employment in Muswellbrook or other villages and towns.	Positive	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the management strategy or measures developed to address this impact.	Medium sensitivity based on employment opportunities.	Professional judgement based on proposed Project workforce requirements.
Mine optimisation - workforce.	Continuation of increasing cost of goods and services (including affordable rental accommodation).	Near neighbours and surrounding rural communities and Muswellbrook and other villages and towns.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the management strategy or measures developed to address this impact.	High sensitivity, especially for low income households.	Case studies from ACDF, Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation. Cottle (2013). Sincovich (2018).
Mine optimisation - workforce.	Reduced access to qualified, skilled and experienced labour pool for local businesses and residents.	Near neighbours and surrounding rural communities and Muswellbrook and other villages and towns.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the management strategy or measures developed to address this impact.	High sensitivity given the current demand for qualified, skilled and experienced people.	Case studies by MSC and Muswellbrook Chamber of Commerce. Petrova and Marinova (2013).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mine optimisation - workforce.	Lower local spend by the workforce because they are not living in the area full time (i.e. they have a family living outside the area).	Near neighbours and surrounding rural communities and Muswellbrook and other villages and towns.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the management plan developed to address this impact.	High sensitivity given the downturn and lack of economic development in Muswellbrook.	Case studies by MSC. Stakeholder A and MCCI Petrova and Marinova (2013).
Mine optimisation – environmental impacts.	Uncertainty for the thoroughbred industry due to customer perceptions of environmental impacts impacting on Thoroughbred CIC.	Thoroughbred breeders in the area (Godolphin and Coolmore).	Negative	Thoroughbred CIC.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity given the existing cumulative impacts of the mining industry in the region.	Professional judgement based on submissions to previous Modifications and findings of MSC LEP Discussion Paper.
Mine optimisation – environmental impacts.	Uncertainty for the viticulture industry due to customer perceptions of environmental impacts impacting on Viticulture CIC.	Wineries in the MSC LGA.	Negative	Hunter Valley viticulture industry.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	Medium sensitivity given the existing cumulative impacts of the mining industry in the region.	Professional judgement based on findings of MSC LEP Discussion Paper.
Cultural impacts								
Mining optimisation - 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.	Negative	Impacts occur on site and associated waterways.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed to address environmental impacts.	High sensitivity given the history of dispossession of and connection between land and waters and identity and self-esteem and the importance of lore.	Stakeholder Case Study by Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation. Cottle (2013).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mining optimisation – opportunity to connect with country and waters.	Increase in cultural identity and self-esteem.	Aboriginal community with connections to the land and waters being impacted.	Positive	Impacts occur on Aboriginal Heritage Conservation Area.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures developed.	High sensitivity given the history of dispossession of land and waters.	Stakeholder Case Study by Wanaruah Local Aboriginal Land Council, Earth Connection Indigenous Corporation and Wonnarua Nation Aboriginal Corporation.
Landowners taking up voluntary acquisitions.	Loss of agricultural culture.	Near neighbours and surrounding rural communities.	Negative	Properties identified as having “acquisition rights”.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of mining in the area.	Stakeholder Case Study from MSC. Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Mcmanus and Connor (2013). Moffatt and Baker (2013).
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.	Near neighbours and surrounding rural communities.	Negative	Properties identified as having “acquisition rights”.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of mining in the area.	Stakeholder Case Study from MSC, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Mcmanus and Connor (2013). Moffatt and Baker (2013).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Purchase of rural properties for the Project – people moving away because “like for like” properties no longer exist in the area.	Loss of rural communities.	Property owner, their family and friends and remaining landholders/ community members.	Negative	Surrounding rural communities.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of mining in the area.	Case studies by MSC, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>) Mcmanus and Connor (2013)
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.	Existing residents of Muswellbrook and other villages and towns.	Dependant on individual.	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of mining in the area.	SIA scoping case study from CCC, ACDF and stakeholder D. Petrova and Marinova (2013)
Mine optimisation – workforce 12-hour shifts can lead to a reduction in volunteering and amalgamation of volunteer based community services.	Change in social networks, community identification, connection and cohesion.	Volunteer based community organisations and the people they provide services to.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of mining in the area.	Stakeholder Case Study from MSC. Cottle (2013) Sincovich et al (2018)
Differing perspectives and beliefs on the coal industry.	Community division and loss of community cohesion.	People who support mining. People who support the horse racing/thoroughbred industry.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of mining in the area.	Stakeholder Case Study from Stakeholder A. Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Moffatt and Baker (2013). Sincovich et al(2018).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Mine workers living away from their family while working.	Alteration of family structure.	Mine workers and their family.	Negative	Individual, their family and friends.	Length of working 12-hour shifts/roster.	Dependant on the individual and their family and friends.	Dependant on the individual and their family and friends.	Cottle (2013).
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.	Property owners who are impacted by Mount Pleasant but who have not been determined to have acquisition rights.	Negative	Near neighbours and surrounding rural communities.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the downturn and lack of economic development in Muswellbrook.	Stakeholder Case Study from MSC Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>) Moffatt and Baker (2013)
Decreased ability to manage agricultural properties, especially in times of drought.	Increase workload, stress and feelings of powerlessness.	Near neighbours.	Negative	Near neighbours and surrounding rural communities.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the downturn and lack of economic development in Muswellbrook.	Stakeholder Case Study from Moore and Stakeholder B. Moffatt and Baker (2013)
Decision making systems								
Inability to affect the decision whether the Project goes ahead or not.	Feelings of uncertainty and powerlessness.	People impacted by the Project.	Negative	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)	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation or cumulative impacts of the mining industry in the region.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects. Moffatt and Baker (2013)

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Frustration of continuing dust, noise, blasting and lighting impacts and the need to lodge a complaint/s.	Feelings of frustration, annoyance, uncertainty and powerlessness.	Near neighbours, surrounding rural communities and residents of Muswellbrook.	Negative	Near neighbours, surrounding rural communities and residents of Muswellbrook.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation or cumulative impacts of the mining industry in the region.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.
Equity impacts								
Income inequality while paying the same price for goods and services.	Change in social networks, community cohesion and reinforces social differentiation and inequity.	Near neighbours, surrounding rural communities and residents of Muswellbrook and other villages and towns.	Negative	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing two-speed economy in Muswellbrook and Singleton.	Stakeholder Case Studies from ACDF, Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation. Cottle (2013). Sincovich et al (2018).
Those people near the mine experience more impacts than those further away from the mine.	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.	Negative	Muswellbrook and other villages and towns.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing division in Muswellbrook and Singleton on mining.	Professional judgement based on case studies, Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>). Sincovich et al (2018) and <i>Land and Environment Court (2019)</i>
Mine life – changes to the landscape.	Intergenerational impacts.	Current and future generations.	Negative	Impacts occur beyond the site boundary.	Permanent.	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation or cumulative impacts of the mining industry in the region.	Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).

Cause of likely social impact (matters ¹¹)	Likely social impact	Stakeholder group ¹²	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹³	
Gender impacts								
12-hour shifts and DIDO.	Increased workload for partner “at home” with family responsibilities.	Partner of mine work “at home”, predominantly women.	Negative	Communities where DIDO workers “live”.	Length of time working 12-hour shifts.	Dependant on the individual and their family and friends.	Dependant on the individual and their family and friends.	Cottle (2013). Sincovich et al (2018).
Dust impacts.	Increased workload for the person who cleans and maintains the house, car, garden etc.	Households experiencing dust impacts.	Negative	Near neighbours, surrounding rural communities, Muswellbrook.	Continuation of Mount Pleasant Operation and for the life of the Project (from 2017 until 2048).	Dependant on the individual and dependant on the management strategy or measures.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Stakeholder Case Study Moore.
Fears and aspirations								
Failure of dams, especially the Fines Emplacement Area.	Loss of home and livelihood.	Properties downstream of the mine on the Sandy Creek catchment.	Negative	Properties downstream of dams on Sandy Creek.	To be determined in technical study.	To be determined in technical study.	High sensitivity given the potential impact to home and livelihood.	Stakeholder Case Study from Stakeholder B.
Cultural management practices on Biodiversity Management Areas.	Increased connection to country, cultural identity and self-esteem.	Aboriginal people with a connection to the land and waters impacted by the Project.	Positive	Biodiversity offset areas.	While MACH is responsible for the Biodiversity Management Areas.	Dependant on the individuals participating.	High sensitivity given the history of dispossession of and connection between land and waters and identity and self-esteem and the importance of lore.	Stakeholder Case Study by Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation and Wonnarua Nation Aboriginal Corporation.



Appendix J

Assessment of Likely Social Impacts -
Project is not approved

Table 25: Likely social impacts if the Mount Pleasant Optimisation Project does not proceed

Cause of likely social impact (matters ¹⁴)	Likely social Impact	Stakeholder group ¹⁵	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹⁶	
Way of life								
Reduction in workforce.	Less pressure on affordable housing and change (i.e. decrease) in property values in Muswellbrook and other villages and towns.	Low income families currently living in or wanting to relocate to Muswellbrook and other villages and towns.	Positive	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity due to the existing shortage of affordable housing.	Professional judgement based on case studies by MSC, ACDF, Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.
Reduction in workforce.	Decreased traffic along Wybong and Bengalla Road and between Muswellbrook and Singleton with the workers travelling to site.	Residents living along Wybong and Bengalla Road and other road users travelling between Muswellbrook and Singleton (particularly during shift change).	Positive	Wybong and Bengalla Road and between Muswellbrook and Singleton.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the existing cumulative impacts of the mining industry in the region.	Professional judgement based on case studies by MSC, ACDF and Stakeholder B.
Reduction in workforce.	Reduction in mining workers in Muswellbrook and other villages and towns.	Existing residents of Muswellbrook and other villages and towns.	Dependant on individual.	Surrounding rural communities, Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the existing cumulative impacts of the mining industry in the region.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.
Reduction of workforces.	Loss of employment	MACH workforce (including contractors) and their families.	Negative	MSC, UHSC and Singleton Council LGAs.	Permanent when associated with the Mount Pleasant Operation.	Subject to the individual and their family and friends.	High sensitivity to the coal industry's future in the Upper Hunter.	Professional judgement.
Reduction of workforces.	Loss of businesses, income, revenue.	MACH suppliers and their associated workforces and families.	Negative	MSC, UHSC and Singleton Council LGAs.	Permanent when associated with the Mount	Subject to the individual and their family and friends.	High sensitivity to the coal industry's future in the Upper Hunter.	Professional judgement.

¹⁴ As identified in Table 4 of the SIA Guideline.

¹⁵ Based on affected groups in Section 5.2.

¹⁶ Views from the SIA scoping stakeholders and issues raised in submissions to previous submissions have been used to determine level of sensitivity.

Cause of likely social impact (matters ¹⁴)	Likely social impact	Stakeholder group ¹⁵	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹⁶	
					Pleasant Operation.			
Health and wellbeing								
Mine closure.	Increase in health and wellbeing due to a reduction in dust, noise, blasting and lighting impacts and concerns for the future.	Near neighbours and surrounding rural communities and Muswellbrook.	Positive	Surrounding rural communities, Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the individual and management strategy or measures developed to manage the impact.	High sensitivity as impacts on homes and businesses.	Professional judgement based on case studies.
Mine closure and rehabilitation.	Increase in health and wellbeing.	Aboriginal community with connections to the land and waters being impacted.	Positive	Surrounding rural communities, Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the individual and management strategy or measures developed to manage the impact.	High sensitivity given the history of dispossession of land and waters.	Professional judgement based on the Stakeholder Case Study by Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation.
Reduction in workforce.	Increased safety travelling between Muswellbrook and Singleton because fatigued mine workers are not on the roads.	Other road users traveling between Muswellbrook and Singleton (particularly during shift change). Emergency services if there is an accident.	Positive	Roads between Muswellbrook and Singleton.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the existing cumulative impacts.	Professional judgement based on the Stakeholder Case Study by MSC and ACDF.
Mine workforce.	Health and wellbeing implications of being unemployed.	Mine workforce and their families and friends.	Negative	Individual, their family and friends.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	Dependant on the individual and their family and friends.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.

Cause of likely social impact (matters ¹⁴)	Likely social impact	Stakeholder group ¹⁵	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹⁶	
Services and facilities								
Reduced workforce.	Decreased demand on local medical services in Muswellbrook and other villages and towns.	Other people accessing medical services.	Positive	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the existing cumulative impacts.	Professional judgement based on case studies from MSC and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
Reduced workforce.	Decreased demand on local medical services in Muswellbrook and other villages and towns.	Medical service providers.	Negative (if not prepared).	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	Unknown – to be researched as part of the SIA for the Project EIS.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.
Reduced workforce.	Decreased demand for mental health services.	People negatively impacted by the project.	Positive	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	Unknown – to be researched as part of the SIA for the Project EIS.	Professional judgement Case studies from MSC and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
Reduced workforce.	Decreased demand for educational services if families leave the area.	Education providers e.g. childcare centres and schools.	Negative (if not prepared)	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	Unknown – to be researched as part of the SIA for the Project EIS.	Professional judgement.
Reduced workforce.	Decreased demand for emergency services (police, fire, ambulance and SES) due to reducing population.	Service providers.	Positive	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the management strategy or measures developed to manage the impact.	Unknown – to be researched as part of the SIA for the Project EIS.	Professional judgement based on case studies and previous experience undertaking SIAs for proposed mining projects.

Cause of likely social impact (matters ¹⁴)	Likely social impact	Stakeholder group ¹⁵	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹⁶	
Support for local community based organisations (community contributions).	Cessation of funding to provide services.	Recipients of donations.	Negative (if not prepared).	Muswellbrook and other villages and towns.	Mining operation will cease in 2026.	Dependant on the organisation, level of support received and management strategy or measures developed to manage the impact.	Unknown – to be researched as part of the SIA for the Project EIS	Professional judgement based on a review of donations data.
Quality of the living environment (surroundings)								
Mine closure – reduction in dust, noise, blasting and lighting impacts.	Increase in health and wellbeing impacts leading to an increase in the level of homeliness and connection to place.	People who experience amenity impacts	Positive	Near neighbours, surrounding rural communities, Muswellbrook and other villages and towns.	Cessation of mining in 2026.	Dependant on the individual and management strategy or measures developed to manage the impact.	High sensitivity as impacts on homes (especially low-income households) and businesses.	Professional judgement based on case studies from MSC, ACDF, Moore, Stakeholder B and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
Socio-economic impacts								
Mine closure – dust impacts.	Decreased housekeeping and cleaning due to dust.	Residents who experience dust impacts.	Positive	Nearby neighbours, surrounding rural communities and Muswellbrook.	Mining operation will cease in 2026.	Dependant on the individual and cumulative nature of dust impacts.	High sensitivity due to the existing dust impacts from the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Professional judgement based on Stakeholder Case Studies by MSC, Moore, Stakeholder B.
Cessation of Local Supplier Strategy.	Reduced economic activity on local expenditure and employment.	Local businesses in Muswellbrook, Upper Hunter and Singleton LGAs.	Negative	Muswellbrook, Upper Hunter and Singleton LGA.	Cessation of mining in 2026.	Dependant on the individual business and the management strategy or measures developed to manage the impact.	High sensitivity given the downturn and lack of economic development in Muswellbrook.	Professional judgement based on Stakeholder Case Study from MSC, Stakeholder A and Stakeholder D.

Cause of likely social impact (matters ¹⁴)	Likely social impact	Stakeholder group ¹⁵	Positive or negative	Material effect rating				Evidence
				Extent	Duration	Severity	Sensitivity ¹⁶	
Mine closure.	Loss of employment opportunities.	Employees and contractors.	Negative	Muswellbrook and other villages and towns.	Cessation of mining in 2026.	Dependant on the individual and management strategy or measures developed to manage the impact.	Medium sensitivity based on other employment opportunities.	Professional judgement based on proposed Project workforce requirements.
Mine closure.	Increased access to qualified, skilled and experienced labour pool for local businesses and residents due to decreased demand.	Near neighbours and surrounding rural communities and Muswellbrook and other villages and towns.	Positive	Surrounding rural communities, Muswellbrook and other villages and towns.	Cessation of mining in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the current demand for qualified, skilled and experienced people.	Professional judgement based on case studies by MSC and Muswellbrook Chamber of Commerce.
Mine closure.	Loss of local spend from workforce.	Muswellbrook and other villages and towns.	Negative	Muswellbrook and other villages and towns.	Cessation of mining in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the downturn and lack of economic development in Muswellbrook.	Case studies by MSC. Stakeholder A and Muswellbrook Chamber of Commerce. Petrova and Marinova (2013).
Cultural impacts								
Mining rehabilitation – opportunity to connect with country and waters.	Increase in cultural identity and self-esteem.	Aboriginal communities with connections to the land and waters being impacted.	Positive	Impacts occur on Aboriginal Heritage Conservation Area.	Cessation of mining in 2026.	Dependant on the individual and the management strategy or measures developed to manage the impact.	High sensitivity given the history of dispossession of land and waters.	Professional judgement based on Stakeholder Case Study by Wanaruah Local Aboriginal Land Council, Earth Connection Indigenous Corporation and Wonnarua Nation Aboriginal Corporation.
Landowners remaining in their homes.	Retention of agricultural/rural community.	Near neighbours and surrounding rural communities.	Positive	Properties identified as having acquisition rights.	Cessation of mining in 2026.	Dependant on the individual and the management strategy or measures	High sensitivity given the existing impacts of the Mount Pleasant Operation and	Professional judgement based on Stakeholder Case Study from MSC. Denman Aberdeen Muswellbrook Scone

Cause of likely social impact (matters ¹⁴)	Likely social impact	Stakeholder group ¹⁵	Positive or negative	Extent	Material effect rating			Evidence
					Duration	Severity	Sensitivity ¹⁶	
						developed to manage the impact.	cumulative impacts of mining in the area.	Healthy Environment Group (2019 <i>pers comms</i>). McManus and Connor (2013). Moffatt and Baker (2013).
Family and community								
Reduction in population.	Change in social networks, community identification, connection and cohesion.	People to remain living in the towns and villages that the mine workers have left.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Cessation of mining in 2026.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Professional judgement based on Stakeholder Case Study from MSC.
Differing perspectives and beliefs on the coal industry.	Community division and loss of community cohesion.	People who support mining and those who do not.	Negative	Surrounding rural communities, Muswellbrook and other villages and towns.	Permanent.	Dependant on the management strategy or measures developed to manage the impact.	High sensitivity given the existing impacts of the Mount Pleasant Operation and cumulative impacts of the mining industry in the region.	Professional judgement based on Stakeholder Case Study from Stakeholder A and Denman Aberdeen Muswellbrook Scone Healthy Environment Group (2019 <i>pers comms</i>).
Fears and aspirations								
Aspiration to participate in rehabilitation of site.	Increased connection to country, cultural identity and self-esteem.	Aboriginal people with a connection the land and waters impacted by the Project.	Positive	Mine site.	During the rehabilitation works.	Dependant on the individuals participating and the management strategy or measures developed to manage the impact.	High sensitivity given the history of dispossession of and connection between land and waters and identity and self-esteem and the importance of lore.	Stakeholder Case Study by Wanaruah Local Aboriginal Land Council and Earth Connection Indigenous Corporation and Wonnarua Nation Aboriginal Corporation.