
Hume Coal Project and Berrima Rail Project

Updated Social Impact Assessment prepared in response to the Independent Planning Commission Assessment Report dated 27 May 2019

Prepared for Hume Coal Pty Limited
April 2020

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Executive Summary

The purpose of this updated social impact assessment (SIA) is to respond directly to the Independent Planning Commission (IPC) findings and recommendations as published in their Independent Planning Assessment Report' (the IPC assessment report) released in May 2019.

Specifically, this SIA addresses IPC Recommendation R24 that requested the applicant (Hume Coal) to update the SIA in accordance with the '*Social Impact Assessment Guidelines – September 2017*', and to ensure consistency with the updated economic impact assessment, which has also been developed in accordance with the IPC findings and recommendations.

Where necessary, this SIA also addresses items presented in the IPC assessment report that informed the IPC findings and assessment that the applicant feels are erroneous, unsubstantiated or are otherwise worthy of response.

Hume Coal Pty Limited (Hume Coal) proposes to construct and operate an underground coal mine in the Southern Coalfield of New South Wales (the Hume Coal Project) located in the Wingecarribee local government area (LGA). The mine will produce metallurgical coal with a secondary thermal coal product. Around 50 million tonnes (Mt) of run-of-mine coal will be extracted from the Wongawilli Seam via a non-caving mining system, resulting in approximately 39 Mt of saleable coal over a project life of about 23 years, including construction and rehabilitation. Hume Coal is also seeking approval in a separate development application for the construction and operation of a new rail spur and loop, known as the Berrima Rail Project.

Approval for both the Hume Coal Project and the Berrima Rail Project is sought under Part 4 Division 4.1 (State significant development) of the NSW Environmental Planning and Assessment Act 1979 (EP&A Act).

A SIA was prepared as part of the environmental impact statement and submitted to the NSW Department of Planning and Environment (DPE) (now the Department of Planning, Industry and Environment (DPIE)) on 29 November 2016 for adequacy review. During public exhibition a large number of objections were received (see Section 1.2.4) including more than 25 objections from Wingecarribee Shire Council (WSC), which triggered the Minister for Planning to refer the Hume Coal Project to the IPC, who conducted a public hearing to assess the merits of the project. As a result, the IPC recommended that Hume Coal update the SIA to be in accordance with the Department's *Social Impact Assessment Guidelines – September 2017* (SIA Guideline). This is the updated SIA and has been prepared in accordance with the SIA Guideline.

Construction of the Hume Coal Project will occur over a period of about two years, with approximately 105 construction workers during early works, building-up to a peak workforce of approximately 414 construction workers after 11 months. The construction phase of the Berrima Rail portion of the Project is anticipated to take about 15 months, comprising a workforce of about 40 workers. This creates a total of 454 workers during the construction phase of the Project. Where possible local contractors will be used however, it is expected that most will be required to travel from outside the local area and will require accommodation while rostered on during construction through an onsite construction accommodation village (CAV).

The operations phase of the Hume Coal Project will extend for approximately 19 years with a peak workforce of about 300 workers. This includes direct employees and full-time-equivalent contractors. Whilst not all employees will be sourced locally, the workforce will be required to reside within a 45-minute drive from the Project site during both the operations and closure phases of the Hume Coal Project. The Berrima Rail Project will also have an operation workforce of 16 workers consisting mainly of train drivers, bringing the total Project operations workforce to 316 workers. It is expected that 70% of the workforce will reside within Wingecarribee Shire LGA.

The community was consulted using a variety of methods. Data was collected through:

- a telephone survey;
- focus groups;
- community information sessions (CIS);
- briefings and presentations; and
- convening advisory groups.

All contact with the community through phone calls and emails were recorded in a stakeholder engagement database (ie Consultation Manager). These records have also been included in the data set. Further communication tools were also implemented including:

- newsletter;
- local media (ie newspaper and radio), and
- letters sent directly to landholders.

These measures were taken to ensure that information was disseminated regularly, and the community was kept abreast of the Project's status.

Once the initial application was submitted and exhibited to the public, submissions were received in relation to the Project detailing the perceived impacts by the community. These have also been included in the data set for this updated SIA with weight given to individual submissions from within the Wingecarribee LGA.

During consultation and submissions, the community raised a range of concerns, the most prevalent concerns related to the potential increase in population that would change the character of the region. In addition, there was a perception that fly-in-fly-out (FIFO) and/or drive-in-drive-out (DIDO) workers would engage in anti-social behaviour. Reports of the residents physical and mental health and well-being was raised and noted in the IPC assessment report.

The assessment of the social impacts considered a range of complex factors and often competing interests. The impact assessment is reflective of this and has:

- assessed some aspects of the proposed Project as both negative and positive as they relate to different groups of people;
- included negative impacts on local communities while documenting the benefits to the broader region;
- considered the impacts on vulnerable groups and provided management strategies to ensure that any existing disadvantages are not exacerbated; and
- considered each communities access to critical resources, such as housing and health care, and how this affects their resilience.

The key benefits to the community are demonstrated in the potential positive impacts related to:

- Way of life:
 - increased local employment and training opportunities.
- Access to infrastructure, services and facilities:
 - potential for infrastructure built by the project to be repurposed by the community when the mine is closed.
- Surroundings:
 - potential for land use improvements as a result of the rehabilitation practices.
- Personal and property rights:
 - potential for increased local procurement opportunities as a result of the Project's requirements;
 - potential for increased community investment through Hume Coal's ongoing community contributions and the implementation of a Voluntary Partnership Agreement with Council; and
 - community benefit resulting from the collection of taxes and royalties.

The key potential negative impacts on the community are related to:

- Way of life:
 - perception that anti-social behaviour of the construction workforce will reduce community cohesion; and
 - population growth could change the character of the region.
- Community:
 - perception that increased traffic will lead to more traffic incidents.
- Access to infrastructure, services and facilities:
 - emergency services will be delayed at the level crossing at Robertson; and
 - perception that population increase will put a demand on existing social services.
- Culture:
 - perception that Aboriginal and/or Torres Strait Islander artefacts will be lost; and
 - perception that heritage gardens in Moss Vale will be disturbed as a result of groundwater effects from mining.

- Health and well-being:
 - perception that the Project has caused tension and stress resulting in significantly poorer mental health outcomes for the local community; and
 - perception that the air quality as a result of the Project has deteriorated the physical health of the community.
- Surroundings:
 - perception that stockpiles, disturbance to the natural environment, noise and dust will diminish the amenity;
 - perception of potential increase in greenhouse gas emissions;
 - perception that increased water usage from the Project would result in decreased access to water for the general public and existing industries, particularly agricultural industries; and
 - perception that the Greater Sydney water supply would be under threat of contamination.
- Personal and property rights:
 - perception that incompatible land usage will pose a threat to existing local businesses, particularly agricultural and tourism; and
 - perception that a sudden influx of workers on commencement and outflux of workers upon completion of the Hume Coal Project will cause fluctuations in the property market.

Hume Coal has committed to a range of management and mitigation measures to lessen any negative impacts identified by the community and address any misinformation surrounding misconceptions relating to perceived impacts. Hume Coal has also committed to a range of measures that will help to enhance any positive impacts to ensure the community benefits are maximised (see Sections 7 and 8 for more information).

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1 Introduction

1.1 Overview of the Project

Hume Coal Pty Limited (Hume Coal) proposes to construct and operate an underground coal mine and associated mine infrastructure in the Southern Coalfield of New South Wales (NSW) (the Hume Coal Project). The mine will produce metallurgical coal with a secondary thermal coal product. Around 50 million tonnes (Mt) of run-of-mine coal will be extracted from the Wongawilli Seam via a non-caving mining system, resulting in approximately 39 Mt of saleable coal over a project life of about 23 years, including construction and rehabilitation. The Project area is located to the west of Moss Vale, in the Wingecarribee local government area (LGA). Figure 1.1 illustrates the location of the project at a regional scale.

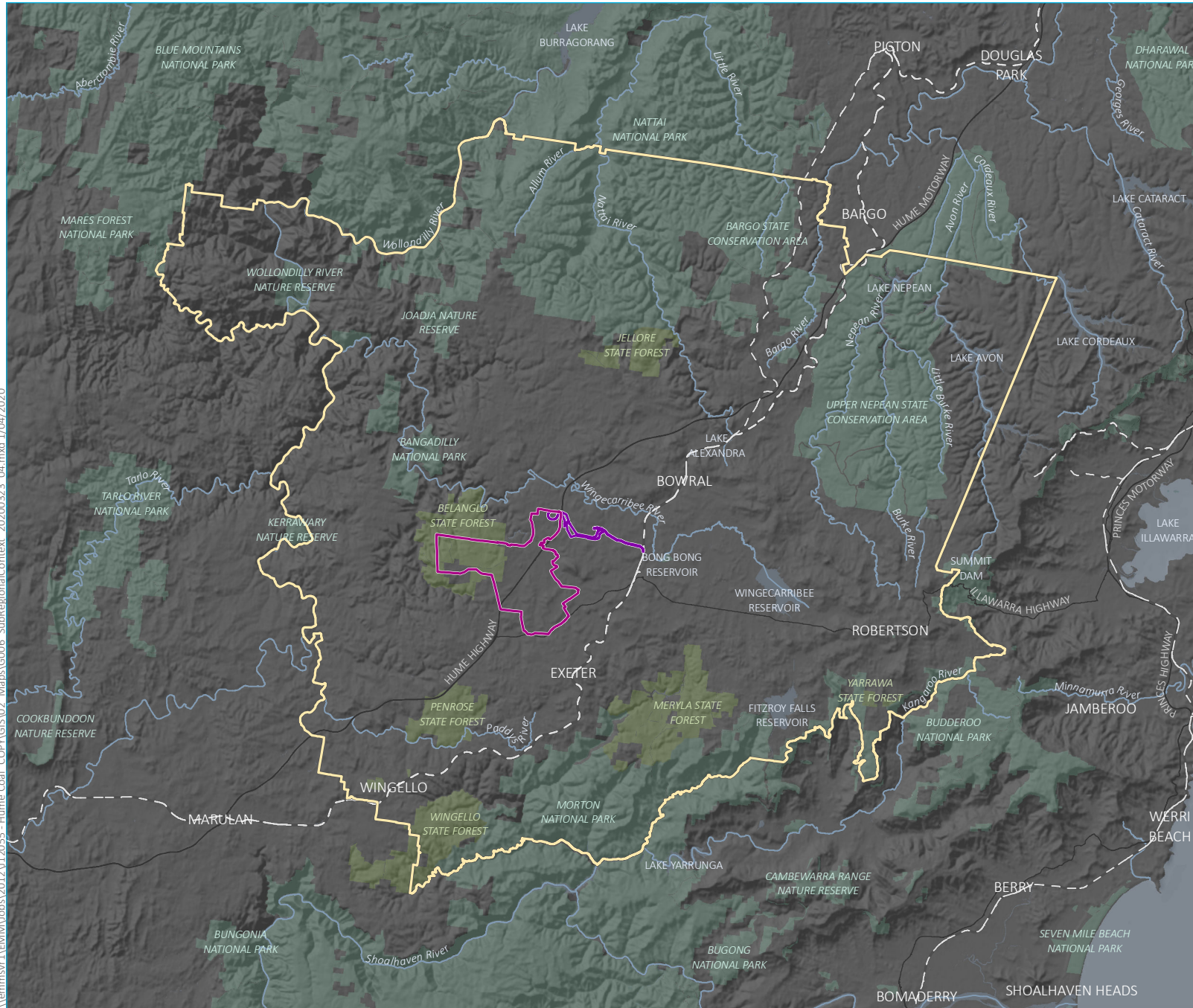
Hume Coal is also seeking approval in a separate development application for the construction and operation of a new rail spur and loop, known as the Berrima Rail Project. Coal produced by the Hume Coal Project will be transported to port by rail for export or to domestic markets also by rail via this new rail spur and loop. The project areas for the Hume Coal Project and the Berrima Rail Project are shown on Figure 1.2. The Hume Coal Project and the Berrima Rail Project are therefore intrinsically linked. Hume Coal has submitted two separate development applications; however, the two projects are collectively referred to as ‘the Project’ in this report.

Approval for the Project is being sought under Part 4 Division 4.1 (State significant development) of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act) and has been under assessment from 2015 to present, with the Environmental Assessment Requirements for the Project issued in August 2015 by the then NSW Department Planning and Environment. A detailed description of the environmental assessment process to date is provided in Hume Coal’s response to the Independent Planning Commission (IPC) assessment report (EMM 2020), to which this updated social impact assessment (SIA) is appended.

The Hume Coal Project involves developing and operating an underground coal mine and associated infrastructure over a total estimated project life of 23 years. Indicative mine and surface infrastructure plans are provided in Figure 1.3.

A full description of the Hume Coal Project, as assessed in this report, is provided in Chapter 2 of the main EIS report (EMM 2017a). In addition to the construction and operation of the rail spur and loop, the Berrima Rail Project will involve upgrades of existing sidings, construction of a rail maintenance and provisioning facility, use of the upgraded rail infrastructure, and ongoing use of the Berrima Branch Line. Chapter 2 of the Berrima Rail Project EIS report provides a full project description (EMM 2017b).

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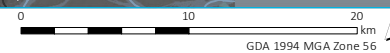


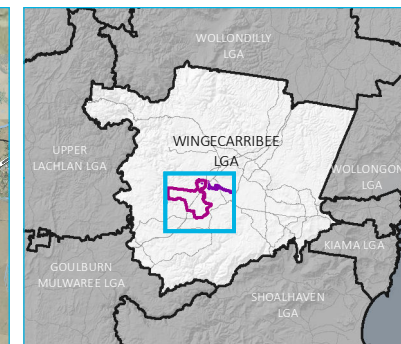
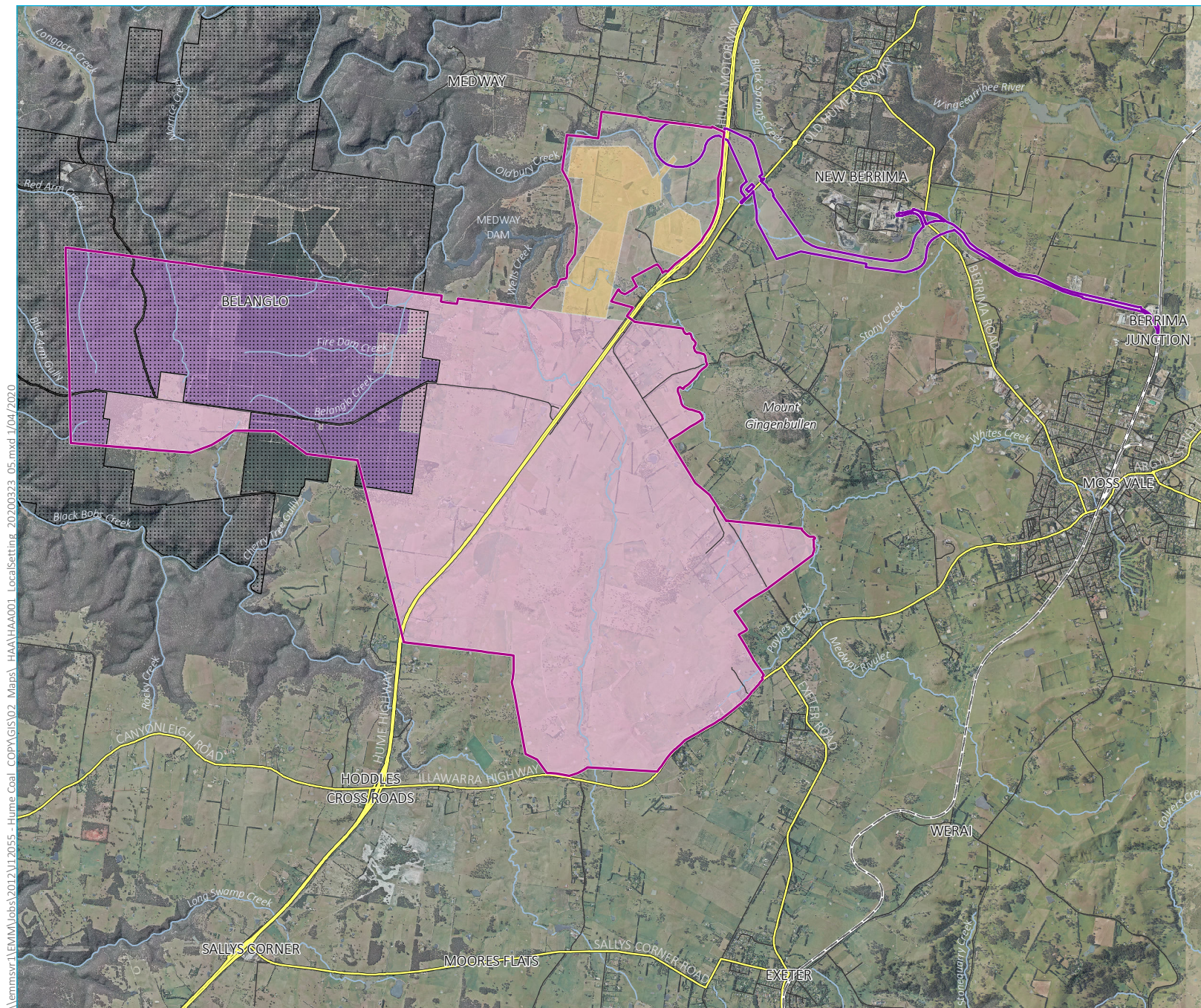
- KEY**
- Hume Coal Project area
 - Berrima Rail Project area
 - Wingecarribee Shire local government area
 - Rail line
 - Motorways and primary roads
 - River
 - Named waterbody
 - NPWS reserve
 - State forest

Regional context

Hume Coal and Berrima Rail Project
Updated social impact assessment
Figure 1.1

Source: EMM (2020); DFSI (2017); GA (2011); ASGC (2006)



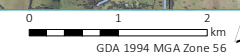


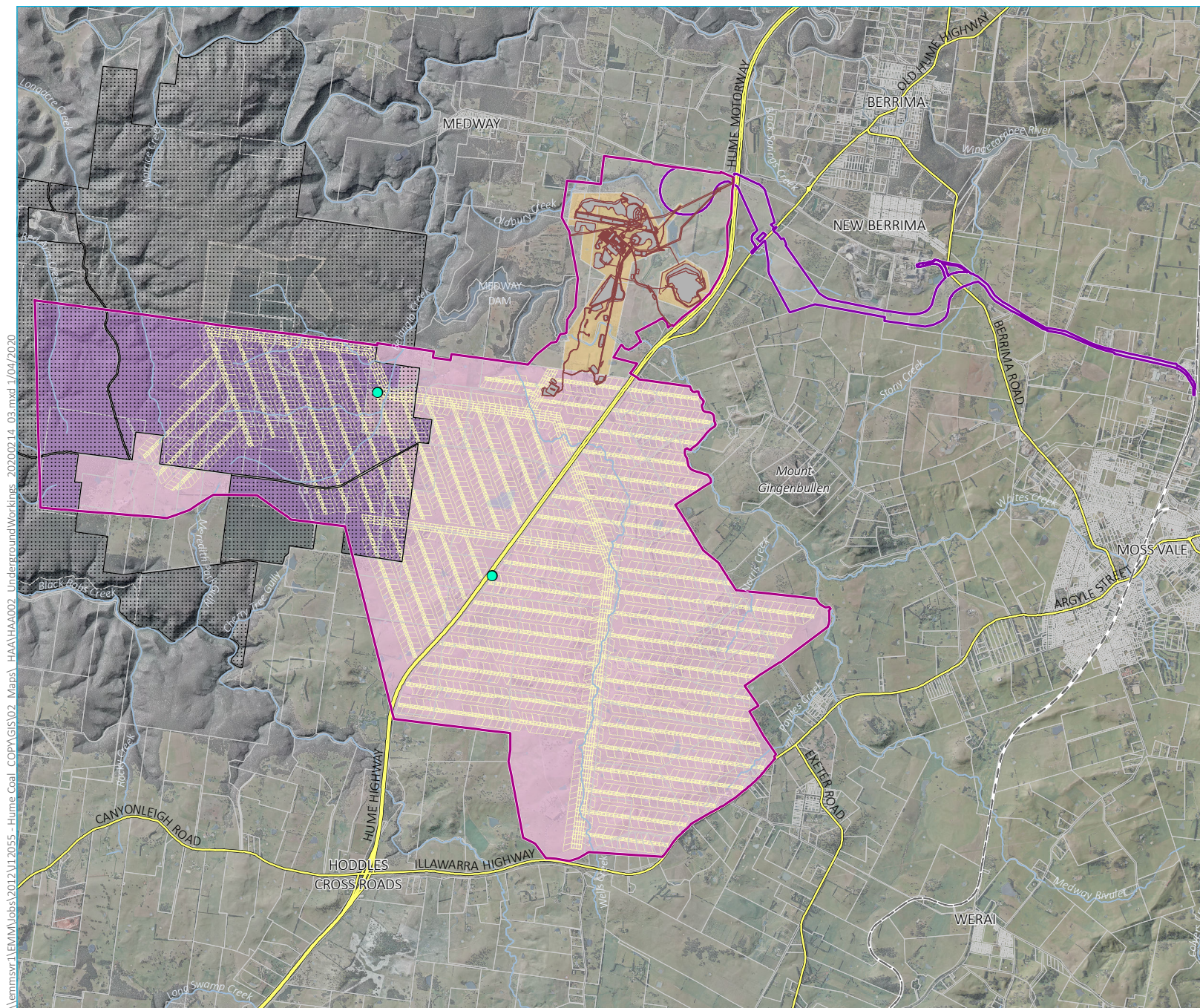
- KEY**
- Hume Coal Project area (5,051 ha, 44,740 m perimeter)
 - Berrima Rail Project area (181 ha, 23,201 m perimeter)
 - Mining lease application area**
 - MLA 527
 - MLA 528
 - MLA 529
 - Existing environment**
 - Rail line
 - Major road
 - Minor road
 - Named watercourse
 - Waterbody
 - Belanglo State Forest

Local context

Hume Coal and Berrima Rail Project
Updated social impact assessment
Figure 1.2

Source: EMM (2020); Hume Coal (2016); DFSI (2017); DPE (2019)



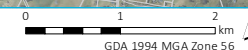


- KEY**
- Hume Coal Project area
 - Berrima Rail Project area
 - Downcast ventilation shaft
(3 m diameter, not shown to scale)
 - Indicative surface infrastructure footprint
 - Underground mine workings (indicative)
 - Mining lease application area**
 - MLA 527
 - MLA 528
 - MLA 529
 - Existing environment**
 - Rail line
 - Major road
 - Named watercourse
 - Waterbody
 - Cadastral boundary
 - Belanglo State Forest

Indicative underground mine
and surface infrastructure layout

Hume Coal and Berrima Rail Project
Updated social impact assessment
Figure 1.3

Source: EMM (2020); Hume Coal (2016); Palaris (2016); DFSI (2017); DPE (2019)



1.2 Assessment process

The assessment process for the Project to date is illustrated in Figure 1.4 and described further below.



Figure 1.4 The assessment process to date

1.2.1 Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs) for the two projects were issued by the NSW Department of Planning and Environment (DPE) (now the Department of Planning, Industry and Environment (DPIE)) on 20 August 2015.

1.2.2 Controlled Action Declaration

Approval for the Hume Coal Project is also sought under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The coal project was declared a controlled action on 1 December 2015 requiring assessment and approval under the EPBC Act. Supplementary environmental assessment requirements (to the SEARs) were subsequently issued on 18 January 2016 by the then Department of the Environment (DoE) (now the Department of Agriculture, Water and the Environment, herein referred to as DAWE). The Hume Coal Project will be assessed under the bilateral agreement between the Commonwealth and NSW governments in accordance with Part 5 of the EPBC Act.

In correspondence dated 5 November 2015, the DAWE confirmed that the Department was satisfied the Berrima Rail Project did not need to be included in the referred action for the Hume Coal Project. Therefore, the rail project is not a controlled action and approval is not required under the EPBC Act.

1.2.3 Application for the Project submitted and public exhibition

The development applications and accompanying environmental impact statements (EIS) for the Hume Coal Project (EMM 2017a) and the Berrima Rail Project (EMM 2017b) were submitted to the DPIE on 29 November 2016 for adequacy review. Following feedback and some modification, the two EISs were deemed adequate for exhibition, which occurred between 31 March 2017 and 30 June 2017.

A Social Impact Assessment (SIA) (EMM 2017c) was prepared and submitted to the DPIE as part of the EIS for the Hume Coal Project. The SIA was prepared prior to the current guideline that is in place in NSW for the preparation of social impact assessments, ie the *Social impact assessment guideline for State significant mining, petroleum production and extractive industry development*, which was released by DPIE in September 2017.

1.2.4 Application submitted for public exhibition

Following public exhibition of the EISs, Hume Coal prepared a Response to Submissions (RTS) report (EMM 2018), responding to submissions received from government agencies, organisations and the public. A total of 12,666 submissions were received on the Project, the majority of which (89%) were form letter submissions, totalling 11,241. Individual community members made 1,354 individual submissions, of which 419 were in support and 929 objected. A total of 23 submissions were received from special interest groups, and 36 from businesses. The remaining 12 submissions were from government agencies. Of the total submissions received (including form letters), 12,212 objected to the project, 436 were in support and 18 provided comment.

The RTS report was submitted to the DPIE in June 2018.

1.2.5 Preliminary assessment report

The DPIE subsequently prepared a preliminary assessment report for the Project which was released in December 2018.

1.2.6 Independent Planning Commission

As the number of submissions objecting to the project was greater than 25, the Minister for Planning referred the projects to the IPC to conduct a public hearing, to assess the merits of the Project, and to prepare a report outlining the Commission's findings on the Project, including any recommendations.

The IPC's 'Independent Planning Assessment Report' (the IPC assessment report), released in May 2019, included a number of findings and recommendations relating to the SIA prepared for the Hume Coal Project. Specifically, recommendation R24 requested the applicant (Hume Coal) to:

...consider updating its Social Impact Assessment in accordance with the Department's 'Social Impact Assessment Guidelines – September 2017' and ensure consistency with the assumptions of the revised Economic Impact Assessment (IPC 2019).

1.2.7 Updated SIA

In accordance with the IPC recommendation, Hume Coal commissioned EMM to revise the SIA for the Project to align with the '*Social Impact Assessment Guidelines – September 2017*' (the SIA guideline). The updated SIA report was led and prepared by two qualified Social Scientists to accord with the SIA guideline (refer to Section 1.3.1). The updated SIA also incorporates and assesses the Berrima Rail Project to address the absence of an SIA in the Berrima Rail EIS as identified in clause 392 and 393 of the IPC response. The purpose of this updated SIA is therefore to respond to the IPC report, findings and recommendations, and in particular Recommendation 24.

A detailed summary of the changes made to the SIA is provided in Table 1.1 which outlines how the updates respond to the IPC report and recommendations, and maps the sections in this updated SIA report to which changes have been made.

Table 1.1 Summary of SIA updates in response to the IPC Report

IPC Report Reference	IPC assessment considerations	Updated SIA section	Amended/added	Changes made	How changes address IPC assessment considerations
8.15 Social Impact 399	The Commission in its assessment of merits of the Project has had regard to its consideration of the social impacts of the Project. The Commission has had regard to the Material before it and considered the issues raised in public submissions. Relevant excerpts from the submissions included:	6.3.9	Added	Added an overview of the submissions process and the submissions received in relation to the Hume Coal Project.	Acknowledges the public submissions received in relation to the project, and the extent and content of these submissions
	<ul style="list-style-type: none">Hume Coal is already having a physical and mental toll on residents. Residents have described their feelings of anxiety, fear, angst, depression, traumatisation, helplessness, uncertainty and stress. These types of social impacts are unlikely to quickly disappear. No amount of tree screenings, barriers, making good offsets, buybacks or any other conditions of consent are likely to resolve these social impacts, nor turn the Project into a no impact mine;	4.3.5 - i	Added	Added NSW Health data pertaining to the three major indicators of health risk (alcohol consumption, smoking, and obesity), compared health trends in SWS Local Health District (LHD) with NSW trends from 2002 to 2018	Provides an indication if the physical toll as described in the submissions is demonstrated in the community
		4.3.5 - ii	Added	Added mental health indicators, including: the total number of mental health related services provided in the Southern Highlands from 2011-2017; total number of mental health services delivered by service type in the Southern Highlands from 2011-2017; self-harm related hospitalisations in Wingecarribee LGA from 2003-2018; and psychological distress in SWS LHS from 2003-2017	Provides an indication if the mental toll as described in the submissions is demonstrated in the community
		7.5.1	Added	Included mental health (stress) mitigated; mental health (stress) unmitigated; physical health unmitigated; and physical health mitigated as potential impacts related to the Project	Addresses the claims regarding mental and physical health described in the submissions, and the potential and extent for these impacts related to the Project on the community, linking these impacts to the health and wellbeing component of the social impact definition
		7.5.2			
		7.5.3			
		7.5.4			
	<ul style="list-style-type: none">there is no social licence for Hume Coal’s mine;	6.3.9	Added	Included data of the public submissions, including number of submissions by submission source/type, and whether they were in support or objection of the Project; location origin of individual submissions; submission support and objection within Wingecarribee LGA based on the NSW guideline matters	Shows evidence and the level of support for the Project in the local and broader regions, by residents, businesses, and other groups, including support categorised using the matters in the NSW SIA guideline
	<ul style="list-style-type: none">safety concerns over possible delays to emergency vehicles caused by increased train movements on level crossing’s;	7.2.1	Added	Included potential public safety unmitigated and mitigated impacts related to the Project	Addresses the safety concerns linked to increased traffic volume expressed in the public submissions, linking these impacts to the key links to the community component of the social impact definition
		7.2.2			
		7.3.1	Added	Included emergency services unmitigated and mitigated impacts related to the Project	Identifies the potential for a slowing down of emergency services, as identified in the public submissions, and the impacts on the community's access to and use of infrastructure, services and facilities as outlined in the NSW SIA guideline
		7.3.2			
	<ul style="list-style-type: none">socially, there will be adverse impacts on existing residents and businesses;	7.7.1	Amended	Modified from the original impact assessment to focus more heavily on the property rights and business concerns expressed in the public submissions, including livelihood unmitigated, mitigated, unenhanced, and enhanced impacts for local businesses, property prices, and local procurement	Identities both the positive and negative impacts relating to the personal and property rights SIA definition within the community, and the effect of mitigation and enhancement measures to improve the impact on the community
		7.7.2			
		7.7.3			
		7.7.4			
		7.7.5			
		7.7.6			
	<ul style="list-style-type: none">Southern Highlands area has had a unique social and economic role and its heritage values need recognition and protection if they are to survive into the future. These values are incompatible with the development of the coal mining landscape;	4.3.12	Amended	Included reference to data from telephone surveys and focus groups within Wingecarribee LGA by Hume Coal	Outlines the most important issues cited within the local community to determine the compatibility of community values with mining
		5	Amended	Updated to include most recent and relevant local policies	Demonstrates community values
		7.4.3	Added	Added European heritage unmitigated and mitigated impacts	Identifies potential cultural impacts related to the Project, specifically referencing concerns about the heritage values of the Southern Highlands
		7.4.4			

Table 1.1 Summary of SIA updates in response to the IPC Report

IPC Report Reference	IPC assessment considerations	Updated SIA section	Amended/added	Changes made	How changes address IPC assessment considerations		
	• Hume Coal Project is already having a significant negative social impact to residents of the Shire, and council strongly disagrees with the social impact assessment conclusions put forward by Hume Coal; and	7.7.7	Added	Included community investment unenhanced and enhanced impacts	Assesses the potential for positive social impacts under the personal and property rights SIA definition, including roles for Council, and the impacts on personal and property rights		
		7.7.8					
		7.7.9	Added	Included opportunity cost unenhanced and enhanced impacts	Assesses the potential for positive impacts arising from economic benefits associated with the Project, and the impacts on personal and property rights		
		7.7.10					
	• the social impacts have been chronic and severe. The symptoms we’ve seen across the district have included physical illness, alcohol abuse, marital stress, anxiety and depression, constant feelings of uncertainty and hopelessness, financial worries, and the inability to plan for the future.	4.3.5	Added	Added NSW Health data pertaining to the three major indicators of health risk (alcohol consumption, smoking, and obesity), compared health trends in SWS Local Health District (LHD) with NSW trends from 2002 to 2018	Provides data relating to potential increases or decreases in community health, both physical and mental, inconsistent with the rest of NSW to assess social impacts of health and wellbeing related to the Project		
		4.3.8				Amended	Updated to most recent statistics.
		4.3.9	Amended	Updated to most recent statistics.			
		5.3	Amended	Updated to include most recent and relevant local policies			
		4.3.5	Added	Added health data and health risk assessment specifically pertaining to alcohol use in the community, mental health, and physical health.	Assesses the potential health impacts related to the Project within the community.		
		4.3.10iii					
		7.5					
		7.7	Added	Added an assessment of personal and property rights	Identifies the potential impacts associated with the financial worries expressed by the public submissions.		
	7.8	Added	Included future of the community unmitigated and mitigated impacts	Assesses the impacts associated with fears and aspirations within the community to identify the social impact regarding the future of the community.			
	8.15 Social Impact 400	The Commission finds that that the Applicant has considered the potential social impacts of the Project. However, at this stage of its assessment the Commission finds that it is not satisfied with Department’s assessment of social impacts because the Department’s PAR does not reflect any social impact assessment having been conducted. In particular, while the technical compliance of matters such as noise, air quality etc has been considered the social impacts on those people most affected by the mine have not been assessed. Furthermore, the assumptions in the SIA in relation to employment numbers and percentage of unskilled workers and whether these come from outside the local area should also be reviewed by the Department for consistency with the assumptions used in the Economic Impact Assessment as well as the demographics of the proposed workforce and potential impacts on existing employment in other industries in the local area.	3.3	Amended		Updated local workforce sourcing data	
4.3.5			Added				Added Asthma data by LHD to demonstrate vulnerabilities to the potential effects of poor air quality on those with respiratory conditions
7			Added	Presented potential social impacts related to the Project using a social risk assessment	Considers the social impacts on those people most affected by the Project from a variety of baseline sources and data revealed though a range of community consultation tools, using both quantitative and qualitative data as indicated in the NSW SIA guideline section 2.1		
7.1.1			Added	Included non-resident workforce unmitigated and mitigated impacts, population change unmitigated and mitigated impacts, and employment and training opportunities unenhanced and enhanced impacts	Assesses the way of life impacts, including the impacts associated with the demographics of the proposed workforce and the potential impacts related to employment and industries within the local area		
7.1.2							
7.1.3							
7.1.4							
7.1.5							
7.1.6			Added	Included population increases mitigated and unmitigated impacts	Assesses population change impacts on access to and use of infrastructure, services and facilities arising from non-resident and resident increases access to and use of infrastructure		
7.3.3							
7.3.4							
7.9			Added	Updated concurrent projects in the area and associated cumulative workforce migration data.	Provides an indication of the cumulative impacts related to the project, including the spatial, temporal, and linked impacts as described in the NSW SIA guideline section 1.1		
8.15 Social Impact 401			The Commission makes the following recommendations that will require further information and/or assessment:				

Table 1.1 Summary of SIA updates in response to the IPC Report

IPC Report Reference	IPC assessment considerations	Updated SIA section	Amended/added	Changes made	How changes address IPC assessment considerations
R24	The Applicant should consider updating its SIA in accordance with the Department's 'Social Impact Assessment Guidelines - September 2017' and ensure consistency with the assumptions of the revised Economic Impact Assessment	1.3	Amended	Changed original section '1.5 - Adoption of leading practices' to current section	Identifies the NSW SIA guideline as the primary assessment guideline which this SIA was conducted
		2.2	Added	Added the application of the NSW SIA guideline	Demonstrates the definitions and matters presented in the SIA guideline and their application in the creation of an SIA framework and identifies the primary SIA principles
R25	The Department, regardless of any further assessment provided by the Applicant, should assess the Project in accordance with its 'Social Impact Assessment Guidelines - September 2017' and report on the findings of this assessment in its Final Assessment Report	2.2.1	Added	Included the social risk matrix used in the social impact assessment	Assists in the determination of the level of social risk posed by social impacts based on the consequence and likelihood of the potential impacts, as outlined in the SIA guideline section C3
		4.3.11	Amended	Updated to most recent data on housing and accommodation	Includes baseline data pertaining to house supply
		6.3.1	Amended	Linked issues raised by the identified government stakeholder groups to the relevant SIA matters	Showed the linkages between the issues raised and the SIA matters
		6.3.2	Amended	Included the issues raised by the identified business stakeholders and the associated relevant SIA matters	Showed the linkages between the issues raised and the SIA matters
		6.3.3	Added	Included the means of engagement with community and special interest groups (site visits, community shopfront, emails, community information sessions, briefings and presentations, and direct mailouts to landholders) and the main issues discussed throughout each of these means of consultation, and linked the matters raised by community and special interest groups to relevant SIA matters	Demonstrates the wide range of engagement techniques implemented throughout the assessment and their purpose in social impact assessment as outlined in section 2.3 of the NSW SIA guideline, and showed the linkages between the issues raised and the SIA matters
		6.3.4	Added	Added the issues raised by the Social Reference Group according to the SIA guideline matters	Provides additional evidence from relevant stakeholders and the links between the issues raised and the matters identified in the SIA guideline
		6.3.5	Added	Added the issues raised by the Water Advisory Group according to the SIA guideline matters	Provides additional evidence from relevant stakeholders and the links between the issues raised and the matters identified in the SIA guideline
		6.3.6	Amended	Included data from YourSay consultation tool	Provides additional evidence from relevant stakeholders and the links between the issues raised and the matters identified in the SIA guideline
		6.3.7	Added	Added issues raised through social media	Provides additional evidence from relevant stakeholders and the links between the issues raised and the matters identified in the SIA guideline
		6.3.8	Added	Added issues raised by Hume Coal employees	Identifies Hume Coal employees as relevant potentially impacted stakeholders
		6.3.9	Added	Added the issues raised by public submissions and the sources of these submissions	Provides additional evidence from relevant stakeholders and the links between the issues raised and the matters identified in the SIA guideline, and provides clear evidence of submission consideration in the SIA
		7	Amended	Changed the assessment structure, presentation, and identification of the potential social impacts related to the Project	Modified the assessment to demonstrate the potential impacts based on the key links to social impact definition and the SIA matters outlined within the NSW SIA guidelines
		7	Amended	Includes both unmitigated and mitigated potential impacts for negative impacts, and unenhanced and enhanced potential impacts for positive impacts	Demonstrates the opportunity to promote better development outcomes through a focus on minimising negative social impacts and enhancing positive social impacts, as outlined in the objectives of the NSW SIA guideline

1.3 Relevant guidelines and policies

As described above, this assessment has been prepared in accordance with the SIA Guideline, which was released by the DPIE in 2017.

Other leading practice guidelines or policies referred to in this study are as follows:

- Community Development Toolkit (Energy Sector Management Assistance Program, the World Bank and the International Council on Mining and Metals 2012);
- Leading Practice Strategies for Addressing the Social Impacts of Resource Development (Centre for Social Responsibility in Mining, Sustainable Minerals Institute, University of Queensland 2009);
- Cumulative Impacts – A Good Practice Guide for the Australian Coal Mining Industry (Centre for Social Responsibility in Mining, Sustainable Minerals Institute, University of Queensland 2010);
- Social Impact Assessment of Resource Projects (International Mining for Development Centre 2012); and
- Approaches to Understanding Development Outcomes from Mining (International Council on Mining and Metals 2013).

1.3.1 Authorship

In accordance with the SIA Guideline This updated SIA has been prepared by a Social Scientist with experience in social science research methodologies. In addition, the SIA has been reviewed by a qualified Social Scientist with extensive experience in social science methodologies and SIA methods, including the 2017 Guidelines. A copy of the curricula vitae for the author and reviewer of this SIA is provided in Appendix A.

1.4 Project area and locality

The Project area is approximately 100 kilometres (km) south-west of Sydney and 4.5 km west of Moss Vale town centre in the Wingecarribee LGA (refer to Figure 1.1 and Figure 1.2). The nearest area of surface disturbance will be associated with the surface infrastructure area, which will be 7.2 km north-west of Moss Vale town centre. It is in the Southern Highlands region of NSW and the Sydney Basin Biogeographic Region.

Surface infrastructure is proposed to be developed on predominately cleared land owned by Hume Coal or affiliated entities, or for which there are appropriate access agreements in place with the landowner. Over half of the remainder of the Project area (principally land above the underground mining area) comprises cleared land that is, and will continue to be, used for livestock grazing and small-scale farm businesses. Belanglo State Forest covers the north-western portion of the Project area and contains introduced pine forest plantations, areas of native vegetation and several creeks that flow through sandstone gorges. Native vegetation within the Project area is largely restricted to parts of Belanglo State Forest and riparian corridors along some watercourses.

The Project area is traversed by several drainage lines including Oldbury Creek, Medway Rivulet, Wells Creek, Wells Creek Tributary, Belanglo Creek and Longacre Creek, all of which ultimately discharge to the Wingecarribee River, at least 5 km downstream of the Project area (Figure 1.2). The Wingecarribee River's catchment forms part of the broader Warragamba Dam and Hawkesbury-Nepean catchments. Medway Dam is also adjacent to the northern portion of the Project area (Figure 1.2).

Most of the central and eastern parts of the Project area have very low rolling hills with occasional elevated ridge lines. However, there are steeper slopes and gorges in the west in Belanglo State Forest.

The Project area is in a semi-rural setting, with the wider region characterised by grazing properties, small-scale farm businesses, natural areas, forestry, scattered rural residences, villages and towns. Existing built features across the Project area include scattered rural residences and farm improvements such as outbuildings, dams, access tracks, fences, yards and gardens, as well as infrastructure and utilities including roads, electricity lines, communications cables and water and gas pipelines. Key roads that traverse the Project area are the Hume Highway and Golden Vale Road. The Illawarra Highway borders the south-east section of the Project area.

Industrial and manufacturing facilities adjacent to the Project area include the Berrima Cement Works and Berrima Feed Mill on the fringe of New Berrima. Berrima Colliery's mining lease (CCL 748) also adjoins the Project area's northern boundary. Berrima colliery is currently not operating with production having ceased in 2013 after almost 100 years of operation. The mine is currently undergoing closure. The Austral Bricks complex, which has approval to operate a 11.7 ha open cut quarry, together with a 60,000 sqm masonry/brick factory and hardstand area, was approved by Wingecarribee Shire Council (WSC) in 2019 and is less than 1 km from Berrima.

1.5 Enhancing local participation and opportunities

In line with leading practices adopted in this SIA, input has been sought from community members and stakeholders to guide the assessment of the Project's social impacts. During the preparation of the SIA, the Project team and community were assisted by a Social Reference Group (SRG). This voluntary group of local community and business representatives met with the Project team on five occasions to provide advice on social priorities and opportunities for local business participation in the Project and community enhancement generally.

Hume Coal has engaged with local people and businesses since coal exploration work commenced on the project by current owners in 2011 and aims to form partnerships within the community to enhance the local benefits of the Project. Hume Coal will procure local goods and services during all phases of the Project where they can be reliably and competitively supplied and can meet applicable quality standards. To ensure this occurs to the greatest extent possible, Hume Coal has sponsored various capability building programs for selected local businesses, including helping to train employees through apprenticeships, and providing specialised training for potential recruits. Additionally, Hume Coal's scholarship programme for local Wingecarribee students studying at the University of Wollongong provides additional support to those pursuing tertiary study. Members of Hume Coal continue to be associated with local business groups.

1.6 Assessment requirements

The original SIA (EMM 2017c) was prepared in accordance with the SEARs (Table 1.2) and in consultation with the relevant government agencies. To inform preparation of the SEARs, the former DPE invited other government agencies to recommend matters to be addressed in the EIS. These matters were then considered by the Secretary for DPE when preparing the SEARs. Copies of the government agencies' advice to DPE were attached to the SEARs. No agency raised matters relevant to the SIA.

Table 1.2 Social impact assessment-related SEARs

Requirement	Section addressed
An assessment of the likely social impacts of the development	Section 7
Consultation with relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners.	Section 6
The demand for the provision of local infrastructure and services, having regard to Wingecarribee Shire Council's requirements.	Section 7

Note: WSC did not specify any requirements.

1.7 Purpose

The purpose of this updated SIA is to respond directly to the IPC findings and recommendations as published in the IPC assessment report released in May 2019. Specifically, and as described in Section 1.2, it addresses the IPC Recommendation R24 that requested the applicant (Hume Coal) to update the SIA in accordance with the SIA guideline, and to ensure consistency with the revised economic impact assessment, which has also been developed in accordance with the IPC findings and recommendations.

Where necessary, this study also addresses items presented in the IPC report that informed the IPC findings and assessment that the applicant feels are erroneous, unsubstantiated or are otherwise worthy of response. This updated SIA addresses each item presented in the IPC Report as detailed in Table 1.1.

2 Methodology

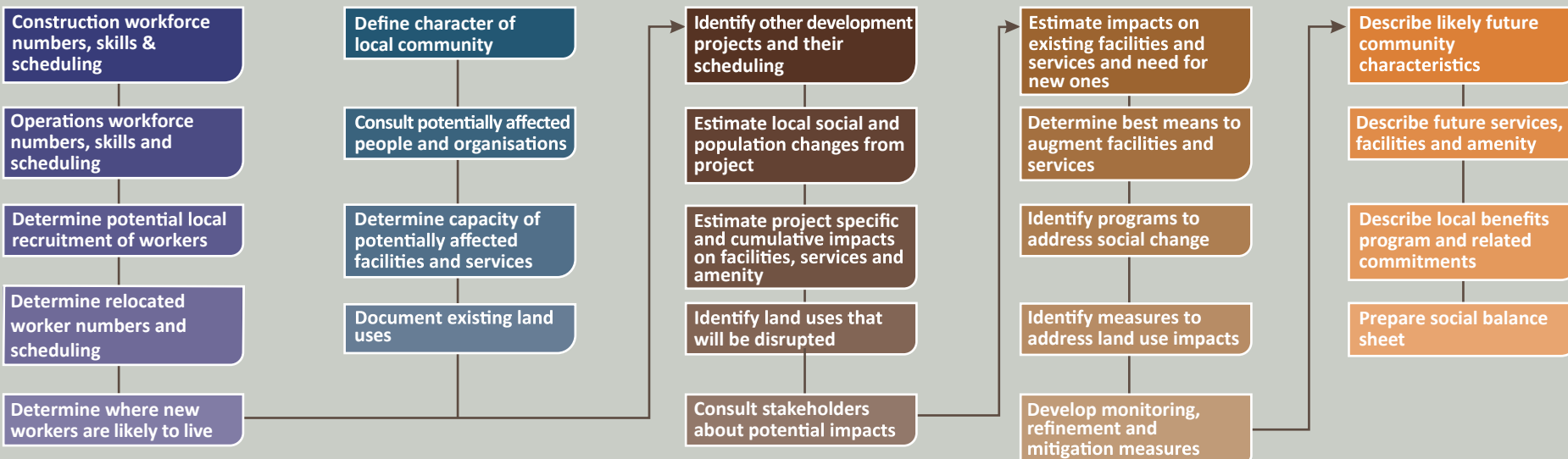
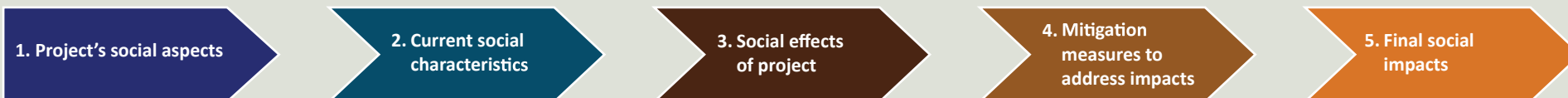
2.1.1 Overview

This SIA adopted the approach illustrated in Figure 2.1 and is described below.

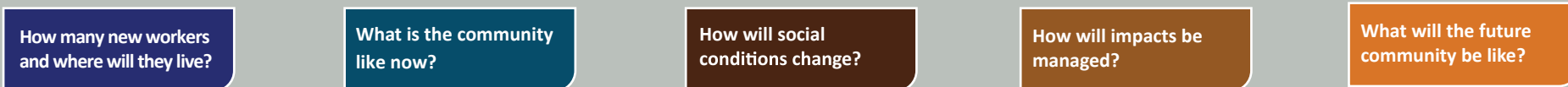
- Step 1 - Social aspects of the Project:
 - documenting social aspects of the Project, particularly the required workforce and whether workers will be sourced locally or from elsewhere as in-migrants. This step considers the effects of Hume Coal's local procurement and participation practices on the local community.
- Step 2 - Workforce catchment:
 - defining the Project's 'workforce catchment area'. This covers both the area from which local workers will be recruited and where in-migrant workers will relocate. It is the area in which most social impacts will occur.
- Step 3 - Residential distribution and population change:
 - estimating the future residential distribution of the Project's workforce and the potential population changes that may result.
- Step 4 - Community characteristics:
 - describing the current population of the local community (ie within the workforce catchment area), including:
 - characteristics and skills of its workforce;
 - housing and accommodation;
 - social services and infrastructure;
 - recreational facilities and activities/groups; and
 - local and regional planning policies that apply in the area;
 - this step also included consultation with key stakeholders including landowners, community groups, local council, state and federal government agencies and service providers.
- Step 5 - Community impacts and opportunities:
 - determining the likelihood and consequence of potential social impacts of the Project, including potential cumulative social impacts resulting from multiple major projects scheduled for development over the same time period as the Project. Identifying opportunities for the Project to enhance its local effects and to add value to the broader community.

- Step 6 - Land use change:
 - identifying land uses and other activities that will be affected by the Project and determining the associated impacts and measures to mitigate adverse effects.
- Step 7 - Mitigation of adverse impacts:
 - devising measures to effectively mitigate adverse impacts.
- Step 8 - Adding value and community enhancement:
 - describing project activities that will stimulate local businesses and other investments that will be made in community enhancement.
- Step 9 - Monitoring and reporting:
 - identifying monitoring and reporting processes to ensure social impacts are responsively managed over time, and ensuring the community remains well informed and engaged.
- Step 10 - Social balance sheet:
 - listing and comparing all the Project's positive and negative social impacts to show its overall or net effects.
- Step 11 – Reporting:
 - preparing the SIA report that documents the potential social impacts in a way that is factual and clear so that the affected community and interested parties can properly understand the effects of the Project.

STEPS



OUTCOMES



Summary of SIA method

Hume Coal Project
Social Impact Assessment
Figure 2.1

2.2 Application of SIA Guideline

In accordance with the SIA guideline, social impacts are defined as potential changes to people's:

- **way of life:** how people live, work, play and interact;
- **community:** its composition, cohesion, character, how it operates and sense of place;
- **access to and use of infrastructure, services and facilities:** provided by all levels of government, not-for-profit organisations, or volunteers;
- **culture:** shared beliefs, customs, values and stories, and connection to land, places and buildings;
- **health and well-being:** physical and mental health;
- **surroundings:** access to and use of ecosystem, public safety and security, access to and use of natural and built environment, aesthetic value and/or amenity;
- **person and property rights:** economic livelihoods, personal disadvantage or civil liberties;
- **decision-making systems:** extent community can have a say in decisions that affect their lives, access to complaint, remedy and grievance mechanisms; and
- **fears and aspirations:** combination of above, or about future of their community (DPIE 2017).

The potential social impacts are categorised into matters as outlined in the SIA Guideline. These matters are:

- | | |
|----------------------|-----------------|
| • amenity; | • economic; |
| • access; | • air; |
| • built environment; | • biodiversity; |
| • heritage; | • land; and |
| • community; | • water. |

During all phases of the Project, population and social change is likely to occur. The SIA has considered that these social changes are likely to differ across the life of the Project. All data collected has been reviewed in accordance with the principles outlined in the SIA Guideline (see Table 2.1).

Table 2.1 SIA principles

<ul style="list-style-type: none"> • action-orientated: delivers outcomes that are practical achievable and effective; • adaptive: establishes systems to actively respond to new or different circumstances and information and support continuous improvement; • 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; • impartial: is undertaken in a fair, unbiased manner and follows relevant ethical standards; • 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 (for example, culturally sensitive, accessible); • 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; 	<ul style="list-style-type: none"> • lifecycle focused: seeks to understand potential impacts (including cumulative impacts) at all project stages, from pre-construction to post closure; • material: identifies which potential social impacts matter the most, and/or pose the greatest risk to those expected to be affected; • precautionary: if there is a threat of serious or irreversible damage to the environment, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental (including social) degradation; • proportionate: scope and scale should correspond to the potential social impacts; • rigorous: uses appropriate, accepted social science methods and robust evidence from authoritative sources; and • transparent: information, methods and assumptions are explained, justified and accessible; and people can see how their input has been considered.
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Source: DPIE 2017

2.2.1 Social impact assessment

Social impacts were identified through an assessment of the predicted and potential changes to the social conditions as a consequence of the project against the baseline. An assessment of the community strengths, vulnerabilities, issues and opportunities was conducted to identify vulnerabilities and understand the community's capacity to cope with potential social impacts.

All identified potential social impacts have been assessed using two scenarios:

- using the assumption that the impact is unmitigated (negative) or unenhanced (positive); and
- using the assumption that the impact is successfully mitigated (negative) or enhanced (positive).

i Social risks

The social impacts were assessed using the social risk framework shown Table 2.2. Using this consequence and likelihood framework allows the assessment of the level of significance of a social impact as low, moderate, high or extreme based on a combination of likelihood and consequence. Both negative and positive impacts have been assessed.

Table 2.2 Social risk assessment matrix

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

Source: DPIE 2017, NSW SIA Guideline.

The social risk assessment process includes an assessment of consequences and likelihood:

1. Determining the consequence based on the definitions in Table 2.3 using a worst case but reasonable scenario:

Table 2.3 Consequence category definitions

Category	Definition
Catastrophic	Long-term, high magnitude and far reaching social impacts. Positive social impacts will provide enormous value both locally and regionally. Society has no capacity to cope with potentially catastrophic negative social impacts.
Major	Long-term and potentially far reaching social impacts. Positive social impacts will provide substantial value to society. Society has limited capacity to adapt and cope with the negative social impacts.
Moderate	Medium-term social impacts. Positive social impacts can be enhanced to provide substantial value to society. Society has the capacity to adapt and cope with the negative social impacts.
Minor	Short-term and mostly local social impacts. Positive social impacts provide some value to society. Negative social impacts can be easily adapted to by society.
Minimal	Local and small-scale social impacts. These social impacts provide limited value or costs to society. These social impacts may require future consideration if, for example, there is change to the Project design.

Source: Building Queensland 2016, Social impact evaluation guide: supplementary guidance.

2. Determining the likelihood of occurrence using the definitions outlined in Table 2.4 using a worst case but reasonable scenario:

Table 2.4 **Likelihood category definitions**

Category	Definition
Almost certain	Expected to occur regularly Expected to occur in 90% to 100% of circumstances
Likely	Expected to occur at some time Expected to occur in 70% to 89% of circumstances
Possible	Might occur at some time Will occur in 31- 69% of circumstances
Unlikely	Unusual or unexpected occurrence Might occur in 11% to 30% of circumstances
Rare	Could happen, but is not expected to occur Could occur in 0-10% of circumstances

Source: Building Queensland 2016, Social impact evaluation guide: supplementary guidance.

The impact assessment also identifies:

- affected parties;
- duration of potential impact; and
- extent of the impact.

See Section 7 for full details of the assessment including the affected parties, extent and duration expected as a result of the impact.

3 Social aspects of the Project

3.1 Planning, feasibility and approvals phase

The Project's planning phase began in December 2010 when Hume Coal acquired A349 from Anglo Coal. In May 2011, Hume Coal began exploration drilling, and then opened their project planning office in Moss Vale in August 2011. Since then, Hume Coal has undertaken extensive geological, engineering, environmental, financial and other technical investigations to inform the mine plan, mining system, and address environmental and other constraints. This included two stages of environmental and engineering investigations, three stages of opportunities, constraints analysis and workshops. Hume Coal has also consulted and engaged with the community throughout the project's planning and environmental assessment phase, including establishing community shopfronts in Moss Vale in November 2012 and Berrima in May 2016.

Hume Coal has retained the services of a large technical team, including consultants and contractors, for these activities. In November 2015, Hume Coal had 17 direct employees who were involved in:

- environmental planning;
- mine planning;
- exploration;
- health and safety;
- community liaison;
- administration; and
- executive roles.

Hume retained over 40 consulting and contracting companies that have provided the following services:

- mine planning and scheduling;
- civil engineering;
- underground geotechnical engineering;
- coal handling plant design;
- feasibility studies;
- coal quality testing;
- environmental monitoring and assessment;
- traffic and transport;
- electrical work;

- surveying;
- surface geotechnical engineering;
- fencing;
- drilling;
- irrigation and pumping;
- gardening and landscaping;
- construction and excavation;
- safety training; and
- plant and equipment testing.

In addition, Hume Coal retained the services of a pastoral company, Princess Pastoral Pty Ltd, to operate and manage agricultural land that Hume Coal and or affiliated company owns.

From February 2015 to 2019, Hume Coal has invested between \$190,191 and \$232,669 a year in the Hume Coal Apprenticeship Program, which provided funding to trainees and apprentices in the local community (see Table 3.1). To administer this programme, Hume Coal partnered with 1300 apprentice, a not-for-profit group training company. In November 2015, Hume Coal was sponsoring four apprentices and two trainees within several local businesses. Between 2016–2019 Hume Coal and the University of Wollongong partnered to provide scholarships to students who originate in the Wingecarribee LGA. Three scholarships were funded via the Hume Coal Charitable Foundation valued at \$7,000 in the fields of engineering and business (Hume Coal 2019).

Table 3.1 Hume Coal investment in Hume Coal Apprenticeship Program, 2015-2019

2015	2016	2017	2018	2019
\$223,031	\$216,014	\$190,191	\$232,669	\$203,523

Source: Hume Coal 2020

Note: Amounts have been rounded to the nearest dollar.

In May 2015, Hume Coal launched the Hume Coal Charitable Foundation. As part of the foundation, Hume Coal provided two rounds of funding each year to local organisations. The foundation invested around \$200,000 a year in the local community with a focus on educational, Indigenous and not-for-profit childcare organisations within the Wingecarribee LGA. To date, the charitable foundation has provided funding to over 40 local organisations, including but not limited to:

- KU Donkin Pre-school;
- Wingecarribee Family Support Service;
- Youth Radio MVH-FM;
- Kollege of Knowledge Kommittee for Kids;

- BDCU Children’s Foundation;
- Challenge Southern Highlands;
- Moss Vale Dragons Junior Rugby League Club;
- Moss Vale Cricket Club;
- Bundanoon Highlanders Rugby League Football Club; and
- Bowral Rugby Club.

3.2 Construction phase

3.2.1 Workforce composition and scheduling

The Hume Coal Project’s construction will occur over a period of about two years, with approximately 105 construction workers during early works and building-up to a peak workforce of approximately 414 construction workers after 11 months. The concurrent presence of a peak construction workforce for the Berrima Rail Project of 40 workers over a construction phase of 15 months gives a combined total workforce of 454 workers. The peak workforce will be deployed to several construction sites, including the coal handling and preparation plant (CHPP) precinct, administration precinct and underground mine precinct. Primary construction worksites of the Berrima Rail Project will be along the Old Hume Highway, with the main temporary rail construction facility adjacent to the Old Hume Highway on Hume Coal owned land. A full description of the construction stages and activities is available in Section 2.4 of the Hume Coal Project EIS and Section 2.4 of the Berrima Rail Project EIS.

Construction works will generally be undertaken during standard construction hours of 7am to 6pm Monday to Friday; 8am to 1pm Saturday; and no works to be undertaken on Sundays or public holidays, except for emergencies and the works presented in Table 3.2, for which out of hours work may be required.

Table 3.2 Potential out of hours construction works

Hume Coal Project	Berrima Rail Project
Drift and shaft construction (24 hours/7 days)	Track possession
Work inside enclosed buildings/structures (24 hours/7 days)	Works required by utility providers
Construction of temporary accommodation village (24 hours/7 days)	Construction on bridges and other structures that may affect traffic flows or the use of other major infrastructure
	Oversize deliveries and unloading of machinery

Source: EMM 2017a; EMM 2017b.

3.2.2 Sourcing of construction workers

The main skills required by construction workers are as follows:

- project management and administration;
- engineering design and supervision;
- various construction trades;

- plant and equipment operators;
- labourers; and
- accommodation provision and servicing.

Some of these skills will be well suited to local contractors and firms; people with these skills will be recruited where feasible. Examples include plant and equipment operators, trades, engineering and administration tasks, and providing food and accommodation for workers. However, some of the skills required during the construction phase are highly specialised and as such specialist firms will be contracted for these tasks. Most of these specialist firms and their employees are located outside of the local area and will require accommodation while rostered on during construction.

For the purposes of the EIS and SIA, Hume Coal conservatively assumed that approximately 90% of construction personnel will be employees of specialist firms from outside of the local area, although it is likely that the local content of the construction work will be far higher than this. The remaining 10% will be recruited locally. There are no practical means of increasing local recruitment for many key aspects of the Project due to the specialised nature of the work.

3.2.3 Accommodation and management of construction workers

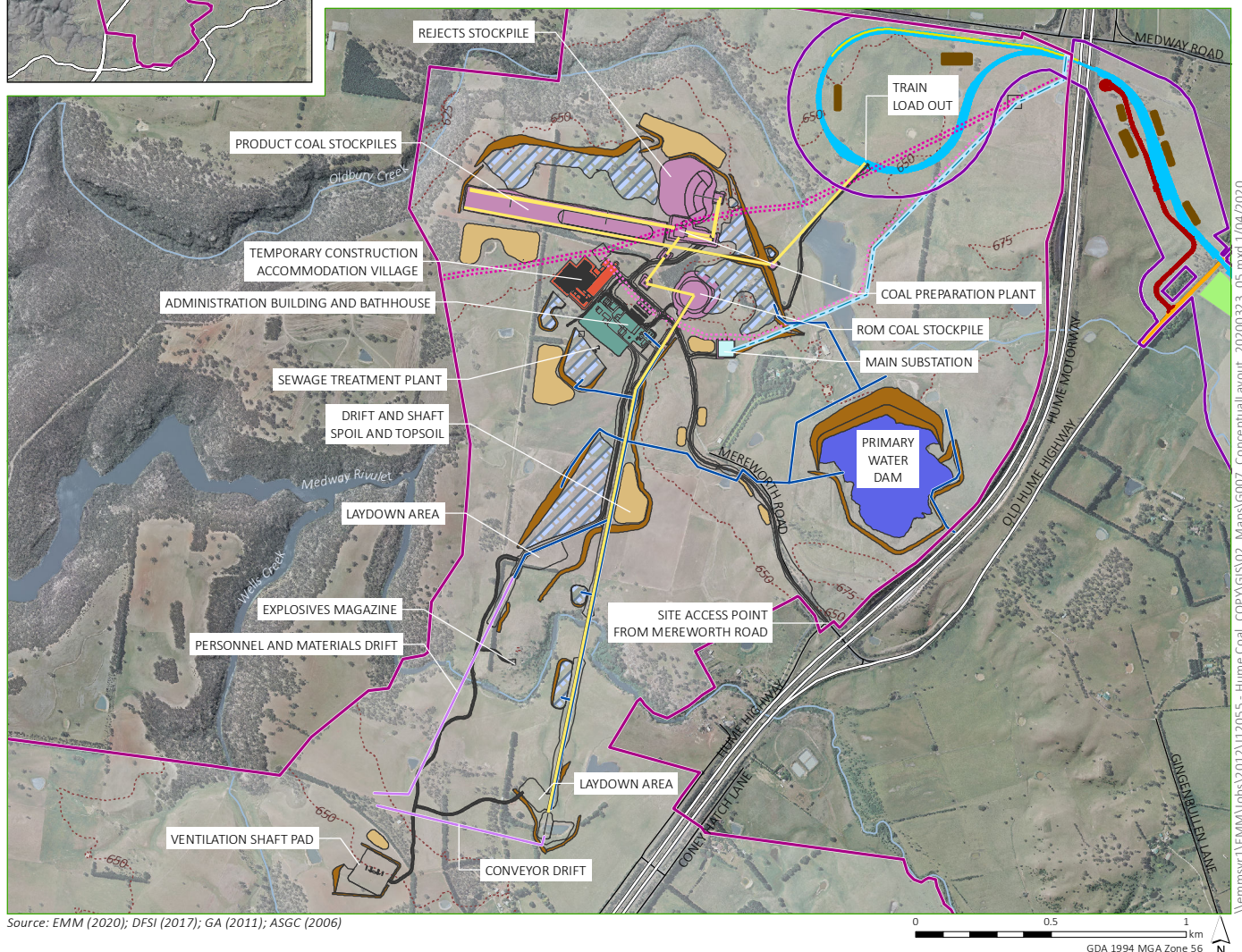
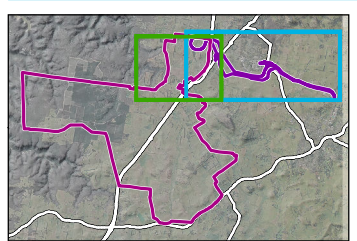
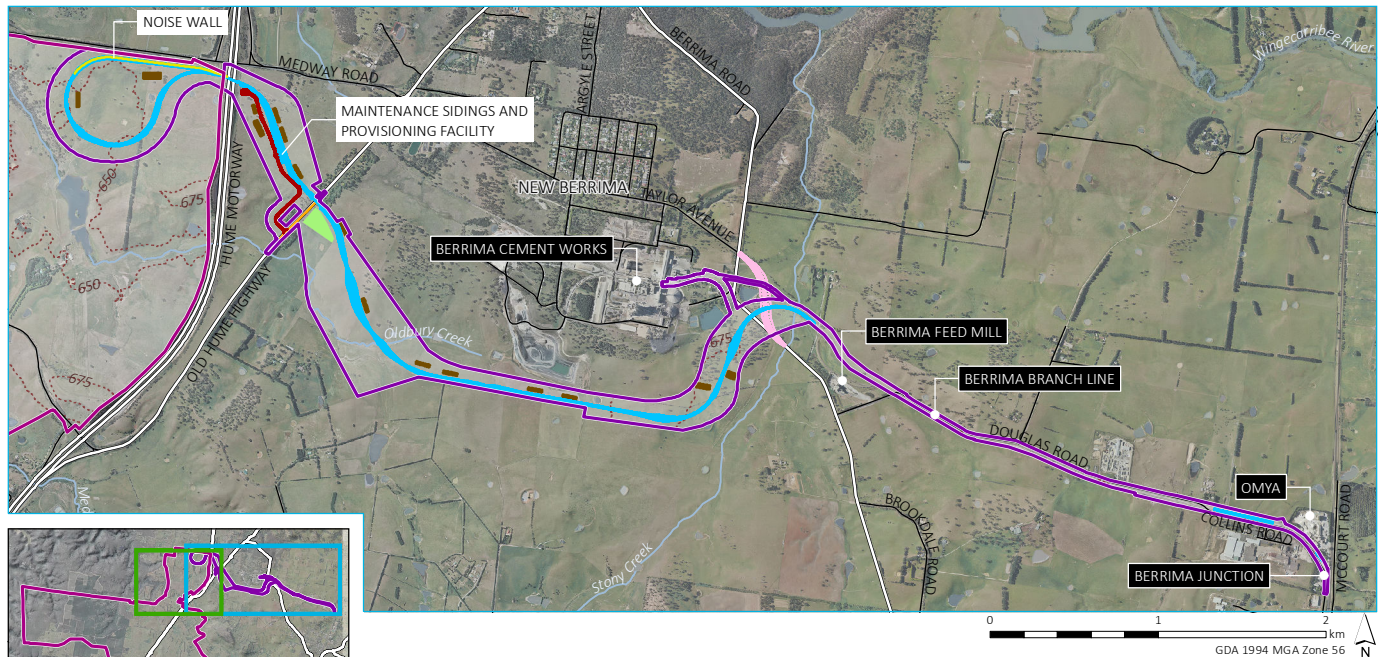
A construction accommodation village (CAV) that can accommodate nominally 400 workers will be developed before the major construction activities begin. It will accommodate most of the non-local construction workers for the Project and the related Berrima Rail Project. The balance will consist of mostly support workers who will not live in the CAV. The CAV will take eight months to construct and will be built in two stages.

The first stage will take four months and will accommodate 200 initial construction workers. The second stage will take another four months, after which the CAV will be at full capacity. During this time, workers building the village will stay in temporary accommodation, such as short-term rental houses, hotels, motels or caravan parks. The CAV will be within the mine surface infrastructure (Figure 3.1) area and will be directly accessed from the Hume Highway via Mereworth Road and an internal mine access road. Following its construction, all non-local workers will be required to live in the CAV while they are rostered on. Since the construction workforce will be temporary, workers will almost always be unaccompanied by family, meaning the CAV will have enough capacity for most of the non-local construction workers for both the Project and the Berrima Rail Project.

The CAV will be temporary and operate for a maximum period of 36 months. It will be dismantled once construction works are completed and the Project moves into its operational phase. The CAV will be dry (ie no alcohol will be permitted) and contain a dining hall, gym, and recreation room. These on-site facilities mean that there will be limited interaction between construction workers and the local community. Consequently, there will be little prospect of any unruly behaviour in nearby towns.

An experienced operator will manage the CAV. Since this is a specialised role, it is likely that the operator will be recruited from outside the local area. However, the operator will be contractually bound to procure local workers and contractors where reliability, quality and financial competitiveness criteria can be satisfied. This will include engaging local businesses to supply goods and services to the CAV, typically consisting of laundry, cleaning and catering.

The presence of the CAV means that non-local construction workers will not place additional pressure on the supply of local housing and short-term accommodation. This is significant as the region's tourism industry relies on the availability of a limited number of beds. The CAV will eliminate project-related impacts on rental accommodation and prices for short-term rentals. The availability of a CAV will also help Hume Coal to attract skilled construction workers and minimise any risks to the Project's development schedule from a potential skills shortage.



Source: EMM (2020); DFSI (2017); GA (2011); ASGC (2006)

KEY

- | | | |
|--|--|--|
| Major road | Topsoil stockpiles | Temporary construction accommodation village |
| Minor road | Rail temporary construction facility | Administration/bathhouse/workshop |
| Contour (25 m increments) | Turning lane/shoulder | Main substation |
| Named watercourse | Hume Coal Project area | Internal road |
| Waterbody | Hume Coal Project elements | CPP and stockpiles |
| Berrima Rail Project area | Conveyor | Topsoil stockpiles |
| Berrima Rail Project elements | Drift (underground) | Stormwater management earthworks |
| Noise wall | Powerline route | Water management area |
| New rail line | Water pipeline | Top water level |
| Rail maintenance facility | Proposed powerline and pipeline easement | |
| Rail access road | Existing WSC easement | |
| Berrima Road relocation (works by Wingecarribee Shire Council) | | |

Surface infrastructure

Hume Coal and Berrima Rail Project
Updated social impact assessment
Figure 3.1



3.3 Operations phase

3.3.1 Workforce composition and scheduling

The operations phase of the Hume Coal Project will extend for approximately 19 years. A workforce of approximately 100 full-time equivalent (FTE) workers will be required during the first year of operations, peaking at about 300 workers in year five (EMM 2017a – see Section 2.13.2). This includes direct employees and FTE contractors. The operation of the Berrima Rail Project will also create approximately 16 additional FTE positions, which are assumed to be required at the commencement of operations. This gives a combined operations workforce total of around 316 workers.

The operations workforce will consist of both semi-skilled and skilled mine operators and maintenance staff, engineers, and managers, requiring varying levels of experience. In the early commissioning and build-up phases a core of experienced workers will be needed. However, as capacity for training increases over time there will be a greater opportunity to recruit less experienced workers. When recruiting, Hume Coal will apply the following criteria:

- completion of Year 12 schooling;
- a responsible character;
- be fit and medically suited to working in an underground mine;
- have a stable employment record; and
- ideally have a trade qualification or working towards one.

Hume Coal will give priority to local recruits who meet the above criteria. In addition, Hume Coal will adhere to Australia's *Fair Work Act 2009* and anti-discrimination laws to ensure that minority groups such as Indigenous, youth, women, people from culturally diverse backgrounds and people with a disability are provided the opportunity to apply for roles as they arise.

The Berrima Rail Project operations workforce will comprise predominantly of train drivers.

A full description of the operations stages and activities is available in Section 2.5 of the Hume Coal Project EIS and Section 2.5 of the Berrima Rail Project EIS.

3.3.2 Workforce catchment area

For work health and safety (WHS) reasons, Hume Coal will require all workers, including those involved in mine closure, to live within 45 minutes travel time from the Project area. This is also assumed to apply to operational workers for the Berrima Rail Project¹. This policy will minimise the risk of fatigue related travel accidents, given that most of the operations workforce will be doing shift work. The 45-minute travel catchment is shown in Figure 3.2 as the workforce catchment area or local area. It includes most of the Wingecarribee LGA and the following localities in adjoining LGAs:

- Wollondilly (Douglas Park, Picton, Thirlmere, Tahmoor and Wilton);
- Kiama (Carrington Falls);
- Shoalhaven (upper Kangaroo Valley); and
- Goulburn Mulwaree (Goulburn and Marulan).

Since all operations workers will be required to live in this workforce catchment area, most population and social change arising during operations will occur in this catchment area.

¹ For the purposes of the SIA the conservative assumption has been made that train drivers would live within 45 minutes from the Project area. It is acknowledged that the 16 train drivers may potentially live up to a maximum of 1 hour and 20 minutes' drive from the Project area if living in Port Kembla. However, the numbers are not significant enough to materially affect the assessment.

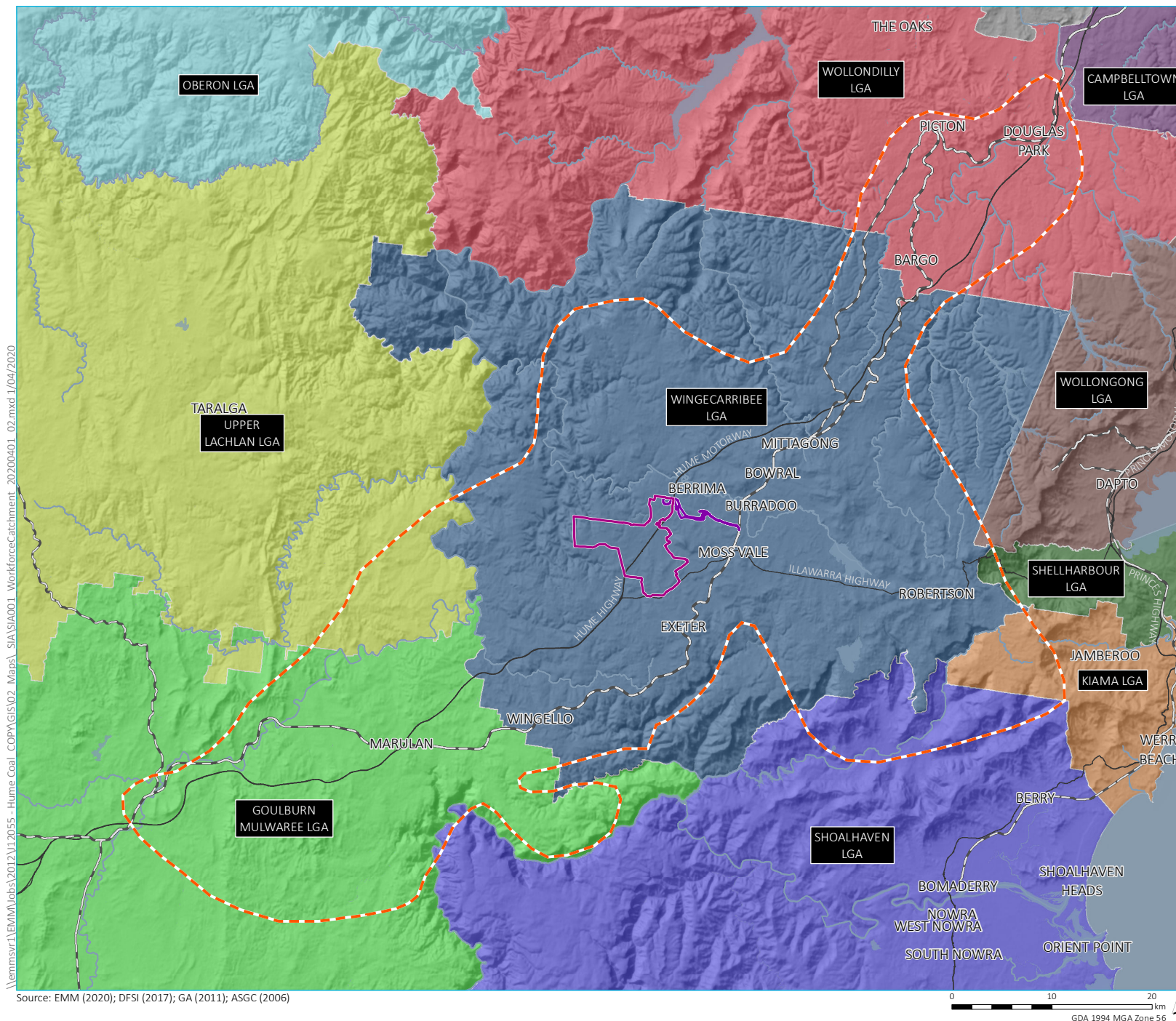
3.3.3 Sourcing of operations workers

In 2016, 227 people in the Wingecarribee LGA worked in the mining sector with a further 939 people in the adjoining LGAs, as listed below (ABS 2016a):

- Wollondilly - 403;
- Kiama - 166;
- Shoalhaven - 166; and
- Goulburn Mulwaree - 204.

This does not account for a significant number of people who live in the local area but to whom one or more of the following circumstances apply:

- people who were working outside the district on census night (ie FIFO or DIDO);
- people who work in related industries with highly transferrable skills (eg manufacturing); and
- people who have been forced to change industries due to a lack of local opportunities in mining, but who have skills in the industry.



- KEY**
- Hume Coal workforce catchment area
 - Hume Coal Project area
 - Berrima Rail Project area
 - Rail line
 - Motorways and primary roads
 - River
 - Named waterbody
 - Local government area
 - Campbelltown
 - Goulburn Mulwaree
 - Kiama
 - Oberon
 - Shellharbour
 - Shoalhaven
 - Upper Lachlan
 - Wingecarribee
 - Wollondilly
 - Wollongong

Workforce catchment area

Hume Coal and Berrima Rail Project
Updated social impact assessment
Figure 3.2

After the construction phase, operations will quickly ramp up and extend for approximately 19 years. This will be long enough to introduce effective training programs for inexperienced workers. For the purposes of this SIA, an inexperienced worker is a worker who does not have significant underground coal mining experience, although they could have a lot of experience in a related occupation. It will take around six to nine months to train an inexperienced person to work competently in an underground mine due to the unique work environment. Therefore, the SIA assumes that the successful implementation of workforce policies and training programs, over time, will increase the potential to recruit local workers. Given this assumption and the reasonably large pool of suitable local workers, it is considered likely that about 70% of all workers will be sourced locally over the life of the Project. It is acknowledged that the exact proportion of local workers could be higher or lower depending on the accuracy of the assumptions made regarding available inexperienced workforce and those that will take up the training opportunities. The number of workers sourced locally is important as the alternative, in-migrating workers and their families, is likely to lead to an increased population which is likely to affect infrastructure and services. To enable the SIA to consider the potential impacts associated with the Project workforce during operations, two scenarios have been adopted for recruitment across the life of the operations:

- Scenario 1:
 - year one of the project assumes 70% of experienced workers would be recruited from outside the area and the remaining 30% would be locally recruited; and
 - at peak of operations assumes a likely estimate of 70% total local recruitment.
- Scenario 2:
 - year one of the project assumes 70% of experienced workers would be recruited from outside the area and the remaining 30% would be locally recruited; and
 - at peak of operations assumes a conservative estimate of 50% total local recruitment.

These scenarios are based on the identified operations workforce of approximately 116 FTE workers required for operations initially in the first year (100 workers for the Hume Coal Project and 16 workers for the Berrima Rail project), followed by an additional 200 FTE workers in subsequent years to peak at 316 FTE workers by year 5.

Table 3.3 Local workforce recruitment estimates for the Project

	Scenario 1: likely estimate (70% total local recruitment)		Scenario 2: conservative estimate (50% total local recruitment)	
	Local workers	Non-local workers	Local workers	Non-local workers
First year	35	81	35	81
116 workers	(30%)	(70%)	(30%)	(70%)
Peak of operations* (additional to first year workers)	186*	14*	123*	77*
Total	221 (70%)	95 (30%)	158 (50%)	158 (50%)
Total peak workforce	316 workers (100%)		316 workers (100%)	

Note: Worker estimates have been rounded to the nearest whole number.

*Note: The workforce estimates assume estimates of 70% and 50% total local recruitment at peak operations. As such, the percentage of locally recruited workers additional to the first-year workers at peak production will be higher than 70% and 50% to compensate for only 30% local recruitment in the first year.

In Scenario 1 (70% total local recruitment), it is assumed the following recruitment pattern would occur:

- in the first year of the Project, 70% of experienced workers would be recruited from outside the area and the remaining 30% would be locally recruited, representing a workforce of 35 local workers and 81 non-local workers for a total initial workforce of 116 workers; and
- at peak production, a further 186 local people would be recruited following completion of training programs as required, with 14 more people recruited from outside the local area, representing an additional 200 workers. This represents a total of 316 workers at peak production, 221 of which (70%) would be locally recruited.

In Scenario 2 (50% total local recruitment), it is assumed the following recruitment pattern would occur:

- in the first year of the Project, 70% of experienced workers would be recruited from outside the area and the remaining 30% would be locally recruited, representing a workforce of 35 local workers and 81 non-local workers for a total initial workforce of 116 workers; and
- at peak production, a further 123 local people would be recruited following completion of training programs as required, with 77 more people recruited from outside the local area, representing an additional 200 workers. This represents a total of 316 workers at peak production, 158 of which (50%) would be locally recruited.

3.3.4 Residential distribution of operational workforce

Population change associated with the Project will occur in three ways:

- workers renting for an initial period before buying a home or renting long-term;
- relocating workers moving to the area; and
- local workers who now live in the outer parts of the workforce catchment area but would choose to relocate closer to the Project area.

Being long-term residents, these new residents will exercise care in choosing the locations of their new homes. Several studies have examined the factors influencing peoples' choices of their residential locations. For instance, the Department of Infrastructure and Transport Major Cities Unit (2013) considered that liveability was the major influencing factor and it encompassed a range of factors such as amenity, quality of buildings and public spaces, public transport, job opportunities and availability of goods and services, particularly health and education. Brooker and Mitchell (2014) suggest that there are three controlling factors – accessibility, amenity and affordability.

In this SIA, Brooker and Mitchell's three factors have been used as well as a fourth factor of availability. Each factor is described below:

- availability: enough zoned and subdivided residential land is available to meet the Project's housing needs;
- affordability: houses or units are available to buy or rent at prices mine workers can afford;
- accessibility: a town or village lies within an acceptable travel time to the Project site (ie within 45 minutes) with closer locations being preferred; and

- amenity: a town or village has essential services, including general medical, a primary school and convenience retail outlets, with those towns containing a broader range of facilities and services being preferred. The environmental amenity of each town and village is also relevant.

The above factors are not of equal weight. Availability and affordability are essential whereas accessibility and amenity are discretionary. Thus, in determining the residential distribution of the Project's workforce, those towns or villages that satisfy the availability and affordability criteria have been given much greater weight. The housing preferences of mine workers also need to be considered. The mining industry employs a relatively high proportion of workers aged between 25 and 44 years (Department of Employment 2014), with 56.1% of the mining workforce aged between 25 and 44 years as of February 2019 (ABS 2019a). As rail workers are considered a potential occupation within the mining industry (classified under machinery operators and drivers) (Department of Employment, Skills, Small and Family Business 2018), it is assumed that the age trends will also reflect those of the mining industry more broadly. Because of this, most relocating workers will be accompanied by young families, suggesting a strong preference for houses with three or more bedrooms.

Each residential preference factor is considered below and followed by towns and villages ranked against all factors.

i Availability

Data available for Wingecarribee LGA suggests there is a good supply of residential zoned land to accommodate future dwelling approvals up to 2031 (the forecast does not project beyond this year) (WSC 2015a). The data shows that Moss Vale, Mittagong and Bowral have the greatest capacity to accommodate future growth with combined space for 4,714 more dwellings. Smaller settlements within the Wingecarribee LGA have less capacity to accommodate future dwelling growth, but some, including New Berrima and Exeter, have some additional land availability (WSC 2015a). The preceding figures deal with vacant land supply, and not vacant houses. There may be some difference between the figures, but this is the best reliable data available relating to future housing availability.

The Wollondilly Development Control Plan (DCP) 2016 identifies several urban release areas within the 45-minute travel zone, including the Wilton park release area, with about 1165 lots. Goulburn Mulwaree Council has also identified several urban release areas.

In summary, the towns and villages within the workforce catchment area have been categorised as follows:

- high availability of land: Moss Vale, Mittagong and Bowral;
- some availability: New Berrima, Exeter, and remaining towns in the Wingecarribee, Wollondilly and Goulburn Mulwaree LGAs; and
- little availability: Sutton Forest, Berrima, and relevant towns in the Kiama and Shoalhaven LGAs.

ii Affordability

A search for median house sale prices in the workforce catchment area has been undertaken. It covered most towns in the Wingecarribee LGA as well as the surrounding LGAs (see Table 3.4 and Table 3.5).

Table 3.4 Median house sale prices across the Wingecarribee LGA, 2013-2019

Location	Median sale price 2013-2019 (\$)	Sale price increase 2013-2019 (%)
Berrima	675,000–1,200,000	77.8%
Bowral	590,000–930,000	57.6%
Moss Vale	414,000–668,000	61.4%
Mittagong	430,000–695,000	61.6%
Exeter	960,000–1,500,000 ¹	56.2% ¹
Sutton Forest	815,000–1,490,000 ²	82.8% ²
New Berrima	265,000–507,000	91.3%
Wingecarribee LGA	547,000 (2019)	-

Source: REA Group 2019; RP Data 2015; RP Data 2019.

¹ The median house sale price for Exeter is based on data for 2015-2019.

² The median house sale price for Sutton Forest is based on data for 2013-2016.

The median rents for all dwelling types in towns within the catchment area have been obtained; the results are listed in Table 3.5 and Table 3.6.

Table 3.5 Median house sale prices across adjoining LGAs, 2019

Location	Median sale price 2019 (\$)
Wollondilly	567,000
Wollongong	518,000
Kiama	640,000
Shoalhaven	379,000
Goulburn Mulwaree	330,000

Source: RP Data 2019.

In the Wingecarribee LGA, houses in New Berrima, Moss Vale and Mittagong were the most affordable. Housing in Berrima, Exeter, and Sutton Forest were the least affordable (REA Group 2019; RP Data 2019). Outside of the Wingecarribee LGA, houses in Goulburn Mulwaree LGA were the most affordable while those in the Kiama LGA were the least affordable.

In general, median rental rates were consistent with the housing sales data, with New Berrima, Moss Vale and Mittagong being amongst the most affordable suburbs within the Wingecarribee LGA, and the least affordable being Bowral and Berrima. Although rental rates were the lowest in Sutton Forest and Exeter, the mortgage repayments were highest in these suburbs and Berrima, revealing consistency with the higher housing prices in these suburbs (Table 3.6).

Table 3.6 Median weekly rent and monthly mortgage repayments across the Wingecarribee LGA, 2016

Location	Median weekly rent (\$)	Median monthly mortgage repayments (\$)
Berrima	400	2,167
Bowral	400	1,950
Moss Vale	320	1,733
Mittagong	320	1,733
Exeter	300	2,100
Sutton Forest	220	2,394
New Berrima	320	1,560
Wingecarribee LGA	350	1,842

Source: ABS 2016a.

Outside of the Wingecarribee LGA, towns within the Goulburn Mulwaree and Shoalhaven LGAs are the most affordable, while those within the Kiama and Wollondilly are the least affordable (Table 3.7).

Table 3.7 Median weekly rent and monthly mortgage repayments across adjoining LGAs, 2016

Location	Median weekly rent (\$)	Median monthly mortgage repayments (\$)
Wollondilly	365	2,167
Wollongong	320	1,950
Kiama	395	2,000
Shoalhaven	280	1,517
Goulburn Mulwaree	260	1,517

Source: ABS 2016a.

iii Accessibility

Travel times to the Project area have been estimated (Table 3.8) showing that towns and villages fall into three categories:

- closest (less than 15 minutes travel time): Sutton Forest, Berrima, New Berrima; and Moss Vale;
- close (16–45 minutes): Bowral, Exeter, remaining towns and villages within the Wingecarribee LGA and Mittagong; and
- more distant (31–45 minutes): the remaining settlements within the Goulburn Mulwaree and Wollondilly LGAs, Kiama and Shoalhaven LGAs.

Table 3.8 Estimated drive times to site (from within workforce catchment area)

Location	Travel time (minutes)
Sutton Forest	0-15
Berrima	0-15
New Berrima	0-15
Moss Vale	0-15
Bowral	16-30
Exeter	16-30
Mittagong	16-30
Rest of the Wingecarribee LGA	16-30
Wollondilly LGA	31-45
Goulburn Mulwaree LGA	31-45
Kiama LGA	31-45
Shoalhaven LGA	31-45

Source: EMM estimates 2014.

iv Amenity

The services available and rating of environmental amenity for towns and villages within the Wingecarribee LGA and adjoining LGAs are summarised in Table 3.9.

Table 3.9 Amenity of towns and villages within the workforce catchment area

Location	Essential services present ¹	Other higher order services ²	Environmental amenity ³
Berrima	No	No	Good
Bowral	Yes	Yes	Good
Moss Vale	Yes	Yes	Good
Mittagong	Yes	Yes	Good
Exeter	No	No	Good
Sutton Forest	No	No	Good
New Berrima	No	No	Acceptable
Rest of the Wingecarribee LGA	Yes	No	Good
Wollondilly LGA	Yes	Yes	Good
Kiama LGA (Carrington Falls)	No	No	Good
Shoalhaven LGA (Kangaroo Valley)	Yes	No	Good
Goulburn Mulwaree LGA	Yes	Yes	Good

Notes: 1. Includes general medical, primary school and convenience retail.
 2. Includes all essential services plus a high school and entertainment or leisure facilities.
 3. Good – a normal town environment in an attractive setting. Acceptable – amenity reduced by presence of major infrastructure and/or industry and/or an unattractive location.

Larger towns rank highest in terms of amenity. They have both a wide range of services and good environmental amenity. Smaller towns generally have more convenience services, but some do not have all essential services. It is important to note the above ratings are based on the amenity preferences of a mining family with multiple young children. Not all mining households will fit this stereotype, and some may prefer smaller villages that offer rural lifestyles but with fewer services.

v All preference factors

The towns and villages within the workforce catchment area are categorised against all preference factors in Table 3.10.

Table 3.10 Ratings of towns against all location preference factors

Rating Level	Availability	Affordability	Accessibility	Amenity
Level 1	Wide choice:	Good:	Closest:	Very good:
	Bowral	Goulburn	Berrima	Bowral
	Mittagong	Kangaroo Valley	Moss Vale	Goulburn
	Moss Vale	Mulwaree towns	New Berrima	Mittagong
		New Berrima	Sutton Forest	Moss Vale
				Mulwaree towns
				Wollondilly
Level 2	Some choice:	Average:	Close:	Good:
	Exeter	Mittagong	Bowral	Berrima
	Goulburn	Moss Vale	Exeter	Carrington Falls
	Mulwaree towns	Rest of Wingecarribee	Mittagong	Exeter
	New Berrima	Wollondilly towns	Rest of Wingecarribee	Kangaroo Valley
	Rest of Wingecarribee			Rest of Wingecarribee
	Wollondilly			Sutton Forest
Level 3	Little choice:	Low:	More distant:	Acceptable:
	Berrima	Berrima	Carrington Falls	New Berrima
	Carrington Falls	Bowral	Goulburn	
	Kangaroo Valley	Carrington Falls	Kangaroo Valley	
	Sutton Forest	Exeter	Mulwaree towns	
		Sutton Forest	Wollondilly	

The above information has been used to rate the relative attractiveness of all towns and villages using the criteria given in Table 3.11.

Table 3.11 Relative attractiveness of towns and villages

Rating	Criteria	Towns and villages
1. Best	Level 2 or above: availability and affordability	Moss Vale
	Level 1: accessibility and amenity	Rest of Wingecarribee
2. Good	Level 2 or above: availability and affordability	Mittagong
	Level 2: accessibility and amenity	Mulwaree towns
3. Acceptable	Level 2 or above: availability and affordability	Goulbourn
	Level 3: accessibility and amenity	New Berrima

Table 3.11 **Relative attractiveness of towns and villages**

Rating	Criteria	Towns and villages
4. Less acceptable	Level 3 or above: availability and affordability Level 1: accessibility and amenity	Sutton Forest
5. Least acceptable	Level 3 or above: availability and affordability; and any combination of Level 2 or Level 3 accessibility and amenity	Berrima Bowral Carrington Falls Exeter Kangaroo Valley Wollondilly

Using the relative attractiveness criteria to assess the data in Table 3.10 show there were no towns rated level 1 for all factors. The highest rating for any town in the local area was a level 2 or above for availability and affordability and level 1 for accessibility and amenity making them the 'best' towns. Accordingly, Moss Vale and Mittagong are considered 'best' towns, while Bowral is considered 'less acceptable', mainly because of its higher housing costs.

These ratings suggest that relocating workers will mostly move to Moss Vale and Mittagong. The next most attractive town is Bowral, where more highly paid workers are likely to live. Following this, all remaining towns and villages have various positive and negative characteristics that make them effectively indistinguishable from each other. On the basis of these assumptions, Table 3.12 summarises the forecast residential distribution of relocating workers and provides estimates of the total number of relocating workers in each town for both in-migration scenarios.

Table 3.12 **Residential distribution of relocating operations workers**

Locality	Residential distribution	Estimated number of workers: 30% in-migration	Estimated number of workers: 50% in-migration
Moss Vale	25%	24	40
Mittagong	25%	23	40
Bowral	20%	18	32
Rest of Wingecarribee LGA	6%	6	9
Wollondilly LGA	6%	6	9
Goulburn Mulwaree LGA	6%	6	9
New Berrima	4%	4	6
Sutton Forest	2%	2	3
Berrima	2%	2	3
Exeter	2%	2	3
Kiama LGA (Carrington Falls)	1%	1	2
Shoalhaven LGA (Kangaroo Valley)	1%	1	2
Total workers	100%	95	158

Note: Numbers are rounded to represent best estimates for population change.

Note: Number by locality do not equal total workers due to rounding.

3.3.5 Population change associated with the operations phase

It is assumed that relocating operations workers will be accompanied by their families as they will be long-term residents in the area. The weighted average household size in the Wingecarribee, Wollondilly, Kiama, Shoalhaven and Goulburn Mulwaree LGAs is 2.52 people (ABS 2016a). This is marginally less than in the Singleton LGA (2.7 people per household), which has a relatively high proportion of mining sector workers (ABS 2016a). The figure for Singleton is a more accurate indicator of the typical household size for project workers and has been used in this analysis.

Based on a 2.7 person household size, the residential distribution given in Table 3.12 and a workforce size of 316 people, the total population increase for all towns is shown in Table 3.13 for both in-migration scenarios.

Table 3.13 Distribution of total population change associated with the Project

Locality	Residential distribution	Population change (number):	
		30% in-migration	50% in-migration
Moss Vale	25%	64	107
Mittagong	25%	64	107
Bowral	20%	51	85
Rest of Wingecarribee LGA	6%	15	26
Wollondilly LGA	6%	15	26
Goulburn Mulwaree LGA	6%	15	26
New Berrima	4%	10	17
Sutton Forest	2%	5	9
Berrima	2%	5	9
Exeter	2%	5	9
Kiama LGA (Carrington Falls)	1%	3	4
Shoalhaven LGA (Kangaroo Valley)	1%	3	4
Total persons	100%	255	429

Note: Numbers are rounded to represent best estimates for population change.

Note: Number by locality do not equal total workers due to rounding.

3.4 Closure and decommissioning

The decommissioning phase of the mine entails works associated with the decommissioning, followed by the management of the mine up until lease relinquishment occurs. Closure works entail clearing surface infrastructure and rehabilitating the site such that it can support land uses like those that existed before mining occurred. Following this, Hume Coal land will enter a period of land management in which the success of rehabilitation activities will be monitored.

Works associated with the mine's closure are expected to run for around two years. During this time up to 10% of the operational workforce (30 people) will be retained. Workers to be retained will be selected from the operational workforce on merit. Following the initial two years, the rehabilitated land will enter a period of management. This will require up to three part-time workers.

Upon completion of the Berrima Rail Project, the Hume Coal infrastructure will be dismantled and removed, with decommissioning and rehabilitation workings including the removal of the rail track and the maintenance sidings and provisioning facility. Rehabilitation will also include the replacement of topsoil to disturbed land, followed by the spreading of pasture grass species. The portion of the Boral-owned track is likely to remain. Section 2.6 of the Berrima Rail Project EIS outlines the full rehabilitation objectives and activities.

The mine and rail's closure could result in a decrease in population in the local area from job losses and workers moving away in search of new employment opportunities if there are inadequate local job opportunities at the time. It is difficult to predict the number of workers who will migrate out of the area following the mine's closure given that it will depend on the availability of jobs in the area at the time.

In consultation with the CCC and other relevant stakeholders, including government agencies and Council, a post-mining sustainable development plan for the Project will be developed to inform closure planning. This approach adopted by Hume Coal aligns with the United Nations (UN) 2030 Agenda for Sustainable Development (UN 2015), and a number of the identified Sustainable Development Goals (SDGs), including:

- SDG 8: Decent work and economic growth – promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- SDG 9: Industry, innovation and infrastructure – build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation; and
- SDG 15: Life on land – protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss.

4 Social baseline

4.1 Assessment area

As explained in Section 3.3, Hume Coal's recruitment policy is to require all operational workers, including those involved in closure and decommissioning, to live within 45 minutes travel time of the Project area. There is no social data available that corresponds exactly with this area because it does not coincide with Australian Bureau of Statistics (ABS) Census Collection Districts (CCDs). Therefore, since the Project population forecasts suggest that up to 70% of the operations workforce will live in towns within the Wingecarribee LGA, only the towns and villages within the Wingecarribee LGA have been considered in this baseline study. This will still provide an accurate guide to the Project's impacts as there will be negligible population growth from the Project in the adjoining LGAs.

To determine the existing social character of the assessment area, the following factors have been considered:

- history and settlement pattern;
- population size and composition;
- employment and training;
- regional economy;
- social infrastructure (including housing, education and childcare services);
- health infrastructure (including primary health and emergency services); and
- transport infrastructure.

4.2 History, geography and settlement pattern

The Project area falls within the Aboriginal language group boundary of the Gundungarra people whose territory extended between Camden and Goulburn and the greater Blue Mountain area to the north-west (AIATSIS 2018). However, several neighbouring groups may have used the greater Southern Highlands region for travelling routes and other purposes such as ceremonies and gatherings (Tindale 1974). This includes the Ngunawal people to the south-west, the Dharawal-speaking Wodi Wodi people to the east (Tindale 1974), the Tharawal/Dharawal people to the north-east, and the Dharung people to the north (AIATSIS 2018).

European settlers first explored the area in 1798 (WSC 2015b). In 1821, a government settlement was established at Bong Bong, between Moss Vale and Burradoo (profile.id 2015). In the 1830s, Berrima became the second settlement in the region. The area's cool climate, reliable rainfall and undulating terrain led to the establishment of a strong agricultural industry mainly based on sheep and cattle grazing, which attracted people to the area (WSC 2015b). However, population growth remained subdued until the 1860s when the Main Southern Railway Line was opened, after which the region experienced rapid population growth, particularly in the townships of Bowral, Mittagong and Moss Vale and with some growth in the smaller settlements of Bundanoon, Exeter and Burrawang (profile.id 2015).

The region continues to support a viable agricultural industry, including sheep and cattle grazing, fruit and vegetable growing and viticulture. Other important primary industries are mining and quarrying (WSC 2015b). In more recent years, the region has experienced strong growth in the services sector, and it is now a major employer.

4.3 Socio-economic profile

4.3.1 Population size, growth and future change

The Wingecarribee Shire has experienced population growth of 13.3% over the last decade, increasing from 42,272 in 2006 to 47,882 in 2016. This was somewhat slower than the NSW population growth of 14.2% over the same time period (ABS 2016b).

Based on NSW DPIE forecasts for 2016 to 2041, the Wingecarribee LGA is likely to experience continued population growth through to 2036, after which it is projected to begin decreasing slowly. It is estimated that there will be an additional 2,498 people living in the LGA by 2041 compared to 2016, which represents an increase of 5.1% (see Table 4.1). While the population of Wingecarribee Shire will grow, it is important to note that this will be much slower than the rate for NSW generally (36.7%) over the same period (DPIE 2019).

Table 4.1 Population forecasts for the Wingecarribee LGA

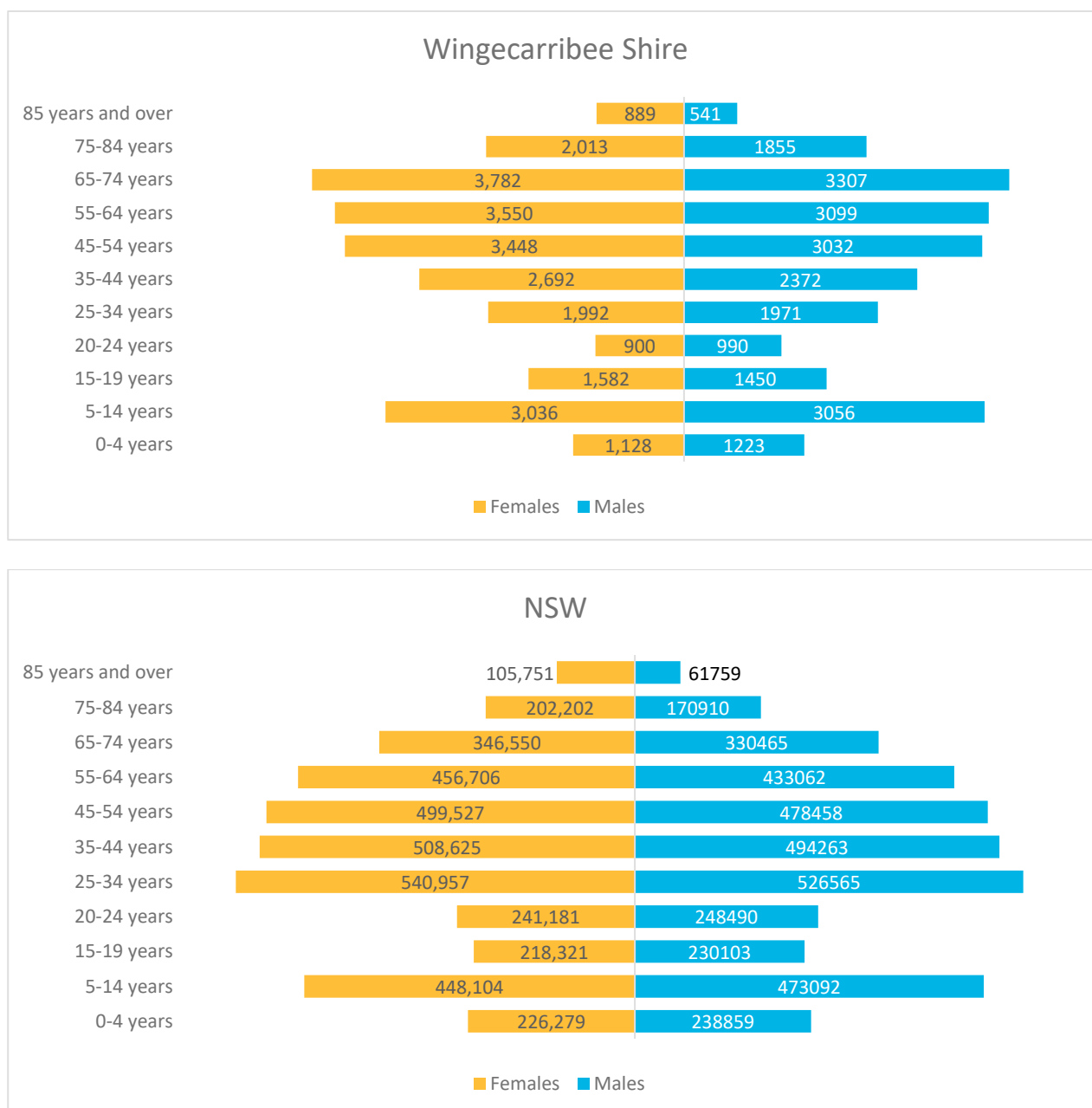
Year	Total population	Total population change	Average annual population growth
2016	48,998	-	-
2021	50,048	1,050	0.4%
2026	50,837	789	0.3%
2031	51,345	508	0.2%
2036	51,555	210	0.1%
2041	51,496	-59	-0.02%

Source: DPIE 2019.

4.3.2 Population structure and characteristics

The largest age cohort in the Wingecarribee LGA in 2016 was 65–74 years, representing 14.8% of the population, followed by 55–64 years (13.9%) and 45–54 years (13.5%) (see Figure 4.1). The 85 years and over age cohort experienced the greatest growth (69.0%) between 2006 and 2016, followed by the 65–74 years (68.5%) and those aged 75–84 years (53.1%). There was a significant decline in the proportion of the population aged 35–44 years (-12.4%), 0–4 years (-6.9%) and 5–14 years (-3.1%), as well as a slower increase in persons aged 25–34 years (8.0%) compared to the NSW (20%) (ABS 2016b). This is indicative of two trends, an ageing population and migration of working age people and their families to larger centres because of limited local employment opportunities.

In 2016, the population distribution between males and females in the Wingecarribee LGA was 47.8% and 52.2% respectively. This compares with 49.3% males and 50.7% females across NSW (ABS 2016a). This is probably due to the age profile of the population and longer life expectancies of women compared to men. The population distribution of Wingecarribee Shire compared to NSW is presented in Figure 4.1.



Source: ABS 2016a, *Census of Population and Housing: General Community Profiles*.

Figure 4.1 Population distribution of the Wingecarribee Shire and NSW, 2016

The Wingecarribee Shire population is older than the NSW average population. The LGA's median age increased from 42 to 47 between 2006 and 2016 compared with 37 to 38 across NSW. The Wingecarribee LGA also has a smaller proportion of people of a younger working age (25–34 years) compared with NSW (8.3% and 14.3% respectively) (ABS 2016b).

77.1% of the population in the Wingecarribee LGA was born in Australia compared with 65.5% across NSW. In addition, 2.0% of the Wingecarribee LGA population identified themselves as Aboriginal and/or Torres Strait Islander compared with 3.0% of the population of NSW (ABS 2016a).

4.3.3 Household structure

According to the 2016 Census, the average household size in the Wingecarribee LGA is 2.4 people. This is similar to the NSW average household size of 2.6 (ABS 2016a).

In 2016, the Wingecarribee LGA had a higher percentage of households containing couples with no children (47.1%) than NSW overall (36.6%). Conversely, the Wingecarribee LGA had a lower percentage of households with couple families (38.2%) than NSW (45.7%). There was a relatively similar proportion of one parent families between the Wingecarribee LGA (13.8%) and NSW (16.0%) (ABS 2016a).

Household and dwelling projection data predict there will be significant increases in lone person households (28.5%) and couple only households (21.5%) between 2016 and 2041 (see Table 4.2). Conversely, there will be a decrease in the number of households containing couples with children (-6.6%) (DPIE 2019).

Table 4.2 Household type projections within the Wingecarribee LGA

Household Type	2016	2021	2026	2031	2036	2041	% Change (2016–2041)
Couple only	6,824	7,384	7,831	8,102	8,221	8,292	21.5%
Couple with children	5,058	4,942	4,841	4,793	4,784	4,726	-6.6%
Single parent	1,853	1,862	1,872	1,898	1,933	1,939	4.7%
Multiple and Other family households	412	427	438	442	441	437	6.2%
Total family households	5,078	5,495	5,872	6,192	6,393	6,526	8.8%
Lone person	450	468	474	472	463	452	28.5%
Group	5,528	5,962	6,345	6,664	6,856	6,978	0.5%
Total non-family households	19,674	20,577	21,327	21,898	22,235	22,372	26.2%
Total	6,824	7,384	7,831	8,102	8,221	8,292	13.7%

Source: DPIE 2019.

4.3.4 Education and training

The Wingecarribee LGA is ranked the 101th most disadvantaged of 153 LGAs in NSW according to the Socio-Economic Indexes for Areas (SEIFA) Education and Occupation ranking (ABS 2016c), with a slightly smaller percentage of the population achieving Year 12 or equivalent (52.7%) compared to NSW (59.1%). However, the proportion of the Wingecarribee LGA population completing Year 12 increased by 10% between 2011 and 2016 (ABS 2011; ABS 2016a). The percentage of the population that achieved Year 10 or higher within the Wingecarribee LGA was higher (30.0%) than NSW (23.4%) as shown in Table 4.3 (ABS 2016a).

Table 4.3 **Highest year of school completed by people aged 15 years and over, 2016**

School year	Wingecarribee LGA (%)	NSW (%)
Year 12 or equivalent	52.7%	59.1%
Year 11 or equivalent	6.6%	5.3%
Year 10 or equivalent	30.0%	23.4%
Year 9 or equivalent	6.9%	6.0%
Year 8 or below	3.5%	5.0%
Did not go to school	0.3%	1.2%

Source: ABS 2016a, *Census of Population and Housing: General Community Profiles*.

Within the Wingecarribee LGA, 21.4% of adults have completed a bachelor level degree (see Table 4.4). This is lower than the NSW level of 26.3%, possibly suggesting that local people with higher educational qualifications must move to cities to find suitable employment. However, certificate level qualifications are higher in the Wingecarribee LGA (34.9%) compared with NSW (29.7%) (ABS 2016a).

Table 4.4 **Highest level of post-school educational attainment by people aged 15 years and over, 2016**

Level of educational attainment	Wingecarribee LGA	NSW
Postgraduate degree level	7.0%	9.3%
Graduate diploma and graduate certificate level	3.4%	2.8%
Bachelor degree level	21.4%	26.3%
Advanced diploma and diploma level	16.1%	14.6%
Certificate level	34.9%	29.7%

Source: ABS 2016a, *Census of Population and Housing: General Community Profiles*.

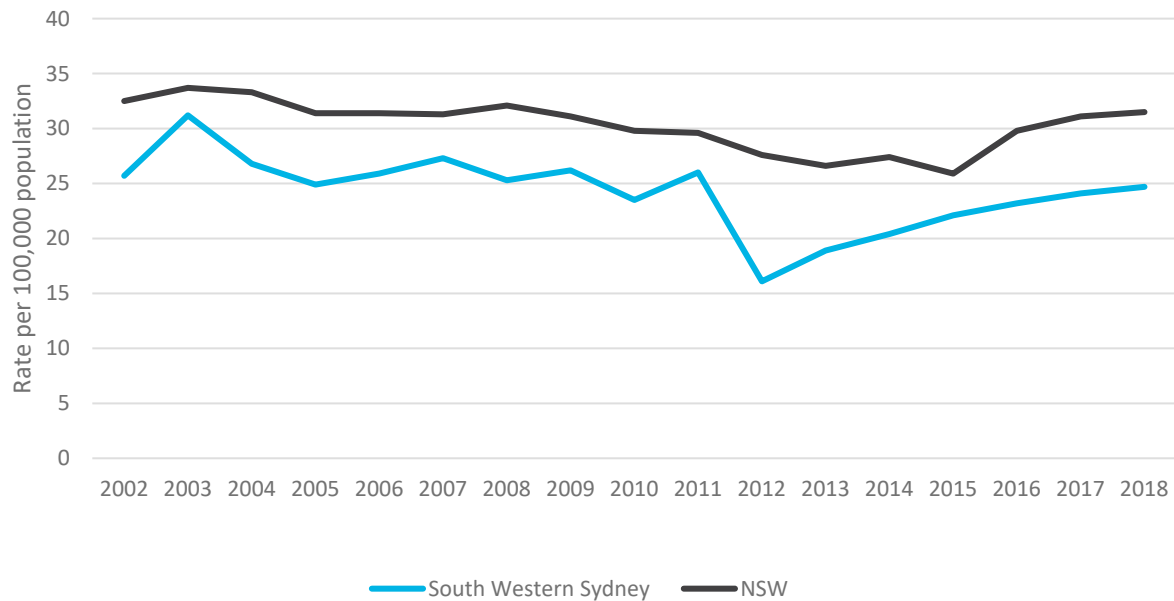
4.3.5 Community health and safety

i Physical health

The overall health characteristics of the Wingecarribee LGA population are generally consistent with NSW health outcomes. There are three major health risk factors that can be used as an indicator of population health: smoking, alcohol consumption and obesity.

The Wingecarribee LGA had a higher percentage of the population who consumed alcohol at levels considered to be a high risk to health² than NSW, at 22.2% and 16.7% respectively (PHIDU 2019). Trends were not available at the LGA level, however trend in relation to the number of people hospitalised as a result of alcohol consumption in the South Western Sydney Local Health District (LHD) is lower than the proportion seen across the state (see Figure 4.2).

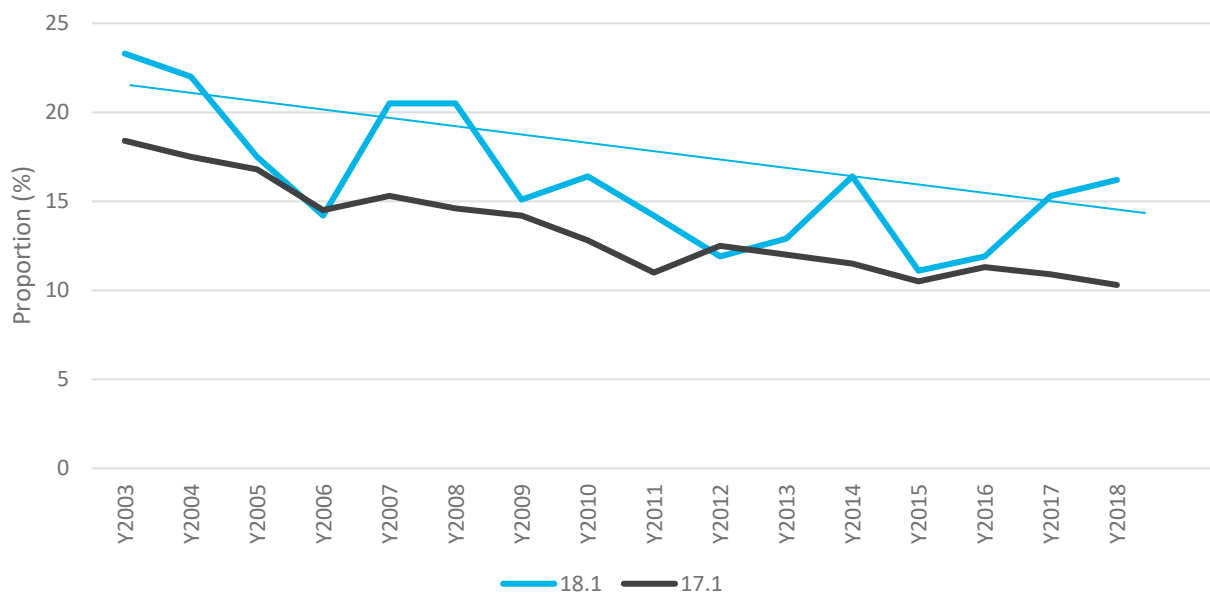
² High risk drinking is defined as the consumption of more than 2 standard drinks per day.



Source: Ministry of Health 2019, *NSW Population Health Survey (SAPHaRI)*.

Figure 4.2 Alcohol at levels posing a long-term health risk (people over 16)

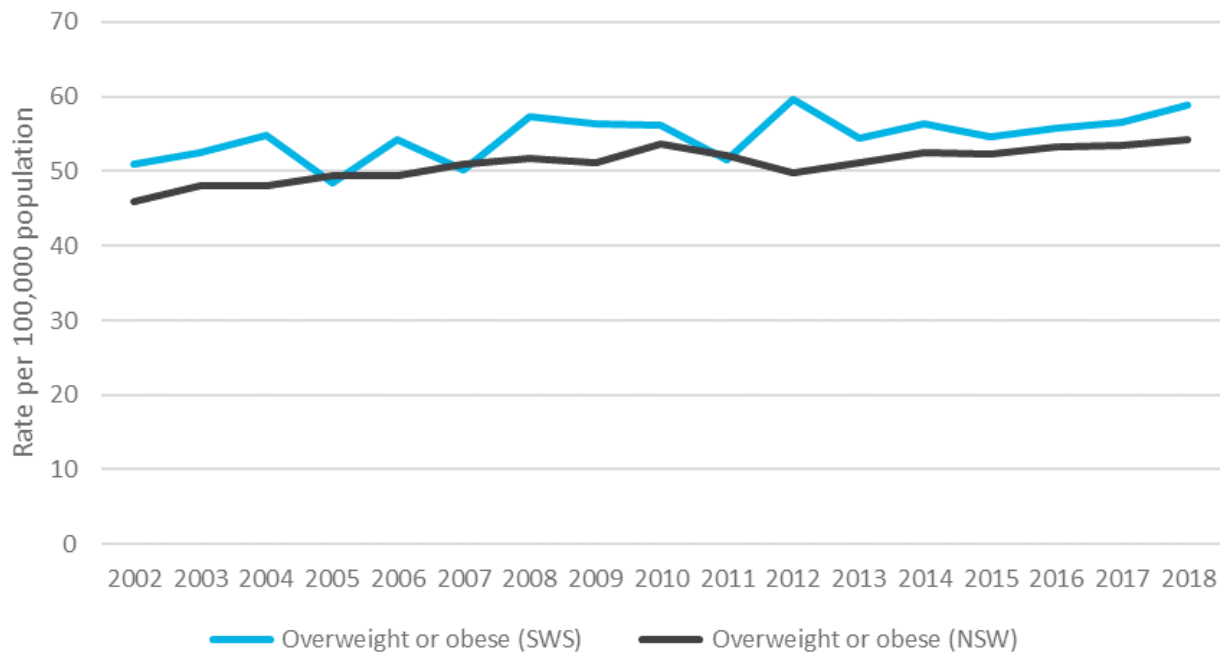
Persons who smoke were only slightly above average with 18.0% in the Wingecarribee LGA and 16.0% in NSW (PHIDU 2019). Trends were not available at the LGA level but were available at the LHD level. The results fluctuate at the LHD level, but the overarching trend reflects the results seen across NSW (see Figure 4.3).



Source: Ministry of Health 2019, *NSW Population Health Survey (SAPHaRI)*.

Figure 4.3 Proportion of the population that smoke daily (LHN)

There was a higher rate of obesity among the Wingecarribee LGA population (31.3%) compared with NSW (28.2%) (PHIDU 2019). Trends can be identified through self-reported data at the LHD level regarding people reporting as either overweight or obese. The data indicates that, whilst the South Western Sydney rates (per 100,000) are slightly above those seen throughout NSW, the overarching trend is like NSW (see Figure 4.4).



Source: Ministry of Health 2019, *NSW Population Health Survey (SAPHaRI)*.

Figure 4.4 Overweight or obese rates

Of the Wingecarribee LGA population, 12.1% aged over 15 years assessed themselves as having fair or poor health, compared with 14.3% of NSW (PHIDU 2019).

In 2016–17 the overall admission for total chronic conditions in Wingecarribee LGA was 895.3 per 100,000 which is significantly lower than for the whole of the South Western Sydney LHD at 1,287 per 100,000 which is indicative of a community with relatively good health (PHIDU 2019).

The percentage of the adult population with asthma in South Western Sydney LHD was lower and decreasing when compared to all LHD's. However, childhood asthma was higher in 2016 and 2018 in South Western Sydney LHD compared to all LHD's (Table 4.5). Those with asthma and other respiratory conditions are more vulnerable to effects of poor air quality. While there are slightly higher percentages of asthma among children it declines drastically in adulthood to lower than for all LHD's and the trend is showing a decline in the adult population.

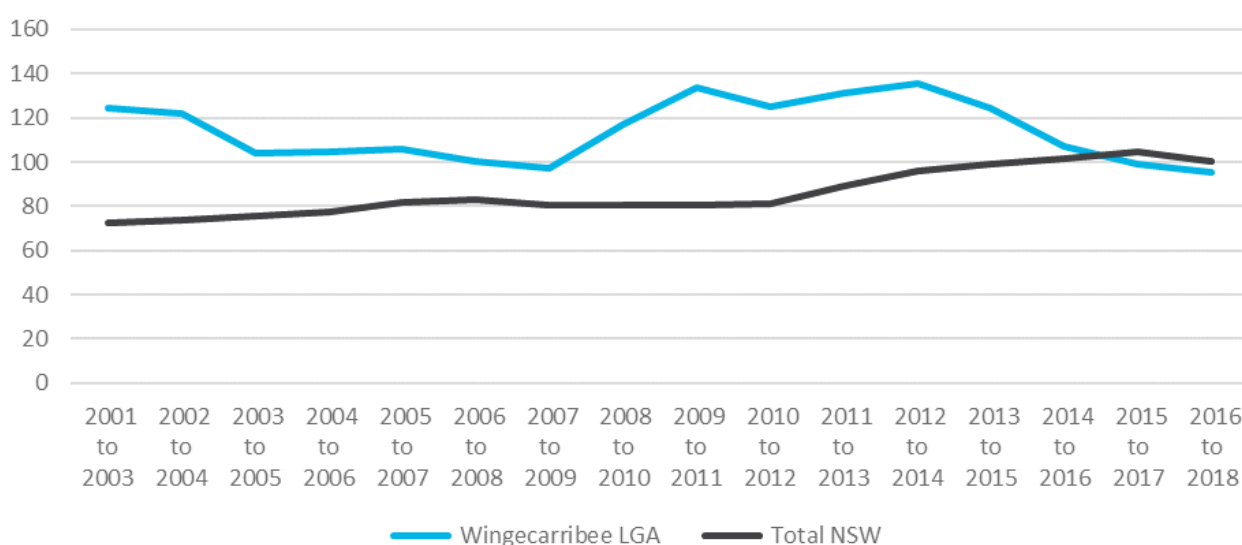
Table 4.5 Asthma by LHD

Date	South Western Sydney LHD		All LHD*	
	Adult (Aged 16 years and over)	Child (Aged 2—15 years)	Adult (Aged 16 years and over)	Child (Aged 2—15 years)
2011	10.2%	15.2%	11.3%	15.4%
2016	9.6%	18.6%	11.3%	12.2%
2018	8.2%	15.4%	10.5%	13.4%

Source: NSW Ministry of Health 2019, *NSW Population Health Survey (SAPHaRI)*.

ii Mental health

Data relating to the number of people that have been hospitalised as a result of self-harm is indicative of very poor and/or poorly managed mental health. Between 2007–2011, there was a steady increase in hospitalisation rates in relation to self-harm in the Wingecarribee LGA, the majority of which were females. After this peak, rates remained relatively steady between 2009–2014. Since 2014 rates have steadily decreased and have returned to the rates seen across NSW.



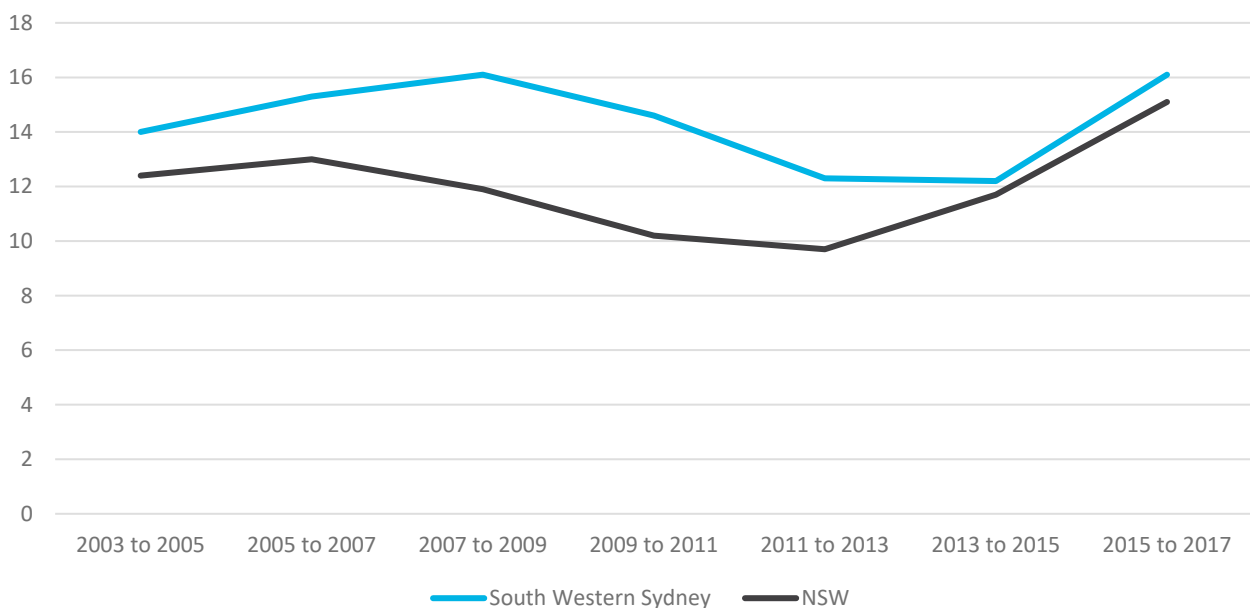
Source: Ministry of Health 2019, NSW Combined Admitted Patient Epidemiology Data and ABS population estimates (SAPHaRI).

Figure 4.5 Self-harm related hospitalisations (per 100,000)

In addition, data is collected by NSW Health regarding the level of psychological distress using the Kessler 10 (K10) approach. This approach uses a 10-item questionnaire that measures anxiety, depression, agitation, and psychological fatigue in the most recent 4-week period and has been adopted by NSW Health as an indicator of mental health.

PHIDU (2019) reports the proportion of people with high or very high psychological distress based on the K10 Scale to be 9.6% in Wingecarribee LGA and 11.0% in NSW. The trend data is only available at the LHD level and indicates that between 2007–2011, levels of psychological distress rated between high and very high in the South Western Sydney LHD were higher than those seen across NSW. Then between 2011–2015, the levels of distress rated as high or very high remained steady and between 2015–2017 the levels of psychological distress rated as high or very high were in line with rates seen throughout NSW (see Figure 4.6 for more detail).

While the results indicate an increased prevalence of mental health in the Wingecarribee LGA population the trends are in line with the mental health data for NSW. Therefore, there is no evidence to suggest there is a correlation between the residents increased awareness of the Project and the increased prevalence or severity of their mental health.



Source: Ministry of Health. 2019, NSW Population Health Survey (SAPHaRI).

Figure 4.6 Psychological distress by Kessler 10 categories (LHN)

Mental health was raised in submissions on the Project as an issue; primarily in relation to suggestions that the proposed project has caused an increase in stress and anxiety in the community. Accordingly, several indicators have been explored to understand the mental health of the community.

The data does not indicate any significant increases in mental health indicators specific to the Wingecarribee LGA relative to Sydney or NSW and some indicators suggest the mental health of the Wingecarribee LGA has decreased. There is nothing to indicate a causal relationship between the introduction of the Project and/or the community's awareness of the Project and diminishing mental health amongst the population.

4.3.6 Safety

The NSW Adult Population Health Survey in 2009 assessed social capital in the Wingecarribee LGA. Social capital is described as features of social relationships within a group or community and includes such things as the extent of trust between people and how they care for others (Ministry of Health 2014). The survey assessed a range of social capital indicators that are summarised in Table 4.6. Unfortunately, social capital was removed from the survey in 2009 and as such cannot be tracked over time.

Table 4.6 Social capital for persons aged 16 years and over

Social indicator	Wingecarribee (%)	NSW (%)
Most people can be trusted	73.4	71.3
Feels safe walking down their street after dark	81.1	72.4
Area has a reputation for being a safe place	86.6	75.7
Visited neighbours in the last week	73.5	61.8
Ran into friends and acquaintances when shopping in local area	84.5	82
Would feel sad to leave their neighbourhood	82.4	73.4

Source: Ministry of Health 2014.

Compared with NSW, the Wingecarribee LGA has strong social capital, indicating the local community feels relatively secure within their environment.

WSC has developed a Community Safety and Crime Prevention Plan (2015-2020) in consultation with the local community to ensure it remains a safe place to live, work and visit. The top five priority issues identified by the community were:

- speeding, noisy, or dangerous driving;
- illegal drugs;
- stealing from motor vehicles;
- drink driving; and
- graffiti and vandalism (WSC 2015c).

It is important to consider both real and perceived issues related to crime as these can influence peoples' wellbeing.

In the Wingecarribee LGA from 2014–2018, there was a significant decline in stealing from dwelling (-20.0%), break and enter of dwelling (-15.9%), stealing from motor vehicle (-12.6%), and domestic violence related assault (-7.4%). However, there was a significant increase in fraud (11.5%). For all other major criminal offences, the rate of incidence remained stable over the same period (BOCSAR 2019).

In 2018, there were 158 vehicle crashes in the Wingecarribee LGA, resulting in the death or injury of 133 people. This represented 0.7% of total crashes across NSW. Although this number is consistent with the number of crashes in 2017 (159), there has been a decline in total number of crashes and casualties from 2014 (249 and 191 respectively) (Transport for NSW 2019).

4.3.7 Workforce and occupation structure

In June 2019, the unemployment rate in the Wingecarribee LGA was 2.7% compared with 4.4% for NSW as shown in Table 4.7. The unemployment rate in the Wingecarribee LGA gradually increased from March 2017 to September 2018. Since then, it has been decreasing. The unemployment rate for Wingecarribee LGA has consistently remained below the unemployment rate for NSW throughout this time.

Table 4.7 Unemployment rates, 2017 – 2019

Area	Mar 2017	Jun 2017	Sep 2017	Dec 2017	Mar 2018	Jun 2018	Sep 2018	Dec 2018	Mar 2019	Jun 2019
Wingecarribee LGA	3.0%	3.0%	3.0%	3.1%	3.4%	3.3%	3.0%	2.4%	2.1%	2.7%
NSW	5.0%	4.8%	4.8%	4.8%	4.9%	4.8%	4.8%	4.7%	4.5%	4.4%

Source: Department of Employment, Skills, Small and Family Business 2019.

At the time of the 2016 Census, the unemployment rate in Wingecarribee LGA was 3.8%, compared to 6.3% for NSW. The youth unemployment rate was also much lower than the NSW average (10.0% and 16.1% respectively). The labour force participation rate for persons aged 15 to 85 years was slightly lower in Wingecarribee LGA at 54.3% compared to the NSW rate of 59.2%. 56.1% of employed persons in the Wingecarribee LGA worked full-time, while 35.6% worked part time (ABS 2016a).

The main industries of employment in the Wingecarribee LGA are health care and social assistance (12.5%), construction (10.0%), and retail trade (9.7%), with the mining industry employing 1.1% of employed persons. Employment in mining increased by 39.3% between 2006 and 2016, with a 22.0% increase between 2011 and 2016. From 2011 to 2016, there was also significant growth in employment in construction (25.2%), administrative and support services (25.0%), and other services (18.5%). Employment declined in manufacturing (-25.9%), wholesale trade (-21.7%), and retail trade (-11.2%) (ABS 2016a).

The most common occupations in the Wingecarribee LGA are professionals (20.2%), technicians and trade workers (16.0%) and managers (14.5%). There was a significant increase in community and personal service workers (14.6%), sales workers (9.8%) and labourers (9.4%) between 2011 and 2016 (ABS 2016a).

In 2011, 22.5% of the Wingecarribee LGA population indicated they participated in voluntary work for an organisation or group compared with 16.9% of the NSW population. By 2016, the percentage of people aged 15 years and over who participated in voluntary work increased to 23.5% in Wingecarribee LGA (ABS 2016a), indicating an increasingly well-connected and networked community contributing to high levels of social capital.

4.3.8 Income and cost of living

Median household incomes in the Wingecarribee LGA increased by 22.1% from 2011 to 2016. This was slightly higher than the increase for NSW, which experienced 20.2% growth. Median weekly household incomes in the Wingecarribee LGA (\$1,335) were below the NSW median (\$1,482) (ABS 2016b). However, fewer families (5.9%) in the Wingecarribee LGA are low-income and welfare dependent compared with 8.8% of families across NSW (PHIDU 2019). In addition, 3.0% of the Wingecarribee LGA population receives unemployment benefits and 2.5% are long-term unemployment beneficiaries. This is lower than NSW in which 4.5% of the population receive unemployment benefits and 3.8% are long-term unemployment beneficiaries (PHIDU 2019).

Housing in the Wingecarribee LGA is relatively affordable. The median weekly rent (\$350) was lower than that for NSW (\$380) and surrounding LGAs, including Wollondilly (\$365) and Kiama (\$388) (ABS 2016a). In Wingecarribee LGA in 2016, 21.7% of households in the bottom 40% of income distribution were under financial stress from mortgage and/or rent repayments. Additionally, 2.4% of people rent their homes from housing authorities. This compares with 29.3% of low-income households under financial stress from mortgage or rent and 3.7% of persons living in social housing in NSW (PHIDU 2019).

4.3.9 Business and economy

In 2018, there were 5,595 businesses in the Wingecarribee LGA. This represents a total increase of 329 businesses from 2016. The industry with the greatest increase in the number of businesses from 2016 to 2018 was construction, with an increase of 113 businesses. The professional, scientific and technical industry also experienced a significant increase of 50 businesses. The industries with a decreased number of businesses were retail trade (-10), arts and recreation services (-7), public administration (-5), and information media and telecommunications (-2) (ABS 2019b).

Of the total number of businesses in the Wingecarribee LGA, 17.3% were in construction; 13.5% in professional scientific and technical services; 10.0% in agriculture, forestry and fishing; and 9.7% in rental, hiring and real estate services (ABS 2019b) (see Table 4.8).

Table 4.8 Business distribution by industry in the Wingecarribee LGA

Business type	Percentage of total businesses in the Wingecarribee LGA
Agriculture, Forestry and Fishing	10.0%
Mining	0.2%
Manufacturing	4.1%
Electricity, Gas, Water and Waste Services	0.3%
Construction	17.3%
Wholesale Trade	3.4%
Retail Trade	6.5%
Accommodation and Food Services	4.1%
Transport, Postal and Warehousing	4.4%
Information Media and Telecommunications	1.0%
Financial and Insurance Services	8.2%
Rental, Hiring and Real Estate Services	9.7%
Professional, Scientific and Technical Services	13.5%
Administrative and Support Services	4.3%
Public Administration and Safety	0.3%
Education and Training	1.4%
Health Care and Social Assistance	5.2%
Arts and Recreation Services	1.6%
Other services	3.6%
Total (number)	5,595

Source: ABS 2019b, 8165.0 – Counts of Australian Businesses, including Entries and Exits, June 2014 to June 2018.

4.3.10 Community infrastructure

i Childcare

There are 30 childcare service providers in the Wingecarribee LGA (see Table 4.9). Of these, 29 provide centre-based care and 1 is a family day care scheme. The services include long day care, preschool, and outside of school hours care (OSHC).

Table 4.9 Childcare services in the Wingecarribee LGA

Location	Name	Type	Service	Capacity
Bowral	Aurora Out of School Hours Care	Centre-based care	OSHC	45
	Bambinos Kindergarten Bowral	Centre-based care	Long day care/OSHC	59
	Bambinos Kindergarten Bowral St	Centre-based care	Long day care	30
	Bowral Street Childcare	Centre-based care	Long day care	36
	Camp Australia - Bowral Public School OSHC	Centre-based care	OSHC	60
	Gumnut Bowral Memorial Preschool	Centre-based care	Preschool	40
	Kamalei Children's Centre	Centre-based care	Long day care	30
	Kamalei Children's Centre ELC	Centre-based care	Long day care	44
	Little Peoples Early Learning Centre Bowral	Centre-based care	Long day care	48
	Mount Gibraltar Preschool	Centre-based care	Long day care/OSHC	29
	Wingecarribee Family Day Care	Family day care	Long day care	Maximum 25 educators employed/engaged by service
Bundanoon	Bundanoon District Community Preschool	Centre-based care	Preschool	86
Colo Vale	Northern Villages OOSH	Centre-based care	OSHC	24
	Theaslea Preschool	Centre-based care	Long day care	26
Hill Top	The Kinder Garden Hill Top	Centre-based care	Long day care	40

Table 4.9 **Childcare services in the Wingecarribee LGA**

Location	Name	Type	Service	Capacity
Mittagong	Best Kidz Early Learning Centre Southern Highlands	Centre-based care	Long day care	39
	Explorers Learning Academy	Centre-based care	Long day care	53
	Gib Gate	Centre-based care	Preschool	36
	Mittagong Early Learning Centre	Centre-based care	Long day care/OSHC	29
	Mittagong Pre-school Kindergarten	Centre-based care	Preschool	40
	QCE Child Care	Centre-based care	Long day care	55
	Wingecarribee Out of School Hours Service	Centre-based care	OSHC	45
Moss Vale	KU - Donking Memorial Preschool	Centre-based care	Preschool	40
	KU Moss Vale Children's Centre	Centre-based care	Long day care	52
	Mossvale Out of School Hours	Centre-based care	OSHC	70
	Rainbow Kindy Moss Vale	Centre-based care	Long day care	32
	Southern Highlands Early Childhood Centre	Centre-based care	Long day care	46
	Wembley Road Preschool	Centre-based care	Long day care	50
Renwick	The Kinder Garden Renwick	Centre-based care	Long day care	63
Robertson	Robertson Community Preschool	Centre-based care	Preschool	31

Source: ACECQA 2020.

ii Education

a Primary and secondary schools

There are 19 government and 11 non-government schools in the Wingecarribee LGA. Of these, 21 are primary schools, 5 are secondary schools, 2 are combined schools, and 2 are special schools. In 2018, there were 7495 students enrolled in these schools and approximately 622 FTE teaching staff (ACARA 2019). The schools in the Wingecarribee LGA are presented in Table 4.10.

Table 4.10 Schools in the Wingecarribee LGA

Location	School	Sector	Type	Year range	Student enrolments	FTE teaching staff
Avoca	Avoca Public School	Government	Primary	K-6	14	1.3
Berrima	Berrima Public School	Government	Primary	K-6	145	7.5
Bowral	Aurora Southern Highlands Steiner School	Non-government	Primary	K-6	62	6.4
	Bowral High School	Government	Secondary	U, 7-12	798	60.6
	Bowral Public School	Government	Primary	K-6	591	31.6
	Southern Highlands Christian School	Non-government	Combined	K-12	365	30.3
	St Thomas Aquinas Primary School	Non-government	Primary	K	376	21.9
Bundanoon	Bundanoon Public School	Government	Primary	K-6	158	9.8
Burradoo	Chevalier College	Non-government	Secondary	7-12	991	83
	Oxley College	Non-government	Combined	K-12	677	59.4
Burrawang	Burrawang Public School	Government	Primary	K-6	29	2.5
Colo Vale	Colo Vale Public School	Government	Primary	K-6	203	12.7
Exeter	Exeter Public School	Government	Primary	K-6	140	7.5
Glenquarry	Glenquarry Public School	Government	Primary	K-6	31	2.5
Hill Top	Hill Top Public School	Government	Primary	K-6	152	9
Kangaloon	Kangaloon Public School	Government	Primary	K-6	30	2.5
Mittagong	Frensham School	Non-government	Secondary	7-12	342 ¹	38.6
	Gib Gate School	Non-government	Primary	K-6	140	12
	Highlands School	Government	Special	U	37	8.9
	Mittagong Public School	Government	Primary	U, K-6	574	34.6
	St Michael's Catholic Primary School	Non-government	Primary	K-6	175	10.3

Table 4.10 Schools in the Wingecarribee LGA

Location	School	Sector	Type	Year range	Student enrolments	FTE teaching staff
Moss Vale	Tangara School	Government	Special	U	32	6.9
	Moss Vale High School	Government	Secondary	U, 7-12	647	54.9
	Moss Vale Public School	Government	Primary	U, K-6	517	38.8
	St Paul's Catholic Primary School	Non-government	Primary	K-6	154	11.3
	St Paul's International College	Non-government	Secondary	7-12	162	31.2
	The King's School, Tudor House	Non-government	Primary	K-6	115	13.2
Penrose	Penrose Public School	Government	Primary	K-6	11	1.3
Robertson	Robertson Public School	Government	Primary	K-6	143	8.8
Wingello	Wingello Public School	Government	Primary	K-6	26	2.6
Total					7495	621.9

Source: ACARA 2019.

Note: 'U' refers to students and/or classes who cannot readily be allocated to a specific year of education, for example, students with special education needs.

b Tertiary education

There are two tertiary education institutions in the Wingecarribee LGA. Technical and Further Education (TAFE) Illawarra has a campus in Moss Vale that provides vocational education and training leading to certificates and diplomas. The Southern Highlands Campus of the University of Wollongong is also in Moss Vale and offers degrees in humanities and business.

iii Health services

The Wingecarribee Shire is within the South Western Sydney Local Health District.

The South Western Sydney Local Health District (LHD) looks after all public hospitals and healthcare facilities provisions in south western Sydney, which covers a population of approximately 966,450 people from Bankstown to Bowral. The District also operates 14 major health centres providing prevention, early intervention and community-based treatment, palliative care and rehabilitation services. The public hospital services within the SWSLHD are:

- Bankstown-Lidcombe;
- Bowral & District;
- Camden;

- Campbelltown;
- Fairfield; and
- Liverpool

The closest public hospital service to the study area is Bowral & District Hospital. It is a major rural hospital provides a wide range of services, including general medical, obstetrics and gynaecology, paediatric, surgical, orthopaedics, ophthalmology, geriatric and emergency services.

There are 91 beds in the Bowral & District Hospital. The number of patients admitted to Bowral & District Hospital have decreased from 2012-2013 to 2016-2017, as shown in Table 4.11. Childbirth numbers have remained relatively stable from 2012 to 2017, while there has been a significant reduction in mental health related admissions from 47 to less than 5 from 2012 to 2017.

Table 4.11 Number of admissions to Bowral & District Hospital

Admissions category	2012–2013	2013–2014	2014–2015	2015–2016	2016–2017
Childbirth	456	483	410	400	463
Surgical (emergency)	314	397	356	370	364
Surgical (non-emergency)	1,453	1,557	1,586	1,633	1,642
Medical (emergency)	4,490	3,982	3,905	3,916	3,695
Medical (non-emergency)	618	586	580	624	688
Other acute (emergency)	86	85	82	94	83
Other acute (non-emergency)	652	637	702	715	620
Mental health	47	48	28	19	<5
Rehabilitation	22	28	27	25	16
Palliative	<5	<5	5	7	5
Other subacute and non-acute	26	28	28	50	59
Total	8164	7831	7709	7853	7635

Source: AIHW 2019.

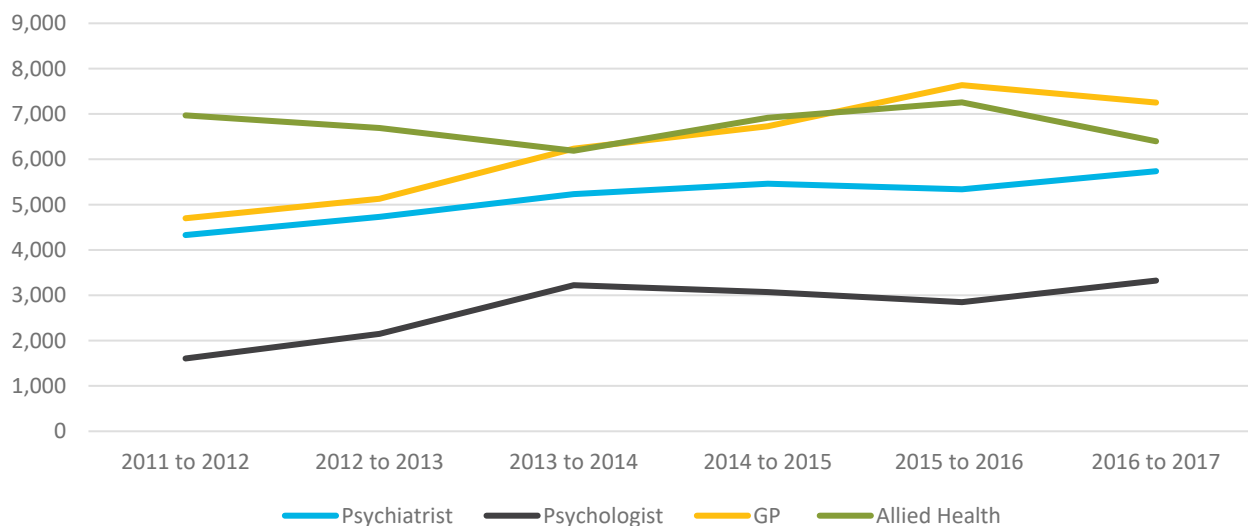
Southern Highlands Private Hospital is co-located with Bowral and District Hospital and has 73 beds. It provides a range of day surgery services, oncology treatments, rehabilitation, palliative, physiotherapy, hydrotherapy, occupational therapy, dietetics, speech therapy and clinical psychology services.

The 78 practising doctors in the LGA (PHIDU 2015) provide a service ratio of 169.1 doctors per 100,000 people. In comparison, there is a GP service rate of 113 doctors per 100,000 people in NSW (PHIDU 2015). The Australian Medical Workforce Advisory Committee recommends one GP per 950 people and Wingecarribee LGA is well serviced with 1.6 GPs per 950 people.

In 2011, there were 40 specialist medical practitioners in the Wingecarribee LGA (PHIDU 2015). This equates to 86.4 specialist practitioners per 100,000 people. Comparatively, NSW had a service rate of 123.1 specialist medical practitioners per 100,000 people (PHIDU 2015). Other services available in the LGA include 19 dental practices, eight physiotherapy practices and six optometry practices. In addition, specialist medical doctors in fields varying from neurology to ear, nose and throat surgery practice in the shire. Many such specialists split their practice between the Southern Highlands and Sydney.

There were two key factors contributing to access to services is their ability to get to the location or service, therefore transport, and cost of the services. In 2014 the estimated number of people aged 18 years and over who experienced a barrier to accessing healthcare when they needed it due to the cost of service was significantly lower in Wingecarribee LGA (1.6 per 100) compared to the South Western Sydney PHN (2.8 per 100) (PHIDU 2019). In relation to the cost of the service, 1.6 per 100 of people aged 18 years and over in Wingecarribee LGA reported this as a barrier to access compared to 2.8 per 100 in South West Sydney (South Western Sydney PHN 2019). This indicates that Wingecarribee LGA has adequate health services that are accessible both in terms of cost of service and the community's ability to access these services.

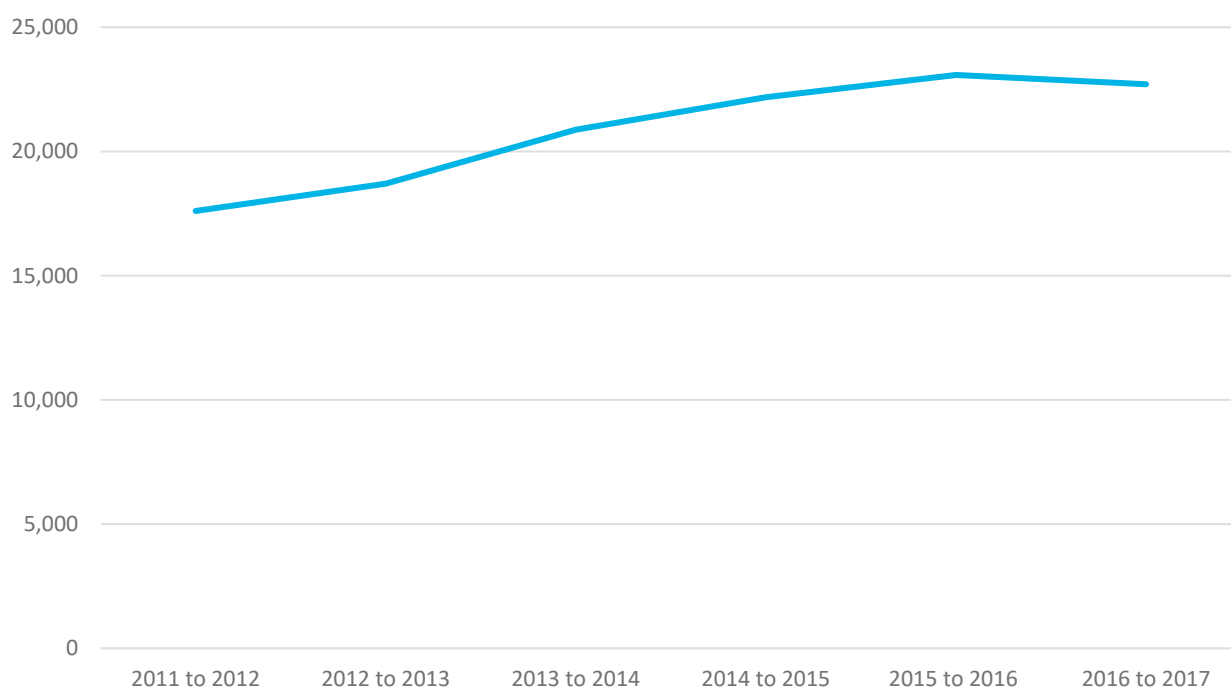
More detail regarding the level of service provided is also included in the Medicare Benefits Scheme (MBS) mental health data. This can be used as an indicator of the severity of mental health experienced. The data indicates that psychiatric services steadily increased between 2011–2015 and remained relatively steady between 2015–2017; psychological services increased between 2011–2014 and remained relatively steady between 2014–2017; GP services increased between 2011–2015 then decreased slightly between 2015–2017; demand for allied health services has remained relatively steady with slight variations across years (see Figure 4.7).



Source: MBS 2018, *Mental Health Data*.

Figure 4.7 Total number of mental health services delivered by service type (Southern Highlands)

As demonstrated in Figure 4.8, the number of mental health related services provided steadily increased between 2011 and 2016 and slightly decreased between 2016 and 2017.



Source: MBS 2018, *Mental Health Data*.

Figure 4.8 Total number of mental health related services provided (Southern Highlands)

iv Sporting and recreation facilities

The Wingecarribee LGA encompasses numerous sporting and recreational facilities. These include, but are not limited to: parks, sporting grounds, sports facilities, and various sport and recreational clubs. The sporting and recreational facilities within the Wingecarribee LGA are presented in Table 4.12.

Table 4.12 Sporting and recreational facilities

Facilities	Number
Parks facilities	
Parks	58
Reserves	13
Ovals	10
Gardens	3
Camping grounds	12
Collections of walking trails/paths	12
Lookouts	6

Table 4.13 **Sporting and recreational facilities**

Facilities	Number
Sporting facilities	
Sports fields	22
Golf courses	5
Cricket grounds	14
Aquatic centres	4
Collections of tennis courts	9 (>24 total)
Soccer pitches	14
Skate parks	4
Basketball courts	8
Rugby pitches	5
Hockey fields	3
Squash courts	2
Croquet	1
Gymnastics centre	2
Velodrome	1
Cycling paths	2
Equestrian centres	12
Showgrounds	1
Bowling clubs	3
Sailing club	1

Source: WSC Online Customer Service Centre 2020a; Google Maps 2020.

v **Community and cultural facilities**

There are a wide range of community and cultural facilities within the study area, including various centres, clubs, and associations, amongst others. Table 4.14 identifies the existing number of selected community and cultural facilities operating within the Wingecarribee LGA.

Table 4.14 **Community and cultural facilities**

Facilities	Number
Community facilities	
Libraries	4
Community centres	9
Halls	17
Indigenous community centres	1

Table 4.14 Community and cultural facilities

Facilities	Number
Youth centres (including PCYC)	4
Senior centres	5
Returned Service Leagues (RSL) and services clubs	3
Country Women's Associations	6
Guides/scouts groups and units	9
Arts facilities	
Arts centres/galleries/studios	15
Theatres/performing arts centres	4
Cinema	1
Cultural facilities	
Indigenous cultural centres	2
Indigenous cultural sites and objects in vicinity of Council-managed land or roadside reserves	86
Museums/historical sites	14
Visitor/tourist centres	3

Source: WSC Online Customer Service Centre 2020a; Google Maps 2020.

vi Emergency services

a. State emergency services

The Wingecarribee LGA falls within the Illawarra South Coast State Emergency Services (SES) region. The regional headquarters is in Wollongong and coordinates all local SES units within the region. The Wingecarribee SES unit is in Mittagong.

b. NSW police

The Wingecarribee LGA has four police stations in Bowral, Moss Vale, Robertson and Bundanoon that fall within the Hume Local Area Command.

c. Fire and Rescue NSW

Fire and Rescue NSW is the NSW government agency responsible for fire, rescue and hazmat services across NSW. Fire and Rescue NSW has stations in Bundanoon, Bowral, Mittagong and Moss Vale. The stations at Bundanoon, Bowral and Mittagong have staff on call for firefighting purposes in the case of emergency incidents. The Bowral station is staffed by both permanent and on call employees.

d. NSW Rural Fire Service

The NSW Rural Fire Service (RFS) is a volunteer fire service providing fire and emergency services to 95% of NSW and have 21 fire brigades in the Wingecarribee LGA.

e. NSW Ambulance Service

The NSW Government provides an Ambulance Service that delivers clinical care and health-related transport services to NSW in emergencies and non-emergencies. The Wingecarribee LGA is within the Southern Western Sydney Zone 1 (Metropolitan Division) and has three ambulance stations at Bowral, Canyonleigh and Bundanoon. The Bowral ambulance station has full-time staff, while the Canyonleigh and Bundanoon stations are staffed by volunteers.

vii Women's services and programs

Services and programs for women in the Wingecarribee LGA include:

- Wingecarribee community health centre: a NSW Government funded service in Bowral that provides a range of community health services, including women's health services, sexual assault counselling, and family health services.
- Wingecarribee family abuse prevention centre: a NSW Government funded domestic violence service in Moss Vale. The service is run by YWCA NSW to support women in crisis through providing information, advocacy, referral and community education.
- Highlands community centre: an independent community organisation supported by the WSC that provides information and referral to community crises services, advocacy, emergency relief, free tax help and legal aid referral and community development.
- Women's Domestic Violence Court Advocacy Service: an independent service for women and children seeking information about protection from domestic violence and accessing support services. There are 28 services across NSW, including one in Moss Vale.
- Pathways Southern Highlands: a St Vincent de Paul program for single women and women 18 years and over with children in the Wingecarribee LGA who are homeless or are at risk of being homeless. Of priority are women and children who have experienced domestic violence.

viii Aboriginal services

There is a diverse range of services and programs for Aboriginal groups in the Wingecarribee LGA. Many of these programs are run with WSC. Some key groups include:

- Aboriginal community and cultural centre: funded by WSC for the local Aboriginal community to use. The centre is in Mittagong and includes a hall and theatre.
- Tharawal GP clinic: the Tharawal Aboriginal Corporation provide a visiting Aboriginal GP service every Tuesday at the Tharawal clinic within Bowral and Districts Hospital.
- The Mob walking group: a walking group for the community that meets weekly at the Tharawal Clinic at Bowral Hospital.
- Springwater Tots Aboriginal supported playgroup: a playgroup for children aged 0–5 that includes social and cultural connections and allows parents to network.
- Yamanda Aboriginal Association: a group of community representatives responsible for managing the Wingecarribee Shire Council's Aboriginal community and cultural centre.

- Wingecarribee Aboriginal cluster group: a local group that hosts community events, such as the Wingecarribee Aboriginal Community services expo and family fun day.
- Koori Kulcha experience: Indigenous education and cultural program that provides training and workshops to local Indigenous people and educational programs for school-aged children.

ix Youth services

A range of government and non-government facilities available for local adolescents to use in the Wingecarribee Shire include:

- Mittagong youth and recreation centre: comprises a sports hall, gymnastics hall, shooting gallery and kitchenette and is available for hire from WSC.
- Loseby Park hall and youth hub: comprises a hall with table tennis and kitchenette, a youth hub with a media hub, café kitchen and pool lounge, and a kit home. The hall and youth hub is available for hire from WSC.
- Youth radio: a local radio station run by young people.
- Southern Highlands Youth Arts Council: a non-profit, volunteer organisation providing children and young people with opportunities to participate in the arts.
- Argyle housing: a not-for-profit community housing program providing housing for people on low to moderate incomes.
- Bowral youth refuge: a specialist homeless service for adolescents aged between 14 and 18. The service operates 24 hours a day, is provided by St Vincent de Paul and has free counselling support for young people.
- Highlands Youth Hub: established by the Highlands Community Centres and run with WSC's support, the hub provides information to adolescents in the local area and runs a number of programs and events throughout the year.
- Mittagong medical centre: bulk bills all services for young people under the age of 16.
- Young parent project: run by the Wingecarribee family support in Bowral; the service provides prenatal classes for young parents under the age of 23.

x Men's services

There are Men's Sheds in Moss Vale, Bowral and other Southern Highlands locations.

xi Transport

a Road

Road vehicles are the major form of transportation in the region. The Wingecarribee LGA is bisected by the Hume Highway, which links Sydney and Canberra. The Illawarra Highway also links the Wingecarribee region to Wollongong and the Illawarra. Other major roads in the Wingecarribee LGA are the Old Hume Highway, Moss Vale/Bowral/Mittagong Roads, Nowra Road, Kangaloon Road and Sheepwash Road.

These are all classified roads partially managed by RMS. There are also regionally and locally significant roads in the area under the jurisdiction of WSC.

Daily coach services run between Sydney and Canberra via the Southern Highlands. NSW TrainLink also provides a regional coach service between Wollongong and Robertson, Burrawang, Bowral, Moss Vale, Exeter and Bundanoon.

Within the Wingecarribee LGA, Berrima Buslines provides a town bus service and a rural village service. These services run daily within and between towns in the LGA. Berrima Buslines also provides a school bus service during school terms in the Wingecarribee LGA.

Southern Highlands Community transport provides transport services for the elderly, disabled and disadvantaged. The service runs Monday to Friday and transports passengers to medical appointments, social outings and local shopping centres.

The Southern Highlands taxi service also provides coach and taxi services within the Wingecarribee LGA.

At present, there are dedicated on-road bicycle facilities in the main centres within the Wingecarribee LGA. WSC has also received funds from RMS to develop a bicycle strategy so that rural towns and villages across the LGA can be better linked.

People in the Wingecarribee LGA rely heavily on private road transport. For example, 71.6% of the population travel to work by car, either as the driver or passenger compared with 64.6% of NSW who travel to work by car (ABS 2016a). In addition, just 3.6% of homes in the Wingecarribee LGA are occupied by people who do not own a motor vehicle, 33.5% own one vehicle and 59.3% own two or more vehicles. In comparison, 9.2% of dwellings in NSW do not own a motor vehicle, 36.3% own one motor vehicle and 50.8% own two or more vehicles (ABS 2016a).

b Rail

NSW TrainLink provides rail services between Sydney and Mittagong, Bowral, Moss Vale and Bundanoon daily. Sydney Trains also provides daily services between Sydney and Yerrinbool Mittagong, Bowral, Burradoo, Moss Vale, Exeter, Bundanoon, Penrose and Wingello.

East Coast Heritage Rail also operate scheduled train services approximately every two months from Sydney to Moss Vale, along the Illawarra Line to Unanderra before continuing up the Illawarra Escarpment to the Summit Tank and then on to Robertson and Moss Vale (East Coast Heritage Rail 2020).

c Air

Sydney Airport is the closest main airport to the Wingecarribee LGA. Several coach services and train services provide transport between the Wingecarribee LGA and the airport. A smaller airfield is located at Mittagong, which is used by the Berrima District Aero Club for chartered flights only.

In addition, Shellharbour airport at Albion Park Rail offers flights through Fly Corporate shuttling people to and from major cities of:

- Melbourne;
- Brisbane; and
- Sydney.

Other destinations that Fly Corporate offer include Armidale, Dubbo, Inverell, Narrabri, Orange, Biloela, Tamworth and Wollongong (Fly Corporate 2020).

4.3.11 Housing supply

i Existing supply and ownership

In 2016, there were 20,546 private dwellings in the Wingecarribee LGA (ABS 2016a). There were very low levels of housing diversity among these dwellings, with separate houses comprising 90.7% of total private dwellings, compared with 66.4% in NSW. A small percentage (1.8%) of the total housing stock comprises flats, units or apartments compared with 19.9% in NSW. A higher proportion of the total private dwellings in the Wingecarribee LGA are unoccupied (13.6%) compared with NSW (9.9%) (ABS 2016a), suggesting the Wingecarribee LGA accommodates many holiday homes.

On average, houses within the Wingecarribee LGA are larger than that across NSW, as 82.1% of houses in the LGA have three or more bedrooms compared with 68.5% of houses in NSW (ABS 2016a).

Outright ownership of dwellings is considerably higher in the Wingecarribee LGA (43.5%) compared with NSW (32.2%). However, only 19.8% of the Wingecarribee LGA population rent their homes compared with 31.8% of the NSW population (ABS 2016a).

Housing stress is considered to occur when households in the lower 40% of income distribution spend more than 30% of their income in housing costs (rents or mortgage repayments) (AHURI 2019). This can mean that local people who are not employed in high-paying jobs may be unable to afford local rents which can be pushed up by higher salaries. A smaller proportion of households in the Wingecarribee LGA have rent payments that are greater than or equal to 30% of their income compared to the NSW proportion, indicating that housing is affordable. Housing affordability in the study area is presented in Table 4.15.

Table 4.15 Housing affordability, 2016

Area	Households where rent payments are greater than or equal to 30% of household income (%)	Households where mortgage payments are greater than or equal to 30% of household income (%)
Wingecarribee LGA	8.2%	7.1%
NSW	12.9%	7.4%

Source: ABS 2016a, Census of Population and Housing: General Community Profiles.

ii Short-stay accommodation supply

In June 2016, there were 558 rooms available within hotels, motels and serviced apartments with 15 rooms or more available as short-term accommodation in the Wingecarribee LGA (Destination NSW 2016). Occupancy rates for the year ending June 2016 were 50.8%, representing a 3.9% decrease since June 2015 (Destination NSW 2016). Given the LGA's closeness to nearby major population centres it is likely these average figures conceal a more polarised usage pattern, with occupancy rates on weekends being much higher than 50% and lower than 50% on weekdays.

a New housing and rental supply

Housing forecasts for the Wingecarribee LGA predict a total increase of 4,050 dwellings between 2016 – 2041 in response to population growth and shifting patterns in household structure and number (see Table 4.16) (NSW DPIE 2019).

Table 4.16 Household requirement and population growth forecasts for the Wingecarribee LGA

	2016	2021	2026	2031	2036	2041
Total population	48,998	50,048	50,837	51,345	51,555	51,496
Total households	19,674	20,577	21,327	21,898	22,235	22,372
Average household size	2.42	2.36	2.31	2.26	2.23	2.20
Required dwellings	22,589	23,625	24,486	25,142	25,529	25,686
Total dwelling change	-	1,036	861	656	387	157

Source: DPIE 2019.

Note: Average household size is taken from NSW DPE 2019 but there is a mathematical discrepancy – average household size is not equal to the total population divided by the total number of households.

Recent growth in housing supply can be estimated from residential building approval figures for the LGA. In the year ending June 2019, there were 464 approvals for new houses and 94 approvals for other residential buildings (equalling a total of 558 new residential building approvals for the year). This represents an increase of 164 from the previous year. There have also been 89 residential buildings approved to be built in Wingecarribee LGA in the financial year 2019–2020 as of the fiscal year-to-date (FYTD) (see Table 4.17).

Table 4.17 Total residential building approvals in Wingecarribee LGA

Year (ending June 30)	Number			Change on prior year		
	Houses	Other	Total	Houses	Other	Total
2019-2020 Nov FYTD	79	10	89	--	--	--
2018-2019	464	94	558	178	-14	164
2017-2018	286	108	394	35	29	64
2016-2017	251	79	330	-45	-65	-110
2015-2016	296	144	440	-136	57	-79
2014-2015	432	87	519	250	42	292
2013-2014	182	45	227	51	34	85
2012-2013	131	11	142	0	7	7
2011-2012	131	4	135	14	-55	-41
2010-2011	117	59	176	-19	48	29
2009-2010	136	11	147	-52	-157	-209
2008-2009	188	168	356	-9	93	84
2007-2008	197	75	272	10	51	61
2006-2007	187	24	211	22	-43	-21

Source: profile.id 2019.

To determine if residential building approvals in Wingecarribee LGA will adequately support expected demand for new dwellings, the median of the total residential building approvals from 2006 to 2019, equalling 272 approvals per year, is used to create a reasonable estimation of residential building approvals into the future. The median of the total number of residential approvals from 2006 to 2019 provides a conservative estimate of the expected trends for building approvals in Wingecarribee LGA into the future, as it takes into account the fluctuations present in the previous approval rates. Although it is possible that actual residential approval totals could be higher or lower, without complete certainty in the factors that are driving approval decisions year on year, the median provides a reasonable degree of confidence in these estimations. Table 4.18 demonstrates projected residential building approvals from 2016 to 2041.

Table 4.18 Estimates of future building approvals in Wingecarribee LGA

2016	2016 – 2021*	2021 – 2026	2026 – 2031	2031 – 2036	2036 – 2041
-	1,643	1,360	1,360	1,360	1,360

Note: Projections from 2021 – 2041 are based on an estimate of 272 residential approvals per year.

*2016 – 2021 includes number of actual approvals from 2016 – 2019, and an estimate of 272 approvals from 2020 – 2021.

The above tables illustrate the capacity of the local building industry. Assuming that building approvals continue at a rate of the median of 272 approvals per year, this is more than enough to meet the expected demand for new dwellings shown in Table 4.16 in 2016 and beyond.

The Wingecarribee LGA demographic and housing study (WSC 2015a) identifies areas of residential zoned land in the Wingecarribee LGA with the potential to accommodate future dwelling growth from 2012-2031, as identified in Table 4.19. The study suggests a large enough suitable area within the Wingecarribee LGA to accommodate the predicted growth in dwellings to 2031 which is after the peak workforce is expected to be reached.

Table 4.19 Existing urban and rural residential zoned land and total dwelling potential

Location	Total potential	Existing dwellings	Total
Aylmerton	13	53	66
Balaclava	150	185	335
Balmoral	50	85	135
Berrima	39	196	235
Bowral	897	4,297	5,194
Braemar	458	119	577
Bundanoon	1,574	1,067	2,641
Burrawang	79	119	198
Buxton	59	28	87
Colo Vale	215	516	731
Exeter	347	352	699
Fitzroy Falls	8	27	35
Hill Top	283	1,184	1,467
Joadja	17	70	87
Mittagong	1,664	2,279	3,943

Table 4.19 Existing urban and rural residential zoned land and total dwelling potential

Location	Total potential	Existing dwellings	Total
Medway	28	27	55
Moss Vale	2,191	3,004	5,195
New Berrima	32	226	258
Penrose	15	24	39
Robertson	187	474	661
Sutton Forest	10	17	27
Welby	153	296	449
Willow Vale	127	235	362
Wingello	607	180	787
Yerrinbool	111	423	534
Total	9,314	15,483	24,797

Source: WSC 2015a, *Wingecarribee Local Planning Strategy 2015-2031*.

Table 4.20 Dwelling capacity by town in the Wingecarribee LGA

Location	Role	Capacity to supply additional dwellings
Bowral	Major centre	2,979
Mittagong	Major centre	4,811
Moss Vale	Major centre	5,818
Berrima	Small centre	381
Bundanoon	Small centre	2,138
Burradoo	Small centre	363
Robertson	Small centre	827
Colo Vale	Village	106
Exeter	Village	97
Hill Top	Village	625
Wingello	Village	134
Yerrinbool	Village	60
Rural balance	Remainder	10,626
Total		28,965

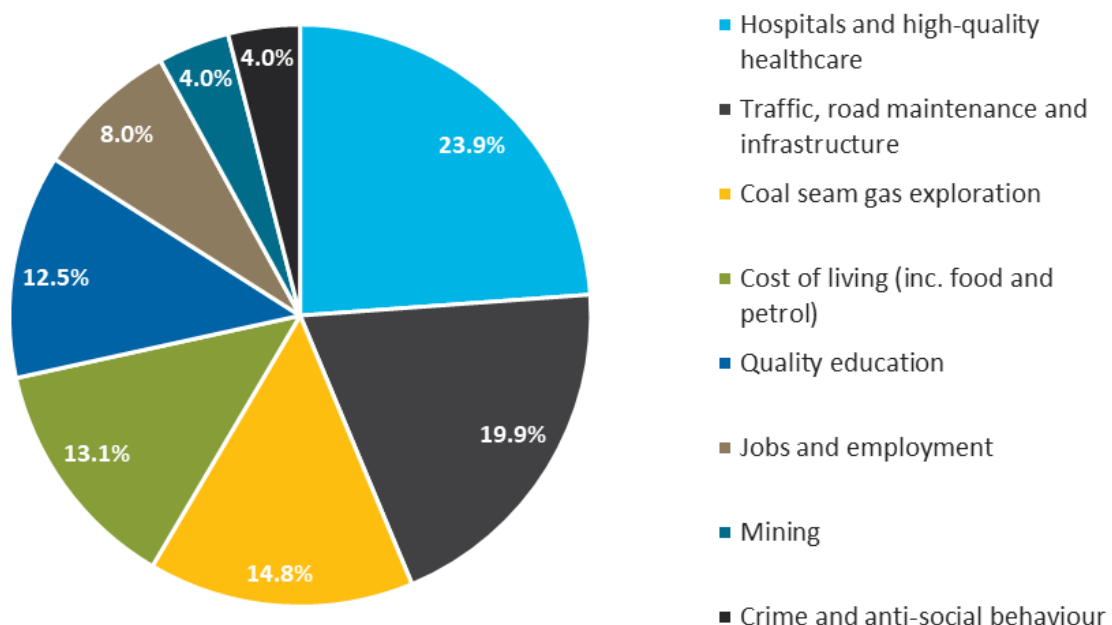
Source: WSC 2015a, *Wingecarribee Local Planning Strategy 2015-2031*.

4.3.12 Community issues and values

Hume Coal extensively researched community opinion across the Wingecarribee LGA focusing on Moss Vale, Bowral, Burradoo and Berrima. This included telephone surveys and focus groups to identify issues of concern to the local community. The outcomes of this research are provided below.

Residents within the Wingecarribee LGA are optimistic about their lives and are positive about their choice to live in the Southern Highlands. There is a strong sense of community connection, with residents citing the relaxed lifestyle, friendly people, open space and general sense of safety and security as key reasons for living in the Southern Highlands.

The most important issues within the local community were cited as hospitals and high-quality health (see Figure 4.9). There was also a strong focus on traffic, road maintenance and infrastructure and coal seam gas. Mining was less of a concern by the local community. Other issues of concern identified by the community include a lack of services and facilities for young people within the area and limited variety in shopping choices.



Source: Luntz Global (2015)

Figure 4.9 Summary of community issues, 2015

4.4 Summary

The Wingecarribee LGA is characterised by a polarised age profile, concentrated in the young and older age groups but with a relatively smaller proportion of working age people. The area has experienced moderate population growth over the last decade, albeit less than for NSW, and forecasts suggest the area is likely to experience continued growth. This is due to the area's high amenity, strategic location between Sydney, Canberra and Wollongong, and its diverse economy.

A good supply of affordable housing is available to cater for population growth, with substantial potential to further increase housing supply. In addition, there is a good supply and wide range of community facilities.

5 Policy context

Strategic policies and plans help guide future development in the area and this will influence the future distribution of people and the social make-up of the community. Relevant state, regional and local strategic policies and plans are discussed below.

5.1 State planning context

5.1.1 A 20-Year Economic Vision for Regional NSW 2018–2038

A 20-Year Economic Vision for Regional NSW 2018–2038 presents a strategy for Regional NSW that encourages its role as a vibrant and growing part of the NSW economy, and fosters decisions to live in the regions. The vision is organised into five sections that form a pathway to a prosperous Regional NSW. The sections include:

- a snapshot of Regional NSW today that presents the current economic and demographic environment, with particular mention of the thriving agricultural, energy and resources industries, and strong manufacturing, tourism, and services sectors;
- the global forces shaping regional economies, and the implications of these trends;
- means of rising to economic challenges, such as investing in infrastructure, skills, advocacy and promotion, and the business environment;
- a presentation of a bright future for Regional NSW that highlights growth in key sectors, increased regional populations, and supporting infrastructure and services; and
- the current priorities for the NSW government.

5.1.2 NSW 2011–2021

NSW 2021: A Plan to Make NSW Number One aimed to guide policy and budget decisions over the 10 years to 2021. The plan is based around the following strategies:

- rebuild the economy;
- return quality services;
- renovate infrastructure; and
- strengthen the local environment and communities.

These strategies have been ‘localised’ by developing tailored priorities for various regions in NSW in consultation with local government and communities. The result has been the development of local and regional action plans across NSW, including the Southern Highlands and Tablelands Regional Action Plan, which was released in 2012. The key priorities identified by communities within the Southern Highlands and Tablelands Regional Action Plan are:

- economically strong and diverse: the Southern Highlands and Tablelands will capitalise on accessibility to the Sydney and Canberra transport corridor and a supply of affordable employment lands. We will maximise the investment opportunities to build a diverse regional economy;
- sustainable: the high-quality natural environment and heritage of the Southern Highlands and Tablelands will be preserved and natural resources and biodiversity sustainably managed. We will support sustainable agricultural production and manage the impacts of development, climate change, weeds and waste in the region;
- connected with efficient and integrated regional transport: regional communities will be connected from and across the region, particularly to Sydney, Canberra and Wollongong by accessible, efficient and integrated transport;
- providing quality health and community services: these services will meet community needs, providing support for ageing and vulnerable families and individuals. Our services will be integrated, coordinated and accessible; and
- providing opportunities for the region's young people: education system will provide education and training pathways for young people encouraging them to stay in the region.

5.1.3 State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industry) 2007

The State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP) is a state-wide policy that recognises mining, petroleum production and extractive industries are important for NSW. The Mining SEPP aims to, among other things:

- provide for the proper management and development of mineral, petroleum and extractive material resources for the purpose of promoting the social and economic welfare of NSW;
- facilitate the orderly and economic use and development of land containing mineral, petroleum and extractive material resources;
- promote the development of significant mineral resources; and
- establish appropriate planning controls to encourage ecologically sustainable development through environmental assessment and sustainable management of the development of mineral, petroleum and extractive material resources.

5.2 Regional planning context

5.2.1 Sydney Canberra Corridor Regional Strategy 2006–2031

The Sydney–Canberra Corridor Regional Strategy (SCCRS) 2006–2031 applies to the area extending between Sydney and Canberra, which is experiencing much growth given its strategic location between two capital cities. The strategy provides a framework to manage and direct growth in housing and employment while protecting the environment. The Hume Coal Project is within the corridor and so the strategy applies to the proposed development.

The strategy recognises the importance of the Wingecarribee LGA for economic development and employment growth due to:

- its proximity to major metropolitan markets for regionally based businesses;
- its relatively high accessibility through infrastructure, such as the M7 and M5, to the southern part of the Sydney metropolitan area;
- land affordability; and
- high rates of commuting out of the subregion and the desirability of reversing or at least slowing this trend.

5.2.2 Regional Development Australia Southern Inland Regional Plan 2017–2020

Regional Development Australia is an Australian Government initiative comprised of 55 committees across Australia. These committees include local leaders who work in consultation with all levels of government, businesses and community to promote the development of regional Australia. The Southern Inland Region comprises 13 LGAs, including the Wingecarribee LGA, and covers 50,000 km. The Southern Inland Regional Plan includes six priorities:

- regional development planning: use informed planning at all levels to guide the strategic and sustainable development of the region;
- education, employment and investment: work with partner agencies to promote education and strong regional economies;
- transport – infrastructure and service: contribute to transport planning and work with partner agencies to improve transport infrastructure and delivery;
- regional food: support regional food production, processing, marketing and consumption as well as food and wine tourism;
- digital economy transition: assist businesses and community organisations to adopt and use the digital economy; and
- living and working sustainably: support the region’s renewable energy sector and promote sustainability practices in the workplace and community.

5.2.3 Southern Regional Transport Plan 2014–2034

The NSW Long Term Transport Master Plan establishes the strategic context for the Southern Regional Transport Plan. The plan recognises the importance of the region in providing connectivity between Sydney, Canberra and Melbourne. Within the southern region, which encompasses the Project area, the Southern Regional Transport Plan includes actions to:

- improve road safety;
- improve regional bus services;
- integrate NSW TrainLink coach services with regional bus services;
- improve public transport interchanges;
- ensure adequate community transport services are provided;

- integrate community transport services into the passenger transport system;
- support proposals to investigate walking and cycling trails; and
- improve tourism-related transport services.

Within the Moss Vale–Bowral–Mittagong area there are additional specific measures to improve transport. These include measures to improve both public transport and opportunities for walking and cycling, including providing bicycle parking at major centres.

5.3 Local planning context

To understand baseline or pre-development conditions in the locality, WSC's community strategic plans were reviewed, with the findings summarised in Table 5.1. WSC has consulted the community extensively in the development of its strategic plans, and they reflect local community aspirations and values.

Table 5.1 Relevant local plans and policies

Policy	Aims and objectives
Wingecarribee Community Strategic Plan 2017–2031 ⁺ (W2031 ⁺)	The Wingecarribee Community Strategic Plan (W2031 ⁺) provides the future vision, goals and priorities for the LGA through to 2031. The plan was developed in consultation with the local community and is comprised of five themes relevant to WSC, namely leadership, people, places, environment and economy. For each theme, several goals and strategies have been identified that work towards the council's vision of establishing 'a healthy and productive community, learning and living in harmony, proud of our heritage and nurturing our environment'. The plan was developed in consideration of the SCCRS 2006–2031 and makes provisions for population and housing projections for the Wingecarribee LGA.
Wingecarribee Local Planning Strategy 2015–2031	The Wingecarribee Local Planning Strategy 2015–2031 outlines several land use proposals to guide future development within the Wingecarribee LGA. It will replace the Wingecarribee Strategic Plan 2002. The strategy is strongly aligned to the W2031 ⁺ plan and the community's vision for the Wingecarribee LGA. In particular, the strategy provides specific land use proposals for the Wingecarribee LGA's natural environment, rural lands, housing, the economy, the built environment and infrastructure needs. It also provides township specific objectives for each major town and village within the Wingecarribee LGA.
Wingecarribee Regional Economic Development Strategy 2018–2022	The Wingecarribee Regional Economic Development Strategy 2018–2022 delineates a long-term economic vision and strategy for the Wingecarribee LGA, based on the region's endowments, core competencies, and specialisations. The strategy aims to: <ul style="list-style-type: none"> • enhance liveability of the Wingecarribee region; • facilitate the development of agriculture as a key strength and specialisation and grow the visitor economy based on food, wine, and events; • grow the education, health, and aged care sectors; and • Strengthen the manufacturing base and monitor opportunities in the natural resource sector. In addition to this, the strategy considers existing regional risks and the potential ways in which to address them.
Bowral Parking, Traffic and Transport Strategy 2012–2031	WSC developed the Bowral Parking, Traffic and Transport Strategy to address the impacts of future growth within the Bowral town centre. In particular, the strategy provides short-term and long-term infrastructure development goals. The strategy will ensure acceptable transport services are provided in the town centre while maintaining pedestrian safety.
Wingecarribee Demographic and Housing Study 2012–2031	The Wingecarribee Demographic and Housing Study examines the current housing stock and availability within the Wingecarribee LGA allowing WSC to make informed decisions about matching demand for housing over the next 20 years. The study includes a detailed analysis of current and historical demographic profiles of the community, a baseline study of current housing supply, and future household projections, including location and type of housing, in line with predicted population growth.

5.4 Summary

Strategic state, regional and local plans have been examined as part of this assessment. Broadly speaking, the Project is aligned with many of the goals and objectives outlined in the plans summarised in Table 5.1. The Project provides the opportunity to:

- stimulate new direct and indirect economic activity within the Wingecarribee LGA and surrounds;
- contribute to community development; and
- support regional economic development through providing new local employment and training opportunities and increased opportunities for local businesses.

The Project can contribute to a longer legacy by helping to improve the skills of local workers through its training program and the capacities of local businesses through procuring local business where possible. The strategic plans present a few challenges for the Project. Principally, these are meeting environmental objectives and avoiding land use conflicts. Secondary challenges are to accommodate population growth associated with the Project without adversely affecting the local housing market or overloading community services and facilities.

The proposal's overall performance compared with applicable strategic plans is assessed in Section 7 and related management and mitigation measures are described in Section 8.

6 Community and stakeholder consultation

6.1 Introduction

This chapter describes the findings of stakeholder consultation and provides a catalogue of the current perceived issues and concerns about the Project raised by a broad range of stakeholders.

6.2 Consultation tools

Hume Coal consulted extensively during the Project planning phase and will continue to engage with local landholders and other stakeholders as the Project progresses. Further details about the EIS consultation activities are provided in Chapter 5 of the EIS. During this consultation a range of tools were used to inform community and stakeholders and collect feedback about the Project, these are outlined in Table 6.1.

Table 6.1 Consultation tools

Item	Summary
Project website: www.humecoal.com.au	Hume Coal has a dedicated project website that provides up-to-date information about the Project, environmental matters and local engagement initiatives. Factsheets, bulletins and newsletters are available on the website, as well as links for people who can provide feedback or supply further information.
Community shopfronts: Argyle Street, Moss Vale	Community members can speak directly with Hume Coal's community liaison team by phone or face-to-face at the shopfront offices in Moss Vale (closed in July 2016) and Berrima, where an information display and factsheets are also available.
Hume Coal head office	Community members can speak directly with Hume Coal's project team or technical staff by phone or face-to-face at the head office. The office was previously located in Moss Vale, but as of January 2020 is now in Berrima.
Project email address	Hume Coal has three dedicated email addresses that provide contact points for stakeholders: general enquiries, media enquiries and Hume Coal's charitable foundation.
Community Information sessions	Hume Coal has held community information sessions during the Project planning phase to provide information about the Project and its environmental studies to members of the community. They were held across the Wingecarribee LGA between 2012 and 2016.
Briefing and presentations	Hume Coal has provided project briefings to interested stakeholder groups and individuals, including local businesses and industry groups. Hume Coal is also a member of many of these groups and has attended executive meetings as members. Hume Coal has also provided many briefings to individuals (at their request) who are both supporters and non-supportive of the Project.
Letters to landholders	Hume Coal has issued formal letters to landholders and community members on several occasions. These letters generally provide project updates and offers of individual briefings about the Project.
Newsletters and bulletins	Bulletins and factsheets were also regularly distributed to local communities via an opt in database and were available in the community shopfront and on Hume Coal's website. Community updates were also published in local newspapers and emailed to those registered on Hume Coal's mailing list.
Media communications	Project information has been communicated through media releases, local newspaper publications and radio segments.

Table 6.1 **Consultation tools**

Item	Summary
Surveys, focus groups and online consultation	Telephone surveys and facilitated focus groups have been used to gauge public opinion and understand peoples' views on the Project. In addition, an online consultation tool 'YourSay' was used to disseminate information and seek feedback.
Advisory groups	Hume Coal established two advisory groups, the social reference group (SRG) and water advisory group (WAG). These groups generally held quarterly meetings and included representatives from the local community.
Social Media	In early 2016, Hume Coal introduced three social media platforms – Facebook, Twitter, and LinkedIn. These platforms provide daily project updates, facts about the Project, contact details for the Project team, information about upcoming events and links to media releases on the Project website.

In addition to the activities conducted as part of EIS and SIA reporting process, further community submissions were collected by the NSW Government whilst on exhibition. These have been collated and reviewed. A summary of the analysis regarding these submissions is included at Section 6.3.9.

6.3 **Matters raised by community and stakeholders**

Hume Coal has been engaging with stakeholders since 2011. The consultation was in accordance with a stakeholder engagement and consultation plan prepared specifically for the Project. The plan establishes who the potential stakeholders are and how, why and when they are to be engaged.

For the purposes of this chapter, stakeholders have been considered in three groups:

- government authorities and service providers;
- corporate entities with a direct or indirect interest in the Project; and
- landholders, community groups and individuals.

These stakeholders have been consulted both formally and informally, using the methods outlined in Table 6.1.

6.3.1 **Government**

A summary of matters raised by government agencies and service providers during the consultation program is provided in Table 6.2.

Table 6.2 Matters raised by government, service providers and agencies

Stakeholder group	Relevant SIA matters	Issues raised	EIS reference
WSC	Built environment Community	General discussions- community services and demographics	SIA
	Community	Types of community consultation being undertaken	Chapter 4
	Community Economic	Hume Coal apprenticeship program	EIS Section 2.13.1
	Built environment Community	Hume Coal charitable foundation	Section 3.2 of the SIA
	Heritage	New heritage listings	Statement of Heritage Impact (Appendix T)
	Access Community	Potential impacts and possible road upgrade requirements	Traffic assessment (Appendix M)
	Built environment Community	General discussion- VPA	Chapter 3 (Legislation)
	Community Economic	Impacts on local tourism and the need for a CAV	SIA Section 7
	Community Economic	Local jobs expo	-
NSW Department of Industry (formerly Department of Trade and Investment, Regional Infrastructure and Services)	Built environment Community	Berrima Community shop reception to date	-
	Built environment Community	Community information sessions	EIS Section 4.5.2i
	Community Economic	Hume Coal apprenticeship program	EIS Section 2.13.1
	Built environment Community	Hume Coal charitable foundation	SIA Section 3.2
	Community Land	Local government concerns- subsidence	EIS Chapter 14
	Community Economic	Youth employment in the Southern Highlands Region	SIA section 4.2
	Project update	Updates/results- Section 31 court case	Not applicable to EIS
	Access Land	Land access issues such as arbitration	Not applicable to EIS
	Project update	Conceptual project Development Plan	EIS chapter 2
NSW Department of Trade and Investment	Determination process update	SEARS	Each relevant chapter of the EIS, and Appendix B
		Site verification certificate (SVC) referral	EIS Chapter 3

Table 6.2 Matters raised by government, service providers and agencies

Stakeholder group	Relevant SIA matters	Issues raised	EIS reference
NSW Office of Water (now DPIE – Water)	Economic Water	General discussions- water	EIS Chapter 7
	Determination process update	SEARS	Each relevant chapter of the EIS, and Appendix B
		SVC referral and EPBC Act referral	EIS Chapter 3
NSW Environment Protection Authority	Determination process update	SEARS	Each relevant chapter of the EIS, and Appendix B
		SVC referral and EPBC Act referral	EIS Chapter 3
	Air	Assessment methodology- air	EIS Chapter 12
		Preliminary results and mitigations	EIS Chapter 12
	Amenity	Assessment methodology- noise	EIS Chapter 11
	Water	Assessment methodology- surface water	EIS Chapter 7
NSW Department of Planning, Industry and Environment	Project update	Mine plan	EIS Chapter 2
	Determination process update	SVC application	EIS Chapter 3
	Natural environment	Environmental considerations	EIS Chapters 7-18
	Heritage	Aboriginal Heritage Impact Permit	EIS Chapter 21
	Determination timeframe	Adequacy review period	-
NSW Office of Environment and Heritage (now DPIE – Biodiversity and Conservation Division)	Project update	Project progression	EIS Chapter 3
	Biodiversity Heritage	Preliminary ecology and heritage results	EIS Chapters 10, 21 and 22
Office of the Minister for Industry, Resources and Energy	Project update	Mine plan	EIS Chapter 2
		Mining Lease Application details	EIS Section 1.1
Minister for Resources and Energy	Land	Drill holes- exploration	EIS Section 2.2
	Water	Groundwater monitoring	EIS Chapter 5 (Figure 5.2) and Chapter 7
		Baseline environmental works being undertaken	EIS Chapter 5
	Community	Demographics	SIA Chapter 4
		Perception research	EIS Section 4.5.3
		Community engagement	EIS Chapter 4
		Action group misinformation	-
		Ongoing delays	-
	Access	Types of properties	-

Table 6.2 Matters raised by government, service providers and agencies

Stakeholder group	Relevant SIA matters	Issues raised	EIS reference
Office of NSW Deputy Premier	Land	Section 252 of the <i>Mining Act 1992</i> .	-
		Drilling program	EIS Section 2.2
	Access Land	Land access	-
	Community	Southern Highland Coal Action Group	-
Office of the Minister for Primary Industries	Access Water	General discussions- water licensing	EIS Chapter 7
Office of NSW Member for Goulburn	Access Water	Aquifer Interface Policy	EIS Chapter 7
		Water Monitoring	EIS Chapter 7
		Location of bores in the area	EIS Section 5.2
	Mine design	Mining method	EIS Chapter 2
	Land	Subsidence	EIS Chapter 14
Office of Federal Member for Hume	Project updates	Mine plan	EIS Chapter 2
	Community	Community perception research results	EIS Section 4.5.3
		Community response to mine plans	EIS Chapter 4
	Access Amenity Community	Covering coal wagons during transport	EIS Chapter 12
	Economic	POSCO Investments in Australia Importance of the Hume Coal Project to POSCO's consideration for any further investment in the Australian market	EIS Section 1.5
Office of Federal Member for Throsby	Community	Anti-Asian/Korean sentiment as Xenophobic	-
	Access	Transport of material by road	EIS Chapter 2 and 15
	Water	Water systems, particularly groundwater in the Southern Highlands	EIS Section 5.2.5
		Hume Coal Project Water Advisory Group	EIS Section 4.5.2ii
Office of Member for Wollondilly	Community	Number of future jobs	EIS Section 2.13
	Economic	Employment catchment area	EIS Section 2.13
	Community	Results of community perception research	EIS Section 4.5.3
	Economic	Mining systems used by the Hume Coal Project- financial viability	EIS Chapter 2
	Land	Extraction rate	EIS Chapter 2
	Water	Groundwater	EIS Chapters 2 and 7
	Economic Land	Current farming practices on the Hume Coal Project site	EIS Appendix G

Table 6.2 Matters raised by government, service providers and agencies

Stakeholder group	Relevant SIA matters	Issues raised	EIS reference
Office of Shadow Minister for Primary Industries	Community	Coal seam gas misconceptions	-
Premier	Project update	Letter sent providing project update and timing	-
RMS (now Transport for NSW)	Clarify agency requirements	Mining system used by the Hume Coal Project	EIS Chapters 2
	Water	Flood assessment	EIS Chapter 7
	Land	Subsidence assessment	EIS Chapter 14
EPBC Advisor, Commonwealth Minister of Environment	Progress briefing	Mine plan and Commonwealth referral	Chapters 2 and 3
Chair of Coalition Backbench Committee on Infrastructure, Energy and Resources	Progress briefing	Mine plan and Commonwealth referral	Chapters 2 and 3
Federal Minister for Industry	Progress briefing	Mine plan and Commonwealth referral	Chapters 2 and 3
Commonwealth Department of Environment and Energy (now DAWE)	Progress briefing	Commonwealth referral and lodgement timing	Chapter 3

6.3.2 Business stakeholders

A number of businesses were consulted as part of the engagement activities including:

- Port Kembla Coal Terminal;
- NSW Ports;
- Forestry Corporation;
- Boral;
- ARTC;
- Endeavour Energy;
- APA Group;
- Princess Pastoral;
- Jemena;
- Optus;
- rail providers;

- local suppliers; and
- mining equipment manufacturers.

A summary of the issues raised with the key businesses is provided in Table 6.3.

Table 6.3 Matters raised by businesses

Business stakeholders	Relevant SIA matters	Issues raised
Port Kembla Coal Terminal	Economic	Procurement opportunities.
	Access	Transport logistics (incl. level crossings), conditions of use.
	Amenity	Dust control strategies.
	Decision making	The application process and timings.
NSW Ports*		
Forestry Corporation	Decision making	Implications for forestry in relation to the EIS.
	Economic, biodiversity	Query regarding the licencing of the Radiata Pine forest on the Project site.
Boral	Water	Shared community concerns regarding fears that subsidence will impact on water supply.
	Land, water, built environment	Rehabilitation of Berrima Colliery site.
	Economic, community	Shared community development and sponsorship opportunities.
ARTC	Land	Question received on site (shared by both companies) in relation to their intention to frack the site.
	Amenity, decision making	Rubbish dumped on shared site believed to be an act of protest.
Endeavour Energy	Decision making, built environment	Project overview including proposed power lines and approvals process.
APA Group	Decision making	Project briefing provided.
	Land, economic	Concerns regarding whether subsidence would impact on the existing pipeline and the optic fibres on the Project site.
Princess Pastoral	Economic	Discussions relating to the co-existence of agricultural land use and mining.
Jemena	Built environment	Project overview, gas pipeline.
Optus	Built environment	Project overview, fibre optic cables.

*Contacted but no ongoing communications.

6.3.3 Community and special interest groups

i Site visits

A total of 35 site visits with 25 directly impacted stakeholders were undertaken and recorded from 1 January 2013 to 8 October 2019. The main issue that was discussed during these visits was land access with 20 of the visits covering this issue. Groundwater was also a key issue with nine of the 25 stakeholders raising this matter. Several specific issues were raised by individual stakeholders such as the approvals process, air quality and potential compensation claims.

An additional five site visits were undertaken with three other stakeholders. Matters raised included concerns regarding rehabilitation, drilling and land access.

ii Community shopfront

Between 1 January 2013 and 8 October 2019, a total of 216 visits were made by 140 members of the public to the two community offices in Moss Vale and Berrima.

A range of issues were covered in the discussions with stakeholders. The majority of those visiting the community shopfront access points were seeking general information about the Hume Coal Project (64%). Seeking information about the approvals process (16%) and potential employment opportunities (16%) were the two most frequently raised matters. Other frequent requests for information included community sponsorships (8%), registering for the skills database (6%), and local procurement opportunities (4%).

When community and stakeholders raised potentially negative social impacts, they most frequently sought information regarding ground water (8%), air quality (6%) and noise (4%).

iii Emails

Between 1 January 2013 and 8 October 2019, approximately 3,039 emails were received from 1,357 stakeholders in relation to the Project with a wide range of matters being raised. The most frequently sought information was for employment opportunities (41%), registering for the skills database (35%), general project information (18%), and mining operations generally (18%). A further 12% were seeking information about apprenticeships and 10% about sponsorship.

The most frequently raised potential negative impacts related to environmental impacts generally (11%), groundwater (8%), and surface water (4%). Similar to results seen amongst visitors to the shopfront access points, there were limited inquiries about potential negative impacts.

iv Community Information Sessions

A total of 15 community information sessions were held by Hume Coal between 1 January 2013 and 8 October 2019. Given the nature of the sessions, it was difficult to record issues at all the sessions as they tended to involve the delivery of general information about the Hume Coal Project. Information was provided to attendees included sponsorship opportunities and the approvals process generally.

During 2015 six community information sessions were held in key communities of Sutton Forest, Exeter, Berrima, Moss Vale, East Bowral, and Robertson.

At these sessions, questions and comments from the floor were notated. Water was the most frequently raised matter in terms of both availability and quality, with availability being the main concern. These concerns were raised in all six locations with a total of 16 questions coming from the floor. Questions in relation to availability were around how the Hume Coal Project would source water and whether this was to impact on access for the community. Quality concerns related to where the water used by the Hume Coal Project would go (ie would it be able to enter the communities water supply through the aquifers) and whether residual coal dust would contaminate the water supply.

Attendees in all six sessions raised air quality as a concern with 16 questions in total. Attendees asked questions around the modelling techniques and whether different scenarios were tested. In addition, attendees wanted to know more about the dust suppression mitigations, particularly in relation to stockpiles and transport. There were some questions regarding the communities that would be affected by dust and whether there was any information relating to potential health impacts. There was also concern about dust particles increasing fire risks.

Questions in relation to the Hume Coal Project's design were also raised in all six locations with a total of 11 questions asked. Attendees sought further information about other projects where the pine feather technique had been used and wanted to understand whether the Hume Coal Project design would impact on their surrounds and access to infrastructure (ie roads and traffic).

Economic factors were also raised frequently by attendees who asked about the potential for local employment and training and flagged concern about these being accessed from outside the local community. Attendees also asked questions about royalties, community investment opportunities and ensuring profits are kept local and not lost offshore. Concern was also raised regarding impacts on the local tourism industry.

Several less frequently raised matters included:

- amenity (dust, noise, sound, light, visual);
- land (stability, chemistry and usage);
- community cohesion (perceived negative behaviour of temporary resident workforce);
- impact on access to public infrastructure as a result of increased train movements; and
- biodiversity (impact on koala habitat and river box trees).

v Briefings and presentations

A total of 18 presentations and briefings were provided to 34 stakeholders. The purpose of these were to provide general project updates though other issues were covered such as sponsorship opportunities and the approvals process. The matters that interested attendees most were general project update; government reporting and public meeting.

vi Direct mailouts to landholders

A total of 638 individual letters were sent out to stakeholders, including landholders, via hand delivery or mail out between 2011 and 2018. The top three matters that are most relevant to the landholders were land access, general project update and the approvals process. Whenever a landholder denied land access, an acknowledgement letter by Hume Coal was sent to the landholder.

Table 6.4 provides a summary of matters raised by community and specialist interest groups during the consultation program through channels other than the submissions process (which is covered in Section 6.3.9).

Table 6.4 Matters raised by community and special interest groups

Links to SIA definition	Matters raised	EIS reference
Amenity	Noise attenuation measures including noise walls	EIS Chapter 11
	Noise impacts on health	EIS Chapter 11 and Appendix I.
	Are the impacts of explosives included in the noise modelling?	EIS Chapter 11 and Appendix I
	Impacts of noise on Berrima	EIS Chapter 11
	Noise generation from the conveyor belt	EIS Chapter 11 and Appendix I
Access	Vehicle access to the mine	EIS Chapter 15
	Potential congestion on local road network	EIS Chapter 15
Heritage	Management of Aboriginal heritage sites	EIS Chapter 21
	Impacts on Aboriginal artefacts	EIS Chapter 21
Community	Is exploration of coal seam gas part of the Hume Coal Project?	Not applicable – No CSG exploration
	Is the mine system safe?	Section 2.5.2 and EIS Appendix L
Community Economic	Fear of foreign ownership – % of money remaining locally versus % of money going abroad	EIS Chapter 19
	Impacts on community life and sense of place	EIS Chapter 20
	Opportunities for apprenticeships	EIS Chapter 20
	Benefits to landholders in the Project area	EIS Chapter 19
	Source of workers	EIS Chapter 20
	Residential location of workers	EIS Chapter 20
	Sponsorship of community events and activities	EIS Chapter 20
	Opportunities for local businesses and suppliers	EIS Chapter 20
	Impacts on tourism industry	EIS Chapter 19 and 9
	Impacts on local land and property prices	EIS Chapter 19
	Economic feasibility of project	EIS Chapter 19
Economic Land	Loss of productive agricultural land	EIS Chapter 9
	Is the land BSAL?	Section 5.2.6
Land	Justification of the location of the surface infrastructure	EIS Chapter 6
	What will the coal be used for?	EIS Section 1.6
Air	Dust impacts on surrounding land uses	EIS Chapter 12
	Dust mitigation and management measures	EIS Chapter 12
	Assessment of PM2.5 including health impacts	EIS Chapter 12
	Location of weather monitoring station and TEOMs	EIS Chapter 5
	Height and location of stockpiles	EIS Chapter 2
Biodiversity	Impact on koala habitat	EIS Chapter 10
	Impacts on Paddy's River Box trees	EIS Chapter 10
	Habitat disturbance	EIS Chapter 10
	Impacts on bats and bat habitat	EIS Chapter 10

Table 6.4 Matters raised by community and special interest groups

Links to SIA definition	Matters raised	EIS reference
Land	Location of soil sampling points	EIS Chapter 8
	Impacts on houses (subsidence)	EIS Chapter 14 (negligible subsidence expected)
	Impacts of a panel failure (subsidence)	EIS Chapter 14 (negligible subsidence expected)
	Why is only 35% of the coal being removed?	EIS Chapters 24
	Dimensions of the panels	EIS Chapter 2
	How will the voids be backfilled?	EIS Chapter 2
Water	Impacts on water supplies	EIS Chapter 14 (negligible subsidence expected)
Water Economic	Impacts on groundwater including drawdown depth and contamination	EIS Chapter 7
	Impacts on private bores	EIS Chapter 7 and Section 4.5.4
	Groundwater recovery time	EIS Chapter 7
	How will the water be used?	Section 2.10
	Methods for removing water from the mine	Section 2.10
	Impacts of groundwater drawdown on agriculture	EIS Chapter 9
	Groundwater monitoring and management	EIS Chapter 7
	Water for future generations	EIS Chapter 7
	Impacts on Medway Dam	EIS Chapter 7
	Surface water storage locations	EIS Chapter 7
	Will Wingecarribee Shire water supplies be used?	Section 2.10.1
Decision Making	Project timeline	EIS Chapter 2
Mining system	Has the mining method been used elsewhere?	EIS Chapter 24

6.3.4 Social Reference Group

Members of the community were drawn together to create a Social Reference Group (SRG). The SRG met on a number of occasions and were presented with information relating to the Hume Coal Project. Issues in relation to the information shown and any other matters arising were discussed and minuted. A summary of matters discussed is provided in Table 6.5.

Table 6.5 SRG summary of matters

Matter	Summary
Amenity	The main amenity matters discussed at the SRG meetings include the Hume Coal Project's potential impacts on visual amenity, dust, noise, and lighting in the area of influence. The group voices concern about the possibility for these matters to affect their way of life and surroundings and mentions these potential impacts both in terms of the Hume Coal Project site and associated transportation/haulage.

Table 6.5 **SRG summary of matters**

Matter	Summary
Access	Conversation focused on stakeholders' access to property and matters related to road and rail. More specifically, matters related to the licensing of land with the intention of simultaneously enabling productivity increases for both mining and farming activities. Access to property was also mentioned in terms of housing supply and the impacts relating to worker/family migration. Roads and rail were referenced in relation to dust mitigation measures through covered rail wagons and proposed rail crossing upgrades.
Built environment	Community infrastructure, services, and facilities relating to the built environment were issues raised throughout the SRG meetings. The group discussed a range of issues, including local investment in infrastructure, a lack of public facilities, power lines, the potential for community investment by Hume Coal, and the need to incorporate the Moss Vale Master Plan and other local planning strategies into Project studies. Other SRG attendees discussed the operation of the community information sessions and communication channels, with suggestions to modify the structure of the mine plan. There were also concerns about community perceptions of the temporary nature of construction worker accommodation villages.
Heritage	The SRG discussed what the Project had undertaken regarding heritage considerations, including mine design adjustments and avoidance of heritage listed items. Heritage-related matters could also be considered in relation to the SRG's discussion of the acknowledgement of local town planning strategies.
Community	<p>Community matters comprised a significant proportion of the issues identified at the SRG meetings, with these matters raised within a variety of contexts. Community discussions included matters relating to infrastructure, services, and facilities such as communities' lack of public facilities, parking, perceived health service provider shortages, and increasing pressure on social services.</p> <p>Additionally, the group members questioned matters relating to workforce health and safety, most notably measures to mitigate driver fatigue and CAV related safety concerns and codes of conduct to address concerns about community cohesion, as well as community health and safety more broadly.</p> <p>In their workforce-related discussions, the SRG also raised issues relating to the community and employment opportunities, worker accommodation and its potential to be converted into tourist accommodation, workforce distribution and relocation of workforce to the local area, and sourcing local workers.</p> <p>Other community issues included a call for more coordination between Hume Coal and the local council, a discussion of primary industries in the area, and current and future housing affordability and availability as relating to the Project.</p>
Economic	Economic related issues were associated with the Project workforce. The group identified the issue of local youth leaving the area to find work/study and suggested the creation of training opportunities and partnerships with local high schools as a means for increasing local retention of youth. There were also discussions relating to opportunity costs and livelihood considerations associated with the Project, including the positives of inward migration, local industry and business procurement, the balancing of project concerns/benefits across higher and lower income community members, workforce sourcing, the growth rate of the Project, and migration of local workers to the Project. Natural resource use was another focus, particularly the allocation, use, and recovery of groundwater and agricultural impacts.
Natural environment	Natural environment discussions generally centred around the implications of the Project to air (dust, respiratory health), water (water contamination, aquifer use and recovery), and the land (overburden and sedimentation, subsidence, agricultural land, and seismic activity). The SRG discussed these matters both in terms of the repercussions for the natural environment itself and the related social impacts as noted above.

6.3.5 Water Advisory Group

A Water Advisory Group (WAG) was convened from 2012–2017 to ensure matters related to potential negative impacts on water supply were thoroughly considered, given its importance to the community, the environment and the economy. The WAG consisted of representatives from the community and sought input from several sources, including a hydrologist, representatives from WSC, the Southern Highlands Coal Action Group, the NSW Office of Water and the community generally to seek broad feedback. A summary of matters discussed is provided in Table 6.6.

Table 6.6 **WAG summary of matters**

Matter	Summary
Water	<p>A significant proportion of the issues discussed by the WAG were related to water itself. Of those, several were related to the implemented water monitoring program involving the installation of Piezometers and other testing measures and tools to collect data from both surface and groundwater sources. Specific issues raised by the WAG involved a variety of measures related to the quality, availability, and flows of ground and surface water within the Project area, with concern arising from the impacts on the area’s surroundings. These matters include bleeding adjacent aquifers, correlations between groundwater studies and surface water studies, natural flow-back capacity considering mining extractions, and plans regarding rejected materials.</p>
Access	<p>Licensing of groundwater bores and access to property were the main issues raised. One of the access-related discussions, that also related to community, concerned the unwillingness of landholders to participate in the measuring of the bores on their property. This community opposition to the bore census survey was identified as a response by landholders not wanting to automatically associate themselves as supporting the Project. A history of Boral’s impacts on these landholders and the way in which they “undermined properties” is also likely to have an influence on the actions and decisions of landholders and shaped their concern for the ways in a project may impact their personal and property rights.</p> <p>Other access-related topics included additional licensing discussions, the Aquifer Interference Policy, the Project’s access to the Wingecarribee-Goulburn pipeline, and concerns about the proximity of facilities to residents of Medway and the potential impacts on surrounding landholders (this also relates to community matters and the potential impacts on their way of life).</p>
Community	<p>Of concern to the WAG was community consultation, and the capacity for the community to participate in the development process. Concern for the cohesion, capital and resilience of the community was the most addressed community-related matter, with members noting that the level of trust between the community and Hume Coal is minimal.</p> <p>Other discussions of community engagement included approaches and results of landholder consultation, and a conversation about the East Bowral engagement evening. Another concern was the perception that Council joining the WAG inferred approval of the Project. Those in attendance stated they needed assurance that the WAG is an independent advisory group, of which they were given.</p> <p>There were issues raised associated with community safety, most notably concerns regarding biosecurity/food security within the community with water use from shallow bores, as well as the potential for, and resulting impacts of, earthquakes and seismicity (also related to land matters). The group specifically inquired about consideration of the impacts of the Project on the Medway dam, and the way in which the Project may impact its service to residents, both within their community and economically.</p>
Amenity	<p>There was limited discussion relating to amenity. However, the WAG meetings questioned and discussed the potential to impact the community’s way of life and surroundings, including the completion of the air quality and noise studies, the intention of coal washing to reduce dust impacts, and concerns about visual amenity.</p>

Table 6.6 WAG summary of matters

Matter	Summary
Built environment	Heritage issues of public domain were related to intellectual property and data dissemination. Discussions of the backlogging of NSW Office of Water data were continued throughout WAG meetings. Other prevalent issues included conversations regarding ownership over data, the inability to provide data due to reasons of confidentiality, the adequacy of parties' access to information (primarily related to water data), and the impacts on water from above ground structures and other built assets. Members of the WAG meetings requested an update about the Project's Aboriginal outreach. However, this was not discussed at length.
Economic	Issues related to economic matters included considerations of natural resources, livelihood, and opportunity costs, all of which are not exclusive. These issues include funding, biophysical strategic agricultural land and strategic agricultural land mapping, domestic-use bores versus irrigation bores, funding, POSCO ownership of the Hume Coal Project, drawdown due to irrigation use, the use of water pumped to the surface (irrigation, facilities, dust suppressants, farming), and the consideration of bores as valuable property assets indicating that property owners may not necessarily use bores in a conventional way (this issue specifically also relates to matters of access).
Natural environment	Issues such as air, biodiversity, and land were discussed with consideration of their interactions with water. These matters include groundwater and surface water dependent ecosystems and the impacts on native vegetation and fauna, water's involvement in subsidence, sandstone and the erosion of rocks, and disconformity between the Hawkesbury Sandstone and the underlying Illawarra Coal Measures.
Previous projects	The WAG identified the need to consider the effects of previous Projects on the area as well. More specific mentions of past Projects and their associated issues relevant to this project include the Boral Colliery's draining of water and replacement with lower quality water (also identified as being an issue with Berrima), comparisons between the Project and the Berrima Mine, and worries stemming from Bulga's history of changed and extended plans.

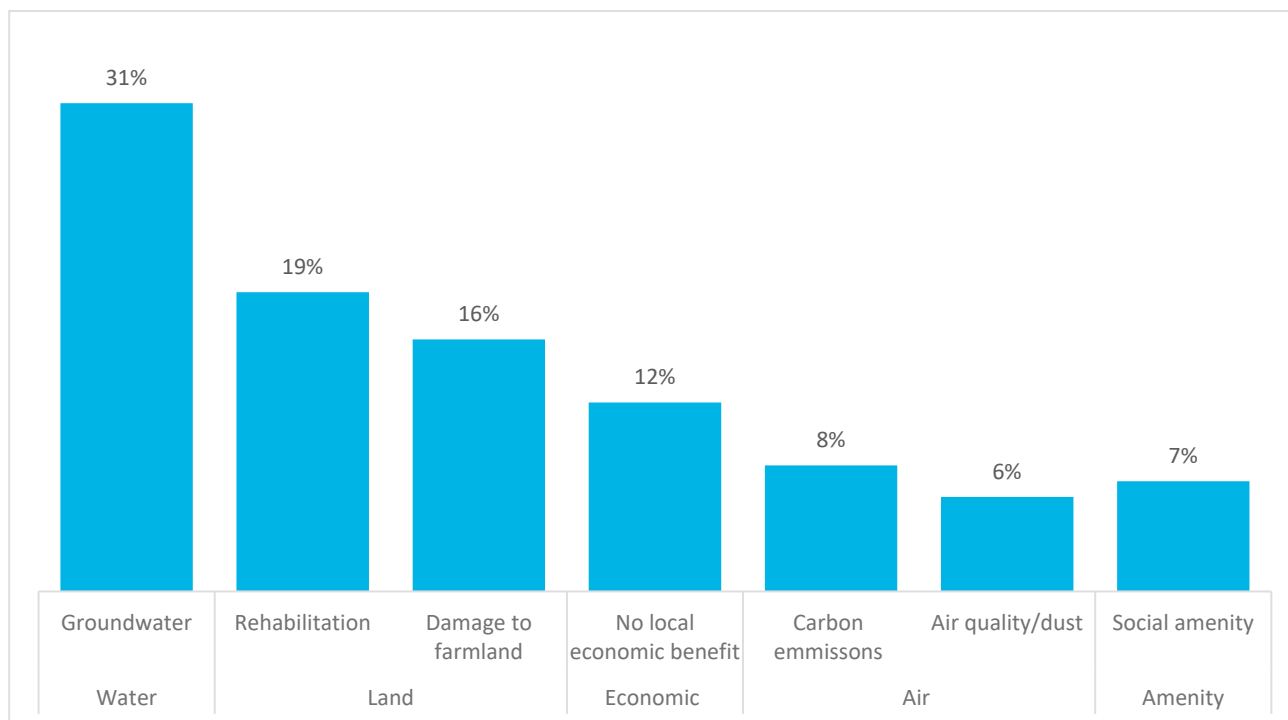
6.3.6 Stakeholder perception surveys and online consultation

An independent research consultant, on behalf of Hume Coal, researched community perceptions using quantitative surveys and qualitative focus groups in November and December 2013, October and November 2014, and June and September 2015.

The quantitative surveys each had a sample size of at least 400 people drawn from Wingecarribee LGA. In each case a random stratified sampling technique was used to obtain representative samples of the population. Interviews were structured and all stakeholders were asked pre-determined questions so that consistent data were collected.

The focus groups were generally held at two evening meetings and went for two hours. The focus group participants were recruited to obtain a representative sample of the population.

The following concerns were identified by the focus groups and are shown in Figure 6.1. A range of issues were identified, but the perceived effects on local groundwater supplies clearly dominated.



Source: Luntz Global - focus groups (2015)

Figure 6.1 Issues of concern identified by focus group participants

In addition to the telephone survey and focus groups, between 29 March and 4 October 2017, Hume Coal used the online community consultation tool YourSay which allows the community to view information pertaining to the Project and, if they chose, leave comments or feedback. There were approximately 579 visitors who made 1,200 visits to the site peaking at 81 per day in April 2017. Visitors were placed into three categories, aware (all visitors); informed (visitors who interacted with content); and engaged (visitors who had left feedback).

Based on the feedback that had been received through other channels of engagement various pages were created to provide information and generate engagement on specific project issues. The number of visitors to each project page was tracked. This has been used as a proxy for the level of community interest in a topic. The pages and the number of visitors to each page is shown in Table 6.7.

Table 6.7 YourSay project page visitors

Project Page	Aware		Informed		Engaged	
	Number	%	Number	%	Number	%
Visual amenity	492	85%	188	32%	10	2%
Project overview	479	83%	25	4%	3	1%
Water	252	44%	32	6%	0	0%
Air quality	206	36%	42	7%	0	0%
The economy and employment	191	33%	28	5%	2	0.3%
Noise	157	27%	12	2%	0	0%

Table 6.7 **YourSay project page visitors**

Project Page	Aware		Informed		Engaged	
	Number	%	Number	%	Number	%
Ground stability	137	24%	5	1%	0	0%
Community Exhibition	105	18%	9	2%	0	0%
Consultation commitment	91	16%	0	0%	0	0%
TOTAL	579	100%	247	43%	12	2%

Source: Hume Coal 2017.

The impact that received the most attention (including the most feedback overall) was visual amenity. Participants were also interested in getting an overview of the Project. The water, air quality, economy and employment, and noise also received reasonable number of visitors.

Comments regarding visual amenity were positive, with participants stating that they felt the design would mask most of the infrastructure from the general public. Other comments related to stockpiling and potential visual impacts along with perceived air quality impacts.

Feedback was also received on the economy and employment page. The two comments received indicated that only positive impacts on the economy had been shared and the potential negative impacts on other industries in the region had not been addressed.

6.3.7 Social media

Whilst Facebook, Twitter and LinkedIn were used, most of the social media engagement with the Hume Coal Project was through Facebook. Hume Coal's approach to social media included the provision of information, statistics, and figures, links to additional information, and videos. Hume Coal provided information and updates via social media regularly, with new posts nearly every day addressing a wide range of topics. The topics of their posts primarily included:

- Hume Coal's role in supporting local farming and agriculture;
- advances in mining technologies and the technologies applied by the proposed Hume Coal Project operation;
- support for local businesses and employment, including Hume Coal's proposed apprenticeship and traineeship programs;
- the role of coal in significant product manufacturing, particularly the creation of steel;
- trade and market considerations;
- energy demands and the role of coal in renewable energy infrastructure;
- project sustainability measures;
- engagement opportunities (including Community Shopfront hours) and the status of the EIS;
- environmental considerations, including the role of water, visual amenity, noise, and biodiversity;

- transport considerations;
- local tourism considerations;
- opportunities for sponsorship, including charity sponsorship and student scholarships; and
- addressing opposing positions/groups.

The posts that garnered the most engagement from the social media community were those that related to farming and agriculture. Their posts related to the canola cropping conducted on the land owned by Hume Coal. Other agriculture related posts that received significant attention referenced agricultural landscapes and the co-existence of mining and farming. This engagement reveals an effort to address economic, access, and community matters, especially related to agricultural livelihoods, natural resource use, and associated opportunity costs associated with mining, agricultural property and land, and the ability for the community to maintain a specific way of life.

Other Facebook posts that received attention related to Hume Coal's role in supporting local businesses and employment, as well as investment in the local community. Posts that included information regarding the Hume Coal Project's potential to create local jobs, apprenticeships, traineeships and statements of intended investment in local goods and services were also actively engaged. These posts demonstrate further recognition of the importance of economic matters and community, as well as built environments.

There was limited negative engagement with the posts on Facebook though one post regarding the impact traffic and trucks may have on access to infrastructure and air quality did receive some negative comments regarding perceived impacts and two separate posts received one or two negative comments that imply negative impacts with regard to the perceived impacts on the community's current way of life.

6.3.8 Hume Coal employees

Hume Coal employees are both employees and members of the Wingecarribee LGA community and are therefore impacted stakeholders. Some Hume Coal staff have felt intimidated by members of the public both while at work and when off duty while in public locations (such as shopping centres). Examples have included being watched, verbal abuse and/or using vulgar gestures and insulting staff in public spaces. Such instances cause stress and if not managed, or preferably eradicated, such behaviours can escalate and cause fractures and cohesion problems in the community.

6.3.9 Submissions

The following sub-section provides an overview of the submission process and the submissions received in relation to the Hume Coal Project. In order to reflect distributive justice, additional analysis has been provided in relation to submissions received in the Wingecarribee LGA as those most likely to be directly impacted by the Hume Coal Project (see Sub-section iii). Further analysis has also been conducted on submissions received in the following council areas and are summarised in sub-section iv:

- Wollondilly LGA;
- Wollongong LGA;
- Kiama LGA;
- Upper Lachlan LGA;
- Shellharbour LGA;

- Shoalhaven LGA; and
- Goulburn Mulwaree LGA.

In addition, a summary of submissions received from special interest groups can be seen in sub-section vi; businesses in sub-section vii; and government in sub-section viii.

i Exhibition details

The Hume Coal Project EIS and the Berrima Rail Project EIS were publicly exhibited from 31 March–30 June 2017 at the following locations:

- WSC office in Moss Vale;
- Mittagong Library;
- Bowral Library;
- Moss Vale Library;
- Hume Coal Office (Clarence Street, Moss Vale);
- Hume Coal Project community office (Berrima);
- Nature Conservation Council office (14/338 Pitt Street, Sydney); and
- DPE office in Sydney (320 Pitt Street, Sydney).

Each EIS was also available for review on DPIE's online Major Projects register, and copies were sent to a number of NSW government agencies nominated by the DPIE. In addition, 115 electronic copies of the EIS were handed out to persons requesting copies of the documentation.

ii Submissions overview

A total of 12,667 submissions were received by DPIE in relation to the Project (noting that the two projects were combined when exhibited to the community). Of those 11,241 (or approximately 89%) were received as form letters that had been signed by individuals from the community, 1,354 (or approximately 11%) were individual submissions (sent by individuals). A further 23 submissions were sent from special interest groups, 37 from businesses and 12 from Government representatives. A summary of submissions received is provided in Table 6.8.

Table 6.8 Summary of submissions received

Source/type	Object	Support	Comment	Total
Form letter (multiple/group)	11,241	-	-	11,241
Individual	929	419	6	1,354
Special Interest group	21	2	-	23
Business	21	15	1	37
Government	-	-	12	12
Total	12,212	436	18	12,667

In terms of weighting provided to submissions, given the effort required to complete an individual submission compared to the processes undergone to elicit signatures on a form letter, we have given greater weighting to the individual submissions as being representative of community identified issues. Of those submissions, 69% were objections and 31% were supportive. Support for the Project was most prevalent among individual submissions.

Requests for submissions are often framed in relation to objections can lead to over-representation of negative responses. In addition, there is no ability to ensure representative samples of submissions or to manage the squeaky wheels within the community. The results should be viewed with this consideration.

When looking at where the 1,354 individual submissions originated from, the vast majority (66%) originated in the Wingecarribee LGA and the bulk of the remainder coming from the rest of NSW (29%). Of note is that individual submissions were more likely to be supportive than other submission types and more likely to reside in the Wingecarribee LGA, which is important when considering the distribution of benefits and impacts on the potentially impacted community; in this case residents of the Wingecarribee LGA. An overview of the origins of the individual submissions is provided in Table 6.9.

Table 6.9 **Origin of individual submissions for the Project**

Location	Proportion of submissions
Wingecarribee LGA	65.8%
Rest of NSW	28.9%
QLD	2.8%
VIC	1.1%
SA	0.1%
WA	0.1%
ACT	0.4%
TAS	0.1%
International	0.3%

Of all the individual submissions received, the matters that received the most objections related to access (74%), community (65%) amenity (63%) and impacts on the built environment (63%). The matters that were raised as key objections in the individual submissions were economic (70%), community (67%), water (64%) and amenity (61%). The matters raised in the individual submissions that garnered the most support included community (57%) and economic (45%).

iii Wingecarribee LGA

Given the proximity to the Project, the residents of the Wingecarribee LGA are most likely to experience direct impacts. Accordingly, further investigation has been undertaken into the issues and matters raised in the submissions by this community. In total 5,332 submissions were received by the Wingecarribee LGA community. Of those, 4,444 were received as form letters and 888 were received as individual submissions.

There were 5,163 objections and 164 supportive submissions in total. All form submissions were objections to the Project whilst 81% of the individual submissions were objections and 18% were supportive. The remainder were neutral comments. Table 6.10 provides a breakdown of the number of submissions by suburb and the proportion of those that were supportive or objections (noting that locations where less than 100 submissions were received have been combined into Rest of Wingecarribee).

Table 6.10 Submissions by suburb/town

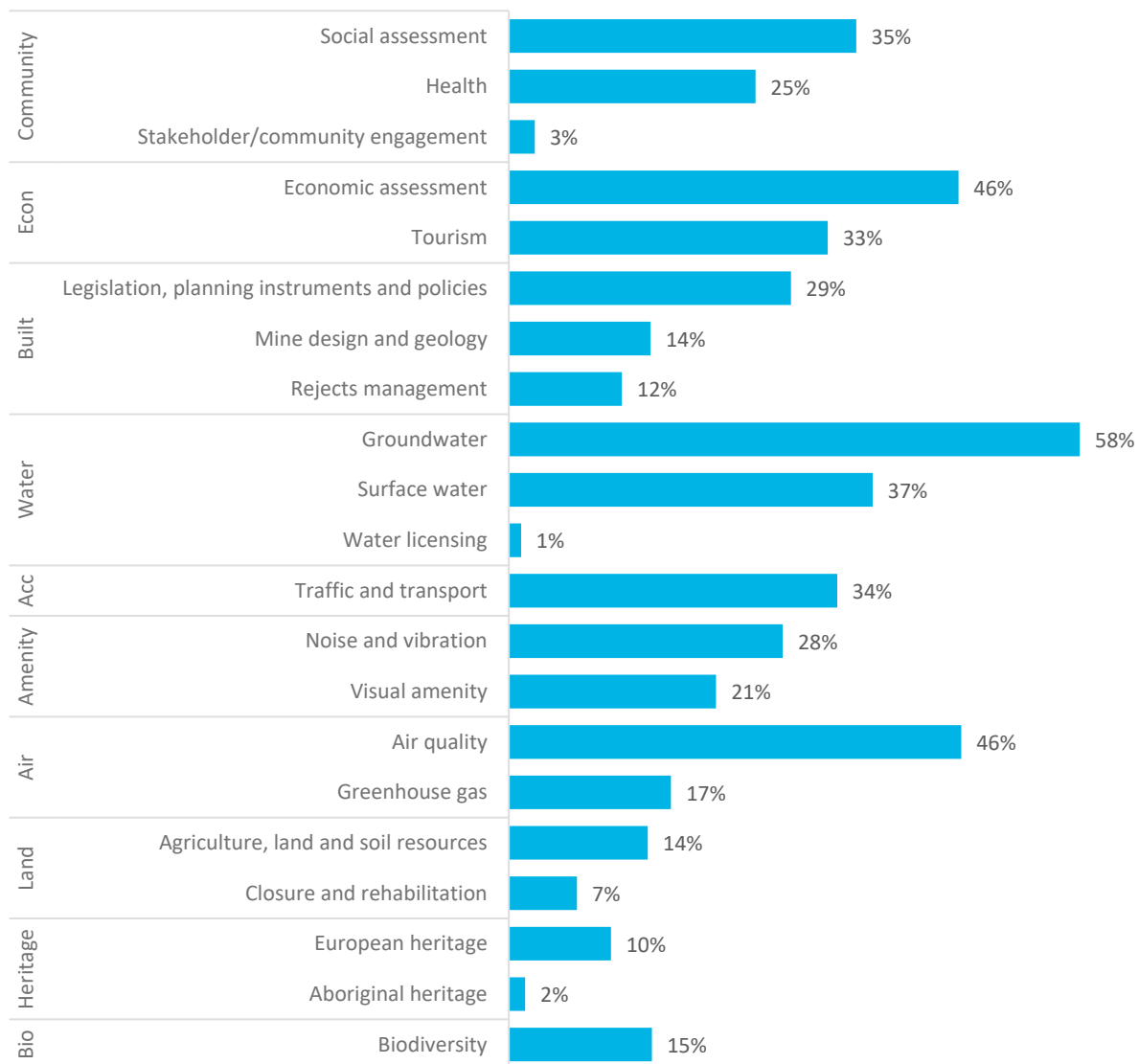
Suburb/town	Number of submissions	Objects (%)	Supports (%)
Bowral	1594	99%	1%
Mittagong	633	97%	3%
Moss Vale	613	91%	9%
Bundanoon	430	99%	1%
Burradoo	382	99%	1%
Berrima	349	96%	3%
Robertson	176	94%	6%
Exeter	175	100%	0%
Sutton Forest	129	97%	3%
Rest of Wingecaribee	851	96%	4%
TOTAL	5332	97%	3%

Individual submissions are considered to be more reflective of specific issues identified by the Wingecaribee LGA community. The proportion of objections received from Exeter, Sutton Forest and Berrima were statistically significantly greater than other locations whilst the proportion of supportive responses was greater in Moss Vale, Mittagong and Robertson. A breakdown of those submissions is below in Table 6.11.

Table 6.11 Individual submissions by suburb/town in the Wingecaribee LGA

Suburb/town	Number of individual submissions	Objects	Supports
Berrima	165	92%	7%
Bowral	148	86%	13%
Moss Vale	144	62%	38%
Sutton Forest	78	95%	5%
Exeter	73	100%	0%
Mittagong	61	64%	34%
Bundanoon	49	90%	8%
Burradoo	28	82%	14%
Robertson	28	64%	36%
Rest of Wingecaribee	114	69%	31%
TOTAL	888	81%	18%

Given that the individual submissions are more likely to reflect perceptions of the local community, further analysis has been conducted regarding the social impacts highlighted in these submissions specifically. There was a total of 719 individual submissions objecting to the Project. Of those, the key concern was related to fears of the Project contaminating and using groundwater excessively (58%), followed by negative impacts on air quality (46%) then potential negative economic impacts, such as loss of farming land (46%). A summary of the issues identified by the objecting submissions and their associated matter is provided in Figure 6.2.

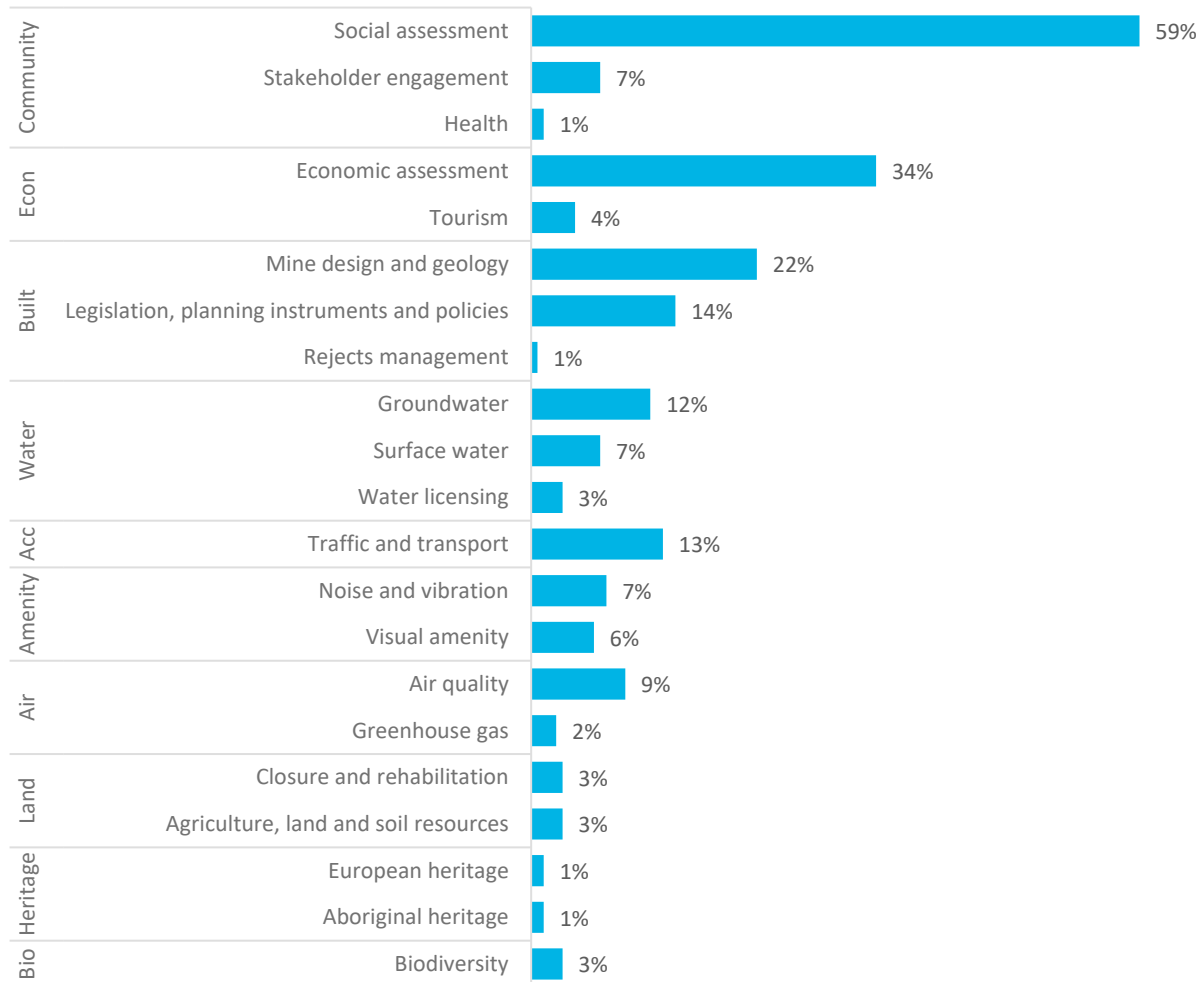


Note: submissions could contain multiple issues and matters therefore the total is more than 100%
Note: Econ=Economic; Built=Built environment; Acc=Access

Figure 6.2 Individual submissions originating in Wingecarribee LGA – objections

The IPC assessment report noted relevant excerpts from submissions that had informed its decision. This included that assertion that social impacts on the community have been chronic and severe in relation to physical illness, abuse, marital stress, anxiety and depression (IPC 2019). However, there is no evidence in the data relating to mental health (Section 4.3.5) to suggest causation between the introduction of the Project to the community and effects on the mental health of the population. Given the perceived severity and chronic nature of the social impacts, one would have expected a peak in mental health indicators (such as access to services, increased alcohol consumption and self-harm hospitalisation), yet this was not observed in the data.

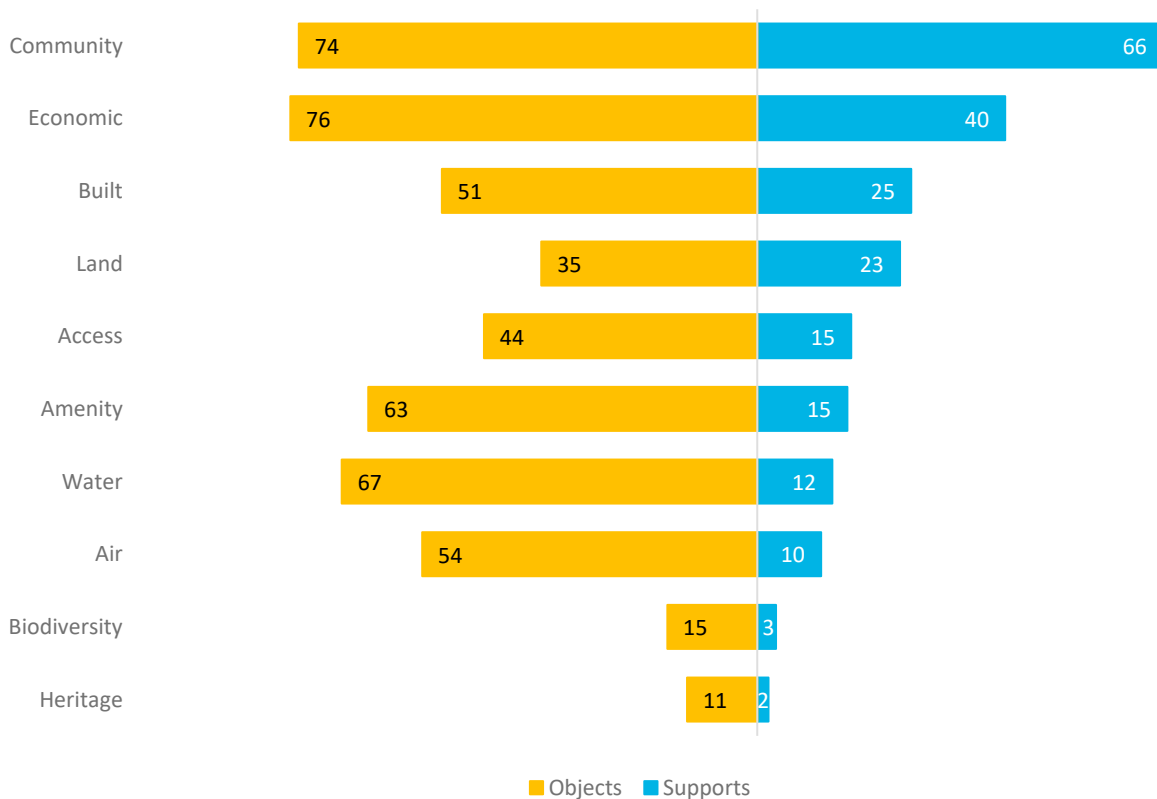
There was a total of 164 submissions from residents in the Wingecarribee LGA that supported the Project (Figure 6.3). The impacts that were perceived as being positive in the submissions included social impacts on the community in terms of investment in community programs and population growth (59%) followed by positive economic impacts like employment/training and local procurement opportunities (34%). A further 22% of supportive submissions related to elements of the mine design (such as the mining method and carbon offsets).



Note: submissions could contain multiple issues and matters therefore the total is more than 100%
Note: Econ=Economic; Built=Built environment; Acc=Access

Figure 6.3 Individual submissions originating in Wingecarribee LGA – supportive

An overview of the proportion of submissions that were either objections or supportive by matter is illustrated in Figure 6.4. The chart demonstrates a dichotomous relationship between the objections and supportive submissions, with matters for both related to community and economic. The matters that featured heavily in objections (and not in supportive submissions) were water, amenity and air quality.



Note: submissions could contain multiple issues and matters therefore the total is more than 100%

¹ Land includes matters of stability, chemistry, capability, and topography

² Water includes matters of quality, availability, flows

³ Air includes matters of particles, gases, emissions

⁴ Biodiversity includes matters of native vegetation and fauna

Figure 6.4 Perceived impacts from individual submissions – NSW Guideline matters (%)

iv Surrounding LGA's

Whilst not likely to widely experience the direct impacts of the Project, residents from surrounding LGA's are likely to feel some of the indirect impacts. Accordingly, the submissions have been reviewed more closely to understand the perceived impacts within the wider community in the region, which include:

- Wollondilly LGA;
- Wollongong LGA;
- Kiama LGA;
- Upper Lachlan LGA;
- Shellharbour LGA;
- Shoalhaven LGA; and
- Goulburn Mulwaree LGA.

In total, 987 submissions were received from the community in these surrounding LGA's. Of those, 897 were received as form letters and 90 were received as individual submissions. In total, 911 were objections to the proposal and 76 were supportive. Whilst all of the submissions received as part of a form letter were objections, only 14 of the individual submissions were objections. This means that the majority ($n^3=76$ or 84%) of the individual submissions within the surrounding LGAs were supportive.

Of the 14 that were objections the key issues were in relation to water ($n^4=9$); perceived negative economic impacts ($n^4=7$); and air quality ($n^4=6$). The key impacts that were raised in support of the Hume Coal Project in the submissions from the surrounding LGA's included positive social impacts, like community investment and population growth (50%); the potential economic benefits to the community such as employment and local procurement opportunities (42%), and the mine design (32%). This indicates that those people indirectly impacted are more able to perceive potential broader economic and social benefits resulting from the Hume Coal Project.

v Wider community

There was a total of 5,973 submissions received from the community beyond Wingecarribee LGA and its bordering LGA's. Of those 94% (or 5,615) were received as form letters and 6% (or 358) were received as individual submissions. The majority (97%) were objections to the Hume Coal Project and 3% in support.

When considering the 358 individual submissions alone, 51% (or 181) were objections with a comparable 49% (176) in support. This further demonstrates the wider community's ability to consider the broader positive impacts of the Hume Coal Project.

vi Special interest groups

There was a total of 23 special interest groups (listed below) that provided submissions. Of those, 22 were objections and 1 was supportive:

- 350 Australia;
- Aurora Southern Highlands Steiner School;
- Australian Garden History Society - Southern Highlands Branch;
- The Australia Institute;
- Australian Stock Horse Society - Moss Vale Branch;
- Battle for Berrima Inc;
- Berrima District Acclimatisation Society;
- Berrima Residents Association;
- Climate Action Now Wingecarribee;
- CFMEU (The United Mineworkers South Western District);
- Coal Free Southern Highlands (this submission included several supporting reports, as listed further below);

³ For all expressions of n , n = the number of submissions.

⁴ Note the sample size and not the proportion has been reported due to the low base size (ie $n=14$) of this group.

- Exeter Village Association;
- Farmers for Climate Action;
- Groundswell Gloucester;
- Institute for Energy Economics and Financial Analysis (IEEFA);
- Lock the Gate Alliance;
- National Trust – Southern Highlands Branch;
- The National Trust of Australia;
- Nature Conservation Council of NSW;
- Quit Coal;
- Regional Development Australia - Southern Inland;
- Southern Highlands Food and Wine Association; and
- Southern Highland Greens (IPC 2019).

The Coal Free Southern Highlands Group commissioned several studies in support of their submission:

- Pells and Pan (May 2017) *Groundwater modelling of the Hume Coal Project*, Pells Consulting technical report #S025.R1;
- UNSW Water Research Laboratory (June 2017) *Hume Coal Project peer review of conceptual and numerical modelling that predicted likely groundwater impacts*;
- C. M. Jewell and Associates Pty Ltd (May 2017) *Potential groundwater contamination issues associated with the placement of washery fines material into mine voids, review of Appendix K Hydro-geochemical assessment*;
- The Australia Institute (May 2017) *For Hume the bell tolls – local economic impacts of the Hume Coal Project*;
- The Australia Institute (June 2017) *Hume Coal Project - Submission on Environmental Impact Statement*;
- Marylou Potts Pty Ltd and Robert White (June 2017) *Water regulations and the Hume Coal Project*;
- John Lee, geoscientist, Hydroliex Pty Ltd (June 2017);
- Colleen Morris and Christine Hay (May 2017) *Cultural landscape assessment, Berrima, Sutton Forest and Exeter*;
- Colleen Morris and Christine Hay (June 2017) *Statement of Heritage Impact for Berrima, Sutton Forest and Exeter Cultural Landscape of Hume Coal proposal for an underground coal mine and Berrima Rail line extension*; and

- Macquarie University, Department of Environmental Sciences, Faculty of Science & Engineering (June 2017) Report on the predicted off-site impacts of the proposed Hume Coal and Berrima Rail Projects – Southern Highlands, NSW.

The key issues (and matters) included perceived negative impacts on water (both groundwater and surface water); the economy; air quality (CO₂ emissions and dust) and the decision-making process. The supporting submission flagged the economic benefits and the mine design as positive elements of the Hume Coal Project (IPC 2019).

vii Businesses

There was a total of 37 businesses from a wide range of industries and a summary is provided in Table 6.12.

Table 6.12 Submissions by business type

Business type	Number
Pastoral / Agricultural	6
Accommodation / Hospitality	5
Construction	3
Transport	3
Retail	2
Real estate	2
Excavation	2
Mining	2
Wholesale	2
Industrial design	1
Sporting facility	1
Blasting	1
Timber plantation	1
Mining consultancy	1
Financial services	1
Electrical engineering	1
Architecture	1
Town planning	1
Horticulture	1
TOTAL	37

Source: IPC 2019.

As mentioned at Table 6.8, there were 15 businesses that provided submissions in support of the Hume Coal Project; 21 that objected and one general comment. There were supportive submissions amongst most business types apart from architecture, retail, the sporting facility and accommodation/hospitality businesses. The issue that businesses raised the most objections around was water (ie availability and potential contamination), followed by air quality and potential negative economic impacts in existing industries (ie agricultural and tourism).

In terms of aspects of the Hume Coal Project that garnered the most support, positive economic impacts, including local employment and procurement opportunities, were on the top of the list, followed by positive social impacts like growth of the community and community investment programs, and the mine design.

viii Government

The following NSW Government agencies provided submissions:

- DPE Division of Resources and Geoscience (DRG);
- Department of Primary Industries (DPI), including:
 - DPI – Agriculture;
 - DPI – Water; and
 - DPI – Fisheries.
- Environment Protection Authority (EPA);
- Forestry Corporation of NSW (FCNSW);
- Office of Environment and Heritage (OEH);
- NSW Health – South Western Sydney Local Health District;
- Roads and Maritime Services (RMS);
- Heritage Council of NSW;
- Subsidence Advisory NSW;
- Transport for NSW (TfNSW);
- Water NSW; and
- Wingecarribee Shire Council.

Impacts that were raised by government departments tended to reflect those raised prior to submissions (see Table 6.2) including:

- water related impacts;
- land related impacts;
- economic impacts;
- air quality;
- Aboriginal and European cultural heritage;

- closure and rehabilitation planning;
- health and wellbeing; and
- employment.

6.4 Summary of stakeholder engagement

A comprehensive stakeholder engagement program conducted over five years has allowed all key stakeholders and the broader community the opportunity to have their say about the Project. The issues have been progressively reported back to Hume Coal through various channels (either direct or through various consultants). Furthermore, after the initial submission to the Department for review and public exhibition, public submissions were also reviewed and considered. All data sources have been taken into account in the Project's design so that the concern is avoided, mitigation is provided or, where a positive opportunity exists, it is enhanced.

Key potential negative social impacts included perceived impacts on water supply and contamination; local industry; air quality; and community cohesion. The main potential positive impacts identified through the SIA process activities included positive impacts on the economy through increased employment opportunities, increased procurement opportunities, increased potential for community development and community investment opportunities.

7 Social impact assessment

This chapter provides a ranking of the identified social impacts of the Project. The aim of the SIA is to assess the proposed change to the current social conditions. To do this, data from several sources has been utilised to develop a layered picture of the potential social impacts that are likely consequences or changes experienced by the community in which the proposed Project is located.

In order to prioritise the identified social impacts, a risk-based framework (Table 2.2 in Section 2.2.1) has been adopted in the assessment of social impacts. Findings of technical reports as well as the perceptions of stakeholders were considered when conducting the social risk ranking to ensure an integration of expert and local knowledge in impact assessment and the development of appropriate impact mitigation, amelioration and enhancement strategies.

Assessment of social impacts is complex and as such requires the balancing of a range of factors and often competing interests. The impact assessment is reflective of this and has:

- assessed aspects of the proposed Project as both negative and positive as they relate to different groups of people;
- included negative impacts on local communities while documenting the benefits to the broader region;
- considered the impacts on vulnerable groups and provided management strategies to ensure that any existing disadvantages are not exacerbated; and
- considered each communities access to critical resources, such as housing and health care, and how this affects their resilience.

The social impacts identified in this chapter were initially assessed on a worst-case scenario, and then the residual effect was assessed assuming mitigation of negative impacts or enhancement of positive impacts are successfully implemented. The assessment uses the terms unmitigated and mitigated when referring to negative impacts and un-enhanced or enhanced when referring to positive impacts.

The following data and information have been used to identify the impacts and their associated risks:

- data collected as part of the social baseline;
- findings from community and stakeholder engagement activities;
- findings from technical studies;
- academic research; and
- relevant government and agency reports.

7.1 Way of life impacts

This section provides an assessment of the unmitigated and mitigated way of life impacts on the local and regional communities as a result of the proposed Project. There were three matters raised related to the social impact on the community's way of life:

- non-resident workforce;
- population change, and
- employment and training opportunities.

7.1.1 Non-resident workforce – unmitigated

Some members of the community surrounding the Project area raised concerns that the non-resident workforce would behave in an anti-social way and was raised in multiple forums (CIS, SRG, WAG, employees and submissions) (see Section 6). Anti-social behaviour could lead to unrest and disrupt community cohesion impacting on the community's way of life. With a peak construction workforce of 454 it is likely to occur at some time given the existing angst in the community. The consequence if unmitigated would be minor due to the short term (construction phase) and localised nature of the impact. Therefore, the unmitigated impact has been assessed as a moderate negative impact on the way of life of local residents and businesses throughout the construction phases of the Project. A summary of the assessment is provided in Table 7.1.

7.1.2 Non-resident workforce – mitigated

The successful implementation of the Hume Coal workforce plan that outlines a code of conduct for both direct employees and contractors and encourages positive community participation, combined with an ongoing community engagement strategy would mean that any anti-social behaviour would be unlikely. In the unlikely event that anti-social behaviour occurs, appropriate action will be taken by Hume Coal meaning the consequences would be minimal because they would be small-scale. Therefore, the mitigated impact has been assessed as low negative impact on the way of life of the local residents and businesses throughout construction, resulting in a residual rating of low. A summary of the assessment is provided in Table 7.1.

Table 7.1 Summary way of life – non-resident workforce

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Non-resident workforce	Residents Business	Construction	Local	Moderate negative	Low negative

7.1.3 Population change – unmitigated

Members of the local community raised concerns about the effects the in-migrating operational workforce would have on the rural character of the area. Those who raised concerns perceived that the mining workforce culture and mining generally, was not compatible with their current rural lifestyle that is highly valued by the residents of Wingecarribee LGA. Even with the intent to employ 70% of the operational workforce from the local area, there will be an increase in population due to workers and their families relocating. It is therefore possible that this will occur. Unmitigated the consequences would be moderate given the community has the capacity to adapt and cope with the negative social impacts. Therefore, the unmitigated impact has been assessed as a high negative impact on the way of life of local residents throughout the operations phase of the Project. A summary of the assessment is provided in Table 7.2.

7.1.4 Population change – mitigated

Hume Coal's residential workforce policy (see Section 3.3.2) supports the incorporation of their workforce and their families into the local community. The successful implementation this policy will result in most of the workforce and their families residing in the community and participating in local community activities, having children in schools, childcare and sporting and recreational activities. This successful integration into the community will minimise the impacts related to in-migration on the local rural character and Hume Coal's approach is compatible with supporting a cohesive community. The Agricultural Impact Statement (EMM 2017d) indicates there will be minimal impact on the land use in the area as a result of the Project. Furthermore, the application of a workforce code of conduct will help to manage any anti-social behaviour from the workforce. The fears held by the community that their lifestyle will be disrupted by the in-migrating workforce is unlikely to occur. The consequences would be minor as the community can easily adapt to any changes. Therefore, the mitigated impact on the way of life of local residents has been assessed as low negative during operations of the Project. A summary of the assessment is provided in Table 7.2.

Table 7.2 Summary way of life – non-resident workforce

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Population change	Residents	Operations	Local	High negative	Low negative

7.1.5 Employment and training opportunities – unenhanced

Local employment and training were identified by some members of the community as an opportunity, as the Project would increase the availability of jobs in the local area as well as increasing the employability of residents. However, some community concern was raised in the submissions about whether this would occur. If no enhancement strategies are adopted to make sure the employment and training opportunities are provided to the local community it would be possible that this could occur. The consequences would be minor as there would be some social value to the community. The consequences are minor as the impacts would be localised, resulting in an overall unenhanced rating of moderate. Therefore, the unenhanced impact on the way of life of local residents has been assessed as moderate positive during operations of the Project. A summary of the assessment is provided in Table 7.3

7.1.6 Employment and training opportunities – enhanced

Hume Coal's workforce strategy assumes that locals will be prioritised and that any hires from outside the area will be expected to relocate to within a 45-minute drive of the site. This therefore means that, mitigated, employment and training opportunities are almost certain to benefit the local community. The consequence is moderate as the impact can be enhanced to provide substantial benefit to the community. Therefore, the enhanced impact on the way of life of local residents has been assessed as extreme positive during operations of the Project. A summary of the assessment is provided in Table 7.3

Table 7.3 Summary way of life impacts – employment and training opportunities

Impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Way of life	Employment and training opportunities	Residents	Construction Operation	Local	Moderate positive	Extreme positive

7.2 Community impacts

This section provides an assessment of the unmitigated and mitigated impact on the local and regional communities as a result of the proposed Project. Public safety was the only matter raised relating to community impacts during the consultation and submissions process.

7.2.1 Public safety – unmitigated

An increase in population can result in increased use of roads. There was a perception that this may lead to increased traffic incidents, particularly if no improvements are made to assist with adapting to the increased volume. However, the traffic assessment concluded that the roads in the Project area could handle this increased volume (EMM 2017e). This would make it unlikely to impact community safety and the consequence would be moderate as the community has the capacity to adapt to any increase in traffic. Therefore, the unmitigated impact on the community's local and regional residents has been assessed as moderate negative during construction and operations of the Project. A summary of the assessment is provided in Table 7.4.

7.2.2 Public safety – mitigated

Noting that the operations will be using rail transport predominantly, the most likely cause of any accidents due to traffic would result from the increase in population. As demonstrated in Section 3.3.5, this is expected to be marginal. In addition, Hume Coal will require all workers, including those involved in mine closure, to live within 45 minutes travel time from the Project area. The successful implementation of this policy will minimise the risk of fatigue related travel accidents (Section 3.3.5). The traffic assessment found that no significant adverse traffic impacts related to future traffic movements resulting from the Project for either the capacity of the road network, functioning of intersections, condition of the road that would affect traffic (EMM 2017e). There would be additional benefits by providing the community with information about the outcomes of the traffic report, related to its ability to handle increased traffic volumes as well as ongoing incident reports to minimise misperceptions and prevent unnecessary stress or angst to residents. It is considered that the successful implementation of mitigation measures would make accidents rare. The consequence would be minimal given that the current road conditions would be maintained. Therefore, the mitigated impact on the community's local and regional residents has been assessed as low negative during construction and operations of the Project.

A summary of the assessment is provided in Table 7.4.

Table 7.4 Summary community impacts – public safety

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Community	Public safety	Residents	Construction	Local	Moderate negative	Low negative
			Operations	Regional		

7.3 Access to and use of infrastructure, services and facilities impacts

This section provides an assessment of the unmitigated and mitigated risk of impact to the access and use of infrastructure, services and facilities on the local and regional communities as a result of the proposed Project. There were three matters raised in consultation and in submissions that related to the social impact on the community's access to and use of infrastructure, services and facilities:

- emergency services;
- population increase; and
- legacy infrastructure.

7.3.1 Emergency services – unmitigated

There is a reasonable likelihood that the Project would slow down emergency services at the level crossing at Robertson creating delays in transporting patients to hospital, causing angst amongst the community. This would potentially impact on the community's ability to access critical social infrastructure. Unmitigated this is likely to occur at some time. The consequence is catastrophic as it may result in death due to delayed medical treatment or firefighting services. Therefore, the unmitigated impact on the community's local residents has been assessed as extreme negative during operations of the Project. A summary of the assessment is provided in Table 7.5.

7.3.2 Emergency services – mitigated

The successful mitigation of this impact would require emergency services to take the lead and work in partnership with the rail line operator to make sure that emergency vehicles travel unhindered to their destination. This would require Hume Coal cooperating with emergency services to support them in delivery of an appropriate mitigation strategy. Whilst it is possible to mitigate this impact it falls within the responsibility of the relevant emergency services and other responsible agencies to form a partnership. The successful implementation of this mitigation would mean it would be a rare occurrence to have an emergency vehicle stopped for significant periods of time. The consequence would be minimal as the emergency services would have an agreed strategy and existing agreement in place with the rail provider to allow a rapid response if future changes to the approach are required, and the impacts would be significantly reduced. Therefore, the mitigated impact on the community's local residents has been assessed as low negative during operations of the Project. A summary of the assessment is provided in Table 7.5.

Table 7.5 Summary Access to and use of infrastructure impacts – emergency services

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Access to and use of infrastructure	Emergency services	Residents	Operations	Local	Extreme negative	Low negative

7.3.3 Population increase – unmitigated

An increase in the non-resident and resident population during the construction and operational phases could increase demand on social infrastructure. However, data indicates that Wingecarribee LGA residents have adequate services that are accessible both in terms of cost of service and the community's ability to access these services when compared to other LGAs. Therefore, there is capacity for the local services to cope with an increase in population. It is important to note that unmitigated the pressure on services could escalate and cause problems for local residents, particularly vulnerable residents. It is possible that this could occur at some time. The consequence would be minor as the community can adapt due its existing capacity and proximity. Therefore, the unmitigated impact on the community's local residents has been assessed as moderate negative during operations of the Project. A summary of the assessment is provided in Table 7.6.

7.3.4 Population increase – mitigated

As demonstrated, in Section 4.3, Wingecarribee LGA population is projected to grow at a rate greater than the population growth estimate for the Project. Whilst most of the population growth from the Project is likely to be within the Wingecarribee LGA, it is also expected to disperse to some surrounding LGAs. Furthermore, the successful implementation of the policy to hire locally as a priority will help to reduce the need for in-migration to the region. This means that it is possible it will occur, and the consequence would be minimal as the impacts would be localised but may need to be reassessed if the Project requirements change in any way. Therefore, the mitigated impact on the community's local residents has been assessed as low negative during operations of the Project. A summary of the assessment is provided in Table 7.6.

Table 7.6 Summary Access to and use of infrastructure impacts – community services and facilities

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Access to and use of infrastructure	Population increase	Residents	Construction Operations	Local	Moderate negative	Low negative

7.3.5 Legacy infrastructure – unenhanced

One of the potentially positive impacts identified as part of the SIA process was the potential for a beneficial legacy to be left in the community as a result of the infrastructure from the mine being re-purposed and as a result of the on-going investment in the community. The establishment of the Hume Coal Charitable Foundation demonstrates Hume Coal's commitment to making a community contribution that leaves a lasting positive impact. There is no reason to expect that this sentiment would not extend to infrastructure. Hume Coal's demonstrated efforts to fund community projects that have long lasting benefits means it is possible that this would be extended to infrastructure, and the consequence would be moderate as it could be enhanced to provide substantial value to society. Therefore, the unenhanced impact on the community's local and regional residents has been assessed as high positive during closure of the Project and beyond. A summary of the assessment is provided in Table 7.7.

7.3.6 Legacy infrastructure – enhanced

The implementation of a strategy to effectively collaborate with the community to ensure that the infrastructure is re-purposed to provide maximum benefit and that ongoing community investment is future focused. The success of the mitigation strategy makes it almost certain to occur and the consequences would be major due to the far-reaching benefits to the community. Therefore, the enhanced impact on the community's local and regional residents has been assessed as extreme positive during closure of the Project and beyond. A summary of the assessment is provided in Table 7.7.

Table 7.7 Summary Access to and use of infrastructure impacts – legacy infrastructure

Impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Access to and use of infrastructure	Legacy infrastructure	Residents	Closure and beyond	Local Regional	High positive	Extreme positive

7.4 Culture impacts

This section provides an assessment of the unmitigated and mitigated culture impacts on the local and regional communities as a result of the proposed Project. There were two matters related to the social impact on the community's culture:

- Aboriginal and/or Torres Strait Islander culture; and
- European heritage.

7.4.1 Aboriginal and/or Torres Strait Islander culture – unmitigated

Concerns were raised by the OEH during the submissions process in relation to the potential negative cultural impact on Aboriginal and/or Torres Strait Islander heritage. This was as a result of the discovery of artefacts on the Project proposed footprint. However, community concern was not supported by the Aboriginal Cultural Heritage Assessment which found the cultural heritage sites as being of low significance (EMM 2017f). If the potential impacts are not mitigated it is possible that artefacts are not salvaged. The consequence would be minor due to the low significance of the cultural sites. Therefore, the unmitigated impact on the community's local Aboriginal and/or Torres Strait Islander people has been assessed as moderate negative and long term as a result of the Project. A summary of the assessment is provided in Table 7.8

7.4.2 Aboriginal and/or Torres Strait Islander culture – mitigated

The Aboriginal Cultural Heritage Assessment recommended that salvage of the identified artefacts take place and will be salvaged (EMM 2017f). The successful implementation of this mitigation would make the loss of artefacts rare and the consequences minor due to the low significance of the cultural sites. Therefore, the mitigated impact on the community's local Aboriginal and/or Torres Strait Islander people has been assessed as low negative and long term as a result of the Project. A summary of the assessment is provided in Table 7.8.

Table 7.8 Summary culture impacts – Aboriginal and/or Torres Strait Islander culture

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	Aboriginal and/or Torres Strait Islander culture	Aboriginal and/or Torres Strait Islander people	Long term	Local	Moderate negative	Low negative

7.4.3 European heritage (unmitigated)

There have been concerns raised in relation to European heritage, particularly on the effects the Project may have on the heritage gardens in Moss Vale. They fear that the mine will cause the gardens to be disturbed by the underground workings, negatively impacting on the local surroundings. However, the first workings mining method planned for the Project is expected to have no subsidence impacts. Impacts to listed heritage items are not anticipated from groundwater drawdown due to identified heritage items being located above Wianamatta Group shale. Wianamatta Group shale has limited hydraulic connection to the underlying Hawkesbury Sandstone (where groundwater drawdown is predicted to occur). Given the level of concern and value the community places on the heritage gardens it is important to take note of their perception. As such it is unlikely subsidence would occur; however, the consequence would be major due to the limited capacity to adapt and the value to the community if the heritage gardens were lost or damaged. Therefore, the unmitigated impact on the community's local residents has been assessed as high negative during the operation phase of the Project. A summary of the assessment is provided in Table 7.9.

7.4.4 European heritage (mitigated)

The first workings mining method that is planned for the Project is expected to have no subsidence impacts. Impacts to listed heritage items are not anticipated from groundwater drawdown due to identified heritage items being located above Wianamatta Group shale. Wianamatta Group shale has limited hydraulic connection to the underlying Hawkesbury Sandstone (where groundwater drawdown is predicted to occur). However, the community highly value the heritage gardens and their perception will need to be mitigated to ensure it does not cause unnecessary stress and anxiety. As such the successful implementation of a transparent community and stakeholder engagement strategy (CSES) that informs the community of the mining method and associated impacts will build trust and reduce unnecessary stress and anxiety for community members. The success of the first workings mining method and CSES will mean subsidence that impacts the heritage gardens would be rare. Any consequence would be minimal as they would be small-scale and localised and may require further consideration if there are changes to the mining technique. Therefore, the mitigated impact on the community's local residents has been assessed as low negative during the operation phase the Project. A summary of the assessment is provided in Table 7.9.

Table 7.9 Summary culture impacts – European heritage

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	European heritage culture	Residents	Operations	Local	High negative	Low negative

7.5 Health and wellbeing impacts

This section provides an assessment of the unmitigated and mitigated health and wellbeing impacts on the local and regional communities as a result of the proposed Project. There were two matters raised in consultation and in submissions that related to the social impact on the community's health and wellbeing:

- mental health; and
- physical health.

7.5.1 Mental health (stress) – unmitigated

There is the perception amongst some community members that the Project is having a negative impact on the mental health of the community. This was most frequently expressed in submissions received following public exhibition of the EIS. Those who made submissions about mental health have claimed that the Project was causing tension and stress between community members and a significantly negative impact on the health and wellbeing of the community. The volume of submissions on this aspect was highlighted in the IPC assessment report on the Project (IPC 2019). However, Wingecarribee LGA's mental health outcomes indicate that for most indicators they are on par or below that for NSW (see Section 4.3.5ii). While the results indicate increasing prevalence of mental health issues in the Wingecarribee LGA population, given the trends in the data there is no correlation between the community's awareness of the Project and the increase in prevalence of mental health. However, the perception in the community is not to be taken lightly and reflects their experience, and unmitigated could diminish their mental health. Therefore, it is possible that this could occur. The consequences would be moderate as there is capacity to cope and adapt due to the adequacy and availability of health services. Therefore, the unmitigated impact on the community's local residents has been assessed as high negative during construction and operation phases of the Project. A summary of the assessment is provided in Table 7.10.

7.5.2 Mental health (stress) – mitigated

The mental health indicators (as outlined in Section 4.3.5) show no indication that the community's mental health has been impacted by the Project. This was also the case at a broader level (ie Southern Highlands and South Western Sydney LHD). Accordingly, the successful implementation of a continued communication and engagement strategy should be undertaken to inform the community and build a transparent and ongoing relationship. Doing so should improve trust and minimise the perceptions of stress related mental health impacts. Based on the existing mental health data and status of the Wingecarribee LGA residents, it is unlikely that mental health issues will occur. The consequences would be minimal as they would be small scale and limited but should be monitored for future consideration should the Project change. Therefore, the mitigated impact on the community's local residents has been assessed as low negative during construction and operation phases of the Project. A summary of the assessment is provided in Table 7.10.

Table 7.10 Summary health and wellbeing impacts – mental health

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Mental health (stress)	Residents	Construction Operations	Local	High negative	Low negative

7.5.3 Physical health – unmitigated

The community expressed concerns about reductions in air quality in connection with the Project. Air quality was raised across a variety of community and stakeholder engagement activities (Section 6) but was most explicitly expressed during the SRG meetings (Table 6.5). Of those community members that were consulted or provided submissions, they felt that breathing in air from the Project would potentially have negative impacts on the health and wellbeing of the community. The residents of Wingecarribee have relatively good health when compared to other LGAs and NSW. At the LHD level there is a higher percentage of childhood asthma in 2016 and 2018 (see 4.3.5i). Those with asthma and other respiratory conditions are more vulnerable to effects of poor air quality. However, the health impact assessment found that even in the worst-case annual average increased long-term exposure for all-cause mortality would be so small as to be no cause for concern (EMM 2017g). Unmitigated it is unlikely that air quality would be diminished to the point of impacting the health of people with respiratory conditions. The consequence would be minor as there is ability for those with respiratory conditions to adapt and cope given the adequacy and availability of health services (see Section 4.3.10iia) in the local area. Therefore, the unmitigated impact on the community's local residents with respiratory conditions has been assessed as low negative during construction and operation phases of the Project. A summary of the assessment is provided in Table 7.11.

7.5.4 Physical health – mitigated

The air quality has been found to be within acceptable levels given the underground operations of the Project and the additional best practice mitigations in relation to dust (Ramboll Environ 2017). This is consistent with the findings of health impact assessment which found no concerns regarding health impacts (EMM 2017g). The successful implementation of dust mitigation and regular communication of the air quality monitoring as part of the CSES would manage community perceptions and most importantly allow those with respiratory conditions to manage their health and prevent adverse events. The successful implementation of the mitigation strategies would make it rare that physical health is negatively impacted. The consequence would be minimal as those with respiratory conditions can easily adapt to the changed conditions and have access to adequate and available health services in the local area. Therefore, the mitigated impact on the community's local residents with respiratory conditions has been assessed as low negative during construction and operation phases of the Project. A summary of the assessment is provided in Table 7.11.

Table 7.11 Summary health and wellbeing impacts – physical health

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Physical health	Residents with respiratory conditions	Construction Operations	Local	Low negative	Low negative

7.6 Surroundings impacts

This section provides an assessment of the unmitigated and mitigated surroundings impacts on the local and regional communities as a result of the proposed Project. There were six matters raised in consultation and in submissions that related to the social impact on the community's surroundings:

- amenity;
- greenhouse gas;
- water (use);
- water (supply);
- subsidence; and
- land rehabilitation.

7.6.1 Amenity – unmitigated

The Wingecarribee LGA residents highly value their lifestyle with open space and a general sense of safety and security as key reasons for living in the Southern Highlands Community, as summarised in their local plans and strategies (Section 5.3). Community members are concerned that the reject stockpiles would detract from the natural beauty in the local environment, impacting on visual amenity and their surrounds. This is further compounded by some members concerns about changes to local flora and fauna, such as koalas and box trees, as a result of the Project. To a lesser degree, community members also had concerns relating to dust, noise and light. The combination of these factors could not only impact the wildlife and quality of the natural environment, but it could diminish the community's ability to enjoy it. If unmitigated it is possible that impacts to amenity will occur. The consequence would be moderate as there is some capacity to adapt. Therefore, the unmitigated impact on the community's local residents has been assessed as high negative during the operation phase of the Project. A summary of the assessment is provided in Table 7.12.

7.6.2 Amenity – mitigated

Hume Coal are committed to mitigation of the dust as outlined in the air quality and greenhouse gas assessment that includes designing the Project to incorporate a range of dust mitigation and management measures that are in accordance with or above accepted industry best practice dust control measures (Ramboll Environ 2017). The successful mitigation of dust, noise, and light emissions, as well as impacts to biodiversity, would need to be communicated as part of the CSES. This would mean that the mitigated impact on amenity resulting from dust and noise, and the flora and fauna would be unlikely to occur. The consequence would be minimal because it would be localised and small-scale. Therefore, the mitigated impact on the community's local residents has been assessed as low negative during the operation phase of the Project. A summary of the assessment is provided in Table 7.12.

Table 7.12 Summary surroundings impacts – amenity (visual and flora and fauna)

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Amenity	Residents	Operations	Local	High negative	Low negative

7.6.3 Water (use) – unmitigated

Industrial water usage of the Project was also flagged as a concern. This use of natural resources taps into current fears around water security and would impact on the landholder's way of life, through fear of reduced access to water for both residential and commercial purposes. If unmitigated this is likely to occur at some time and the consequence would be major as society would have limited ability to adapt to this additional use of a finite resource. Therefore, the unmitigated impact on landholders has been assessed as high negative during the operation phase of the Project. A summary of the assessment is provided in Table 7.13.

7.6.4 Water (use) – mitigated

Hume Coal acknowledge that there will be temporal impacts to groundwater levels in the Project area. Hume Coal will be obliged to enter into make good agreements on a case by case basis with groundwater users who experience a greater than 2 metre drawdown (EMM 2018 and EMM 2020). Under these individual agreements there will be several mitigations assessed for landholders that ensure continued access to water. The successful implementation of make good agreements will minimise the impacts to landholders identified as potentially experiencing negative impacts as a result of drawdown (EMM 2020). The adoption of make good agreements with affected landholders will ensure continued access to water that will assist in maintaining their way of life. Therefore, the mitigated impact on landholders has been assessed as low negative during the operation phase of the Project. A summary of the assessment is provided in Table 7.13.

Table 7.13 Water usage risk assessment summary

Impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Water (use)	Landholders	Operation	Local Regional	High negative	Low negative

7.6.5 Water (supply) – unmitigated

Some community members and stakeholders (see Section 6.3.1, Section 6.3.2, Section 6.3.3, Section 6.3.4, Section 6.3.5, Section 6.3.9) raised concerns that the Project's operations would result in contamination of the Greater Sydney water supply. Water cannot be contaminated by subsidence due to the first workings mining method; however, this fear was also connected to the Project's operations generally. Concerns were raised in relation to impacts on their surroundings through subsidence, flooding and the potential release of contaminated water from the mine into the catchment. They felt that this could lead to potable water becoming non potable. However, this is not supported by the groundwater or surface water reports which found that the Hume Coal Project and the Berrima Rail Project will not have cumulative impacts on surface water quality as the rail project has been assessed to meet the Neutral or Beneficial Effect (NorBE) criteria in its discharge to the Oldbury Creek catchment upstream of the Project (WSP 2016 cited in EMM 2017h). However, the level of concern in the community should be considered seriously as if left unmitigated can cause unnecessary stress and angst. Given the findings from the technical reports it is unlikely that the water supply would be contaminated. The consequence would be minor as any resulting negative social impact can be easily adapted to. Therefore, the unmitigated impact on the local residents, industry and State Government has been assessed as high negative in the long term as a result of the Project. A summary of the assessment is provided in Table 7.14.

7.6.6 Water (supply) – mitigated

The successful implementation of the CSES that informs the community of the mitigation and is transparent about the ongoing water quality monitoring will build trust and reduce, if not eliminate, the stress and angst amongst concerned residents. The technical reports in relation to surface water, groundwater and geology all indicate that the likelihood of the water supply becoming contaminated is not expected to occur and is rated as rare. The consequences would be minimal as they would be localised and small scale. Therefore, the mitigated impact on the local residents, industry and State Government has been assessed as low negative in the long term as a result of the Project. A summary of the assessment is provided in Table 7.14.

Table 7.14 Summary surroundings impacts – water supply

Impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Water (supply)	Residents Industry State Government	Long term	Local Regional	High negative	Low negative

7.6.7 Land rehabilitation (unenanced)

A potentially positive result for the land was related to the potential for improvements to the quality of the land resulting from rehabilitation practices. This would potentially positively impact on the stability, chemistry, capability, topography of the land, improving surroundings. It would also impact on the land's ability to be used for commercial purposes so livelihoods may also improve. As this might occur at some time, this has been rated as possible and, if not enhanced, the consequence would be short-term and mostly local, thus minor. Therefore, the unenhanced impact on the local residents has been assessed as moderate positive during closure and beyond as a result of the Project. A summary of the assessment is provided in Table 7.15.

7.6.8 Land rehabilitation (enhanced)

The successful adoption of the enhancement strategies during closure would mean that it is likely that the quality of the land is safe, stable and non-polluting and would provide a viable post mining land use. The consequence would be moderate because the land could be enhanced to provide substantial value to the community. Therefore, the enhanced impact on the local residents has been assessed as high positive during closure and beyond as a result of the Project. A summary of the assessment is provided in Table 7.15.

Table 7.15 Summary surroundings impacts – land rehabilitation

Impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Land rehabilitation	Residents	Closure and beyond	Local	Moderate positive	High positive

7.7 Personal and property rights impacts

This section provides an assessment of the unmitigated and mitigated personal and property rights impacts on the local and regional communities as a result of the proposed Project. There were five matters related to the social impact on the community's surroundings:

- livelihood (local businesses);
- livelihood (property prices);
- livelihood (procurement);
- community investment; and
- opportunity cost.

7.7.1 Livelihood (local businesses) – unmitigated

There are a few factors that could potentially impact the livelihood of landholders and other local businesses, which include interruptions to agricultural business due to Hume Coal accessing land. The other most notable factor was the potential for land not being available for agricultural purposes or mining activities keeping tourists away. While some of the community raised concerns there is no evidence to support that mining limits tourism traffic to a region. In contrast the data suggests that Wingecarribee LGA attracts visitors across the country as well as international guests for holiday, visiting friends or family, and business. While some people may be deterred from visiting the area as a result of mining the data indicates that it is not significant.

Table 7.16 Tourism statistics for Wingecarribee LGA

Visitors for Wingecarribee LGA	International	Domestic overnight	Domestic day	Total
<i>Reason (visitors '000)</i>				
Holiday	4	185	690	880
Visiting friends or relatives	7	213	399	619
Business	Np	34	Np	Np
Other	np	27	109	np

Austrade 2018, *Local Government Area Profiles 2018*.

The ongoing need to access private properties for operational reasons was an issue that would impact on the way of life of the largely agricultural landholders potentially causing interruptions to their agricultural businesses. This could cause inconvenience and potentially lead to loss of revenue. This has occurred during the technical assessment process however it was sporadic and infrequent.

It is possible that livelihoods of local business are impacted either by the avoidance of mining or the ongoing need to access landholder properties. The consequence would be minor due to the ability to adapt as access is sporadic and short term for landholders and tourism is spread across a range of drivers to visit, with the majority being to visit friends which is unlikely to change. Therefore, the unmitigated impact on the local landholders and business has been assessed as moderate negative during construction and operation phases of the Project. A summary of the assessment is provided in Table 7.17.

7.7.2 Livelihood (local businesses) – mitigated

It is likely that the need to occasionally access a small number of properties will remain during construction and operations. This means that there are still likely to be inconveniences and possible interruptions to agricultural activities thus the likelihood would still be rated as likely when mitigated. Continuing with a communications strategy that helps to keep landholders informed about the process and reasons access is required, will allow for planning around such interruptions and reduce the impact rating to minimal. Continuing to engage agricultural and tourism related businesses to inform them of the low likelihood of negative impacts and to encourage collaboration to advance local industry would allow forward business planning and increased resilience. Successful mitigation would make it unlikely that livelihoods are reduced due to Project. The consequences would be minor as landholders and businesses would have the capacity to adapted. Therefore, the mitigated impact on the local landholders and business has been assessed as low negative during construction and operation phases of the Project. A summary of the assessment is provided in Table 7.17.

Table 7.17 Summary personal and property right impacts – livelihood

Impact	Issue	Affected parties	Duration	Extent	Unmitigated	Mitigated
Personal and property rights	Livelihood	Landholders Business	Construction Operation	Local	Moderate negative	Low negative

7.7.3 Livelihood (property prices) – unmitigated

As seen in other resource communities, there were concerns that a sudden influx of workers during operations and a corresponding outflux at closure may result in fluctuation in the local property market. Those consulted expressed concern that this could make it more difficult to purchase property in the region during peaks periods and result in loss of value and challenges selling during downturns and closure impacting on people's livelihoods. However, during the construction phase workers will be housed in CAVs and the economic assessment (BAEconomics 2017) that due to the current availability and the forecast supply of new housing in the region, the operational workforce would also not significantly impact the local housing market. Therefore, it is unlikely to occur if unmitigated and the consequences as moderate given the ability for the community and the local economy to adapt. Therefore, the unmitigated impact on the local residents has been assessed as moderate negative during all phases of the Project. A summary of the assessment is provided in Table 7.18.

7.7.4 Livelihood (property prices) – mitigated

Whilst the local employment strategy will help to manage this impact largely, Hume Coal cannot fully predict the influx and outflux of workers, the risk cannot be fully ruled out. The successful implementation of a housing and accommodation strategy and the current availability of housing and the forecast supply of new housing in the region (BAEconomics 2017) would make it unlikely that the housing market is adversely impacted. When considering the high range estimates of population change and the likely dispersion of the workforce, the consequences are minimal as they will be local and small-scale. With continued community engagement, the mitigated impact on the local residents has been assessed as low negative during all phases of the Project. A summary of the assessment is provided in Table 7.18.

Table 7.18 Summary personal property rights impacts – property prices

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Personal and property rights	Livelihood (property prices)	Residents	Construction Operation Closure	Local	Moderate negative	Low negative

7.7.5 Livelihood (procurement) – unenhanced

There was an expectation that local procurement would occur (eg use of local suppliers and local services by the mine), resulting in increased opportunity for revenue for local business and therefore having a positive impact on livelihoods. However, there was some scepticism regarding the extent to which this might happen with some sections of the community indicating that this would only happen to a limited degree. Accordingly, the likelihood of local procurement has been rated as possible with minor benefit as it might happen at some time with short-term and local benefit. Therefore, the unenhanced impact on the local business has been assessed as moderate positive during all phases of the Project. A summary of the assessment is provided in Table 7.19.

7.7.6 Livelihood (procurement) – enhanced

The Economic Impact Assessment has shown that the successful manifestation of Hume Coal's commitment to provide the local businesses with access to procurement opportunities will increase the likelihood that local businesses will supply to the Project which would benefit their livelihoods. This commitment will ensure that the benefits are almost certain to occur. The consequence is moderate as the impacts could be enhanced to created substantial social value. Therefore, the enhanced impact on the local business has been assessed as extreme positive during all phases of the Project. A summary of the assessment is provided in Table 7.19.

Table 7.19 Summary personal property rights impacts – livelihood (procurement)

Impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Personal and property rights	Livelihood (procurement)	Business	Construction Operations Closure	Local Regional	Moderate positive	Extreme positive

7.7.7 Community investment – unenhanced

Related to the above issue (in that it may help to boost resilience), another issue raised during consultation was the potential positive effects the ongoing community investment program would have on the community. In September 2017 Hume Coal made a formal Voluntary Planning Agreement (VPA) offer to the Minister for Planning (EMM 2018). Should this agreement be accepted the ongoing benefits to the community would be formalised and more likely to flow on to the community. This was expected to occur at some time by the community and was one of the main impacts raised by supporters during the submissions process. Unenhanced, the community investment is unlikely to occur and the consequences to the community are minimal as they would be local and small scale. Therefore, the enhanced impact on the local residents has been assessed as moderate positive during the operation phase of the Project. A summary of the assessment is provided in Table 7.20.

7.7.8 Community investment – enhanced

Hume Coal has already invested in the community via its Charitable Foundation and Apprenticeship Program, and its ongoing commitment to the VPA offered to the Minister for Planning (EMM 2018). The continued commitment to enhance community investment would make it almost certain to occur. The successful negotiation and implementation of a VPA could be further enhanced through ongoing community collaboration to ensure that the community's specific needs are addressed and making it likely to occur. This would result in a moderate consequence due to the substantial value to society it provides. Therefore, the enhanced impact on the local residents has been assessed as extreme positive during the operation phase of the Project. A summary of the assessment is provided in Table 7.20.

Table 7.20 Summary personal property rights impacts – community investment

Impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Personal and property rights	Community investment	Residents	Operations	Local	Moderate positive	Extreme positive

7.7.9 Opportunity cost – unenhanced

The economic benefits such as royalties and taxes bolster the financial resources available to the community and would be a gain to economic stability of the community. Given that there are legal requirements to pay royalties, it is almost certain that opportunity cost will occur. The consequence is moderate as the positive impacts could be enhanced to create substantial value to the local community. Therefore, the unenhanced impact on the NSW residents and State Government has been assessed as high positive during the operation phase of the Project. A summary of the assessment is provided in Table 7.21.

7.7.10 Opportunity cost – enhanced

Hume Coal could advocate on behalf of the local community to have the benefits from taxes and royalties flow to the local community. However, the decision remains with the government and the degree of success is unable to be assessed. Therefore, the opportunity costs remain certain to occur, and the consequence moderate. Therefore, the enhanced impact on the local residents and State government has been assessed as high positive during the operation phase of the Project. A summary of the assessment is provided in Table 7.21

Table 7.21 Summary personal property rights impacts – opportunity cost

Impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Personal and property rights	Opportunity cost	Residents State government	Operations	NSW	High positive	High positive

7.8 Fears and aspirations

This section provides an assessment of the unmitigated and mitigated fears and aspirations on the local and regional communities as a result of the proposed Project. The future of the community was the matter raised related to the community impact.

7.8.1 Future of the community – unmitigated

A range of concerns regarding the desire for sustainable development for Wingecarribee LGA and fears for water, jobs and housing for future generations, as a result of the Project, were raised by the community through the SRG, community and special interest groups (Section 6.3). The aspirations for sustainable development was echoed in local government planning documents (Section 5.3). There was also support for the Project in matters relating to its benefits to the community and economy (Section 6.3.9). On balance if unmitigated, therefore no ability to counter the negative sentiment and fears, it is possible that the community's fears for the future would be ongoing and the consequences would be moderate due to their level of fear for the future being something that can be adapted. Therefore, the unmitigated impact on the local residents has been assessed as high negative during the operation and closure phases of the Project. A summary of the assessment is provided in Table 7.22.

7.8.2 Future of the community – mitigated

While the concern for the future was expressed strongly by some members of the Wingecarribee LGA there was also support for the Project, especially relating to its benefits to the community and economy (Section 6.3.9). In addition, the WSC have developed local strategic plans with the intent to foster sustainable development and Hume Coal are able to mitigate those social impacts that have the potential to negatively impact the community during all phases of the Project. Consideration has been given to the fact that some of the fears are unfounded, such as water related impacts (Sections 7.6.3, 7.6.4, 7.6.5 and 7.6.6). The successful implementation of Hume Coal mitigation measures and the CSES, along with WSC adherence to their local strategic plans, means that the fears related to the future are unlikely to be ongoing and the consequence is minor, as there is the ability to adapt and provide some positive impacts. Therefore, the mitigated impact on local residents has been assessed as low negative during the operation and closure phases of the Project. A summary of the assessment is provided in Table 7.22.

Table 7.22 Summary personal property rights impacts – opportunity cost

Impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Fears and aspirations	Future of the community	Residents	Operations Closure	Local	High negative	Low negative

7.9 Cumulative impacts

There are several concurrent development projects operating or intended to operate in and around the study area. These projects may contribute cumulative impacts to the Project. A summary of State significant development projects as identified through the NSW DPIE Major Projects website, including workforce forecasts in construction and operational phases, is given in Table 7.23. Workforce numbers in squared brackets are not expected to further contribute concurrently to the Project and are not included in the cumulative population impacts below. These projects have either already concluded their construction phase or entered their operations phase and have reached their peak operational workforce. As such, an in-migration of the associated construction and operational workforces will have already occurred.

Table 7.23 Concurrent development projects

LGA	Project name	Anticipated timeframe/ project life	Development type	Status	Determination date	Construction workforce	Operational workforce
Wingecarribee	New Berrima Quarry	30 years	Extractive industries	Approved	July 2012	Not stated	[5 (plus ongoing 38 workers at Bowral Brickworks)]
Wingecarribee	New Berrima Brickworks Facility	Not stated	Other manufacturing	Prepare EIS	—	Not stated	Not stated
Wingecarribee	Green Valley Quarry	30 years	Extractive industries	Approved with conditions	June 2013	[20]	[22 quarry employees] [40 truck drivers]
Wingecarribee	Sutton Forest Sand Quarry	45 years	Extractive industries	Response to submissions	—	20	22 onsite employees 22-30 truck drivers
Wingecarribee	Southern Waste Management Facility	Not stated	Waste collection, treatment and disposal	Prepare EIS	—	Not stated	Not stated
Wingecarribee Wollondilly	Tahmoor South Coal Project	15 years (proposed extension until 2035)	Coal mining	Response to submissions	—	Not stated	50-175 additional [510 total]

Table 7.23 **Concurrent development projects**

LGA	Project name	Anticipated timeframe/ project life	Development type	Status	Determination date	Construction workforce	Operational workforce
Wingecarribee Wollondilly Wollongong	Dendrobium Mine Extension Project	28 years (proposed extension until 2048)	Coal mining	Response to submissions	—	200	100 additional permanent employees [507 total]
Wollondilly Wollongong	Port Kembla to Wilton Gas Pipeline	Not stated	Gas supply	Prepare EIS	—	Not stated	Not stated
Wollongong	Russel Vale Colliery	5 years	Coal mining	Assessment pending	—	22	205
Wollongong	Port Kembla Resource Recovery Facility	Not stated	Waste collection, treatment and disposal	Prepare EIS	Not stated	Not stated	Not stated
Shellharbour Wollongong	Eastern Gas Pipeline – Port Kembla Lateral Pipeline	Not stated	Gas supply	Prepare modification report	—	Not stated	Not applicable
Shoalhaven	Shoalhaven Hydro Expansion	Not stated	Electricity generation – other	Prepare EIS	—	Not stated	Not stated

Source: DPIE 2020, *Major Projects*.

The construction phase of the Project will result in approximately 454 new jobs. As 90% of this workforce is expected to comprise of workers from outside of the area, a temporary increase of about 409 people is expected, which represents approximately 0.85% of the Wingecarribee LGA's population (ABS 2016a). The known construction workforce associated with expected concurrent projects is 242 full-time employees. Whilst it is unlikely that all of these employees will be sourced externally, the total has been used as we are not able to predict the level of in migration resulting from other projects. The sum of non-local construction workers for the Project and the known construction workforce of concurrent projects is 651 or around 1.6% of the Wingecarribee LGA population (ABS 2016a).

During the operations phase, as shown in Table 3.12, under the maximum in-migration scenario, 158 workers are expected to relocate to the area. This figure represents 0.35% of the Wingecarribee LGA population at the time of the Census (ABS 2016a). The maximum known workforce associated with the operational phase of concurrent projects is 532 workers.

The sum of operations workers for the Project and the known operations workforce for concurrent projects is 690 or around 1.4% of the Wingecarribee LGA population (ABS 2016a). However, it is assumed that operational workers for the Project and concurrent projects will relocate to the area with their families. Assuming an average household size of 2.7 persons, a maximum in-migration consisting of operational workers and their families for the Project and concurrent projects of approximately 1,436 people can be expected. This represents about 4.6% of the population of Wingecarribee LGA (ABS 2016a).

The maximum cumulative population increase, as a result of the Project and other concurrent developments during construction, is 651 people. The population of the Wingecarribee LGA is forecast to increase by 789 people between 2021 and 2026 (DPIE 2019). The cumulative population growth as a result of the Project and other projects is less than this forecast population increase. During operations, the cumulative population increase as a result of the Project and concurrent developments is 1,436 people, of which 158 are a consequence of the Project. The cumulative population increase is almost equivalent to the Wingecarribee LGA forecast population increase of 1,448 people between 2021 and 2041 (DPIE 2019).

8 Management and mitigation measures

8.1 Introduction

A social impact assessment requires identification of various measures and strategies that will be implemented during all phases of a development to monitor, report, evaluate, review and proactively respond to social change (Franks 2012). In many circumstances, there is a lack of integration between a social impact assessment and the ongoing management of social and economic issues once a project begins and after it ceases operation. Therefore, it is important to consider the delivery of long-term positive outcomes for the duration of the Project and beyond (Franks et al. 2010). This SIA follows leading practice and has considered the social impacts during all phases of the Project to identify appropriate management measures to mitigate negative impacts and promote the Project's socio-economic benefits.

Hume Coal has proposed and incorporated in the Project design, measures to mitigate or enhance the Project's potential impacts and opportunities. The measures were developed using the outcomes of stakeholder engagement sessions and the relative significance was assessed for each identified impact by using the impact assessment criteria outlined in Section 2.2.1.

8.2 Population, demographics and community character

One issue raised during consultation with stakeholders was a concern about the population increase that would result from the Project.

The establishment of a CAV will avoid or mitigate most potentially negative impacts relating to population increases associated with the mine's construction. The CAV will be constructed within the mine surface infrastructure area and will accommodate any non-local workers needed for construction except for the small number of workers required to construct the CAV itself and CAV operational and maintenance workers. Any non-local construction workers will be obliged to live in the CAV while rostered on. The CAV is temporary and will be dismantled once construction works are complete. On-site facilities will be provided so that limited interaction occurs between non-local construction workers and the local community. Throughout its operation, the CAV will be managed by a specialist contractor.

Hume Coal has made a commitment to employ as many local people as possible. As discussed in Section 8.3, Hume Coal will give preference to local workers and local firms where possible. This will help to mitigate demographic changes resulting from the Project.

The population increase associated with the mine is expected to result in a number of indirect impacts. Mitigation measures relating to these impacts are discussed in Sections 8.3 to 8.7.

8.3 Labour market

Another key issue raised during stakeholder consultation was the provision of employment opportunities for local residents. As described in Section 3.3.5, Hume Coal has committed to source most of its operations workers from within the local area, defined as the 45-minute travel zone. This will include providing opportunities for training local workers with the skills required to fulfil the type of positions needed by the operation.

Hume Coal will employ as many local people as possible and provide training and education opportunities by:

- implementing its employment policy to ensure all workers live within the 45-minute workforce catchment area;

- giving preference to employing locals wherever possible;
- encouraging local contractors to tender for work, during the construction, operations and closure phases;
- providing training and professional development opportunities for employees beyond those available in nearly all other local industries and with a particular focus on safety in the workplace; and
- working with recruitment, education and training providers within the workforce catchment area to encourage them to provide future employment and training opportunities for skills that the Project would directly and indirectly generate.

8.4 Economic change

Enhancing economic opportunities for the local community was an issue raised by stakeholders during consultation. The Project presents opportunities for the community to benefit from increased economic activity in the area.

Hume Coal will aim to maximise local business opportunities by giving preference to local suppliers where reliability, quality and financial competitiveness criteria can be satisfied. Over the life of the Project, it is expected that the mine will provide benefits through an increase in economic activity in the workforce catchment area and surrounds, through direct business and employee expenditure and an increase in population in the area. Through its commitment to employing as many of the workforce as possible from local hires, and its policy requiring all employees to live within the 45-minute travel workforce catchment area of the mine, Hume Coal will maintain economic benefits locally.

8.5 Community services and facilities

The potential increased demand for community services is low because the Project will only add marginally (0.69%) to the LGA's total population. When cumulative population is factored in, the increase remains relatively low at 2.66%. It is not expected that any special mitigation measures are required to be taken in respect of provision of community services and facilities

Hume Coal has played an active role in the local community through financial contributions as part of the Hume Coal Charitable Foundation. Further, Hume Coal will actively support, participate and align its future investment towards community needs by:

- ongoing contributions to community-based organisations by offering to enter into a VPA, or similar mechanism, with WSC; and
- focusing contributions on community services and facilities that the community has identified as insufficient or where potential shortfalls have been identified.

The improvements to services and facilities provided by the VPA will result in a lasting legacy after the mine closes.

8.6 Housing and accommodation

Hume Coal will develop and provide accommodation during the construction phase. The CAV will have capacity for 400 workers, which is enough to house most of the estimated number of non-local construction workers required for the Project as well as the associated Berrima Rail Project. This will mean the construction workforce's demand for accommodation will not induce inflationary and availability pressures.

As construction progresses the capacity of the CAV will be wound down as the size of the non-local workforce decreases.

Based on the current availability and forecast future supply of new housing in the region, the operations and closure workforce will not significantly impact the local housing market. It is probable that there will be adequate capacity to cater for the relocated workers and their families meaning mitigation measures will almost certainly not be needed.

8.7 Community investment

As described in Chapter 1, the Project will last some decades and the company is committed to making a significant and lasting contribution to the region's prosperity. Hume Coal is therefore actively promoting and supporting local businesses, industries and education facilities.

The Hume Coal Charitable Foundation has focused on initiatives that directly benefit the local community. Since its initiation, the Hume Coal Charitable Foundation has supported more than 40 local organisations, including KU Donkin Pre-school, Wingecarribee Family Support Service, Youth Radio MVH-FM, Kollege of Knowledge Kommittee for Kids, BDCU Children's Foundation, Challenge Southern Highlands, Moss Vale Dragons Junior Rugby League Club, Moss Vale Cricket Club, Bundanoon Highlanders Rugby League Football Club and Bowral Rugby Club.

The charitable foundation's board of directors was composed of community representatives who provided a wide range of local opinions to inform the company's community investment decisions. The foundation made available about \$200,000 a year to the local community; its priority funding areas were education, Indigenous programs and not-for-profit pre-school providers.

The company's community support program includes the Hume Coal Apprenticeship Program, established in 2015 to support training and development within the local community. The apprenticeship program focused on building skills within local businesses. It provided opportunities for local people to improve their skills and gain employment by placing funded apprentices and trainees in local businesses.

Up to \$250,000 a year was spent on these programs and it is expected that once coal production has commenced this will be replaced with a VPA and normal workplace training.

8.8 Closure and decommissioning

At the completion of mining activities, the Project's infrastructure will be decommissioned and the mine site progressively closed and rehabilitated. While there will be a permanent loss of jobs, the timing of the wind-down and ultimate site decommissioning will be planned and communicated in advance. Hume Coal will work with relevant stakeholders to provide information about the timing of these final stages and provide appropriate support to employees, suppliers and other directly affected members of the community as required.

The following measures will be used to alleviate negative impacts associated with the mine's closure:

- training and staff development throughout the mine life will give workers transferrable skills opening up opportunities for these workers in other industries;
- communicate and engage proactively with directly affected stakeholders; and
- consultation with relevant authorities.

The above actions and others will be detailed in a formal mine closure plan that will be prepared towards the end of the Project's operational life. The plan will build on the commitments made in the EIS and detail all decommissioning, rehabilitation, redeployment and consultation activities required to close the mine in a responsible manner.

The closure plan will include a post-mining sustainable development plan for the Project prepared in consultation with a Community Consultative Committee (CCC). This approach adopted by Hume Coal aligns with the UN 2030 Agenda for Sustainable Development (UN 2015), and a number of the identified SDGs as outlined in Section 3.4.

The Project will leave an important legacy of community facilities established by the Hume Coal Charitable Foundation. It will be important that Hume Coal set in place measures to ensure the long-term independence of community facilities created by the charitable foundation. Accordingly, Hume Coal will:

- commit to long-term community partnerships; and
- tailor the Hume Coal Projects it supports to achieve post-development independence.

8.9 Monitoring

Hume Coal will continue to monitor and review potential impacts on the local community over time, of which the comprehensive stakeholder engagement plan will form an essential part.

Monitoring will include mechanisms for:

- reviewing and updating the social baseline study periodically (about every five years) to address spatial and temporal changes during different project phases. Management and mitigation measures will be reviewed and updated to reflect any significant changes in baseline conditions on which this impact assessment was based;
- liaising and consulting regularly with the community, government agencies and service providers;
- holding further meetings of the Hume Coal Social Reference Group or a Community Consultative Committee (CCC);
- producing a public annual environmental management report that will review social and environmental performance each year;
- employing a person whose role includes community liaison responsibilities to respond to any community concerns and issues;
- publishing regular project updates through factsheets, bulletins and community events; and
- establishing a grievance and complaint handling system, including complaints communications channels such as a dedicated telephone line.

Hume Coal will maintain open and constructive communication channels with affected landholders and groups. Ongoing consultation and monitoring impacts will ensure continuous improvements can be made to the Project in response to changing circumstances and awareness of impacts over time.

9 Social impact management plan

It is proposed to develop and implement a social impact management plan (SIMP) for the Project. SIMPs detail strategies to use during the construction, operation, and closure and rehabilitation phases of the Project to monitor, report, evaluate, review and proactively respond to social change. Generally, SIMPs summarise the findings of the social impact assessment, outline any management and mitigation measures proposed, including estimates of their timing, frequency, duration and cost, and establish ongoing monitoring and reporting procedures. They also outline the responsibilities of various parties in relation to the management of social impacts that have been identified.

The SIMP will be prepared following project approval in consultation with relevant government agencies and the local community. It will be periodically reviewed and updated as the Project progresses through different phases.

The SIMP will also contain provisions for ongoing stakeholder consultation and engagement. This will help to mitigate many of the Project's perceived impacts. As identified in Section 6 and Section 7, there are some specific elements that will need to be address in the SIMP. These include:

- on-going access of private property;
- road, traffic and transport;
- community investment;dr
- workforce management;
- local procurement;
- air quality (regarding perceived health risks and greenhouse gas emissions);
- noise and light;
- heritage (both Aboriginal and Torres Strait Islander and European); and
- subsidence and water.

An approach that ensures stakeholders from various sections of the community are regularly informed and given the opportunity to participate and collaborate is recommended. This approach is used successfully to manage social impacts from mining operations in several other mining regions throughout Australia and around the world. The approach includes forming multi-stakeholder groups for ongoing monitoring and management of social impacts associated with a project.

To ensure a broad range of social issues are considered and to align the activities of multiple groups, the groups typically include diverse representatives from the community, such as:

- youth and aged organisations;
- local businesses and tourism representatives;
- welfare agencies;
- emergency services;
- government agencies; and
- environment and community groups.

The stakeholder groups will be encouraged to adopt a regional and systems level perspective when monitoring programs instead of monitoring only specific facilities. This allows social impacts to be considered beyond the geographic location of the mine and ensures cumulative impacts can be monitored and managed.

The SIMP often incorporate a range of other communication strategies and opportunities for the community to provide feedback through a range of other channels including:

- regular community surveys (every 2, 3 or 5 years);
- social media channels;
- website contact forms;
- complaints register;
- community information sessions;
- briefings;
- e-newsletters; and
- letterbox drops.

The SIMP will consider all options and will apply the instruments that best fit the overall needs of the Project. However, the approach will ensure that mechanisms for both information dissemination and feedback collection are incorporated.

9.1 Commitments and mitigations

This section presents the proposed commitments and mitigation measures for Hume Coal as outlined in Section 7 and Section 8, as well as the impacts related to each measure.

Table 9.1 Proposed commitments and mitigation measures for the SIMP

Impact category	Matters raised related to social impact	Proposed commitments and mitigations
Way of life	Non-resident workforce	<ul style="list-style-type: none"> • Successful implementation of the Hume Coal workforce plan that outlines a code of conduct for both direct employees and contractors and encourages positive community participation. • Ongoing community engagement strategy. • Appropriate action will be taken by Hume Coal in the unlikely event that anti-social behaviour occurs. • Establishment of a CAV during the construction phase. • Commitment to employ as many local people as possible.
	Population change	<ul style="list-style-type: none"> • Application of a workforce code of conduct to manage any anti-social behaviour from the workforce. • Commitment to employ as many local people as possible.

Table 9.1 Proposed commitments and mitigation measures for the SIMP

Impact category	Matters raised related to social impact	Proposed commitments and mitigations
	Employment and training opportunities	<ul style="list-style-type: none"> • Provision of employment and training opportunities by Hume Coal to the local community. • Work with recruitment, education and training providers within the workforce catchment area to encourage them to provide future employment and training opportunities for skills that the Project would directly and indirectly generate.
Community	Public safety	<ul style="list-style-type: none"> • Hume Coal will require all workers, including those involved in mine closure, to live within 45 minutes travel time from the Project area. • Provide the community with information about the outcomes of the traffic report related to its ability to handle increased traffic volumes as well as ongoing incident reports to minimise misperceptions and prevent unnecessary stress or angst to residents
Access to and use of infrastructure, services and facilities	Emergency services	<ul style="list-style-type: none"> • Emergency services to take the lead and work in partnership with of the rail provider to make sure that emergency vehicles travel unhindered to their destination. • Hume Coal to work in cooperation with emergency services and the rail provider to support the delivery of the mitigation strategy.
	Population increase	<ul style="list-style-type: none"> • Successful implementation of the policy to hire locally as a priority. • Develop and provide accommodation during the construction phase through the development of a CAV.
	Legacy infrastructure	<ul style="list-style-type: none"> • Demonstrated efforts by Hume Coal to fund community projects that have long lasting benefits. • Implementation of a strategy to effectively collaborate with the community to ensure that the infrastructure is re-purposed. • Ongoing community investment is future focused.
Culture	Aboriginal and/or Torres Strait Islander culture	<ul style="list-style-type: none"> • Avoidance of impact on identified artefacts and heritage sites. • Salvage of the identified artefacts take place in circumstances where avoidance is not possible.
	European heritage	<ul style="list-style-type: none"> • Successful implementation of a transparent community and stakeholder engagement strategy (CSES) that informs the community of the mining method and associated impacts to build trust and reduce unnecessary stress and anxiety for community members. • Carry out mine planning and operations to ensure negligible subsidence impacts.
Health and wellbeing	Mental health (stress)	<ul style="list-style-type: none"> • Continued communication and stakeholder engagement strategy should be undertaken to inform the community and build a transparent and ongoing relationship.
	Physical health	<ul style="list-style-type: none"> • Implementation of dust and noise mitigation measures. • Regular communication of the monitoring as part of the CSES and with the CCC.
Surroundings	Amenity	<ul style="list-style-type: none"> • Mitigation of the dust as outlined in the air quality and greenhouse gas assessment that includes designing the Project to incorporate a range of dust mitigation and management measures that are in accordance with or above accepted industry best practice dust control measures. • Mitigation of dust, noise, and light emissions, as well as impacts to biodiversity, would need to be communicated as part of the CSES and with the CCC.
	Water (use)	<ul style="list-style-type: none"> • Implementation of groundwater mitigation measures and ongoing monitoring

Table 9.1 Proposed commitments and mitigation measures for the SIMP

Impact category	Matters raised related to social impact	Proposed commitments and mitigations
	Water (supply)	<ul style="list-style-type: none"> Implementation of the CSES that informs the community of the mitigation and is transparent about the ongoing water quality monitoring.
	Land rehabilitation	<ul style="list-style-type: none"> Adoption of the enhancement strategies during closure.
Personal and property rights	Livelihood (local business)	<ul style="list-style-type: none"> Continuation with a communications strategy that helps to keep local businesses (including those who are landholders) informed about the process and reasons for access. Continue to engage agricultural and tourism related businesses.
	Livelihood (property prices)	<ul style="list-style-type: none"> Implementation of the local employment strategy. Implementation of a housing and accommodation strategy. Continued community engagement.
	Livelihood (procurement)	<ul style="list-style-type: none"> Commitment by Hume Coal to provide the local community with access to procurement opportunities. Give preference to local suppliers where reliability, quality and financial competitiveness criteria can be satisfied.
	Community investment	<ul style="list-style-type: none"> Formal Voluntary Planning Agreement (VPA) offer made by Hume Coal to the Minister for Planning. Hume Coal investment in the community via its Charitable Foundation and Apprenticeship Program. Continued commitment to enhance community investment. Focus contributions on community services and facilities that the community has identified as insufficient or where potential shortfalls have been identified.
	Opportunity cost	<ul style="list-style-type: none"> Advocate on behalf of the local community to have the benefits from taxes and royalties flow to the local community.
Fears and aspirations	Future of the community	<ul style="list-style-type: none"> Application of WSC local strategic plans with the intent to foster sustainable development. Implementation of Hume Coal mitigation measures and CSES. Provision of training and staff development throughout the mine life to give workers transferrable skills. Work with relevant stakeholders to provide information about the timing of these final stages and provide appropriate support to employees, suppliers and other directly affected members of the community as required Development of a post-mining sustainable development plan in consultation with the CCC. Development of a formal mine closure plan that will be prepared towards the end of the Project's operational life.

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Abbreviations

Abbreviation	Meaning
ABS	Australian Bureau of Statistics
ACARA	Australian Curriculum, Assessment and Reporting Authority
ACECQA	Australian Children’s Education & Care Quality Authority
AHURI	Australian Housing and Urban Research Institute
AIATSIS	Australian Institute of Aboriginal and Torres Strait Islander Studies
AIHW	Australian Institute of Health and Welfare
A349	Authorisation 349
BOCSAR	Bureau of Crime Statistics and Research
CAV	construction accommodation village
CCC	Community Consultative Committee
CCD	Census Collection District
CCL 748	Berrima Colliery’s mining lease
CFMEU	The United Mineworkers South Western District
CIS	community information sessions
CPP	coal preparation plant
CHPP	coal handling and preparation plant
CSES	community and stakeholder engagement strategy
DCP	development control plan
DIDO	drive-in-drive-out
DPE	Department of Planning and Environment
DPI	NSW Department of Primary Industries (now Department of Trade and Investment, Regional Infrastructure and Services)
DPIE	Department of Planning, Industry and Environment
DRG	Division of Resources and Geosciences
EIS	environmental impact statement
EPA	Environmental Protection Authority
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Cth)

Abbreviation	Meaning
EP&A Act	<i>Environmental Planning and Environment Act 1979 (NSW)</i>
FCNSW	Forestry Corporation of NSW
FIFO	fly-in-fly-out
FTE	full-time equivalent
FYTD	fiscal year-to-date
GP	general practitioner
IEEFA	Institute for Energy Economics and Financial Analysis (
IPC	Independent Planning Commission
K10	Kessler 10
LED	Local Environmental Plan
LGA	local government area
LHD	Local health district
MBS	Medicare Benefits Scheme
MIA	mining impact area
Mt	million tonnes
NorBE	Neutral or Beneficial Effect
NSW	New South Wales
OEH	Office of Environment and Heritage
OSHC	outside of school hours care
PHN	Primary Health Network
RFS	Rural Fire Service
RMS	Roads and Maritime Services
ROM	Run of Mine
RTS	Response to Submissions
SCCRS	Sydney-Canberra Corridor Regional Strategy
SEARS	Secretary's environmental assessment requirements
SEIFA	Socio-Economic Indexes for Areas
SEPP	State Environmental Planning Policy
SES	State Emergency Services

Abbreviation	Meaning
SIA	Social Impact Assessment
SIMP	social impact management plan
SRG	Social Reference Group
SVC	Site verification certificate
TAFE	Technical and Further Education
TfNSW	Transport for NSW
UN	United Nations
VPA	Voluntary Planning Agreement
WAG	water advisory group
WHS	work health and safety
WSC	Wingecarribee Shire Council

Appendix A

Curriculum Vitae

Amanda Micallef

Social Planner

Curriculum vitae

Amanda is a social planner with experience in community and stakeholder engagement and experience in indigenous engagement and creation of youth indigenous development programs. Amanda has experience in providing social impact assessment services in Queensland and New South Wales, including indigenous engagement and creation of youth indigenous development programs.

Amanda completed her Master of Development Practice, which included social impact assessment, at the University of Queensland.

Qualifications

- Master of Development Practice, University of Queensland (UQ),
- Bachelor of Arts – International Development (Specialisation in Environment and Development), University of Guelph (UoG)

Career

- EMM Consulting, May 2019-Present
- Developmental Economics Tutor, University of Guelph, September 2015-February 2017

Representative experience

Social planning and impact assessment

- Baralaba South Project, social impact assessment – assisted on baseline study preparation, community engagement, data analysis, social risk assessment, report creation, Baralaba QLD (Mt. Ramsay Coal)
- Snowy 2.0 Polo Flat Segment Factory, social impact assessment – contributed to community engagement planning and organisation, data analysis, social risk assessment, report creation, Polo Flat NSW (Snowy Hydro Limited)
- Snowy Hydro 2.0 Pacific Hills Workers Accommodation, development applications – prepared community information sheet, Cooma NSW (Snowy Hydro Limited)
- Great Cobar Project, social impact assessment – prepared social baseline study, assisted in arrangement of scoping phase community engagement, Cobar NSW (Aurelia Metals Ltd)
- Dubbo Quarry Expansion, social impact assessment – prepared social baseline study, assisted on community engagement data analysis, Dubbo NSW (Holcim Australia Pty Ltd)
- Hume Coal Project and Berrima Rail Project, revised social impact assessment in response to the Independent Planning Commission Assessment Report – assisted in revision and compilation of study area social data, community consultation data analysis, submissions analysis, report creation, Southern Coalfield of NSW (Hume Coal Pty Limited)

- Burrawang to Avon Tunnel Project, social impact assessment – assisted in preparation of social baseline including social infrastructure and housing information, Illawarra region of NSW (WaterNSW)
- Moorebank Avenue Realignment Works, social impact assessment – prepared social baseline study, Moorebank NSW (Qube Holdings Limited)

Publications

‘ICT and Agriculture in the Global South’, paper prepared for World Accord, presented at the University of Guelph 2017



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Andrea Kanaris

Associate, Social Impact Assessment National Technical Leader

Curriculum vitae

Andrea is a Social Scientist / Social Planner with over 20 years' experience across corporate and government sectors.

She is an innovative, result-driven leader and facilitator of positive change and strategic direction. She has gained a broad range of expertise in providing government and corporate stakeholders advice on policy, program management, quality assurance, planning, sustainability and stakeholder engagement.

She has also provided contemporary strategic advice on social impact assessment, led and delivered policies and achieved quality stakeholder engagement outcomes.

Qualifications

- Masters Social Planning and Development (Post Graduate Diploma), University of Queensland (UQ),
- Bachelor of Social Science – Community and International Development, UQ
- Former Chair and Full Member Social Planning Chapter Queensland – Planning Institute Australia
- Member International Association of Impact Assessment

Career

- Associate, SIA National Technical Leader, April 2019-Present
- Principal Social Consultant, Umwelt Australia Pty Limited, March 2018–March 2019
- Social Consultant, Office of the Coordinator General, Department of State Development Strong and Sustainable Resources Communities Act & Social Impact Assessment, July 2017–March 2018
- Social Consultant, Queensland Health – Aboriginal and Torres Strait Islander Health Branch, March-July 2017
- Independent Consultant – Social Strategist / Social Planner, 2015–2017
- Director, Service Integration, Department of Housing and Public Works, March-July 2015
- Principal Consultant, ImpaxSIA Consulting, 2014–2015
- Director / Social Planner, Social Planning Services Australia, 2011–2015
- Project Manager, Metro South Hospital and Health Service, January-November 2014
- Chair Social Planning Chapter Queensland (Voluntary), The Planning Institute Australia, March-December 2013
- Social Planner, Sinclair Knight Merz, March-December 2011

Representative experience

Social impact assessments

- New Cobar Mine – Project Manager for the SIA for the expansion of Aurelia Metals zinc / lead Mine in Cobar NSW (Aurelia Metals)

- Baralaba South Project – Project Director for the SIA for the Baralaba South Project in the Bowen Basin, Queensland (Baralaba Coal)
- Snowy 2.0 Polo Flat Segment Factory, conducted a social impact assessment of the proposed segment factory at Polo Flat to identify the impacts on the communities in Cooma and Adaminaby in the Snowy Monaro Regional Council. Snowy Monaro region, NSW (Snowy Hydro Ltd.)
- Continuation of operations at Dubbo Quarry, Social Impact Assessment, including community engagement and scoping workshop (Holcim (Australia) Pty Ltd)
- Ensham Residual Void project, conducted a social impact assessment on three options for the rehabilitation of the residual voids for the Ensham Mine, as well as undertaking the stakeholder engagement manager role, Central Queensland (Idemitsu)
- Social Baseline for the Dendrobium and Bulli Seam operations, conducted a social baseline and social impact and opportunities assessment for Illawarra Metallurgical Coal operations, Illawarra and Wollondilly region, New South Wales (South32)
- Strong and Sustainable Resource Communities Act (SSRC Act) implementation, assisted with the implementation of the SSRC Act, and helped draft the Social Impact Assessment (SIA) Guideline for consultation, Queensland (Office of Coordinator-General)
- LNG Plant and Pipeline project, conducted the social impact assessment technical report and EIS chapter, and undertook the stakeholder engagement, Gladstone, Queensland (Arrow Energy)
- LNG Plant and Pipeline project, prepared the social baseline study, and undertook stakeholder engagement interviews and assessment of social impacts for social impact assessment, Gladstone, Queensland (Arrow Energy)
- AQUIS Resort, expert peer review and advice for social impact assessment component of EIS, Cairns, Queensland (AQUIS Resort at the Great Barrier Reef Pty Ltd)
- Boral Gold Coast Quarry, prepared a social baseline study and community profile for social impact assessment and undertook community consultation activities, Gold Coast, Queensland (Boral).

Other projects

- Conducted an audit / review of Rio Tinto Coal's community development funds (CDF) and Aboriginal community development funds (ACDF), Clermont, Mackay and Emerald in Queensland and Singleton and Muswellbrook in New South Wales (Rio Tinto)



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