
APPENDIX V

Social Impact Assessment

Social Impact Assessment

HVO Continuation Project

Prepared for HV Operations Pty Ltd

December 2022

Social Impact Assessment

HVO Continuation Project

HV Operations Pty Ltd

H190408

December 2022

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Executive Summary

ES1 Overview

Hunter Valley Operations (HVO) is a multi-pit open cut mining complex approximately 24 kilometres (km) north-west of Singleton in the Hunter Valley of New South Wales (NSW). Operations first commenced at HVO over 70 years ago in 1949. HVO North and HVO South operate under separate development consents, allowing the extraction of up to 22 million tonnes (Mt) and 20 Mt of run-of-mine (ROM) coal per year, respectively.

The HVO Continuation Project (the Project) comprises the continuation of the life of HVO North and HVO South, from the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and the end of 2045 at HVO South. A number of infrastructure upgrades and changes are required to facilitate the Project. This SIA was developed in accordance with the NSW Department of Planning, Industry and Environment (DPIE) *Social Impact Assessment Guideline for State Significant Projects* (SIA Guideline 2021) (DPIE 2021a) and informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA) and International Finance Corporation (IFC).

ES2 Existing environment

Impacts and benefits associated with the Project are likely to be experienced most acutely by those people who live nearby; however, they also extend throughout the broader region. Accordingly, the social impact assessment (SIA) has examined a local study area along with a regional study area set within a broader social area of reference.

The local study area includes the communities which directly surround HVO, being Jerrys Plains, Maison Dieu, Long Point and Camberwell, along with the two key nearby townships of Singleton and Muswellbrook. The communities of the local study area are likely to experience direct social impacts associated with the Project including residential amenity, traffic, demands on social infrastructure and services, housing and accommodation, and community health and wellbeing. There are limited private residences in close proximity to the Project, and a number of these are currently entitled to mitigation rights under existing HVO approvals, as well as under approvals for surrounding mines.

Economic activity in the local area is dominated by coal mining with numerous other coal mines currently operating employing approximately 11,500 people. Mining is the leading industry sector with respect to employment share followed by retail trade, health care and social assistance. Agriculture is also an important industry and accounts for the largest proportion of registered business. This includes niche agricultural enterprises associated with viticulture and horse breeding.

The regional study area comprises the Local Government Areas (LGAs) of Singleton and Muswellbrook, and sits within a broader area of reference that includes the Hunter Valley and Newcastle. Communities in these areas are likely to experience fewer direct and more indirect social impacts and benefits due to the Project such as those associated with the flow-on effects of employment and local procurement, infrastructure, transport, the movement of workers, transportation of goods, supply chains, and cumulative impacts contributed to by other Projects in the area.

ES3 Engagement informing the SIA

Community stakeholder engagement is a core element of SIA. This SIA has been informed by both community stakeholder engagement undertaken as part of the EIS and the collection of primary data through a range of tailored social research techniques as outlined below:

- In depth interviews – verification of baseline characteristics and identification of potential impacts and benefits through in-depth interviews with key stakeholders, including nearby neighbours and landholders, local councils, social infrastructure and service providers.
- Supplier survey – to attain an understanding of the characteristics of suppliers to HVO, and to identify supplier-specific Project impacts and benefits related to procurement and business opportunities.
- Workforce surveys – to identify the characteristics of the existing operations workforce including their place of residence and thoughts and concerns regarding future employment opportunities.
- Community surveys – to identify and gain an understanding of community perceptions, concerns and expectations from the Project and potential social impacts and benefits of the Project.

A summary of engagement activities and stakeholder participation in these activities is provided in Table ES1.

Table ES1 SIA field study participation

Method	Format	Time Frame	Invited/contacted	Participated
In-depth interviews	Videoconference and teleconference	25 August 2022 – 25 September 2022	• 29 community members in the local area contacted by EMM via phone and email. • 13 near neighbours contacted via the Project team by phone, face to face and post. • 5 local council representatives contacted by EMM by phone and email. • 47 service providers and community organisations contacted by EMM via phone and email.	• 10¹ community members in the local area • 10 near neighbours • 5 local council representatives • 27 service providers.
Supplier survey	Online survey	July 2021 – August 2021	• 798 suppliers who currently supply services to HVO.	• 125 HVO supplier businesses
Workforce continuation survey	Online survey	August 2021 – September 2021	• 1,223 HVO workforce invited to complete an online survey.	• 429 HVO workforce completed the online survey
Community survey	Online survey	July 2021 – October 2021.	• Open to the public via HVO Project website. • Advertised in the Singleton Argus, Hunter Valley News and Hunter River Times. • Emailed to 113 people. • Survey link placed in the HVO newsletter.	• 42 responses completed online • 8 responses collected at community information days

Table ES1 **SIA field study participation**

Method	Format	Time Frame	Invited/contacted	Participated
Consultation with Aboriginal stakeholders – 4 stages of engagement. Stage 1 – Notification of project proposal and registration of interest. Stage 2 – Presentation of information about the proposed Project Stage 3 – Gathering information about cultural significance Stage 4 – Review of draft cultural heritage assessment. Review and feedback sought of draft documentation including survey methodology and draft Aboriginal Cultural Heritage Assessment.	Face-to-face and teleconference, consultation meetings, on-site tours, two workshops, 56 day field program including surveys test excavations and scarred tree assessments and cultural values mapping exercise.	17 September 2020 – 25 November 2022	Aboriginal organisations and individuals were invited to register interest in the Project through public notification in local media and individual letters and emails inviting participation.	Stage 1 – 33 Aboriginal organisations/individuals registered to be consulted on the Project (RAPs). Stage 2 – meeting 1, 14 RAPs attended held in Singleton. Stage 2 – meeting 2, 19 RAPs attended, held in Singleton. Stage 3 – two day mitigation and management workshop, 27 individuals representing 25 RAPs. Stage 4 – meeting 3, 13 individuals representing 14 RAPs, held in Jerrys Plains and a provision of draft report to RAPs for comment.

- Notes: Near neighbours were contacted by the Project team for a one on one meeting to discuss outcomes from technical studies.
- Interviews were conducted by Project team, and at this interview the offer was made for an interview with the SIA team. The findings of interviews were analysed by EMM. One near neighbour elected to be interviewed by EMM.
1. A total of 10 people participated, nine community members who live in the local area and one near neighbour (R245, refer to Figure 3.1) of the Project

Extensive engagement with Registered Aboriginal Parties (RAPs) was undertaken as part of the Aboriginal Cultural Heritage Assessment (ACHA). This included a 2 day cultural values workshop with members of the SIA team in attendance, along with a follow up one day outcomes workshop. The workshops sought to identify key areas of concern within the local Aboriginal community and discuss options for meaningful mitigation measures. Key areas identified by RAPs included cultural awareness at HVO, employment, mental health, business, housing, disability, and aged care support.

A broad range of issues were identified through engagement activities completed to inform the SIA. These have been drawn upon to define social impacts and benefits and assess relative levels of significance.

ES4 Assessment of social impacts and benefits

A summary of the social impacts and benefits which have an assessed residual significance of medium or higher are presented in Table ES2 and Table ES3. The full assessment of potential impacts and benefits is provided in Chapter 6. As outlined below, no identified social impacts retained a post-mitigated risk rating of high or above, with all potential impacts rated as medium or low following the application of proposed mitigation measures. A number of benefits generated by the Project were rated as providing a high or very high social benefit.

Table ES2 Key social impacts

Impact/challenge	Significance (mitigated)
Impact of continued traffic congestion and road delays – construction	Medium
Construction activities for the Project predominantly involve upgrades to a number of existing facilities and the realignment of Lemington Road. The peak construction workforce requirement is anticipated to be around 600 workers. The estimated peak number of construction related truck movements would occur towards the end of Year 2, where up to 1,072 truck movements (combined inbound and outbound) are forecasted. Light vehicle traffic generation includes a conservative assumption that all workers (peak of 600) would travel individually by car, arriving/departing across a 2 hour period in the morning and afternoon peak periods. Whilst the additional traffic generated by Project construction is relatively small, it represents an incremental increase on a road network already operating under pressure. The Traffic Impact Assessment (TIA) concluded that appropriate treatments were warranted to mitigate traffic impacts associated with construction.	
Impacts due to continued generation of dust and diminished air quality	Medium
Continued generation of dust and exposure to diminished air quality was a key concern raised by stakeholders. The Air Quality and Greenhouse Gas Assessment (AQGHGA) report notes that dust generation in the construction phase will largely be associated with works on the realignment of Lemington Road and has the potential to increase overall dust emissions in the early phase of the Project by 3 to 4%. This level of increase is not predicted to be of a magnitude that will change air quality outcomes for nearby neighbours. During continued operations modelling undertaken for the air quality assessment found that total suspended particulates (TSP) and deposited dust concentrations will comply with air quality criteria at all privately owned sensitive receptors not subject to existing air quality acquisition rights. The Project will not be the cause of any exceedance of criteria relating to TSP and deposited dust at neighbouring residences, nor are exceedances of criteria predicted when contributions from other mines are also accounted for. In relation to finer dust particles (PM₁₀ and PM_{2.5}), the air quality assessment found that the maximum 24-hour PM₁₀ and PM_{2.5} concentrations may continue to exceed air quality criteria from time-to-time; however, these events would be within the range of historically measured days above the criteria, excluding extraordinary events. A review of recent and historical air quality monitoring data showed that, in the representative year, all monitoring locations operated by HVO recorded between one and two days above the air quality criteria. Based on modelling outputs, the Project is not anticipated to change this outcome, and the potential for exceedances is expected to be successfully managed using existing management measures, as demonstrated by HVO's air quality compliance history and reported in the Annual Environmental Reviews. The assessment found that the Project may contribute to an exceedance of the NSW Government's <i>Voluntary Land Acquisition and Mitigation Policy</i> criteria for annual average PM₁₀ and PM_{2.5} at two properties: - Receptor 308 (in Jerrys Plains). This receptor already has acquisition rights under the United Wambo JV development consent relating to noise, and mitigation rights relating to noise under the existing HVO South Project Approval. - Receptor 121 (in Maison Dieu). This receptor already has mitigation rights for air quality and noise under the HVO South Project Approval. Separate to the properties who are afforded mitigation rights, HVO currently operates a near neighbour amenity resource program, which is a voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.	

Table ES2 **Key social impacts**

Impact/challenge	Significance (mitigated)
Impact on community cohesion due to divergent opinions on the Project	Medium
Differing community values and opinions around economic, social and environmental impacts and benefits of the Project have the potential to create community dis-harmony. Construction and operation of the Project will support further coal extraction as a resource for energy production. Climate change is an indirect impact of coal resource extraction and consumption through greenhouse gas emissions. While the Project forms a small piece of the puzzle when it comes to climate change, this matter is of high importance to the broader Australian community. Greenhouse gas emission mitigation is a key consideration in the development of the mine plan. For example, reducing fuel usage by mobile plant and equipment (which represents nearly half of estimated direct greenhouse gas emissions) is an objective of mine planning and good practice. At a broader business level, both Yancoal and Glencore (as the JV partners of HVO) have announced commitments relating to GHG emissions from their operations, supporting the transition to a low carbon future. HVO will regularly review and update greenhouse gas minimisation measures, including consideration of electricity efficiency and source and fuel efficiency measures where reasonable and feasible. The HVO Air Quality and Greenhouse Gas Management Plan will also be updated to incorporate the Project, subject to conditions of any development consent, and this plan will be made publicly available through the HVO website.	
Impact on an increased housing demand impacting rental affordability and availability	Medium
During construction phase up to 180 construction workers would require accommodation when working on the Project. It is anticipated that the preferred form of accommodation sought by these workers would be short-term accommodation (hotels/motels etc); however, due to the limited availability of short-term accommodation, rental accommodation may also be sought. The influx of up to 180 construction workers may result in additional demand for rental accommodation which places upward pressure on rental prices. However, it is also noted that the peak construction period in which there is the potential for heightened demand for accommodation is only anticipated to occur for up to 6 months. Subsequently any upward pressure on rental prices is likely to be marginal and short lived and therefore potential impacts on vulnerable groups would possibly not eventuate. Effective mitigation of this impact requires a planned approach to workforce accommodation to avoid negative impacts on the rental market in the local and regional area. Mitigations which serve to avoid negative impacts on the capacity and affordability of the local rental market include: • where possible, prioritisation of short-term accommodation rather than rental accommodation to meet construction workforce requirements; and • maximising the number of workers with applicable skills able to be sourced from within a one hour commute from the Project site.	
Impacts from noise and vibration	Medium
Impacts on the health and wellbeing of nearby residents due to noise and vibration generated by construction and operational activities was raised as a concern by multiple stakeholders. In relation to construction activities, predictions from modelling undertaken as part of the noise impact assessment (NIA) for the Project (EMM 2022b) indicate that privately owned residences in Maison Dieu are expected to experience noise levels that are higher than the 'noise affected' management level, but well below the 'highly noise affected' management level, as specified in the <i>Interim Construction Noise Guideline</i> (ICNG) (EPA 2009). These are worst case construction noise predictions that may occur during noise enhancing weather conditions during the peak of the construction period, that is, an expected infrequent occurrence. Consequently, received levels should typically be less than those presented in the NIA. Construction noise predictions are below the 'noise affected level' for all other receptors around HVO. Construction road traffic noise impacts are not predicted, with changes in road traffic noise levels resulting from Project construction traffic increases found not to be measurable or perceptible at privately owned residences.	

Table ES2 **Key social impacts**

Impact/challenge	Significance (mitigated)
In relation to ongoing operations, the design of the Project has been an iterative one, taking into account outcomes of the NIA and involved an extensive investigation into reasonable and feasible measures that could be included in the Project design to reduce residual noise levels at nearby residences. With these measures implemented, the assessment found that: • 19 receptors will be entitled to voluntary mitigation rights based on predicted marginal residual noise impacts as a result of the Project, of which: – 13 already have existing rights under current HVO approvals. – 6 are on the outskirts of Jerrys Plains, and while a marginal noise impact is predicted at these receptors due to the Project, it is noted that the noise criteria for the Project (known as Project Noise trigger Levels (PNTLs) for these receptors in the evening and night time periods are less than the current criteria that applies to these residences, and the recommended noise criteria for these receptors is consistent with the current criteria that applies. • Seven receptors that already have mitigation rights in accordance with the HVO South Project approval are not predicted to experience noise levels such that they would be entitled to voluntary mitigation rights for the Project; however, HVO proposes to retain voluntary noise mitigation rights for these receptors. The blast impact assessment conducted for the Project concluded that exposure to vibration and airblast overpressure can be effectively managed via existing blast management practices on site and through the application of reduced charge masses where required for private residential receptors in Maison Dieu and Jerrys Plains. An additional four blast monitors will be deployed by the Project to ensure effective monitoring and management of blasting activities.	
Impact of continued anxiety about potential effects on water quality	Medium
The Project will generate dust through proposed construction activities and due to mining operations. Feedback received from local residents included concerns about potential effects on water quality and the continued anxiety about potential effects on water quality in the surrounding area. More specifically, the community raised concerns about the possibility of dust entering privately-owned water tanks, or in other ground water sources, and hence impacting the quality of available drinking water To ease anxiety about potential dust related impact on water tanks, HVO will implement a more structured water tank cleaning service for all privately owned residences within 4 km of the proposed mining area, whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.	
Impact on land management and pest control	Medium
Several near neighbours reported issues with pest animals including dogs, foxes and pigs which were potentially contributed to by adjoining HVO managed land. Pest and feral animal control measures will be undertaken during construction and operation in accordance with current mine practices and as outlined in the HVO Integrated Biodiversity Management Plan. Successful pest control programs rely on coordination with other mine sites and landholders. The community perception of the problem is ongoing, which suggests that more coordination and community consultation and engagement is required to manage the perception of the issue.	

Table ES3 **Key social benefits**

Impact/challenge	Enhanced benefit
Benefit of the realigned Lemington Road and new bridge over the Hunter River	Very high
Stakeholders recognised the potential benefits of improved road conditions delivered through the realigned Lemington Road and construction of a new bridge over the Hunter River. As noted above, the realignment of Lemington Road will deliver improved road conditions and decrease travel time by approximately 9–10 minutes if travelling to/from the east of Comleroi Road/New England Road alignment (ie travelling from Bulga or Mount Thorley). However, there will be a minor increase in travel time by about 1 minute 40 seconds if travelling to/from communities west of the current Lemington Road alignment such as Jerrys Plains, when travelling at the posted speed of 100 km/hr. The new bridge over the Hunter River will substantially improve flood resilience. The current crossing has been underwater for a combined total of more than eight months since 2010. The improved design of the proposed new bridge would have kept Lemington Road clear of flooding for all of these rainfall events. The new Lemington Road alignment will therefore provide a more reliable access between the New England Highway and Golden Highway and improving access for the community.	

Table ES3 **Key social benefits**

Impact/challenge	Enhanced benefit
Benefit of the Project contributing to ongoing stability of the local population	high
The continuation of the current HVO operational workforce will contribute to population stability, which provides certainty in planning and delivering social infrastructure and services. Such population stability also maintains community social cohesion with social networks and social capital being preserved. To further enhance the benefits of workforce and population stability there is an opportunity for HVO to take a coordinated and planned approach to mine closure. As per the <i>Integrated Mine Closure: Good practice guide</i>, it is a requirement that a full assessment of social impacts is undertaken well before the cessation of operations. This would enable HVO to further understand and manage the impacts on the community of operational closure, further minimising population change impacts on the local and regional provision of social infrastructure and services. Such planning would involve consultation with local and regional stakeholders and would explore potential legacy benefits for the community.	
Benefit of continued royalty payments to the NSW state government	High
The Minerals Council of Australia (2021) identified that between 2010–2011 and 2019–2020, the minerals sector (including coal) contributed \$238.8 billion in taxes and royalties to federal, state and territory governments – \$132.8 billion in tax and \$106 billion in royalties. The Economic Impact Assessment (EIA) undertaken for the EIS (EY 2022) found the total estimated net benefit of the Project to NSW will be \$4,848.5 million in Net Present Value (NPV) terms, comprised of \$2,122.5 million in direct benefits created from the operation of the Project, \$2,739.6 million in indirect benefits and an estimated at \$13.7 million in indirect costs. The direct benefits of the Project include \$1,555.7 million in royalty payments, \$129.6 million in payroll taxes and \$39.7 million in council rates. In the regional area, coal mining royalties make a significant contribution to delivery of infrastructure and services. In future years, state government planning for royalty allocation is anticipated to deliver this funding to impacted communities more directly and with additional transparency. While the Project has no control over how royalties are allocated, some interview respondents expressed the desire for a clearer line of sight on how royalties benefit impacted communities.	
Benefit related to community grants and sponsorship	High
Participants in research conducted to inform the SIA discussed the benefits related to HVO community grants and sponsorship and noted the Project would allow the continuation of such support for local community groups. HVO has provided more than \$240,700 in funding to 79 Projects since 2018. Possible enhancement of the community grants and sponsorships programs may be achieved through partnerships to deliver funding to support community capacity building and future transition planning. The strategic targeting of grant investment may also lead to improvements for communities experiencing extreme social disadvantage in the region.	
Benefit of rehabilitation, future land use and ongoing land management	High
The Project will enable improved rehabilitation outcomes for the HVO Complex through contemporising the proposed final landform for areas to be disturbed by the Project, incorporating natural design landform features. Stakeholders noted that rehabilitation and final landform was a key positive outcome of the continuation of the Project. Future rehabilitation will occur in accordance with an updated Rehabilitation Management Plan. Should the Project not proceed, existing development approvals for the site would continue to apply.	

Table ES3 **Key social benefits**

Impact/challenge	Enhanced benefit
Benefit of the continued opportunities for local employment and training opportunities – construction and operation Construction of the Project will create a peak of 600 construction jobs over a 5 year total construction period. It is anticipated that a local workforce will be engaged, where possible. Employment providers in the region reported construction jobs presented an opportunity for local jobseekers to gain meaningful employment. There was reported optimism that the Project would provide employment and training opportunities for young people and contribute to an improvement in the retention of young people in the area. The operation of the Project has an opportunity to provide long term employment and training for the existing workforce and new employees where natural attrition and retirement occurs. The EIA estimated the total wages paid to the workforce as a result of the Project will be \$2,379 million in NPV terms. Employee contributions to the regional economy would be substantially reduced should job losses occur and current employees either leave the region to find employment, stay in the region but are unable to find employment or have their incomes reduced. It is also noted that HVO currently employs 30 full-time Aboriginal and Torres Strait Islander employees. It is anticipated the Project will provide new employment opportunities and training pathways for Aboriginal and/or Torres Strait Islander people during the construction and operational phases.	High
Benefit of the continuation of procurement opportunities for local businesses – construction and operation The Project will continue to provide commercial opportunities for local contractors, local businesses and suppliers during the construction and operation phase. An analysis of current supply chains indicates in 2019 HVO has procured goods and services worth approximately \$315 million from approximately 400 businesses across the Hunter Valley and greater Newcastle region. The Project will generate indirect benefits to local suppliers of an estimated \$760 million in NPV terms. The Project is expected to confer a net benefit on the Lower Hunter SA3 region of \$1,739 million in NPV terms. This includes potential opportunities for businesses to participate in the Project supply chain.	High
Benefit of allowing more time for transition planning The Project will deliver an additional 25 years of mining at HVO North, and a further 15 years of mining at HVO South, beyond that currently approved. The Project will secure continued support for local businesses and employment opportunities of around 1,500 full time equivalent (FTE) and would provide the community additional time to transition before mine closure, including opportunities for: - workers to transition to new industries through reskilling; - transition planning to manage withdrawal of the mine's direct and indirect economic contributions to business and community organisations, allowing these groups to adapt their approach and offerings; - the local and regional community to make informed decisions and extending the time within which these decisions can be made; and - new infrastructure and employment opportunities in the region are likely to develop and become viable, for example employment opportunities in the renewable energy sector, as there is a strong local and regional planning context for transitioning away from the economic reliance on the mining sector, which has not yet been fully realised. Effective transition planning is reliant on the Project's preparation and implementation of a workforce and business stakeholder transition plan and, particularly around commercial and business opportunities.	High
Mitigation and management strategies have been proposed for each identified social impact which seek to avoid or minimise negative consequences and enhance social benefits for local communities, as described in Chapter 7. An adaptive approach is proposed which allows HVO to manage and respond to changing circumstances and new information over time through ongoing monitoring and periodic review of mitigation strategies allowing for modification as required.	

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1 Introduction

This Social Impact Assessment (SIA) has been prepared on behalf of Hunter Valley (HV) Operations Pty Ltd to examine the likely impacts of the HVO Continuation Project (the Project) on nearby communities as part of the Environmental Impact Statement (EIS).

1.1 Background

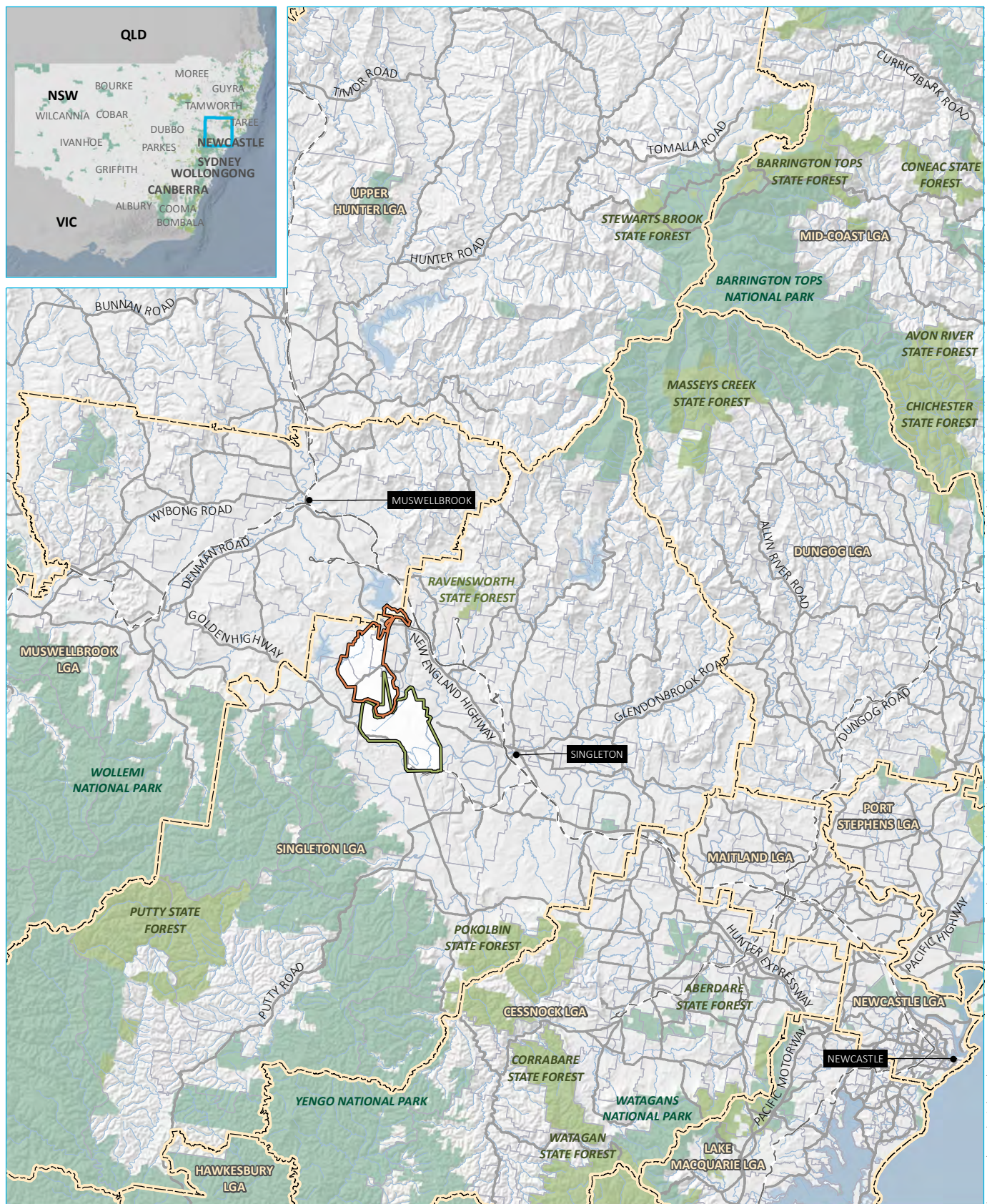
Hunter Valley Operations (HVO) is a multi-pit open cut mining complex approximately 24 kilometres (km) north-west of Singleton in the Hunter Valley of New South Wales (NSW) (Figure 1.1). HVO comprises two mine sites separated by the Hunter River, HVO North and HVO South. While the two mine sites are approved under separate development consents, they are operated as one complex with fully integrated environmental management systems.

The existing HVO North operation comprises the approved mining areas of West Pit, Mitchell Pit and Carrington Pit, as shown in Figure 1.2. It operates under development consent DA 450-10-2003 which allows extraction of up to 22 million tonnes per annum (Mtpa) of run-of-mine (ROM) coal until 12 June 2025.

HVO South operates under Project Approval (PA) 06_0261 and comprises the approved mining areas of Riverview Pit and Cheshunt Pit, where mining activities currently take place, and the Riverview South East Extension and South Lemington Pits 1 and 2. PA 06_0261 allows the extraction of up to 20 Mtpa of ROM coal until 24 March 2030.

Mining across HVO is undertaken using dragline and truck and shovel methods. ROM coal from HVO North and South is currently processed at the HV Coal Preparation Plant (CPP) and/or the Howick CPP (both at HVO North), from which product coal is predominantly transported via overland conveyor to the HV load point (HVLN) or Newdell LP and via rail to the Port of Newcastle for export. The Lemington CPP (LCPP) and associated rail loop, which is approved under PA 06_0261 and would process and rail coal from HVO South, is yet to be constructed.

HVO is owned by subsidiary companies of Yancoal and Glencore, as participants in the unincorporated HVO Joint Venture (JV). HV Operations Pty Ltd is the appointed manager of the JV.



KEY

- Existing HVO North development consent boundary (DA 450-10-2003)
- Existing HVO South project approval boundary (PA 06-0261)
- Rail line
- Major road
- Named watercourse
- Named waterbody
- Suburb boundary
- Local government area
- NPWS reserve
- State forest

Locality plan

HVO Continuation Project
Social Impact Assessment
Figure 1.1

1.2 Project overview

The Project broadly comprises the continuation of the life of HVO North and HVO South, from the current approved mining completion dates of 2025 and 2030 respectively, to the end of 2050 at HVO North and 2045 at HVO South. The continuation of mining across the HVO Complex will increase resource recovery from the existing operation, predominantly by mining through previously mined areas and to the extent of existing mining tenements and extracting coal from deeper seams at HVO North.

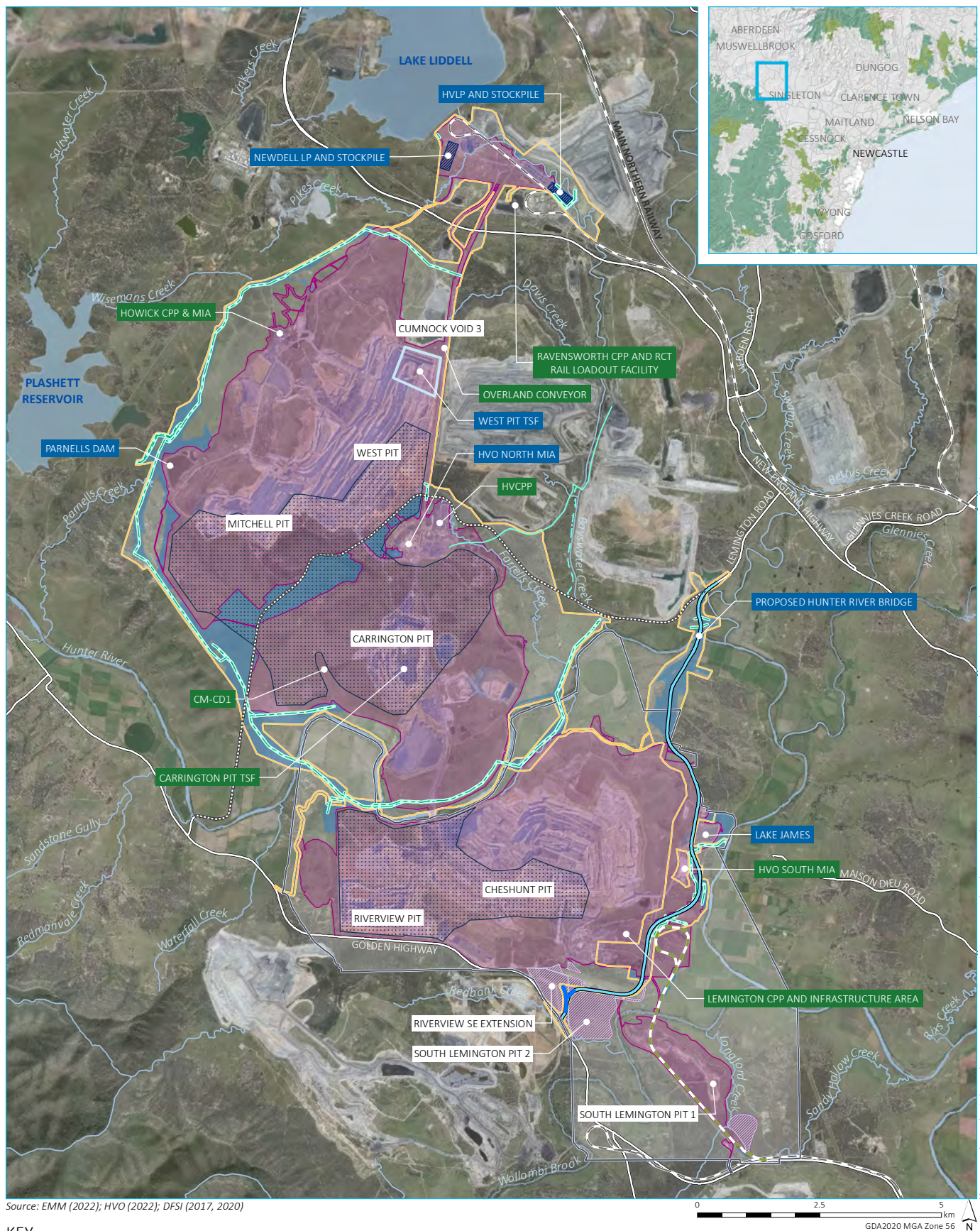
At HVO South an extension to the life of the mine is proposed to facilitate improved mine sequencing outcomes and reduction in mining rate. The Project proposes a reduced mining footprint at HVO South compared to what is approved for extraction, with the previously approved coal extraction in the Riverview Southeast Extension area and South Lemington Pits 1 and 2 proposed to be removed from mine plan (and future approvals) for the Project. However, some rehabilitation works will be required to be undertaken in the South Lemington Pit 1 area, as part of the mine closure process. The approved shorter rail loop option associated with the LCPP has also been removed from the Project.

A number of infrastructure upgrades and changes are also required to facilitate the Project (and are included as part of it), including realignment of part of Lemington Road, relocation of transmission and telecommunication lines, an upgrade of the Newdell LP including construction of a new product stockpile and train loading bin, an upgrade of the HVLP product stockpile including an extension to the existing coal stockpile, and improvements to Lake James and Parnell's Dam.

To enable the Project to proceed, two new State significant development (SSD) consents are required; one for HVO North and one for HVO South, under Part 4, Division 4.1 of the NSW *Environmental Planning and Assessment Act 1979* (EP&A Act). The Project will seek to maintain separate development consents for HVO North and South, as is currently the case. Given that the two mine sites operate as one complex, one EIS has been prepared to support the two development applications required for the Project.

This SIA forms part of the EIS and provides an assessment of the potential social impacts and benefits as a consequence of the Project; that is, of the whole complex. It also documents the assessment methods, results and the initiatives built into the Project design to avoid and minimise social impacts, and the additional mitigation and management measures proposed to address residual impacts that cannot be avoided.

The Project description is provided in Chapter 4 of the EIS (EMM 2022). The key components of the Project as they relate to HVO North and HVO South are individually listed below. The proposed conceptual layout of the Project, inclusive of both HVO North and South, is provided in Figure 1.3.



Source: EMM (2022); HVO (2022); DFSI (2017, 2020)

KEY

- HVO North proposed development consent boundary
- HVO South proposed development consent boundary
- Existing and approved disturbance area
- Previously approved area not retained
- Existing HVO elements to be maintained
- South Lemington Rail Loop (approved, not yet constructed)

- Proposed HVO Continuation Project elements
- Lemington Road realignment
- Indicative location of public road closure
- Haul route to Ravensworth Operations
- Transmission line relocation
- Alternative Golden Highway intersection
- Proposed mining area
- Product stockpile
- Additional disturbance area
- West Pit TSF

- Existing environment
- Rail line
- Major road
- Ravensworth Operations access road
- Named watercourse
- Named waterbody
- NPWS reserve (refer to inset)
- State forest (refer to inset)

Proposed conceptual layout

HVO Continuation Project
Social Impact Assessment
Figure 1.3



1.2.1 HVO North

The key changes proposed by the Project to the approved HVO North operations include:

- an extension to the life of the mine until the end of 2050;
- extraction of coal to the base of the Barrett seam across the HVO North mining area. Existing operations are approved to extract coal to the base of the Barrett seam in the West Pit; however, are only approved to the base of the shallower Bayswater seam in Carrington Pit;
- extraction of an additional approximate 400 million tonnes (Mt) of run of mine (ROM) coal through the extraction of coal from deeper seams and a small increase in the mining extent (between the existing West and Mitchell Pits and Carrington Pit);
- infrastructure upgrades, as listed below:
 - realignment of Lemington Road and new bridge over the Hunter River. While the proposed realigned corridor is partly within the HVO South development consent boundary, the realignment is required to enable the progression of mining from the Mitchell and West pits into the Carrington area at HVO North. The works associated with the road realignment therefore form part of the HVO North Project;
 - HVO North site access road relocation off the existing Lemington Road;
 - an increase in the capacity of Parnells Dam from approximately 1 gigalitres (GL) to 4 GL;
 - realignment of transmission and telecommunication lines that are currently within the proposed mining footprint;
 - mine infrastructure area upgrade;
 - ancillary activities as required to facilitate operations;
 - access roads to facilitate service provider access;
 - use of demountable/temporary buildings in Project compounds as required; and
 - upgrade of the existing Newdell LP train loading facility and construction of a new product stockpile; or an extension of the HVLP product coal stockpile, including the closure of a section of Liddell Station Road;
- coal haulage from the HVCPP to the Ravensworth ROM pad, via internal haul roads;
- revised tailings management strategy;
- amendments to the approved final landform;
- progressive rehabilitation throughout the mine life; and
- changes to the development consent boundary to incorporate the changes listed above.

Other than as set out above, all activities that are currently approved under the existing HVO North approval are intended to continue. Key aspects and outcomes of the approved development at HVO North that will remain the same under the Project include the following:

- the maximum allowable annual coal extraction and processing rate;
- annual operational workforce numbers and associated traffic generation;
- approved heights of overburden emplacement areas;
- receipt of ROM coal from HVO South via internal haul roads for processing at all CPP facilities approved for HVO North;
- continued avoidance of the Aboriginal heritage site known as Carrington Mine – Colluvial Deposit 1 (CM-CD1); and
- the ridge between Jerrys Plains and HVO North will remain, continuing to provide an effective amenity barrier.

1.2.2 HVO South

The key changes proposed by the Project to the existing approved operations at HVO South include:

- an extension of the life of the mine until the end of 2045;
- a reduction in the approved maximum ROM coal extraction rate from 20 Mtpa to 18 Mtpa;
- changes to the approved mine sequencing (although noting that mining within the two primary open cut pits; Riverview and Cheshunt, will remain generally within the same footprint as approved);
- removal of coal extraction from the mine plan from the Riverview South East Extension, South Lemington Pit 1 and South Lemington Pit 2 mining areas;
- infrastructure upgrades and changes to that currently approved, as listed below:
 - removal of the LCPP short rail loop option;
 - removal of the approved conveyor from HVO South to the HVCPP at HVO North (the conveyor has not been constructed);
 - construction of the Cheshunt and Riverview flood protection levees;
 - realignment of transmission lines;
 - enlargement of Lake James from approximately 0.7 GL to 2 GL;
 - additional tailings pipelines and pumps;
 - ancillary activities as required to facilitate operations;
 - access roads to facilitate service provider access; and
 - use of demountable/temporary buildings in construction compounds as required;

- revision and implementation of the tailings strategy; and
- amendments to final landform due to rescheduling and or infrastructure relocations, progressive rehabilitation will be undertaken throughout the mine life.

Other than as set out above, all activities that are currently approved under the existing HVO South approval are intended to continue. Key aspects of the approved development at HVO South that will remain the same for the Project include:

- the coal seams to be extracted (ie no increase in the depth of mining);
- the extent of approved mining areas within the Riverview and Cheshunt Pits;
- approved heights of overburden emplacement areas;
- construction of the LCPP and associated rail loop (long rail loop option only);
- transfer of coal from HVO South to HVO North for processing; and
- annual operational workforce numbers and associated traffic generation.

1.3 Project terminology

The following key terms are used throughout this assessment to describe the Project:

- **HVO Complex** – comprises both HVO North and HVO South operations.
- **The Project** – the Project in its entirety, encompassing the continuation of the life of the complex; ie both HVO North and HVO South, within their respective proposed development consent boundaries, as illustrated in Figure 1.2.
- **Project Area** – the area that is the subject of the two development applications, ie, the proposed development consent boundary for HVO North and the proposed development consent boundary for HVO South.
- **Existing and approved disturbance area** – areas that are disturbed and/or approved to be disturbed under the current development consents that apply to the HVO Complex.
- **Approved mining area** – the areas within the approved disturbance area that have been previously assessed and approved under the NSW EP&A Act for mining operations.
- **Additional disturbance area** – the areas that will be disturbed by the Project that are outside of the existing and approved disturbance area.
- **Proposed mining area, HVO North** – areas where coal extraction will take place for the Project at HVO North and includes:
 - areas already disturbed by mining that will be re-disturbed to facilitate coal extraction in the deeper Barrett seam;
 - areas not previously approved for mining (eg the area between the Mitchell Pit and Carrington Pit); and
 - areas approved but not yet disturbed (eg the Carrington West Wing area).

- **Proposed mining area, HVO South** – comprises the Riverview Pit and Cheshunt Pit, where coal extraction will continue under the Project, down to the Bayswater seam.
- **Previously approved areas not retained** – areas that are disturbed and/or approved to be disturbed under the current development consents that apply to the HVO Complex, that will no longer be disturbed by the Project, such as the LCPP short rail loop, the Riverview South East Extension and South Lemington Pit 2 mining areas, and the approved temporary crossing across the Hunter River between HVO North and South.
- **Transmission line corridors** – two categories of transmission line corridors have been defined for the purpose of quantifying the extent of disturbance for the Project:
 - realigned transmission lines (ie new transmission line easements) – the extent of disturbance will be limited to transmission line poles/towers and an access road for maintenance along the alignment, as well as vegetation management to maintain safe powerline clearance; and
 - existing transmission line easements to be decommissioned – disturbance will be confined to existing access tracks and cleared areas.
- **Realigned Lemington Road corridor** – the corridor extends from the Comleroi Road intersection with the Golden Highway at the southern end of the new alignment, along the Comleroi Road alignment around the south-eastern side of HVO South, and then extends in a northerly direction to join the existing Lemington Road at a point approximately 2.3 km south of the New England Highway/Lemington Road intersection. The corridor also allows for two options with respect to the connection to the Golden Highway; one assuming that the Golden Highway is realigned by United Wambo as approved under SSD 7142, and a second option that connects with the current alignment of the Golden Highway.
- **Project disturbance area** – this area is a combination of the additional disturbance area and the existing and approved disturbance area, minus the areas not being carried forward by the Project.

1.4 Assessment approach and requirements

This SIA supports the planning and approval process for the Project. It has been prepared in accordance with the Secretary’s Environmental Assessment Requirements (SEARs) for the Project as well as relevant government assessment requirements, guidelines and policies, and in consultation with the responsible government agencies, including:

- the *Social Impact Assessment Guideline for State Significant Projects* (SIA Guideline) (DPE 2021a);
- the *Technical Supplement: Social Impact Assessment Guideline for State Significant Projects* (SIA Technical Supplement 2021) (DPE 2021b); and
- the *Cumulative Impact Assessment Guidelines for State Significant Projects* (DPE 2021d).

The SEARs outline what is required to be addressed in the EIS. The SEARs for HVO North and HVO South, and where they are addressed in this assessment, are provided in Table 1.1.

Table 1.1 SEARs relating to social impact assessment

Reference	Requirements	Section addressed
Social – including a Social Impact Assessment, that:		
1.	• Including a detailed assessment of the potential social impacts of the development that builds on the findings of the Social Impact Assessment Scoping Report in accordance with the <i>Social impact assessment guideline for State significant mining, petroleum production and extractive industry development 2017</i> .	Chapter 4, Chapter 5, Chapter 6
2.	• How the development might affect people’s way of life.	Chapter 6, Section 6.3
3.	• Community.	Chapter 6, Section 6.4
4.	• Access to and use of infrastructure, services and facilities.	Chapter 6, Section 6.5
5.	• Culture.	Chapter 6, Section 6.6
6.	• Health and wellbeing.	Chapter 6, Section 6.7
7.	• Surroundings.	Chapter 6, Section 6.8
8.	• Personal and property rights.	Chapter 6
9.	• Decision-making systems.	Chapters 6, Section 6.10
10.	• Fears and aspirations:	Chapter 6
11.	– the principles in Section 1.3 of the guideline; and	Chapter 1, Section 1.3
12.	– the review questions in Appendix A of the guideline.	Appendix A

The SIA Guideline (DPE 2021a) provides a set of SIA review questions. The questions and corresponding responses are presented in Appendix A (Table A.1). The responses in both Table 1.1 and Table A.1 identify where each element of the SEARs and SIA Guideline requirement is addressed in this report.

1.5 SIA study area

The SIA study area (or social locality) was determined in accordance with the SIA Guideline (DPE 2021a) and considered the following:

- the scale and nature of Project activities, and potential direct, indirect and cumulative impacts;
- who may be affected by the Project, how they may be affected and their interests, values and aspirations;
- potentially affected built or natural features identified as socially valuable, including infrastructure, facilities and amenities;
- relevant local and regional area social trends or change processes, for example, availability of rented accommodation and population and demographic changes; and
- the history of the Project and the experience local and regional communities have had with this Project and others like it.

While the impacts and benefits of the Project will be experienced locally, direct and indirect impacts (both positive and negative) may be farther reaching. Accordingly, the social impact assessment (SIA) adopted a local study area along with a regional study area set within a broader social area of reference.

The local study area includes the communities which directly surround HVO being Jerrys Plains State Suburbs Classification (SSC), Maison Dieu SSC, Camberwell SSC and Long Point SSC along with the two key nearby townships of Singleton Statistical Area level 2 (SA2) and Muswellbrook SA2. The communities of the local study area are those which are likely to experience direct social impacts associated with the Project such as those related to social infrastructure and services, workforce, business and industry, housing and accommodation, and community health and wellbeing.

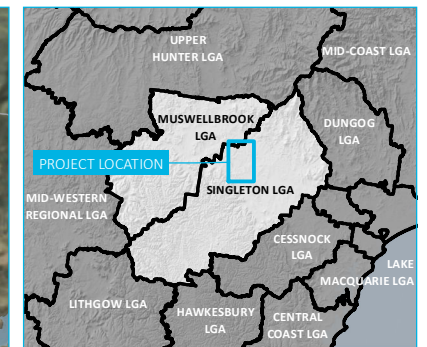
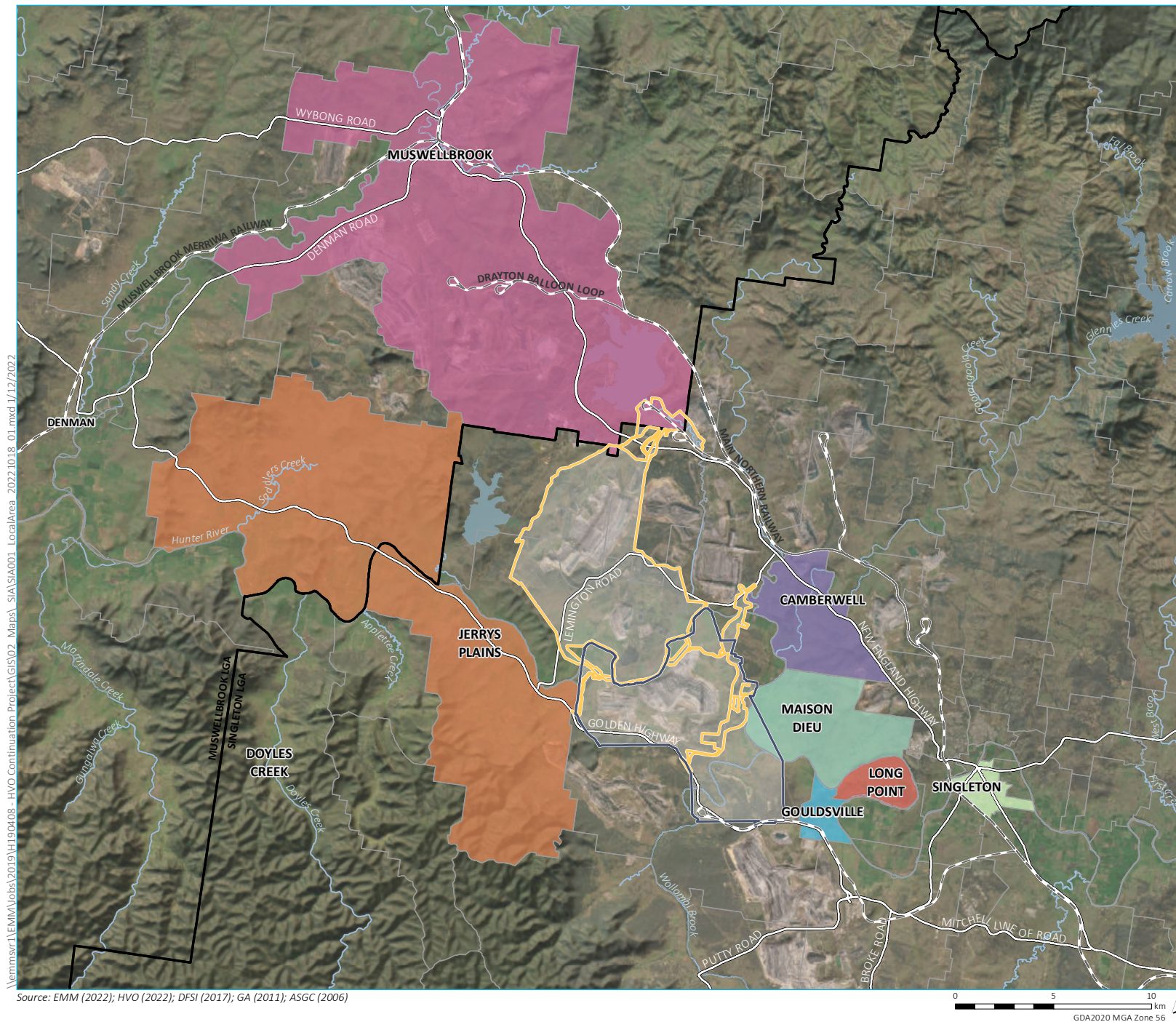
The Singleton Local Government Area (LGA) and Muswellbrook LGA are identified as the regional study area for the SIA area. Communities in the regional study area may not be directly affected by Project activities; however, they may experience impacts associated with the use of infrastructure, supply chains, roads, transportation of goods, materials and equipment, the employment, accommodation and movement of workers and cumulative impacts arising from other Projects in the area.

The area of reference includes communities within the Australian Bureau of Statistics (ABS) category of Hunter Valley region (excluding Newcastle Statistical Area Level 4 (SA4) and Newcastle State Electoral Divisions (SED)) due to the potential for Project workers to be sourced from and be accommodated in these geographic locations. This area provides an understanding of social trends and data and a meaningful point of comparison. Comparison is also made against the data describing the state of NSW.

These communities have been mapped to the ABS categories used for data analysis (Table 1.2) and the local area and regional study area (herein referred to as the local area, regional area or the area of reference) are illustrated in Figure 1.4 and Figure 1.5.

Table 1.2 **SIA study area**

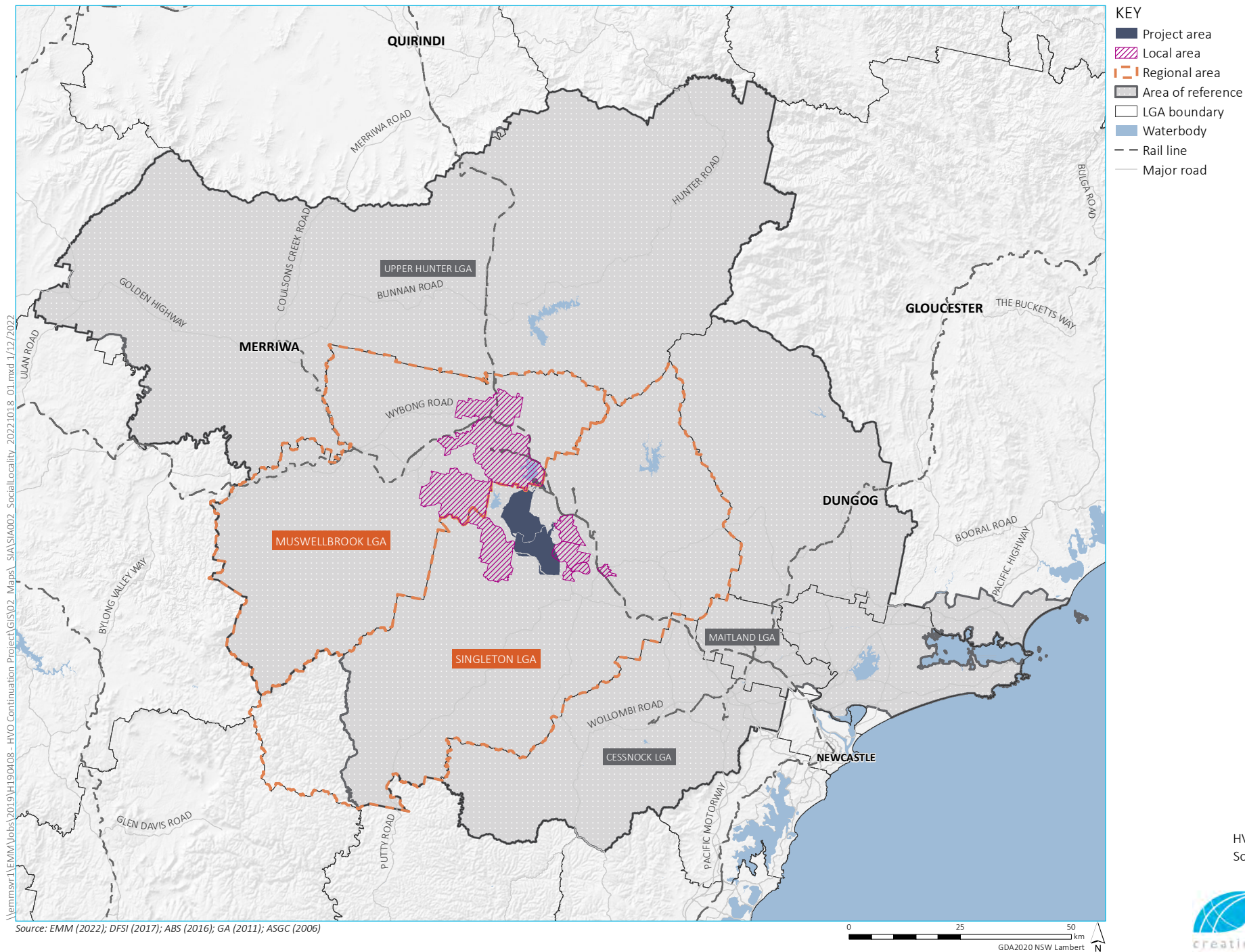
SIA study area	Geographic area	ABS data category	Referred to in report as:
Local area	Jerry Plains	Jerry Plains SSC	Local area
	Maison Dieu	Maison Dieu SSC	
	Camberwell	Camberwell SSC	
	Long Point	Long Point SSC	
	Singleton – township	Singleton SA2	
	Muswellbrook – township	Muswellbrook SA2	
Regional area	Singleton Council area	Singleton LGA	Regional area
	Muswellbrook Shire Council area	Muswellbrook LGA	
Area of reference	Hunter Valley region	Hunter Valley excluding Newcastle SA4 and	Area of reference
	Newcastle	Newcastle SED	
State of New South Wales	State of New South Wales	New South Wales State and Territory (STE)	NSW



- KEY**
- HVO North proposed development consent boundary
 - HVO South proposed development consent boundary
 - Existing environment
 - Main road
 - Rail line
 - Named watercourse
 - Named waterbody
 - Local government area
 - Suburb boundary
 - Singleton ABS SA2 area
 - Muswellbrook ABS SA2 area
 - Jerrys Plains SSC
 - Maison Dieu SSC
 - Camberwell SSC
 - Gouldsville SSC
 - Long Point SSC

SIA local area

HVO Continuation Project
Social Impact Assessment
Figure 1.4



SIA social locality

HVO Continuation Project
Social Impact Assessment
Figure 1.5

1.6 Authorship and SIA Declarations

The authorship and SIA Declarations for this report are provided in the following sections.

i Authorship

This report has been prepared by a suitably qualified and experienced lead author (Chris Mahoney) and co-author (Alicia Minogue), consistent with SIA Guideline requirements and reviewed and approved by a suitably qualified and experienced SIA practitioner. All contributors hold appropriate qualifications and have the relevant experience to carry out the SIA for this Project. The curriculum vitae for each author is provided in Appendix B.

ii SIA Declarations

The authors declare that this SIA report:

- was completed on 16 December 2022;
- has been prepared in accordance with the SIA Guideline;
- contains all reasonably available Project information relevant to the SIA; and
- as far as EMM Consulting Pty Limited (EMM) is aware, contains information that is neither false nor misleading. Assumptions and limitations of this report are outlined in Section 2.2.

2 Methodology

This section presents the methodology that was employed to conduct the SIA. The methodology for the SIA has been specifically tailored to meet the requirements of the SEARs, in particular the SIA Guideline (DPE 2021a). This SIA has been informed by best practice guidance and standards set out by the International Association for Impact Assessment (IAIA) and International Finance Corporation (IFC).

Figure 2.1 illustrates the phases of the SIA methodology which was adopted based on the applicable requirements and standards. The SIA report, which is the output of Phase 2, will be placed on public exhibition with the EIS, where submissions are received during Phase 3.

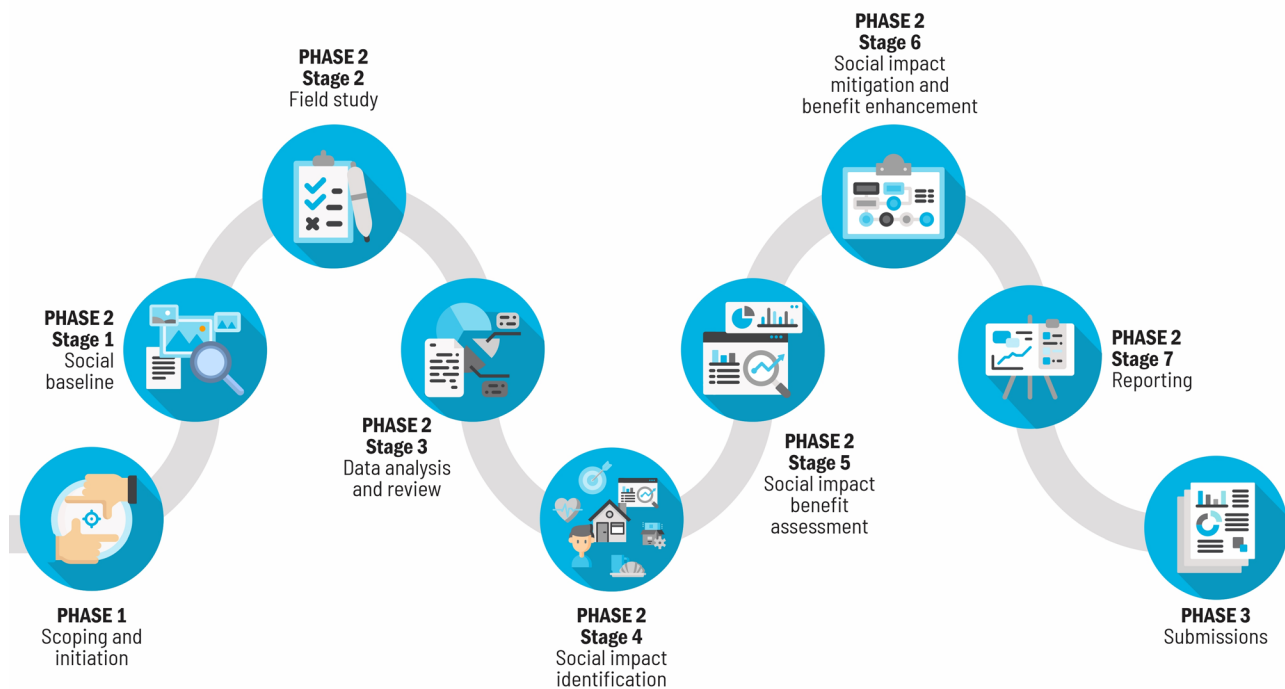


Figure 2.1 Phases of the SIA methodology

2.1 Methodological phases

The phases of the SIA methodology are described below.

i Phase 1

a Scoping and initiation

As per the SIA Guideline, scoping is the first phase of the SIA process and serves to gain an understanding of what the Project entails and how it might interact with the social environment. In completing SIA scoping the following key tasks were undertaken:

- review of the Project description including the locational context, analysis of workforce requirements and how the workforce is to be accommodated;
- town cluster analysis to examine the social and economic linkages between the Project and surrounding communities;

- review of policy and planning considerations;
- definition of the Project's social area of influence; and
- preparation and submittal of the SIA Scoping Report.

The SIA Scoping Report for the Project was prepared by EMM and submitted to DPE in December 2020. This included a profile of the study area which was informed by stakeholder consultation. SEARs for the Project were received on 11 March 2021 referencing the 2017 SIA Guideline (DPE 2017); however, these guidelines have been superseded and this SIA has been prepared in accordance with the 2021 SIA Guideline (DPE 2021a).

ii Phase 2

a Stage 1 – Social baseline study

Building upon the understanding of the existing social environment attained in the scoping phase, a social baseline study was completed. Key sources of information included existing demographic, health, housing, and socio-economic data from the ABS, government agencies, and local government; published literature and social research; government policies and plans; and documents relating to similar Projects. A wide range of social indicators were reviewed and assessed for relevance.

The selection of social baseline indicators was informed by the social impact categories defined in the SIA Guideline and the outcomes of initial scoping and background literature review. The social baseline study provides a community profile, including a socio-economic profile and analysis of social infrastructure and capacity within the SIA study area.

The social baseline study provides the benchmark against which potential social impacts are identified and assessed. The social baseline study is presented in Chapter 4.

b Stage 2 – Field studies

SIA field studies were conducted in accordance with Appendix A of the SIA Guideline, which prescribes key engagement objectives and how to conduct community engagement. Due to the COVID-19 pandemic, social distancing requirements were enforced during all SIA field study and engagement activities. The specific methods and outcomes of the community engagement and SIA field studies are presented Chapter 5.

The field study component of the SIA used social research methods, which included in-depth interviews, service provider interviews and community, workforce, and supplier surveys to collect qualitative and quantitative data to:

- validate baseline data and assumptions;
- identify/test impacts that may be experienced by nearby neighbours and the broader community;
- confirm identified impacts and determine potential management strategies; and
- provide communities with an opportunity to express any concerns.

HVO will continue to provide opportunities for community members to comment on the Project as it progresses through the assessment and determination process.

c Stage 3 – Social impact identification

With a clear understanding of the scope of the Project, social baseline, and input from the field studies, suitably qualified social scientists (see Appendix B) identified the Project's potential social impacts. This analysis informed the social risk assessment (approach to Stage 4).

The assessment of social impacts was conducted using the SIA Guideline (DPE 2021a) definition of social impacts which refers to 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.
- Accessibility: how infrastructure provided by public, private or not for profit organisations, including services and facilities is accessed and used.
- Culture: shared beliefs, customs, values and stories, and connection to Country, land, places, waterways and buildings, both Aboriginal and non-Aboriginal.
- Health and wellbeing: 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.
- Livelihoods: how people sustain themselves through employment or business, their capacity to do so and whether disadvantage is experienced.
- Decision-making systems: extent community can have a say in decisions that affect their lives, access to complaint, remedy and grievance mechanisms.

Identification of the Project's potential social impacts and benefits was completed through several complementary approaches, helping to triangulate the findings and confirm their accuracy. These approaches included:

- Consideration of environmental impacts – review of similar Projects in the area, as well as available academic and grey literature to identify potential impacts.
- Consideration of local plans and policies – findings from the review aided to contextualise and understand the local priorities as well as to identify local values.
- Consideration of the existing social environment – demographic and social analysis in the form of a social baseline study.
- Consideration of feedback generated through stakeholder engagement including findings from SIA field studies along with broader engagement undertaken as part of the EIS process.
- Findings from other technical disciplines that contributed to the EIS were reviewed and potential social impacts defined. These included:
 - Air Quality and Greenhouse Gas Assessment (Jacobs 2022) – Appendix G of the EIS;
 - Noise Impact Assessment (EMM 2022b) – Appendix H of the EIS;
 - Blasting Impact Assessment (Enviro Strata Consulting 2022) - Appendix I of the EIS;

- Groundwater Assessment (AGE 2022) – Appendix J of the EIS;
 - Surface Water Assessment (Engeny 2022) – Appendix J of the EIS;
 - Biodiversity Development Assessment Report (Umwelt 2022) – Appendix K of the EIS;
 - Aquatic Ecology and Groundwater Dependant Ecosystem Assessment (Eco Logical 2022) – Appendix L of the EIS;
 - Aboriginal Cultural Heritage Assessment (EMM 2022a) – Appendix M of the EIS;
 - Soil and Land Resources Assessment (Minesoils 2022a) – Appendix O of the EIS;
 - Agricultural Impact Statement (Minesoils 2022b) – Appendix P of the EIS;
 - Traffic Impact Assessment (WSP 2022) – Appendix Q of the EIS;
 - Visual Impact Assessment (EMM 2022d) – Appendix R of the EIS;
 - Mine Closure and Rehabilitation Strategy (EMM 2022e) – Appendix S of the EIS;
 - Economic Impact Assessment (EY 2022) – Appendix V of the EIS;
 - Mine Plan Options Report (HVO 2022a) – Appendix D of the EIS; and
 - Infrastructure Options and Avoidance Report (HVO 2022b) – Appendix D of the EIS.
- Consideration of cumulative impacts – review of documentation from other existing and proposed Projects in the study area.

d Stage 4 – Social risk assessment

The social risk assessment stage assessed each of the social impacts identified to predict the nature and scale of potential social impacts during construction and operation of the Project. A social risk approach was adopted to assess the consequence and likelihood of potential positive and negative social impacts with and without mitigation. The social risk assessment matrix, including the assessment framework used for the assessment, is provided in the SIA Guideline Technical Supplement (DPE 2021b, Section 2.3). The social impact significance matrix extracted from the Technical Supplement is provided as Figure 2.2.

		Magnitude level				
		1	2	3	4	5
Likelihood level		Minimal	Minor	Moderate	Major	Transformational
A Almost certain		Low	Medium	High	Very High	Very High
B Likely		Low	Medium	High	High	Very High
C Possible		Low	Medium	Medium	High	High
D Unlikely		Low	Low	Medium	Medium	High
E Very unlikely		Low	Low	Low	Medium	Medium

Source: SIA Guideline Technical Supplement, Social impact significance matrix

Figure 2.2 Social impact significance matrix

The following data and information has been used to identify the potential social impacts and their associated risks:

- data collected as part of the social baseline analysis including the findings from SIA field study and EIS engagement activities;
- academic research;
- relevant previously conducted SIAs; and
- relevant government and agency reports.

e Stage 5 – Social impact mitigation and management

A mitigation and management framework was prepared with consideration of all potential social impacts and benefits to allow for the identification of:

- required impact mitigation measures;
- enhancement measures to maximise the potential benefits; and
- partnership opportunities.

Findings from Stages 1–5 was used to distil and analyse recommendations for the SIA report. This stage used a multidisciplinary approach lead by EMM’s social scientists supported by environmental advisers.

f Stage 6 – SIA reporting

Development of this SIA technical report and internal peer review were conducted by EMM’s social scientists and environmental scientists.

2.2 Limitations of the SIA

2.2.1 Limitations of secondary data sources

At the time of writing the social baseline (April 2021) the most recent census data available was the 2016 ABS Census. Some ABS Census data for 2021 became available by July 2022 when this report was prepared, and where feasible this has been incorporated into the assessment. Where more up-to-date data was not available, this report endeavours to capture potential impacts and vulnerabilities using historical data or proxy measures, such as references to alternate sources like id Consulting (2020) to identify trends. Information drawn from the 2016 ABS Census of Population and Housing is five years old and may not fully represent current community trends and economic conditions. Changes to the local, regional and national economy arising from the COVID-19 pandemic are not captured in the 2016 census data.

2.2.2 Limitations of primary data

Data presented from the SIA field study program is based on the interviewed community member's knowledge and experience and on their willingness to participate and share data. Feedback provided may not be representative of the perspectives of all community members across each of the SIA study areas. Landholder participants in the SIA field study program were primarily those who are proximal to the study area and were willing to participate. As key stakeholders it is important to capture the perceptions of these people; however, it may not be fully representative of broader community sentiment.

3 SIA Scoping

As per the SIA Guideline, scoping is the first phase of the SIA process and serves to gain an understanding of what the Project entails and how it might interact with the social environment. In completing SIA scoping the following key tasks were undertaken as further outlined below:

- review of relevant Project details including the locational context, analysis of workforce requirements and how the workforce is to be accommodated;
- town cluster analysis to examine the social and economic linkages between the Project and surrounding communities;
- review of policy and planning considerations; and
- preparation and submittal of SIA Scoping Report.

3.1 Key Project elements

3.1.1 Locational context of the Project

HVO is within a well-established coal mining and power generation region in the Hunter Valley. It is approximately 24 km north-west of Singleton, which is the largest town in the upper Hunter Valley. Singleton has a population of over 16,000 people and supports a range of local industries. The Project is predominantly in the Singleton LGA, with a small portion of the Project area (less than 4%) in the Muswellbrook LGA.

The Project area shown on Figure 1.3 comprises the proposed development consent boundaries for both HVO North and HVO South. The proposed development consent boundary for HVO North is similar to the existing consent boundary, with some changes proposed primarily to accommodate infrastructure relocation and upgrades and the proposed mining footprint between the Mitchell and Carrington Pits. The HVO South development consent boundary will remain largely the same. The SIA has considered a broader area for identification of social baseline conditions and potential social impacts and benefits, referred to as the study area and discussed in detail in Section 3.2 and Section 3.3.

The general area surrounding the HVO Complex is comprised of various operating open cut and underground coal mining operations. Existing open cut pits, mine-related infrastructure and rehabilitated former mining areas are to the north, south-east and south-west of the HVO Complex. Surrounding operating mines include Glencore's Liddell Coal Operations, Ravensworth Operations and the Mount Owen Complex, as well as United Wambo (a Glencore and Peabody JV), Peabody's Wambo Underground Mine and Yancoal's Mount Thorley Warkworth mines (MTW) and Ashton. AGL's Bayswater and Liddell power stations are to the north-west.

Other land uses in the area include agriculture, mine-owned buffer land, land supporting biodiversity offsets, Crown land, rural residential areas and Wollemi National Park, which is approximately 5 km south-west of the HVO Complex. Grazing and cropping land are to the north-east of HVO South and west of HVO North. The existing HVO Wandewoi biodiversity offset area is west of HVO North. Biodiversity offsets for the nearby Warkworth Mine are immediately to the east of HVO South and further afield to the south of Warkworth. Identified surrounding land uses are shown on Figure 1.3. The key natural feature within the locality is the Hunter River (refer to Figure 1.3), which flows between HVO North and HVO South.

The HVO Complex lies between the Golden Highway, which runs along the southern boundary of the HVO Complex and the New England Highway which runs along the northern boundary. The local road network consists of Lemington Road, which is a two-lane two-way local road that traverses the HVO Complex and provides access to the HVO North Mine Infrastructure Area (MIA) and to Ravensworth Operations; Comleroi Road, which is a two-lane two-way local road and provides access to the HVO South MIA and the Hunter Valley Glider Club (HVGC) from the Golden Highway; Archerfield Road which is a single carriage way gravel road that intersects with Comleroi Road and provides access to rural properties to the east of HVO South, Pikes Gully Road, which is a two-lane two-way sealed road that provides access to the Howick CPP at HVO North and Liddell Station Road, which is a two-lane two-way sealed road, which provides access to the Newdell LP and HVLP at HVO North.

i Landholder and land ownership

There are limited private residences in close proximity to the Project. Private residences near the HVO Complex are predominantly at Maison Dieu to the east, Long Point and Gouldsville to the south-east, Camberwell to the north-east and Jerrys Plains to the west (refer to Figure 3.1).

The closest residences are east of HVO South in Maison Dieu within the existing and proposed HVO South development consent boundaries. No private landholdings are within the existing and proposed development consent boundaries at HVO North. Maison Dieu is around 2 km east of the HVO South MIA and has a population of around 181 people (ABS 2016). Long Point (31 people; ABS 2016) and Gouldsville (24 people; ABS 2021) are approximately 7–8 km south-east of the HVO South MIA and the predominantly mine-owned Warkworth (42 people; ABS 2021) is south of HVO South. Camberwell (83 people; ABS 2016) is around 7 km north-east of the HVO South MIA, and Jerrys Plains (385 people; ABS 2016) is approximately 8 km west of the HVO North MIA.

A number of privately owned residences are entitled to voluntary mitigation rights upon request by HVO under existing approvals. At HVO South, Condition 1 Schedule 3 of Project Approval PA 06_0261 lists five properties that are entitled to acquisition upon request; however, all the listed properties are now mine owned, having been acquired by either the HVO JV or other mining operations. A number of privately owned properties are entitled to mitigation upon request under the HVO South Project Approval (outlined in Table 2, 4 and 14 of PA 06_0261), and are listed in Table 3.1 and shown on Figure 3.1. It is noted that the numbers previously assigned to residential dwellings (ie receptors) around HVO, as documented in PA 06_0261, have been reviewed for the Project to provide a consistent receptor list between HVO North and HVO South.

In relation to HVO North, four properties are listed as entitled to voluntary acquisition upon request under Condition 1 Schedule 3 of DA 450-10-2003. However, all the listed properties are now mine owned, having been acquired by either the HVO JV or Ravensworth Operations. No properties are identified as being entitled to the implementation of mitigation measures upon request under the current HVO North development consent.

Numerous properties in the vicinity of HVO are also entitled to voluntary acquisition or mitigation upon request under the development consents for surrounding mining operations. These residences are also identified in Figure 3.1.

Table 3.1 Privately owned receptors entitled to mitigation upon request under existing HVO development consents

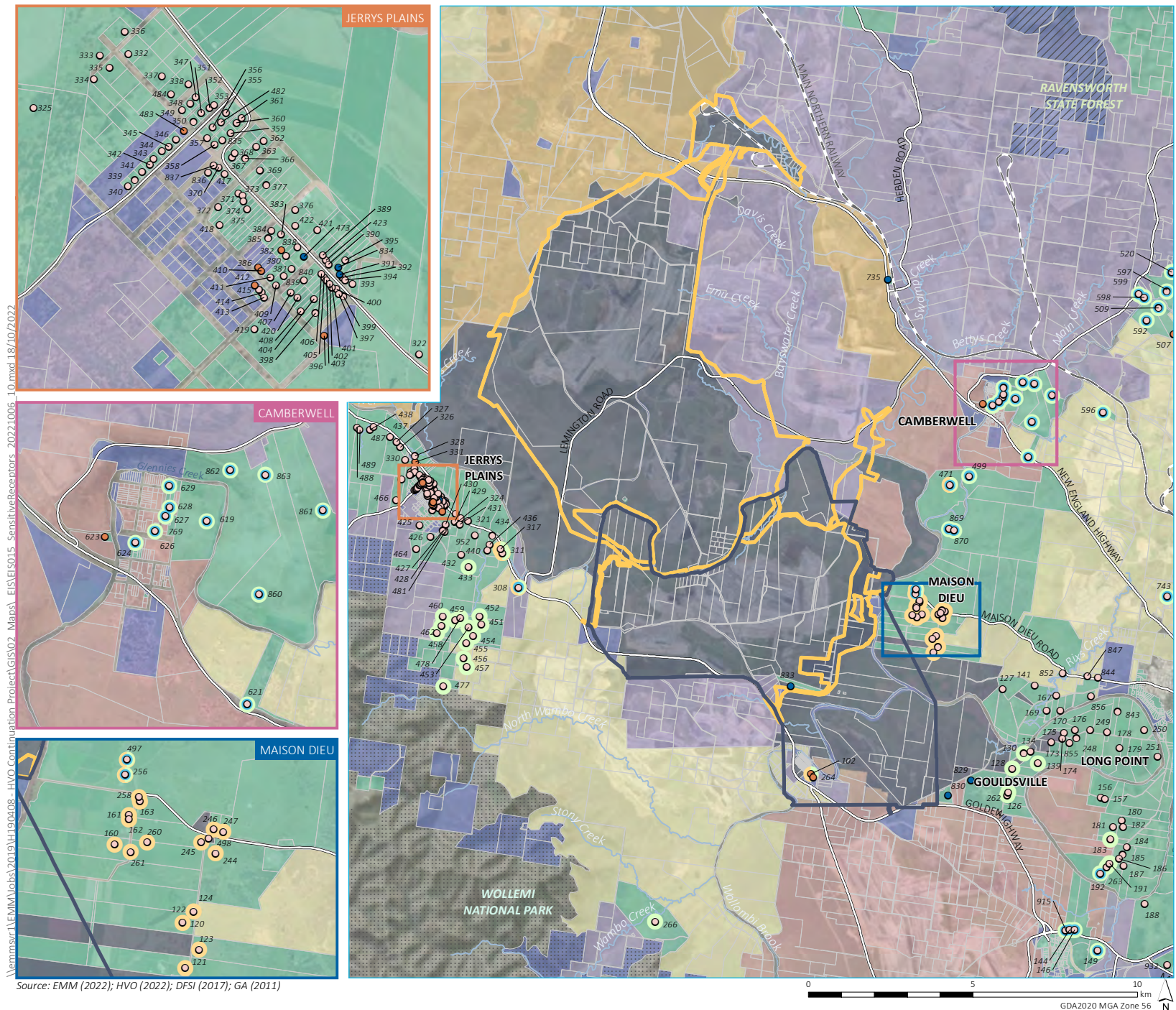
Location	Receptor number (Project)	Previous receptor number HVO North	Previous receptor number HVO South	Associated with	Due to noise or air quality
Maison Dieu	120	120	120	HVO South	Noise and air quality
Maison Dieu	121	34	121	HVO South	Noise and air quality

Table 3.1 Privately owned receptors entitled to mitigation upon request under existing HVO development consents

Location	Receptor number (Project)	Previous receptor number HVO North	Previous receptor number HVO South	Associated with	Due to noise or air quality
Maison Dieu	122	56	122	HVO South	Noise and air quality
Maison Dieu	123	50	123	HVO South	Noise and air quality
Maison Dieu	160	5	160	HVO South	Noise
Maison Dieu	161	61	161	HVO South	Noise
Maison Dieu	162	162	162	HVO South	Noise
Maison Dieu	163	163	163	HVO South	Noise
Maison Dieu	244	244	244	HVO South	Noise
Maison Dieu	245	245	245	HVO South	Noise
Maison Dieu	246	246	246	HVO South	Noise
Maison Dieu	247	247	247	HVO South	Noise
Maison Dieu	256	47	256	HVO South	Noise
Maison Dieu	258	258	258	HVO South	Noise
Maison Dieu	260	260	260	HVO South	Noise
Maison Dieu	261	261	261	HVO South	Noise
Jerrys Plains	308	31	308	HVO South	Noise
Jerrys Plains	311	3	311	HVO South	Noise
Jerrys Plains	317	76	317	HVO South	Noise
Camberwell	471	NA	471	HVO South	Air quality
Maison Dieu	497	NA	NA ¹	HVO South	Noise

Note: 1 – Receptor 497 not previously allocated a receptor number under PA06_02611. However, it is located within 1 km of Shearers Lane and as such is afforded mitigation rights as per Schedule 3, Condition 2 of PA06_02611.

In addition to the voluntary mitigation rights under the existing HVO South Project Approval, HVO currently operates a voluntary Near Neighbour Amenity Resource (NNAR) program. This is a non-statutory voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps. Approximately 174 private residences in Jerrys Plains, Maison Dieu, Long Point and Gouldsville are eligible for the existing NNAR program, and in the last five years around 50 residents have participated.



3.1.2 Project schedule

i Construction schedule

The main construction program proposed for the Project (Phase 1) is expected to take up to five years, and subject to approval it is scheduled to commence (ie Year 1 of the Project) in around mid-2023.

The peak of construction activities is expected to occur in around mid to late Year 2, when several elements of the construction program will overlap. Construction of the re-aligned section of Lemington Road will be completed prior to cutting off access from the existing alignment, thereby minimising interruptions to the road network. An overview of the schedule of Project construction (Phase 1) is provided in Table 3.2.

Construction activities are proposed to occur generally within standard construction hours.

Table 3.2 Construction project – phase 1

Key construction elements	Feature (activity)	Indicative construction period
Mitchell	North Void TSF flood protection levee	Year 1 to Year 2
Lemington	Lemington Road realignment	Year 1 to Year 2
Mitchell	Transmission line and telecommunication line relocations	Year 1 to Year 2
Mitchell	Mitchell Pit clean water diversion	Year 1 to Year 2
Newdell	Tailings pump and pipeline infrastructure	Year 1 to Year 2
Mitchell	Mitchell Dam	Year 1 to Year 2
Howick	Parnells Dam enlargement	Year 1 to Year 2
HVO North MIA	HVO North site access road relocation	Year 2 to Year 2
HVO North MIA	HV MIA upgrades	Year 2 to Year 3
Newdell	Newdell LP upgrades and new product stockpile*	Year 2 to Year 3
Lemington	Lake James enlargement	Year 2 to Year 3
HVO North MIA	Haul road crossing to Ravensworth Operations	Year 3 to Year 5
Newdell	HVLP product stockpile extension*	Year 3 to Year 5

*Only one stockpile of either Newdell product stockpile or HVLP upgrade will be completed.

Some construction activities will also occur later in the Project life, namely the construction of the LCPP and associated rail loop. These elements are already approved as part of the existing HVO South Project Approval and have not been required to be constructed to date. The LCPP and rail loop are proposed to be constructed in around Year 13 to Year 15 of the Project, should future operational requirements and or market conditions deem it necessary.

ii Operations schedule

The Project will continue operations at HVO South through to the end of 2045, which represents an additional 15 years of operations against that currently approved to 2030.

Operations at HVO North will continue through to the end of 2050, which is an additional 25 years of mine operations against that currently approved to 2025.

The Project will commence decommissioning upon the completion of respective operations.

3.1.3 Project workforce requirements

i Construction workforce

Over the five year construction phase, the Project is expected to require a predicted peak of approximately 600 fulltime equivalent (FTE) workers working on site at any one time. The peak of around 600 workers will be required for approximately 6 months. Key construction elements are outlined in Table 3.2 and respective anticipated construction workforce requirements illustrated in Figure 3.2.

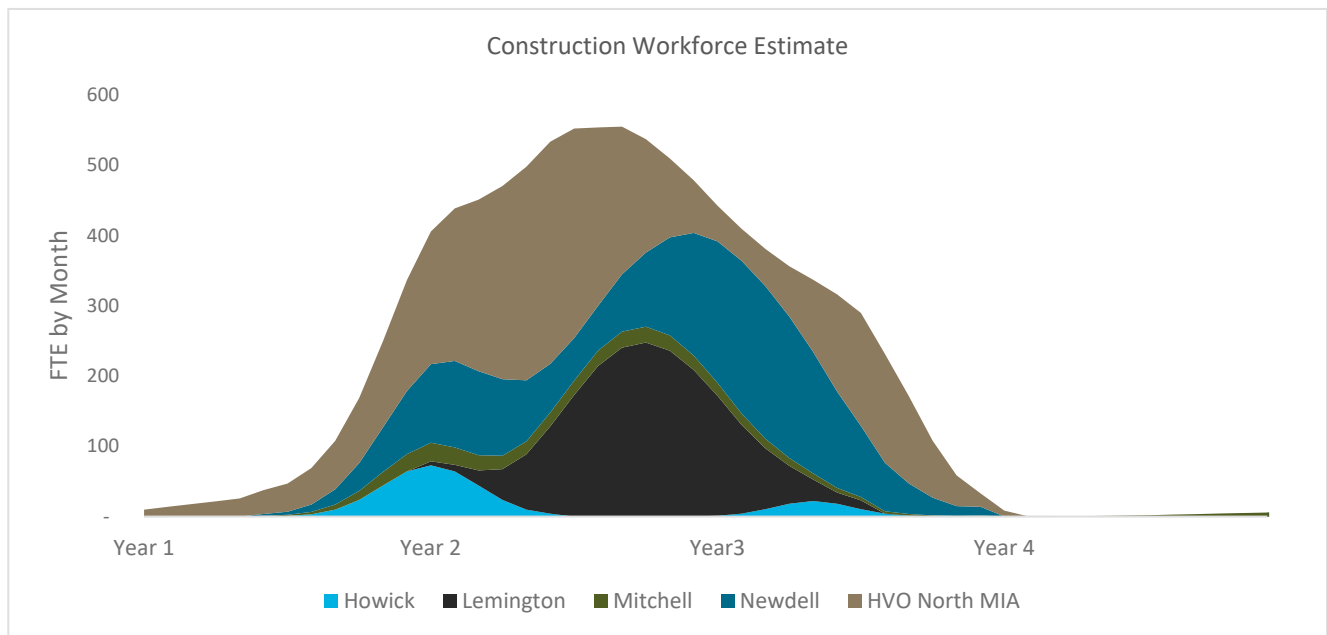


Figure 3.2 Construction workforce estimation from Year 1 to Year 4

a Source of the construction workforce

To gain an understanding of the locational distribution of potential social impacts and benefits associated with the construction workforce, a number of assumptions regarding the source of the workforce are predicted across the SIA study areas.

Table 3.3 presents the workforce sourcing assumptions for the construction phase of the Project. These assumptions have been informed by:

- consideration of a reasonable and safe commute time/distance for a worker to commute on a daily basis whilst on shift. For the construction workforce, this has been assumed to be approximately one hour which encompasses the local and regional area along with most of the area of influence;
- analysis of local and regional labour market dynamics and available skill sets (refer to Section 4.4);
- employment trends of previous and similar Projects within and outside the regional area; and
- information gathered through EIS and SIA engagement with employment agencies and other stakeholders who have an appreciation of regional construction workforce dynamics (refer to Section 5.2).

Based on the characteristics of the labour force, a best case and a worst-case scenario have been assumed with regard to the ability to source required labour from the local and regional area, and the area of reference (defined in Section 4.4 as the combined area of Singleton LGA, Muswellbrook LGA; the Hunter region includes Cessnock LGA, Maitland LGA and the Newcastle region).

The median between the best case and worst case scenarios is subsequently adopted as the assumed proportion of the labour sourced from the local, and regional and the area of reference- referred to as 'local hires' (LH).

b Best case scenario

This scenario assumes that an estimated 80% (480 workers) of the peak construction workforce are LH, while an estimated 20% of the construction workforce (120 workers) are NLHs. It is anticipated that LHs will include both skilled and unskilled workers given the characteristics of labour force skills (Section 4.4).

c Worst case scenario

This scenario assumes that an estimated 60% (360 workers) of the peak construction workforce are LH, while an estimated 40% of the construction workforce (240 workers) are NLHs.

d Median case scenario

The mid-point between the best and worst case scenarios is that 30% of the required construction workforce will be sourced from outside of the broader region. Of the peak construction workforce of 600, this equates to 180 workers being sourced from other areas of NSW.

Table 3.3 Peak workforce sourcing assumptions

Location workforce is sourced from	Best case scenario		Worst case scenario		Median case scenario	
	Proportion of total workforce	Number of workers	Proportion of total workforce	Number of workers	Proportion of total workforce	Number of workers
Local area, regional area, and area of reference	80%	480	60%	360	70%	420
Other areas of NSW	20%	120	40%	240	30%	180
Total Workforce	100%	600	100%	600	100%	600

ii Operational workforce

The current operational workforce at HVO will be sustained by the Project, with approximately 1,500 FTE positions being maintained through to around Year 19 (anticipated to be around 2041, as HVO South starts to wind down). The operational workforce will remain above 1,000 FTE positions through to the cessation of coal mining in 2050 (refer to Figure 3.3).

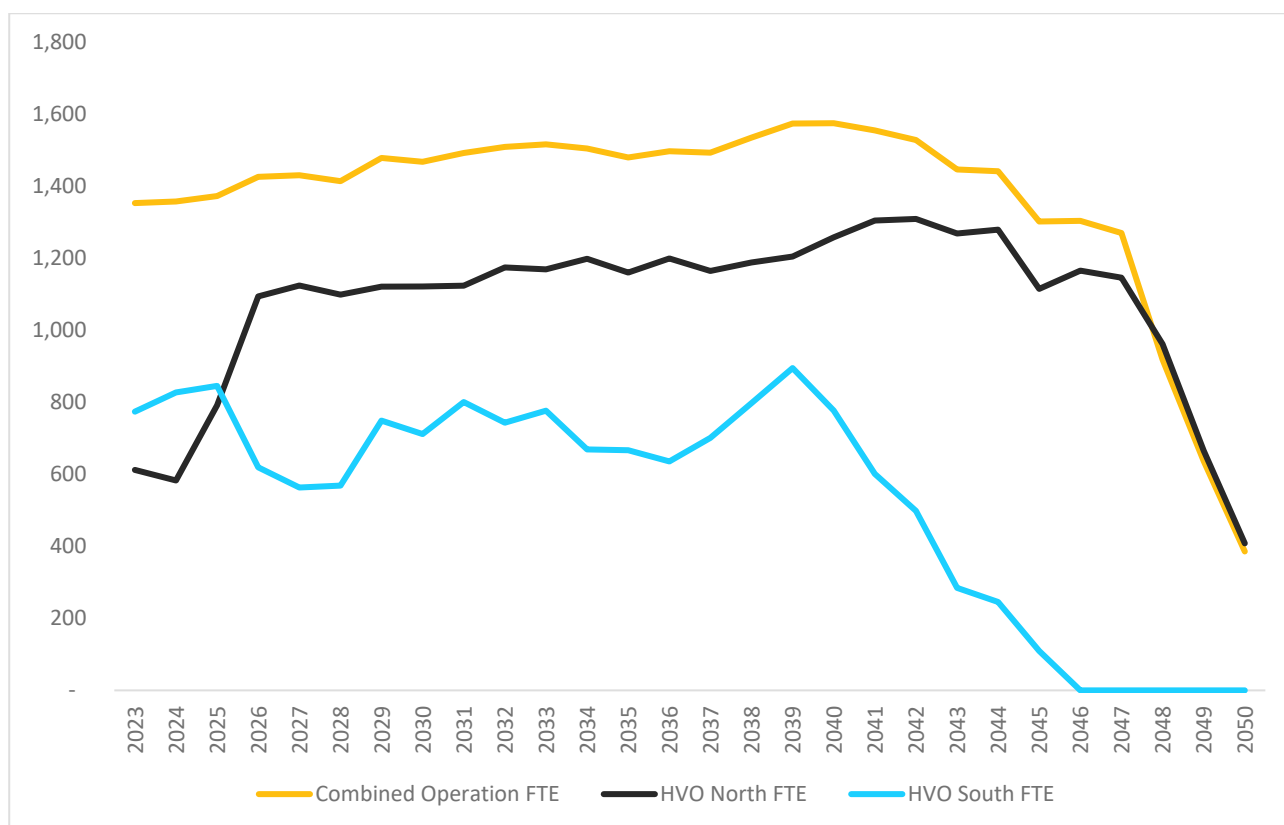


Figure 3.3 Indicative Project operational workforce requirements (FTE)

The place of residence distribution of the existing workforce is expected to be maintained. Workforce data collected as part of the SIA suggests that:

- the majority of the current workforce resides in suburbs in the local and regional area of the SIA study area, with around 26% residing in Singleton LGA and 9% in Muswellbrook LGA;
- in communities within the area of reference, 23% of the current workforce lives in Maitland LGA, 19% in Cessnock LGA, 2% in Dungog LGA, 3% in the Upper Hunter and 6% in Newcastle LGA; and
- the remaining 12% live outside the one-hour drive commute and are placed throughout NSW which includes the following communities including Lake Macquarie (6%), Port Stephens (3%), and the Central Coast (0.5%), while 0.5% live in communities outside of NSW.

3.2 Town resource cluster analysis

A Town Resource Cluster (TRC) analysis was undertaken to examine social and economic linkages between the Project and key towns across the broader region. A TRC analysis reviews several factors concerning the Project's workforce and supplier composition to determine the social and economic associations, relationships and inter-dependencies between Project operations and the surrounding communities (Coakes & Lamb 2016).

To inform the TRC analysis, eight localities were identified as resource centres which may experience social and economic effects associated with the Project such as employment, Project workforce expenditure and participation within the local community and suppliers' business expenditure. The localities identified as resource centres were Singleton, Maitland, Cessnock, Muswellbrook, Lake Macquarie, Newcastle, Scone and Port Stephens.

3.2.1 Labour force

Labour force participation rates of persons aged 15 years and older varied across all resource centres. According to the 2016 ABS Census data, workforce participation rates are relatively low within Singleton (57.7%), Maitland (51.7%), Cessnock (45.4%), and Muswellbrook (57.9%) when compared to Newcastle (62.7%), Scone (59.2%) and greater NSW (59.2%). Maitland (10.7%), Cessnock (10.6%) and Muswellbrook (9.6%) had the highest rates of unemployment in comparison to Singleton (9.0%), Newcastle (5.2%), Scone (4.4%) and greater NSW (6.3%). Youth unemployment rates were significantly higher within Singleton (20.4%), Maitland (24.2%), Cessnock (19.6%), Muswellbrook (19.3%) and Newcastle (14.3%). Whereas youth unemployment was low in Scone (9.2%) when compared to greater NSW (13.6%).

3.2.2 Occupation

The predominant occupation within Cessnock (16.6%), Muswellbrook (20.8%), Scone (17.1%) was technicians and trades workers. Whilst the most common occupation within Newcastle and Maitland was professionals at 38.8% and 18.6% respectively. Only within Singleton the predominant occupation was machinery operators and drivers (17.8%).

3.2.3 Local business and industry

The top three industries within each resource centre varied.

Mining is one of the top three industries of employment within Singleton (22.5%), Muswellbrook (23.2%) and Scone (12.6%), which is reflective of the strong presence of mining within the SIA study area (see Section 1.5). Health care and social assistance is one of the most consistent industries providing employment within the majority of the resource centres, with health care and social assistance providing a higher proportion of employment within Singleton (9.0%), Maitland (20.1%), Cessnock (12.9%), Muswellbrook (8.9%), and Newcastle (19.7%). Retail trade is also a significant industry across majority of resource centres, with retail trade being one of the top three industries of employment within Maitland (9.2%), Cessnock (12.6%), Muswellbrook (9.9%) and Scone (8.8%).

Data regarding registered businesses within each resource centre was not available at the SSC level. Therefore, data concerning local business and industry is provided at the LGA level. When comparing registered businesses amongst the resource centres, Newcastle LGA (13,969) and Lake Macquarie LGA (13,460) had the highest proportion of businesses. The majority of registered businesses across the resource centres were non-employing, with a higher proportion of non-employing businesses in the Singleton LGA (62.5%), Maitland LGA (60.9%), Muswellbrook LGA (59.4%), and Upper Hunter Shire LGA (64.8%). Outside of non-employing business, Lake Macquarie LGA (42.1%) had the highest proportion of small businesses followed by Cessnock LGA (41.8%), Newcastle LGA (40.0%) and Port Stephens LGA (40.0%). There were fewer businesses employing 20–199 employees, with Newcastle LGA (3.5%), Muswellbrook LGA (3.1%) and Singleton LGA (3.0%) having the highest proportion.

Across majority of resource centres, there is a higher proportion of registered businesses operating in the construction industry. Lake Macquarie LGA (22.8%), Port Stephens LGA (22.5%) and Cessnock LGA (17.0%) have the highest proportion of businesses operating within the construction industry. Whilst Upper Hunter Shire LGA (45.3%), Muswellbrook LGA (29.7%), Singleton LGA (26.5%) and Cessnock LGA (9.2%) have a higher proportion of businesses operating within the agriculture, forestry and fishing industry.

3.2.4 Income

According to the ABS 2016 Census data, household median weekly income was higher in Newcastle (\$1,849) than NSW (\$1,486) and the remaining resource centres. Household median weekly income within Muswellbrook (\$1,331), Scone (\$1,318), Singleton (\$1,250), Maitland (\$1,040) and Cessnock (\$990), was lower than Newcastle and greater NSW. This is also reflected in the individual median weekly income, where individual median weekly income in Newcastle (\$1,095) and Scone (\$674) is higher than Muswellbrook (\$630), Singleton (\$592), Maitland (\$537), Cessnock (\$488) greater NSW (\$664). This may be indicative of the lower workforce participation rates within Muswellbrook, Maitland, Cessnock and Singleton, when compared to Newcastle, Scone and greater NSW.

3.2.5 Social infrastructure

A TRC analysis considers the potential impacts that result from a mine closure which can include impacts on the viability or sustainability of social infrastructure (Coakes & Lamb 2016).

There is a wide variety of health, education and community services available across all resource centres. When comparing all available health services within each resource centre there is a higher concentration of health services within the Maitland SSC and Cessnock SSC. In terms of education services, each resource centre has at least one childcare service, primary school, high school or combined school and tertiary education institute, with Cessnock providing the most education services when compared to all resource centres. Availability of community services such as sport and recreation facilities and support services varied amongst the resource centres with Maitland SSC providing the most community services.

3.3 Policy and planning context

This section provides a summary of the relevant plans and strategies across NSW along with the Singleton and Muswellbrook LGAs that inform an appreciation of potential social impacts and benefits associated with the Project along with potential mitigation and management strategies.

3.3.1 State

i Strategies and plans

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

A 20-Year Economic Vision for Regional NSW 2018–2038 (NSW Government, updated 2021) (20 Year Economic Vision) presents a strategy with NSW government priorities for Regional NSW. The strategy provides an overview of the current economic and demographic environment, including the external economic forces impacting regional growth.

The 20 Year Economic Vision identifies that the Hunter region is Australia's largest regional economy, valued at over \$40 billion. While the cumulative impacts of recent shocks, such as COVID-19, have affected the tourism sector, the NSW Government has identified opportunities to accelerate recovery through investments in the Williamstown Special Activation Precinct, renewable energy and a range of infrastructure. Regional specialisations such as mining and tourism will continue to drive employment and economic growth despite bushfire and COVID-19 related disruptions.

Strategic Statement on Coal Exploration and Mining in NSW, 2020

In August 2020, the NSW Government released the *Strategic Statement on Coal Exploration and Mining* (the Statement) which sets out the Government's approach to Australia's commitments under the Paris Agreement, and management of impacts to coal-reliant communities. The Statement provided a four-point action plan:

1. improving certainty about where coal mining should occur;
2. supporting responsible coal production;
3. reducing the impact of coal mining; and
4. supporting diversification of coal-reliant regional economies to assist with the phase-out of thermal coal mining.

The Statement commits the NSW Government to consider responsible applications to extend the life of existing coal mines, which is consistent with the proposed applications for both HVO North and HVO South. Outcomes and recommendations of this SIA are proposed in alignment with the relevant objectives of the Statement, insofar as an SIA prepared to support the EIS process can address the matters raised by this strategy. For further information on the relevant objectives, strategic directions and recommendations, see Appendix C.

Integrated Mining Policy 2018

The *Integrated Mining Policy* (IMP) is a whole-of-government policy that aims to:

- improve the regulation and assessment of major mining Projects;
- strike a balance between the significant benefits mining can bring to the economy and the potential impacts on communities and the environment;
- help manage the environmental and social impacts of mining; and
- ensure the community has access to relevant and timely information about mining Projects.

The IMP is inclusive of a suite of documents relevant to the preparation of assessment material for mining developments. Documents that are to be taken into consideration for the Project include:

- *Technical Notes supporting the Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals* (DPIE, formerly DPE, 2018);
- *Mine Application Guideline* (DPIE, formerly DPE, 2015); and
- *Water Regulation Overview* (DPIE, formerly DPE, 2015).

The IMP is inclusive of guidelines and policies relevant to mining operations post approval. Should the Project receive approval, these requirements will be considered.

State Infrastructure Strategy 2022–2042

The Strategy recognises that forward planning and economic diversification are required to ensure that communities which have a high degree of economic dependence on the coal industry have access to alternative industries, skills, education and training. In addition, the legacy infrastructure in these areas may also form the basis for building future new industries that support a Net Zero economy, and re-use of this infrastructure should be actively pursued. Major economic transitions usually only succeed where, those most adversely affected are considered and supported.

Hunter Regional Plan, 2016–2036

The *Hunter Regional Plan 2036* aims to guide the NSW Government with future land use planning priorities and decisions within the Hunter region (NSW Government 2016). The plan provides an overarching framework for land use plans, development proposals and infrastructure funding decisions. The *Hunter Regional Plan 2036* establishes four goals to secure the Hunter region as the leading regional economy in Australia, promote a biodiverse environment, thriving communities, greater housing and employment.

The *Hunter Regional Plan 2036* is inclusive of actions that identify land and infrastructure requirements to develop the Hunter region's coal and alternative energy resources. The Project is aligned with the *Hunter Regional Plan 2036* key goals for the Hunter region including:

- the continued contribution to developing the Hunter region as the leading regional economy;
- the provision of ongoing opportunities for Hunter region communities to thrive; and
- ensuring the ongoing employment for approximately 1,500 FTEs in the region (NSW Government 2016).

The Project is supported by alignment with the Hunter Regional Plan and recommendations made by this report take the priorities and principles of this strategy into consideration. See Annexure C for the relevant priorities, principles and actions in the Hunter Regional Plan 2036.

Draft Hunter Regional Plan 2041

A review of the HRP was undertaken by DPE in 2021, and the *Draft Hunter Regional Plan 2041* (draft HRP 2041) was published in December 2021. At the time of reporting, the public consultation period of the guideline has closed and it is understood the HRP 2041 is being finalised by DPE. The draft HRP 2041 notes that mining, energy and industrial sectors all make the Hunter an economic powerhouse and will remain important contributors into the future. The draft HRP 2041 also notes that mining is a significant source of direct and indirect jobs and underpins the Hunter Valley's prosperity. Coal is the state's largest export commodity, and is a major source of revenue, which the NSW Government uses to help fund essential services and infrastructure such as schools, hospitals, roads and transport.

The draft HRP 2041 recognises that the world has begun the transition to other forms of energy, and the NSW Government will work to support coal-dependent communities to diversify for the future with good employment opportunities. In this regard, the ongoing operations proposed at HVO by the Project, along with the direct and indirect employment and economic benefits resulting from the Project, will enable and support the transition to sustainable energy forms over time, with reduced impacts to the local population and economy, and with reduced support required from the NSW Government compared to what would occur with a rapid decline in the mining sector.

The draft HRP 2041 contains eight objectives for the Hunter region. The first objective of diversifying the Hunter's mining, energy and industrial capacity relates closely to the Project, and notes that opportunities for the future alternate use of mine land and associated infrastructure such as transmission lines, rail lines and water storages will play a key role in the transition of the local economy as existing mines cease operations. The draft HRP 2041 contains a discussion on strategic land use opportunities in Strategy 1.1 and 1.2. These strategies encourage early consideration of alternative land uses during the design stage of new or expanded mines.

SIA Guideline

The SIA Guideline (DPE 2021a) provides direction on assessing impacts arising from SSD Projects in the context of the environmental impact assessment process under the EP&A Act. In this guideline, SIA is the process of identifying, predicting, evaluating and developing responses to the social impacts of a proposed State significant development project which requires proportionate and tailored assessment to suit each Project's context and the nature and scale of its potential impacts and benefits. The SIA Guideline requires that all State significant development projects have a clear and consistent approach to assessing social impacts. The SIA Technical Supplement 2021 accompanies the SIA Guideline to provide specific methods and techniques for the identification and assessment of social impacts and benefits (DPE 2021b).

Undertaking Engagement Guidelines for State Significant Projects

The *Undertaking Engagement Guidelines for State Significant Projects 2021* (engagement guideline) (DPE 2021c) describes the requirements for effective engagement on State significant projects in NSW. The engagement guideline outlines requirements for proponents to engage with the community, councils and government agencies at each phase of the environmental assessment. The engagement guideline also outlines the actions that DPE will take and identifies opportunities for community participation during each phase. It emphasises early planning and engagement, effective engagement, proportionate engagement, innovation, and transparency. The primary audience of this guideline is proponents and their teams, who are responsible for engaging with the community and other stakeholders during each phase of the environmental assessment. The engagement guideline also provides the community and other stakeholders with a better understanding of how, when and on what they can provide feedback, and how it will be addressed by proponents and decision-makers.

3.3.2 Local planning context

The Project is predominately in the Singleton LGA, with a small portion (approximately 4%) in the Muswellbrook LGA, which constitutes the regional SIA study area. The plans and strategies supported by local government are representative of the needs of local communities and identify strategies and opportunities to further improve the liveability and resilience of these communities, which could be affected by the Project.

Singleton and Muswellbrook Councils provide strategic plans and statutory directions to define and deliver their vision for the future of the community. These are summarised in the LGA Planning Context, Table C.3, Appendix C.

4 Social baseline

This section provides a summary of the existing social conditions in the social locality for the Project with reference to specific and relevant social indicators that align to the following key themes:

- population and demography;
- educational attainment and qualifications;
- labour market and income;
- housing and short-term accommodation;
- vulnerabilities and vulnerable groups;
- social infrastructure and services;
- road infrastructure and transport; and
- community health and wellbeing.

The social baseline provides an understanding of pre-existing social conditions and identifies vulnerable groups. Data relating to housing and accommodation and local workforce skill and capacity also informs workforce and accommodation recommendations, to maximise benefits to the local community.

Unless otherwise stated, the data included in this social baseline is derived from the 2016 Census of Population and Housing (ABS, 2006a, 2011, 2016a, 2016b, 2016c).

4.1 Population and demography

According to the 2016 Census of Population and Housing, the local area has a total population of 28,844 people. Most of these people reside in the townships of Singleton and Muswellbrook, which have respective populations of 16,089 people and 12,075 people. A smaller proportion of the local area population reside in Jerrys Plains (385), Maison Dieu (181), Camberwell (83) and Long Point (31).

ABS data from 2006 was unable to be attained for some suburbs, therefore analysis of population trends across the ten year period between 2006–2016 was unable to be determined for the whole of the local area. Population data from 2006 was available for Jerrys Plains, which experienced a 22.9% increase, Camberwell, which experienced a 52.1% decrease, and Muswellbrook SA2, which experienced a 10.1% increase. However, overall, the population within the local area decreased by 0.4% during the five year period between 2011–2016. Greater population decreases in the local area occurred primarily in the smaller communities of Jerrys Plains and Camberwell, whereby between 2011–2016 they had respective population decreases of -44.0% and -54.1% which could be attributed to a decrease in dairy farms (ABC 2018).

The regional area has a total population of 39,073, with 22,987 residing in the Singleton LGA and 16,086 residing in the Muswellbrook LGA. Population trend data in the regional area shows a 1.5% increase in population between 2011–2016 which is a lower growth rate compared to the area of reference (7.1%) and NSW (6.6%).

Table 4.1 **Population trend by location and year**

Location	2006	2011	2016	Total % change 2006–2011	Total % change 2011–2016
Jerrys Plains SSC	560	688	385	22.9%	-44.0%
Maison Dieu SSC	–	162	181	–	11.7%
Camberwell SSC	378	181	83	-52.1%	-54.1%
Long Point SSC	–	–	31	–	–
Singleton SA2	–	16,136	16,089	–	-0.3%
Muswellbrook SA2	10,707	11,791	12,075	10.1%	2.4%
Local area	-	28,958	28,844	–	-0.4%
Singleton LGA	21,937	22,694	22,987	3.5%	1.3%
Muswellbrook LGA	15,236	15,791	16,086	3.6%	1.9%
Regional area	37,173	38,485	39,073	3.5%	1.5%
Area of reference	–	311,166	335,081	–	7.1%
NSW	6,742,700	7,218,550	7,732,850	7.1%	6.6%

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

Projected population data is published by DPE and is only available at the LGA level for this area (DPE 2022). Population Projections published by DPE (2019) suggest that the population of the regional area is estimated to increase by 1,700 people from 40,050 in 2016 to 41,750 in 2041, representing a total increase of 9.4% and an average annual increase of less than 0.1%.

Within the regional area, population Projections for the LGAs indicate that the:

- population of Singleton LGA is estimated to decrease by 500 people from 23,600 in 2016 to 23,400 in 2041, representing a total decrease of 0.8% and an average annual decline of 0.03%: and
- population of Muswellbrook LGA is estimated to increase by 1,900 people from 16,450 in 2016 to 18,350 in 2041, representing a total increase of 10.3% and an average annual increase of 0.44%.

Projected annual average population growth rates in the LGAs of Singleton and Muswellbrook are well below the projected annual average population growth rate for NSW (1.26%).

In the local area, 52.5% of the population are persons aged 25–64 years, with the highest age category being persons aged 25–34 years accounting for 14.7% of the population. These trends are generally comparable to age demographics across the regional area, area of reference and NSW. Age demographic trends are also reflected in the median ages across the local area and regional area: 35 years in Jerrys Plains and Long Point, 37 years in Maison Dieu and Camberwell, 34 years in Muswellbrook, and 35 in Singleton. In the regional area, Singleton LGA has a median age of 36 and Muswellbrook is 35. Across the area of reference, the median age is 39.

4.2 Educational attainment and qualifications

Educational attainment (ie the highest level of schooling completed) in the local area, regional area and the area of reference experience lower levels of educational attainment compared to NSW. In the local area, 37.5% of people completed their schooling in Year 12 and 37.6% completed schooling in Year 10. The proportion of Year 12 completion is similar across the regional area (37.1%); however, lower than the area of reference (37.1%) and NSW (59.1%). The local area's proportion of people completing their schooling in Year 10 is comparable across the regional area (38.4%) and area of reference (34.7%) however significantly higher than NSW (23.4%). In general, people who have completed Year 12 are more likely to continue with further education or training and have a more successful transition into the workforce (ABS 2016).

Non-school qualifications in the local area, regional area and area of reference are lower than NSW for all types of qualifications, except diplomas and certificates. Certificates comprise the largest proportion of non-school qualifications in the SIA study area, with 51.3% holding certificates in the local area, 50.0% in the regional area, and 42.8% in the area of reference. These rates are markedly higher than NSW where 29.7% of people hold certificate qualifications. This reflects a combination of factors including limited access to further education institutions and the dominant regional employment sectors (ie agriculture, mining and health care and social assistance) which in turn inform the dominant occupation types (ie technicians and trades workers and machinery operators and drivers). These occupations typically do not require tertiary level education. Bachelor's degrees are less common in the SIA study area, with 13.1% of people being qualified at this level in the local area, 12.8% in the regional area and 17.1% in the area of reference. This is lower compared to rates of people attaining Bachelor degrees across NSW which stands at 26.3%.

4.3 Labour market and income

4.3.1 Labour force

In 2016 the estimated labour force in the local area was 22,480 people. This equates to 73.5% of the estimated regional labour force which has an approximate total of 30,585. Majority of workers in the local area reside in Singleton and Muswellbrook, which have respective labour forces of 12,640 and 9,305. Across the local area, labour force participation rates range from 49.2%–67.2%, with Camberwell demonstrating the lowest and Jerry's Plains demonstrating the highest.

4.3.2 Unemployment

Overall, the aggregate unemployment rate for the local area was 4.9% in 2021 however, there is variance across the different suburbs. Muswellbrook and Camberwell had unemployment rates of 6.0% and 11.4% respectively, which are higher than the unemployment rate of NSW (4.9%). However, in Jerrys Plains the unemployment rate was 3.6%, 3.4% in Maison Dieu, 0.0% in Long Point and 4.2% in Singleton which are all lower compared to NSW.

In the regional area, Muswellbrook LGA (5.1%) had a higher unemployment rate than NSW. In contrast the Singleton LGA (3.7%) had an unemployment rate lower than NSW.

In 2021, the local area had a youth unemployment rate¹ of 8.9% which was only slightly lower than the regional area (8.6%), and slightly higher in the area of reference (9.3%) and NSW (9.8%). In the local area, Muswellbrook demonstrated a rate of 10.6% of youth unemployment which is considerably higher than Singleton, which had a youth unemployment rate of 8.3%, and the rest of the local area suburbs which had no youth unemployment.

¹ The youth unemployment rate is a measure of the number of unemployed youth (persons aged 15 to 24) expressed as a proportion of the youth labour force (the total number of employed and unemployed youth).

ABS labour force data (ABS 2022) for the Hunter Valley excluding Newcastle region (in which the local area and regional area is located) shows a June 2022 youth unemployment rate of 9.9%, compared to the March rate of 11.2%. This suggests the current youth unemployment rate in the local and regional area is likely to be lower than the reported rates in the 2016 ABS Census.

Current unemployment in the regional area can be further analysed with reference to Workforce caseload data from the Australian Government (2022). Workforce is the Australian Government's employment service. Caseload data by Workforce service provider is available for the LGAs of the local area (Table 4.2). There are four primary providers of Workforce in these LGAs (ie Workskill, AMP employment services, JobLink Plus Ltd, and the salvation army). In June 2022 there were 1,586 people registered with Workforce providers in the local area. The majority, 53.1% (842 people) of the caseload were females aged 15 years and older. Approximately 28.4% (451 people) of the caseload were mature aged people (ie people aged 50 years or older) and 24.1% (383 people) were Indigenous people aged 15 years and older. Table 4.3 shows Workforce caseload data by provider for the local area.

In contrast, ABS labour force data (ABS 2022) for the Hunter Valley excluding Newcastle region (in which the local area and regional area is located) shows in July 2022 there was a total of 23,525 people registered with workforce providers with 51.3% of the caseload were females aged 15 years and older (12,078 people). Approximately 30.9% (7,279 people) of the caseload were mature aged people (ie people aged 50 years or older), 3,784 (16.1%) were young people (youth aged 15-24 years old) and 15.5% (3,657 people) were Indigenous people aged 15 years and older.

Table 4.2 Jobactive caseload data by provider and site – June 2022

Provider	Total jobactive caseload (15+)	Female (15+)	Youth (15–24)	Mature age (50+)	Indigenous (15+)	PWD (15+)	Refugee
Workskill Australia							
Singleton	204	112	39	68	42	67	0
Muswellbrook	252	118	58	62	72	95	0
AMP employment services							
Singleton	296	152	56	94	49	61	0
JobLink Plus Ltd							
Singleton	173	101	21	50	43	61	0
Muswellbrook	356	190	64	90	109	142	0
The salvation army							
Singleton	87	56	12	27	14	26	0
Muswellbrook	218	113	36	60	54	78	0

Source: Australian Government (2022)

Notes: PWD – People with Disability

A transition to work employment service (a program specific for participants aged between 15 and 24 years) is offered by Workskill Australia in Singleton and Muswellbrook. In June 2022 there were 55 people registered with the program including 30 females aged 15 years and a total of <10 people who identified as Indigenous. Table 4.3 shows caseload data for the transition to work program in the local area.

Table 4.3 **Transition to work caseload by provider and site – June 2022**

Provider	Total jobactive caseload (15+)	Female (15+)	Indigenous (15+)	PWD (15+)	Refugee
Workskill Australia					
Singleton	25	16	<10	0	0
Muswellbrook	30	14	n.p.	<10	0

Source: Australian Government (2022)

Notes: Transition to Work is an Employment Services program for participants aged between 15 and 24 years old.

4.3.3 Industry of employment

In 2016 the mining industry sector had the largest employment share in the local area (22.7%), followed by the retail trade industry sector (9.1%) and the health care and social assistance industry sector (8.7%). In comparison the industry sectors with the largest employment share in the regional area in 2016 were mining (22.8%) construction (8.8%) and retail trade (7.9%). Within the area of reference the largest employment share was in the public administration and safety industry (13.4%) followed by mining (12.1%) which demonstrates a strong presence of mining within the study area.

More recent industry employment data is available from the NSC (2022) for the Hunter employment region. In February 2022, in the Hunter employment region the health care and social assistance has the largest share of employment (16.7%), followed by retail sector (11.6%), the education and training (9%), construction (8%), and accommodation and food services (7.3%). In the five years to February 2022 the following industry sectors experienced considerable employment growth: health care and social assistance, retail trade, and the education and training sector (NCS 2022). A number of industry sectors experienced workforce contraction during the same period including mining (-9.1%), information media and telecommunications (-54%), agriculture, forestry and fishing (-41.1%), construction (-11%), administrative and support services (-15.9%) and arts and recreation services (24.3%) sectors.

The top three industries of employment for youth (aged 15–24) in the Hunter employment region in February 2022 were: accommodation and food services (25.7%), retail trade (20.1%) and construction (9.2%) (NSC 2022). The top three industries of employment for mature age persons (aged 55+) were health care and social assistance (18.9%), education and training (10.9%), retail trade (8.1%), and construction (7.9%).

4.3.4 Occupation

In the local area the top three occupations in 2016 were:

- technicians and trades workers (18.7%);
- machinery operators and drivers (18.0%); and
- community and personal service workers (11.6%).

Largely reflecting the local area, the regional area's most dominant occupations are also technicians and trades workers and machinery operators and drivers, which respectively hold 18.6% and 17.5% of employment in the regional area. These top occupations are consistent with the dominant industry of employment in the local area which in 2016 was the mining industry sector. These occupations generally require TAFE education or certificate level qualifications, which comprise the largest proportion of qualifications in the local and regional areas, with almost half of technicians and trades workers holding a Certificate III or higher vocational qualification (NSC 2021). This demonstrates a diverse range of occupations that could benefit from the Project, either through employment or procurement.

In the area of reference, professionals (18.1%) constitute the occupation with the largest employment share, followed by technicians and trades workers (16.3%). Professionals often hold a Bachelor degree or higher level qualifications which indicate that a more skilled workforce could be sourced from the area of reference if unable to be sourced locally or regionally.

4.3.5 Businesses by industry

In the regional area, the top three industries of registered businesses were within the agriculture, forestry and fishing industry (27.5%) followed by construction (13.2%) and rental, hiring and real estate services (8.5%). This demonstrates a strong agriculture presence within the regional area. While the mining industry still remains as the dominant industry within the local and regional area, the industry comprises of only 0.6% of registered businesses.

In 2021, there was a total of 3,131 registered businesses were identified in the regional area, with majority of the registered businesses are located in the Singleton LGA (2,086 businesses), followed by Muswellbrook LGA (1,044 business) (see Table 4.4). Of the 3,071 registered businesses identified in the regional area the majority of businesses were non-employing (58.5%), followed by businesses that employ 1–19 employees 3.0%). The most common turnover of businesses in the regional area is the range of zero to less than \$50k (32.2%), followed by \$50k to less than \$200k (30.6%), with only 6.9% of business having a turnover range of \$2 million or more. The data reflects there is more registered businesses in the region that is comprised of sole traders, with a small proportion of businesses turning over more than \$2 million or more, this indicates that mining represents a small proportion of registered businesses in the regional area. However, the mining industry represents the most significant industry of employment (see Section 4.3.3) and the largest output generating sector, contributing approximately 56.6% of total annual economic output in Muswellbrook LGA and 70.7% of total annual economic output in Singleton (REMPAN Economy 2021).

Table 4.4 Percentage of registered businesses by industry and location, 2021

Business Industry	Singleton LGA	Muswellbrook LGA	Total number	Regional area
Agriculture, forestry and fishing	565	296	861	27.5%
Mining	16	3	19	0.6%
Manufacturing	93	35	128	4.1%
Electricity, gas, water and waste services	4	3	7	0.2%
Construction	295	118	413	13.2%
Wholesale trade	50	22	72	2.3%
Retail trade	102	52	154	4.9%
Accommodation and food services	94	57	151	4.8%

Table 4.4 **Percentage of registered businesses by industry and location, 2021**

Business Industry	Singleton LGA	Muswellbrook LGA	Total number	Regional area
Transport, postal and warehousing	110	47	157	5.0%
Information media and telecommunications	11	4	15	0.5%
Financial and insurance services	42	22	64	2.0%
Rental, hiring and real estate services	173	94	267	8.5%
Professional, scientific and technical services	157	73	230	7.3%
Administrative and support services	77	63	140	4.5%
Public administration and safety	5	6	11	0.4%
Education and training	36	10	46	1.5%
Health Care and Social Assistance	65	47	112	3.6%
Arts and recreation services	21	19	40	1.3%
Other services	171	88	259	8.3%
Currently unknown	3	3	6	0.2%
Total number	2,086	1,044	3,130	100.0%

4.3.6 Income

Individual income data is one of many indicators of socio-economic status and is linked to factors such as employment status, age (eg students and pensioners often receive a lower income), qualifications and type of employment (id consulting 2021c). There is significant variation in individual and household median weekly incomes across the local area and regional area.

For the local area, individual median weekly incomes range between \$537–\$763. Jerrys Plains (\$763), Long Point (\$675) and Singleton (\$690) hold individual median weekly incomes higher than NSW which stands as \$664. The rest of the suburbs in the local area fall below this benchmark. Household median weekly incomes in the local area range between \$1,331–\$2,249. Only Camberwell (\$1,375) and Muswellbrook (\$1,331) fall below the NSW's median of \$1,486.

Singleton LGA and Muswellbrook LGA demonstrate comparable median incomes to NSW. Singleton LGA is reported as having an individual median income of \$684 and a household median income of \$1,682. Muswellbrook LGA is reported as having an individual median income of \$640 and a household median income of \$1,346. The slightly lower income levels demonstrated by Muswellbrook LGA is indicative of the significantly higher levels of disadvantage evident in the SEIFA indices (see Section 4.5).

4.3.7 Social Infrastructure

A TRC analysis considers the potential impacts that result from a mine closure which can include impacts on the viability or sustainability of social infrastructure (Coakes & Lamb 2016). Therefore, this section presents the available social infrastructure and services, specifically health, education and community services, within each resource centre.

There is a wide variety of health, education and community services available across all resource centres. When comparing all available health services within each resource centre there is a higher concentration of health services within Maitland SSC and Cessnock SSC. In terms of education services, each resource centre has at least one childcare service, primary school, high school or combined school and tertiary education institute, with Cessnock providing the most education services when compared to all resource centres. Availability of community services such as sport and recreation facilities and support services varied amongst the resource centres with Maitland SSC providing the most community services.

4.4 Housing and short-term accommodation

4.4.1 Rental market conditions

Access to safe, adequate and affordable housing is a critical pillar in enabling the physical, mental and social health of communities. While housing is generally provided in the private market, a distinct lack of affordable housing options for different income brackets and diverse community members can result in more people needing housing assistance (Infrastructure Australia 2019).

i Rent repayments

Within the local area, the median rental repayments is approximately \$340 per week, the regional area is \$319 per week and the area of reference is \$380 per week, this all falls under the NSW median of \$420.

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 higher-paying jobs may be unable to afford local rents which can be pushed up by higher salaries.

Analysis of rental stress in the local area shows that a higher proportion of households in Muswellbrook (15.0%) and Singleton (9.5%) experience rental stress when compared to Maison Dieu (6.2%) and Jerrys Plains (4.8%). However, only Muswellbrook has greater levels of rental stress than what is comparatively demonstrated across NSW where 12.9% of households have rent payments greater or equal to 30% of their income. Long Point and Camberwell experience no rental stress. Muswellbrook LGA and Singleton LGA experience 13.0% and 7.6% of households in rental stress respectively (ABS 2016).

ii Rental property availability

A snapshot of housing availability in the local area can be derived from analysis of data from the REA Group (2022). As at 23 August 2022, there are no properties in for rent in Jerry Plains (2330), Camberwell (2330) and Maison Dieu (2330). There were 50 properties for rent in regional area, with most of these properties were located within the suburb Muswellbrook and surrounds (32 properties for rent). Rental payments within Singleton range between \$230 and \$740 per week, with the lowest rental payments being in Muswellbrook at \$190 per week.

). In the area of reference there were 837 properties for rental in regional area (REA Group 2022). Most of these properties were located within the suburbs of Maitland (100 properties for rent), Cessnock (31 properties for rent), Newcastle and surrounds (175 properties for rent). Within the Hunter region rental payments are as low as \$110 per week and as high as \$1,800 (see Table 4.5).

Table 4.5 Private rental property availability 23 August 2022

Location	Residential property type	No. of residential properties available	Highest rent (\$p/w)	Lowest rent (\$p/w)
Singleton (PC 2330) and surrounding areas	All properties	28	740	230
	Furnished properties ¹	16	600	360
Muswellbrook (PC 2333) and surrounding areas	All properties	32	660	190
	Furnished properties ¹	0	0	0
Hunter region, NSW (area of reference)	All properties	837	1,800	100
	Furnished properties ¹	136	900	110
Newcastle (PC 2300) and surrounding areas (area of reference)	All properties	175	1200	180
	Furnished properties ¹	27	660	250

Source: REA Group 2022

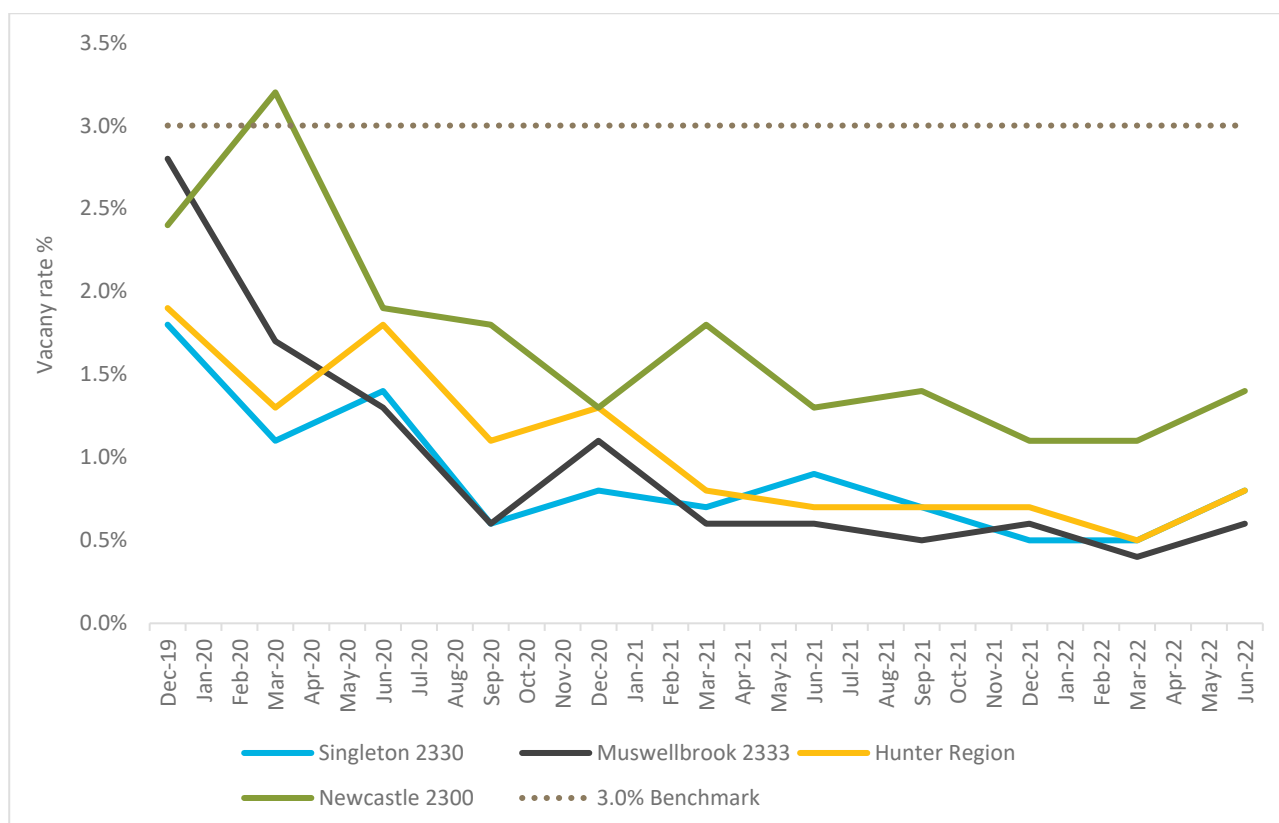
Notes: 1. Subset of all properties.

iii Residential vacancy rates

The residential vacancy rate trends for postcode 2330 Singleton, 2333 Muswellbrook, Hunter region, NSW (area of reference) and postcode 2300 Newcastle is presented in Figure 4.1 for the period March 2019 to June 2022. The vacancy rate in the local area during this period was consistently below the 3.0% benchmark, indicating a tight rental market with an undersupply of rental housing during that time. Whilst the data shows considerable fluctuation in rental vacancy rates across the two communities in the regional area and two regionals in the regional area, overall rental vacancy rates have steadily declined.

In June 2022 there were 18 rental vacancies in Muswellbrook, 23 in Singleton, 48 in Newcastle and 12,417 in the Hunter region. The findings of SIA interviews conducted with real estate agents in the local area confirmed the presence of a tight housing market and limited rental availability. SIA interview outcomes suggest the following factors are influencing current housing market conditions in Muswellbrook and Singleton and to a lesser extent Hunter region:

- reduction in available rental stock as properties are purchased as holiday homes or transferred into the short-term stay market (ie Airbnb);
- demand generated by major Projects occurring in or nearby the local area (ie See section 6.10); and
- an increase in-migration due to the COVID-19 pandemic and the corresponding increase in the attractiveness of regional NSW communities as permanent resident locations.



Source: sqmresearch.com.au

Figure 4.1 Rental vacancy rates

4.4.2 Home tenure

Within the local area, 37.2% of households are renters which stands to be the predominant form of home tenure. This is followed closely by 34.1% of households being owned with a mortgage and only 25.9% owning their homes outright. Comparatively, in the regional area, homeownership with a mortgage is the most common form of tenure with 30.6% falling within this category. However, there is some variance between Singleton LGA and Muswellbrook LGA in which the former has a greater level of homeownership (with and without a mortgage) whereas the latter has a greater level of renting. Greater rental rates in Muswellbrook may be explained by the higher levels of disadvantage demonstrated in the SEIFA analysis (see Section 4.5).

i Mortgage repayment

Mortgage repayments within the local area ranges between \$1,668 and \$2,600, with the lowest repayment being in Muswellbrook and the highest repayment being in Maison Dieu. Muswellbrook (\$1,668), Jerrys Plains (\$1,766) and Singleton (\$1,842) all hold median mortgage repayments lower than the NSW median (\$1,986). Singleton LGA has a median mortgage repayment of \$1,950 and Muswellbrook stands at \$1,733, with both LGA falling below the NSW median.

Across the local and regional area, mortgage stress is most greatly experienced in Maison Dieu and Jerry Plains with 18.8% and 8.6% of households experiencing mortgage stress. The high levels of mortgage stress in Maison Dieu is also supported by the substantially higher median mortgage repayment of \$2,600. In Singleton LGA, 6.8% of households experience mortgage stress, with Muswellbrook LGA demonstrating only 4.6%. Rates of mortgage stress in the regional area fall below the proportion of households across NSW experiencing mortgage stress.

4.4.3 Short term accommodation

The term short-term accommodation refers to accommodation options that are typically provided to visitors or tenants for a short period of time; for example, motels, hotels, serviced apartments, bed and breakfast, self-contained homes, caravan and camping parks. The length of tenancy in these forms of accommodation can often extend to lengthy stays, depending on accommodation availability, price and personal circumstances.

Short-term accommodation providers in the local and regional area service a number of different industry sectors while the capacity is largely taken up by the mining sector and places a strong focus in Singleton and Muswellbrook LGA. The area of reference is known for hosting large events, and this might place significant demand on short-term accommodation within the hunter region. Both the number of events and patronage is increasing evident in an increase in visitor numbers to the Hunter region.

Within the local area short-term accommodation is concentrated in the larger communities of Singleton and Muswellbrook and consists of a combination of hotels, motels, bed and breakfast accommodation, vineyard and country stays, cottages, holiday home rentals (AirBnb) and camping and caravan parks. The most abundant form of short-term accommodation in the local, regional area and area of reference is private holiday rentals through platforms such as Airbnb and booking.com.

In 2016, according to destination NSW LGA profiles there is no data available for the number of rooms of short stay available Singleton LGA, however data collected from destination Singleton LGA for Singleton Regional Council for the LGA in 2011 estimated 330 rooms available, with an average occupancy rate of 65.4%. In 2016 within the Muswellbrook Shire Council there are an estimated 227, with an average occupancy rate of over 40.6%. Other data available shows within the upper hunter shire are an estimated 164 rooms average with an average occupancy rate of 51.9%, Cessnock LGA shows an estimated 1,326 rooms with an average occupancy rate of 55.6% and Maitland LGA demonstrates an estimated 174 rooms, and average occupancy rate of 58.2%. In more recent years in 2020, within the hunter region the estimates show there are 7,010 rooms of short-stay accommodation, with an average occupancy rate of 56.1%.

Analysis of available on-line short-term accommodation data suggests that in 2022 there are more than 326 active Airbnb rentals in the regional area including an estimated 32 properties in Muswellbrook LGA and 294 properties in Singleton LGA. There are an estimated 1,147 active Airbnb rentals within the area of reference with 1,025 active properties within Cessnock LGA and 122 active properties in Maitland LGA (Airdna 2022). Additionally, during SIA field study stakeholders identified the trend of properties being purchased and transferred out of the stock of private rental or owner-occupied housing and into the short-term accommodation or holiday rental market.

4.5 Socio-economic advantage and disadvantage

The level of disadvantage or advantage in the population is indicated in the Socio-Economic Indexes for Areas (SEIFA) which focuses on low-income earners, relatively lower education attainment, high unemployment and dwellings without motor vehicles. SEIFA is a suite of four summary measures that were created from Census data, including:

- the Index of Relative Socio-Economic Disadvantage (IRSD);
- the Index of Relative Socio-Economic Advantage and Disadvantage (IRSAD);
- the Index of Education and Occupation (IEO); and
- the Index of Economic Resources (IER).

Each index is a summary of a different subset of Census variables and focuses on a different aspect of socio-economic advantage and disadvantage. Low rankings are deemed most disadvantaged and high rankings least disadvantaged within a decile ranking system where the lowest 10% of areas within Australia are given a decile number of 1 and the highest 10% of areas are given a decile number of 10. For the SEIFA rankings across the local area and regional area, see Figure 4.3.

According to the 2016 SEIFA, there is a large degree of variation within the local area in terms of disadvantage. Maison Dieu is in the 7th or higher decile for all indexes, with IER in the highest percentile of 10. Indexes for Jerrys Plains, Long Point, Singleton and Muswellbrook fall under the 6th percentile or lower. Camberwell is in the bottom 10% of communities in Australia regarding disadvantage, with IRSD, IRSAD, IER and IEO all falling in the lowest percentile of 1. Similarly, Muswellbrook SCC is in the bottom 20% of communities in Australia with all indexes falling in the lowest two percentiles. These levels of disadvantage are also reflected across the broader Muswellbrook LGA (ABS 2016b).

These combination of high and low disadvantage across the local and regional area suggests a distribution of households paying low rent in the area, as well as paying high rent or owning property. The IEO index was significantly lower than other indexes in all SSCs and LGAs, excluding Camberwell where all indexes were in the same lowest percentile. The low IEO index is likely attributed to the local area having fewer qualifications, as all categories of persons with a non-school qualification were below the state averages, excluding certificate attainment.

Within the local and regional areas there is a significantly smaller proportion of persons who have completed Year 12 or equivalent in comparison to NSW, with a higher percentage of the local and regional area population completing Year 10 or equivalent. The predominant non-school qualification within the local area is a certificate qualification, followed by a bachelor's degree. The proportion of persons within a bachelor's degree is considerably lower than NSW which could be reflexive of the lack of tertiary education services available, educational outcomes and socio-economic disadvantage in the local area.

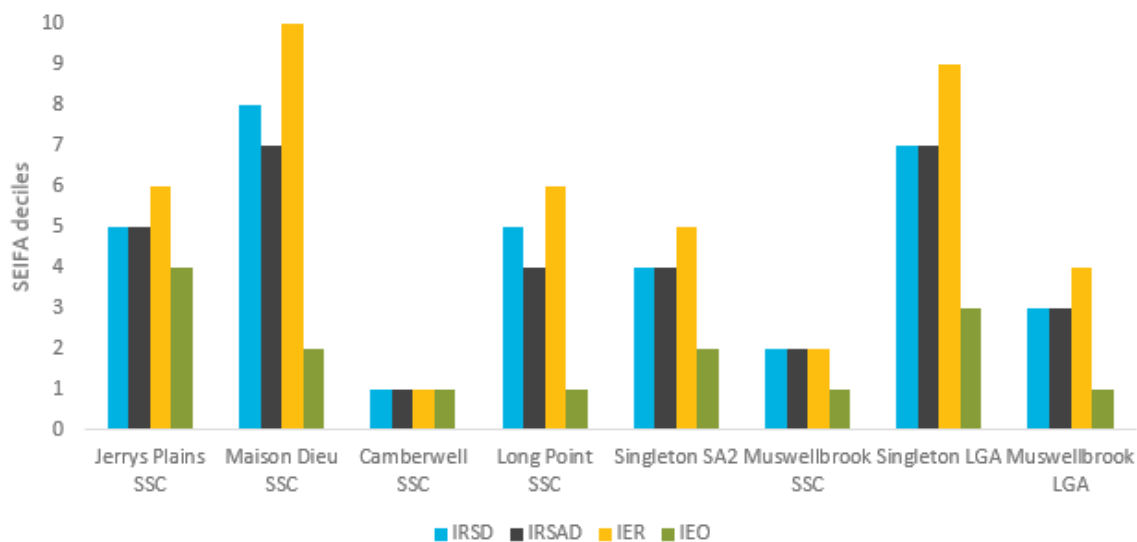


Figure 4.2 SEIFA deciles in the local and regional area, 2016

4.5.1 Disability

Disability can be understood as people who need assistance in their day to day lives with any or all of the following core activities: self-care, mobility or communication because of a disability, long-term health condition (lasting six months or more) or old age. In the local area, 5.0% of people have a need for assistance in one or more of the three core activities of self-care, mobility and communication due to a long-term health condition (lasting 6 months or longer), a disability (lasting 6 months or longer), or old age. Camberwell (9.6%) was identified as requiring more assistance compared to NSW (5.4%), while the population within the regional area has a lower need for assistance overall (4.7%).

The similar need for assistance in the local area and regional area may reflect access to and availability of social services, in particular disability services, in the regional area. Baxter, Hayes and Gray (2011), of the Australian Institute of Family Studies, found that people living in major cities and regional centres are less likely to have problems accessing services such as doctors and disability services, while those in outer regional or remote areas have the most trouble accessing these services. This may contribute to people migrating to regional centres, such as Singleton within the regional area, and larger cities where those services are more readily available.

Table 4.6 Core activity need for assistance, 2016

Location	Has need for assistance	Does not have need for assistance
Jerrys Plains SSC	3.4%	85.7%
Maison Dieu SSC	2.8%	77.9%
Camberwell SSC	9.6%	79.5%
Long Point SSC	0.0%	90.3%
Singleton SA2	5.0%	88.5%
Muswellbrook SSC	4.9%	86.3%
Local area	5.0%	87.5%
Singleton LGA	4.5%	87.5%
Muswellbrook LGA	4.9%	86.3%
Regional area	4.7%	87.0%
Area of reference	6.0%	86.6%
NSW	5.4%	87.7%

4.5.2 Homelessness

As explained by the Australian Human Rights Commission (AHRC) (n.d.):

The causes of homelessness are numerous and complex. Homelessness can be caused by poverty, unemployment or by a shortage of affordable housing, or it can be triggered by family breakdown, mental illness, sexual assault, addiction, financial difficulty, gambling or social isolation. Domestic violence is the single biggest cause of homelessness in Australia.

Homelessness can lead to health problems including poor nutrition, depression, substance abuse, poor dental health, and mental health conditions (AHRC 2021). For homeless persons, hardships with finances, transport, identification, Medicare, and difficulty with appointment maintenance/treatment plans make accessing health care services more difficult than the average person (AHRC 2021). As such, homeless persons are at greater risk of being negatively affected by potential impacts on livelihoods and health and wellbeing.

Rates of homeless are not available for the local area but are available for the regional area. Homelessness is measured at a rate per 10,000 persons. In 2016 rates of homelessness across the LGAs of the regional area and area of reference were lower than rates of homelessness across NSW (50.4 per 10,000), however the rate of homelessness in the Muswellbrook LGA (29.2 per 10,000) was markedly higher than regional area (21.5 per 10,000) and Singleton LGA (16.1 per 10,000) (ABS 2016c).

4.5.3 Aboriginal and/or Torres Strait Islander Population

At the time of the 2016 Census, 7.5% of the total population within the local area, 6.8% of the population within the regional area and 5.2% of the population within the area of reference identified as Aboriginal and/or Torres Strait Islander compared to 3% in NSW. The largest proportion of total population is in Camberwell SSC (20.5%) followed by Muswellbrook SSC (9.3%). The largest demographic in the Aboriginal and/or Torres Strait Islander community in the regional area is children (aged 5–14 years). Compared to the total population of the regional area and NSW, there is a much smaller proportion of persons aged 65 years and older who identify as Aboriginal and/or Torres Strait Islander. The Aboriginal population's smaller proportion of the population (both males and females) living beyond 65 years aligns with the lower life expectancy among Aboriginal Australians nationally that is particularly acute in Aboriginal males (AIHW 2020), with much of this gap is explained by the relationships between increased socioeconomic disadvantage, worsened mental health outcomes, and related health risk behaviours, including greater proportions of smoking and alcohol use (AHMAC 2017).

4.5.4 Effects of the COVID-19 pandemic

This SIA was conducted during the COVID-19 pandemic. Population data and forecasts presented in this social baseline were developed prior to the onset of the pandemic and do not consider the potential impacts to assumptions stemming from COVID-19. However, they do provide an insight into the baseline condition of the regional area without this external shock.

The Australian Government's Centre for Population (2020) estimated a net shift in migration away from capital cities in favour of regional areas from 2020. In facilitating increased migration from urban centres to more regional areas of Australia, COVID-19 has increased the number of people at risk of housing instability and homeless for persons experiencing financial hardship (Anglicare 2021). This has contributed to increased rents and lower rental availability (particularly affordable housing) in regional areas of Australia, including the regional area.

In addition, COVID-19 has increased the likelihood of housing relocation among vulnerable households due to instances of low income, unemployment or insecure work and rental/mortgage stress (id consulting 2020). These changes could impact upon household formations and migrations in a multitude of ways, such as younger people returning to live with their parents, elderly people moving to live with their children for care and the creation of larger households to share the burden of housing costs (id consulting 2020).

Evidence indicates that COVID-19 generated similar impacts to the Global Financial Crisis in Australia, whereby apprehension associated with a global issue caused elevated demand for housing which was further contributed to by low interest rates and resulted in upward pressure on housing prices (Verdouw et al 2021). Rising prices within the private housing market generally work to further exclude low income and vulnerable people from the property market, leading to housing stress and insecurity (Verdouw et al 2021). The impacts of COVID-19 on the labour and housing market are ongoing and as such, there is difficulty in measuring the full extent of those impacts currently in and into the future.

4.6 Social Infrastructure and services

There are two key communities in the local area: Singleton and Muswellbrook. Each community has a range of services including general practitioner (GP) services, hospital or multi-purpose service (MPS), preschool, primary and secondary education facilities, emergency services (ie rural fire brigade, police station), employment services, youth and Aboriginal and Torres Strait Islander services. Additional services are accessible in the regional area. Many of the services are multi-service providers and do not solely provide for one service sector.

TAFE is the only provider of post-secondary school education and training in the local area (TAFE 2022). The University established a research and education facility called Upper Hunter, located within the Tertiary Education Centre in what is known as the Hunter Region Innovation Precinct in Muswellbrook (University of Newcastle 2022). The nearest university facility is located in Newcastle (ie Newcastle University). The availability of social infrastructure, services, and facilities in the local and regional area is presented in Table 4.7.

Table 4.7 Social infrastructure, services, and facilities in the local and regional area, 2021

	Local area	Regional area
Hospital services	✓	✓
GP services	✓	✓
Childcare services	✓	✓
Primary schools	✓	✓
Secondary schools	✓	✓
Tertiary institutions	✓	✓
Emergency services	✓	✓
Aboriginal services	✓	✓
Child and family services	✓	✓
Youth services	✓	✓
Housing and homelessness services	✓	✓
Employment services	✓	✓
Disability services	✓	✓
Aged care services	✓	✓
Women's services	✓	✓

Source: ACECQA 2020; myschool.edu.au; AIHW 2020, Hunter New England Health 2020; National Health Services Directory 2020; askizzy.org.au; police.nsw.gov.au; ambulance.nsw.gov.au; fire.nsw.gov.au; ses.nsw.gov.au

4.6.1 Emergency services

Emergency services within the local area are predominantly located within Singleton SSC and Muswellbrook SSC. A police station, ambulance station, fire and rescue station and an SES unit have been identified within Singleton SSC and Muswellbrook SSC as well as Denman SSC which is located outside of the local area and within the Muswellbrook LGA. Outside of Singleton SSC and Muswellbrook SSC, a police station is located in Jerrys Plains SSC. Availability of emergency services in selected suburbs in the local and regional areas are summarised in Table 4.4.

There are three police stations, two ambulance stations, and two fire and rescue stations in the local area. The local area also has a local State Emergency Service (SES) unit and is home to the SES Hunter – Northern Zone Headquarters. The Project is in the Hunter Valley region of the NSW Rural Fire Service (RFS). Within the local area RFS brigades are located in Singleton, Muswellbrook, Jerry Plains. The town of Denman which is located outside of the local area and within the Muswellbrook LGA also has a police station, ambulance, fire and rescue and SES unit.

4.6.2 Health services

The local area is located within the Hunter New England Local Health District (LHD). The majority of health services within the local area are located within the major centres of Singleton and Muswellbrook, with the remainder of services located in the regional area within town of Denman which is located outside of the local area and within the Muswellbrook LGA.

There are three hospitals located within the local area and regional area. Singleton Hospital and Muswellbrook Hospital are both located within the local area, whilst the Denman Multi-Purpose service is located within the regional area.

Singleton Hospital holds 55 beds and provides emergency services and other services including surgical, obstetrics, palliative care, acute and chronic medicine, and renal dialysis. Outreach services available are cardiology, paediatric, pain management, gynaecology, and allied health services. Nursing Clinics are also provided. No mental health services are provided. Patients will be referred to Maitland or Newcastle Hospitals for treatment if required. The hospital also provides cancer surgery, with chemotherapy and radiation therapy provided at the Calvary Mater Newcastle.

Muswellbrook District Hospital is a 46 bed facility with the following services: 24 hour emergency department, acute care, allied health services, chemotherapy, community health centre, gastroenterology, maternity services, ophthalmology, paediatric, renal dialysis, and surgical.

Denman Multi-Purpose Service with 19 beds, 13 Aged care beds, 4 acute patients, and emergency services. The facility also provides general medical, palliative care, oncology, neurology, and community health services and respite services. There are no mental health services available, people requiring mental health support are referred to Maitland Hospital.

In-depth interviews noted that the region has seen a greater demand for health services in the past two years, generally as a result of increase in population to Singleton and Muswellbrook, aging populations with chronic health needs, limited GPs servicing the area, greater distances to travel when needing to see specialists, lack of health services and health services being understaffed. Experienced impacts cited by real-participants in consultation included waiting weeks and sometimes months to see local doctors and specialists and the high costs of travel and accommodation costs required to attend appointments outside of the local area; there are limited GPs; lack of adequate mental health services; in addition COVID-19 has impacted on staffing levels and exacerbated already pressured and understaffed services being understaffed; increased pressures on the ambulance services where people will ring the emergency services if they are not able to get transport or people will present at the emergency department if they are not able to see their GP earlier. The changing nature of the health needs and demographics of rural residents as well as the increased demand on doctors can also have a flow on affect for hospital emergency departments in that people living in rural areas are more likely to report to visit an emergency department because a GP is not available was found in the Health outcomes and access to health and hospital services in rural, regional and remote New South Wales report in May 2022. The report also found that healthcare system in rural, regional and remote areas, which it found to be “in crisis”, leading to “significantly poorer health outcomes” when compared to the city (Parliament 2022).

In the local and regional area there are 16 general practitioner (GP) services which primarily offer standard GP services. The MPS located in Denman also offer a range of health-related services to the local area and broader regional area. Other health related services available to the community are related to community health, Indigenous health, mental health, maternal, child and family health, aged care and special services.

4.7 Road infrastructure and transport

There are limited forms of public transport (train, bus, ferry, tram) within the local area. The main mode of travel to work is by car (as driver, as passenger) with 77.9% of the local population and 74.3% of the regional population traveling by car. The main road network in the local area consists of two main arterial roads, Jerrys Plains Road/Golden Highway and New England Highway. Lemington Road is also a key road in the local area, connecting the two main arterial roads between Jerrys Plains and Camberwell. New England Highway provides access to the local and regional areas from Newcastle in the south and Tamworth to the north and Golden Highway is the main access road west to Dubbo. Public transport, such as train, bus and rideshare services are only available within Muswellbrook and Singleton, with trains running from Sydney daily and bus routes operating 5 to 6 days a week. Bus routes and train services are limited to Muswellbrook and Singleton, with no public transport options available within Jerrys Plains, Maison Dieu, Camberwell and Long Point

4.7.1 Road incidents

The Project is located north of Singleton between the Golden Highway (B84), which runs along the southern boundary of the HVO Complex and the New England Highway (A15) which runs along the northern boundary of the HVO Complex. Road incidents (crash) trend data is at the LGA level for Singleton LGA and Muswellbrook LGA.

Between 2014 and 2020 the overall number of fatal injuries in Singleton LGA fluctuated (ie from 4 fatalities in 2014 to 8 fatalities in 2015 and 2017 to 7 fatalities in 2018, declining to 2 fatalities in 2020) compared with number of fatal injuries in Muswellbrook LGA which was 0 fatalities in 2014 to 2 fatalities in 2020. The number of non-casualty road incidents in the LGAs declined (ie from 57 incidents to 20 in Singleton LGA incidents, and from 36 incidents to 17 incidents in Muswellbrook LGA).

The number of road incidents in Singleton LGA causing injury decreased during this period from 79 incidents in 2014 to 63 incidents in 2020 however this remains significantly higher in comparison, to the number of road incidents in the Muswellbrook LGA from 37 incidents in 2014 to 25 incidents in 2020.

4.8 Community health and well-being

The local area is located within the New England Local Health District (LHD), with health data only available for the Singleton and Muswellbrook LGAs. The New England LHD has a higher percentage of persons who are obese, smoke daily consume alcohol at high-level risks (Ministry of Health 2020). Additionally, 17.7% of persons in Muswellbrook LGA and 14.2% in Singleton LGA self-assess their health as fair or poor compared to 14.1% of NSW (PHIDU 2020). Rates of attributable hospitalisations for high body mass, intentional self-harm, and asthma in Singleton LGA and Muswellbrook LGA also exceeded the NSW rates. However, hospitalisation rates attributable to alcohol were lower within in the local area compared to greater NSW.

4.8.1 Asthma

Between 2002 and 2019 the proportion of adults with asthma fluctuated with people In Hunter New England LHD. Trend data shows a gradual decrease in the prevalence of asthma in both the Hunter New England LHD and slight increase in NSW, with a greater variability including peaks in of 14% between 2006–2008, 13.7% between 2010–2011 and again in 14.7% 2015–2016. Social determinants of health, described as “the circumstances in which people grow, live, work, age, and the systems put in place to deal with illness...which are shaped by political, social, and economic forces” (AIHW 2020), also indicate the health of a population. These include factors such as conditions of employment, provision of social services and support, and socio-economic position. There is a higher level of unemployment within the local area compared to NSW as well as a lower proportion of persons completing Year 12 or equivalent or a non-school qualification which suggests higher rates of socio-economic disadvantage. Data for asthma prevalence in adults is presented in Figure 4.3.

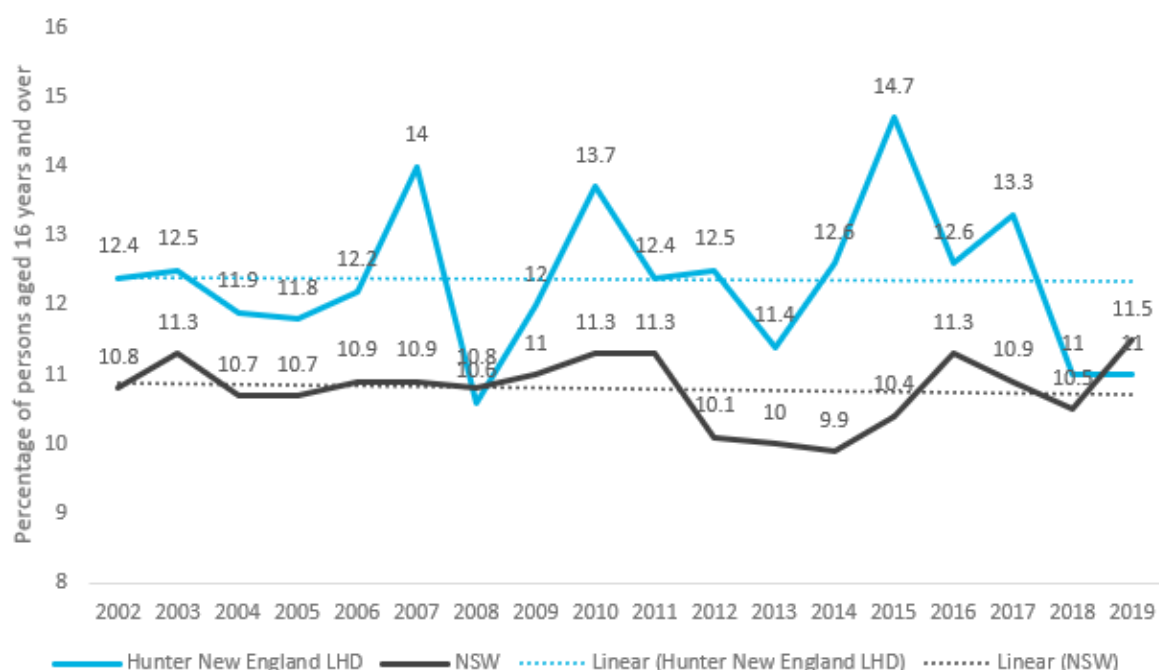


Figure 4.3 Asthma prevalence in adults (proportion of people aged 16 years and older), 2002–2019

5 Community and stakeholder engagement

This section summarises the findings from the community engagement activities undertaken in relation to the Project:

- as part of the EIS engagement; and
- as part of the data collection for the SIA.

Consultation for this assessment was carried out during the COVID-19 pandemic and conducted in accordance with applicable Australian and NSW Government health agency advice.

5.1 EIS engagement and participation

A summary of engagement activities conducted as part of the preparation of the EIS, and participation of stakeholders, is provided below in Table 5.1 and Section 5.1. Full details of community engagement activities and outcomes are described in Chapter 6 of the EIS.

Table 5.1 EIS engagement activities

Activity/engagement tools	Consultation details
Stakeholder briefings – government agencies	Briefings were undertaken by the HVO Project team (face to face, online via Microsoft Teams and teleconference) with key government officers, agencies, elected representatives and local government. These stakeholders were briefed on the Project as well as the findings of the technical studies. Key stakeholder groups consulted included NSW DPE, DPE Water, NSW Environment Protection Authority, Biodiversity and Conservation Division, Heritage NSW, NSW Resources Regulator and Mining, Energy and Geoscience, Transport for NSW, Commonwealth Department of Climate Change, Energy, the Environment and Water, Singleton Council and Muswellbrook Shire Council.
Stakeholder briefings – near neighbours and other stakeholders	HVO held Project-specific one-on-one briefings with near neighbours. All near neighbours who were identified as being potentially affected by the Project were offered a one-on-one briefing, which were held face-to-face or over the phone, depending on the preference of the landholder. HVO maintains ongoing communication with directly adjacent neighbours including residents of Jerrys Plains, Maison Dieu, Camberwell and Long Point, via regular distribution of newsletters, and community open days. Project briefings were also held with Singleton Chamber of Commerce, Hunter Valley Gliding Club, Hunter Valley Clay Shooters Club, Singleton Council and Muswellbrook Shire Council, and HVO Community Consultative Committee (CCC) members.
Aboriginal heritage stakeholder consultation and cultural values workshops	Engagement with Registered Aboriginal Parties (RAPs) was conducted as part of the preparation of the Aboriginal Cultural Heritage Assessment (ACHA). The consultation process identified 33 RAPs with potential interest in the Project. RAPs participated in the field investigations (which incorporated the disturbance area for the Project) and discussions around tangible and intangible values as part of the Aboriginal heritage stakeholder consultation process for the ACHA (refer to Chapter 14 of the EIS). Two mitigation and management workshops were held, in which 19 RAPs participated in the first, and follow up workshop where 27 RAPs participated (see Appendix M of the EIS for full details).
HVO Community Consultative Committee (CCC) Meetings	HVO Community Consultative Committee (CCC) meetings are held approximately on a quarterly basis throughout the year with an update on the HVO Project provided at each meeting since project commencement. Minutes from these meetings can be found at https://insite.hvo.com.au/document-library/ccc

Table 5.1 **EIS engagement activities**

Activity/engagement tools	Consultation details
Project website	A dedicated website for the Project was established in 2020 https://emm.mysocialpinpoint.com/hvo . This page provides Project updates, information and frequently asked questions (FAQs). The website is regularly updated to reflect latest Project information. Following the development of the updated HVO website in December 2022, the dedicated Project website and all associated material will be consolidated at www.hvo.com.au .
Community information and complaints line	All Project materials have contained the mobile phone number of the Project's Approvals Manager and the HVO Environment and Community and Manager to enable local people and stakeholders to speak with a member of the Project team. HVO provides a dedicated 24/7 Community Complaints Hotline (via free call number 1800 888 733) for community members to comment on concerns relating to its operations. All complaint details are recorded in a database and made available on HVO's website www.hvo.com.au . The 1800 number has been promoted on all community notifications and advertising.
Newspaper advertisements	HVO has placed advertisements in the Singleton Argus, Hunter Valley News and Hunter River Times and the Coalface newspapers for Project community information sessions.
Newsletters and factsheets	Project newsletters and surveys were distributed via letterbox drop to directly adjacent neighbours including residents of Jerrys Plains, Maison Dieu, Camberwell, Gouldsville and Long Point. Project newsletters provide key information on the Project and upcoming activities and was also published on the Project website – newsletters were distributed September 2020, December 2020, July 2021, December 2021, and September 2022.
Community information sessions	A total of four community open days were held: • two sessions held in November and December 2020 in Jerrys Plains and Maison Dieu respectively with seven attendees; • one community day was held in March 2022 in Jerrys Plains with nine attendees; and • one community day were held in April 2022 in Maison Dieu with eleven attendees. The community open days were advertised via newsletter updates, social media, newspaper advertisement, website updates, flyers, Project email list with an invitation sent to directly to impacted/nearby landowners and word of mouth.
Presentations and briefings	Used to keep identified stakeholders updated on specific events and activities tailored to the stakeholder group being consulted.
Project email mailing	An avenue for community members to subscribe to receive regular Project updates. Registered stakeholders were notified with upcoming engagement activities.

5.2 Key summary of EIS engagement findings

Feedback from stakeholders and the broader community during the EIS engagement phase has been varied and includes both positive and negative views on a range of topics including traffic and transport impacts, mine rehabilitation and final landform, visual amenity, noise impacts and air quality concerns, and benefits for the local economy. Full details of community engagement findings are provided in Chapter 6 of the EIS.

5.3 SIA field studies

This section provides a summary of the SIA field study activities and findings.

5.3.1 Participation

This section outlines the engagement activities undertaken specifically to inform the SIA. This consisted of:

- in-depth interviews with the near neighbours and landholders, local community members, local government key stakeholders and service providers (conducted via face-to-face, telephone and videoconference);
- a community survey (administered online);
- workforce and supplier surveys (administered online), and
- consultation with Aboriginal stakeholders (conducted face to face via workshops and telephone).

The scope of the SIA field study program is provided in Section 2.1 and the SIA field study program is provided in Table 5.2. The majority of engagement activities were conducted via telephone and videoconference and administered online.

Table 5.2 SIA field study participation

Method	Format	Time Frame	Invited/contacted	Participated
In-depth interviews	Videoconference and teleconference	25 August 2022 – 25 September 2022	• 19 community members in the local area contacted by EMM via phone and email. • 13 near neighbours contacted via Project team phone, face to face and post. • 5 local council representatives via contacted by EMM phone and email. • 47 service providers and community organisations contacted by EMM via phone and email.	• 10¹ community members in the local area • 10 near neighbours • 5 local council representatives • 27 service providers.
Supplier survey	Online survey	July 2021 – August 2021	• 798 suppliers who currently supply services to HVO.	• 125 HVO supplier businesses
Workforce continuation survey	Online survey	August 2021 – September 2021	• 1,223 HVO workforce invited to complete an online survey.	• 429 HVO workforce completed the online survey
Community survey	Online survey	July 2021 – October 2021.	• Open to the public via HVO Project website. • Advertised in the Singleton Argus, Hunter Valley News and Hunter River Times. • Emailed to 113 people. • Survey link placed in the HVO newsletter.	• 42 responses completed online • 8 responses collected at community information days

Table 5.2 SIA field study participation

Method	Format	Time Frame	Invited/contacted	Participated
Consultation with Aboriginal stakeholders – 4 stages of engagement. Stage 1 – Notification of project proposal and registration of interest. Stage 2 – Presentation of information about the proposed Project. Stage 3 – Gathering information about cultural significance. Stage 4 – Review of draft cultural heritage assessment. Review and feedback sought of draft documentation including survey methodology and draft Aboriginal Cultural Heritage Assessment.	Face-to-face and teleconference, consultation meetings, on-site tours, two workshops, 56 day field program including surveys test excavations and scarred tree assessments and cultural values mapping exercise.	17 September 2020 – 25 November 2022	• 33 RAPs contacted via email and post for stage 1. • 33 RAPs contacted via email and post for stage 2. • 33 RAPs contacted via email and post for stage 3. • 33 RAPs contacted via email and post for stage 4.	Stage 1 – 33 RAPs contacted via email and post for participate Stage 2 – meeting 1, 14 RAPs attended held in Singleton Stage 2 – meeting 2, 19 RAPs attended, held in Singleton Stage 3 – two-day mitigation and management workshop, 27 individuals representing 25 RAPs Stage 4 – meeting 3, 13 individuals representing 14 RAPs, held in Jerrys Plains and a provision of draft report to RAPs for comment.

Notes: Near neighbours were contacted by the Project team for a one on one meeting to discuss outcomes from technical studies Interviews were conducted by Project team, and at this interview the offer was made for an interview with the SIA team. The findings of interviews were analysed by EMM. One near neighbour elected to be interviewed by EMM.

1. A total of 10 people participated, nine community members who live in the local area and one near neighbour (R245, refer to Figure 3.1) of the Project

The SIA adopted a case study approach² which has focused on a deeper understanding of the potential impacts on individuals and groups that may be affected by, and/or are interested in the Project. The findings summarised below are based on a small sample of residents and groups. In addition, interview participants opted into the SIA. The findings of SIA interviews have been analysed with reference to existing baseline statistical data, the findings of consultation programs for similar mining Projects in the regional area, a review of recent media articles from the local and regional area, and analysis of public records of council (Singleton Council and Muswellbrook Shire Council) facilitated community meetings. This approach confirms that the findings of the SIA interviews are generally representative of the broader communities in the local and regional area. The key findings from the in-depth interviews are provided below.

² A process or record of research into the development of a particular person, group, or situation over a period of time.

5.3.2 In-depth near-neighbour interviews

i Near neighbour meetings with HVO

Within Jerrys Plains and Maison Dieu, 19 near neighbours who own 29 properties that are in proximity to HVO were invited to participate in an in-depth interview with the HVO Project team, based on predicted air quality or noise outcomes for the Project. These landholders have, or will be entitled to, voluntary mitigation or acquisition rights with respect to air quality or noise with HVO. The Project team met with ten near neighbours (who own the following dwellings R120, R123, R161, R162, R245, R247, R256, R260, R261, R308, R311, R317, R479 (refer to Figure 3.1) to discuss outcomes of noise, air quality and blasting studies. In addition, the Project team held two Project briefings with Coolmore Australia and with the Hunter Valley Glider Club. Three near neighbours (who own R121, R160, R330 and R471) did not meet with the Project team and elected to be sent information via letter to have a meeting at a later date.

The Project team provided an information sheet summarising the assessment outcomes specific to each residence from the noise, air quality and blasting assessments. This information sheet was developed for each landholder to provide a summary of the current status of noise, air and blasting under existing approved operations, predictions derived from the technical studies related to the Project and proposed mitigation measures. The Project team also provided details on how they could participate with the SIA process. The key findings from the interviews are summarised in Section 5.4.1 and 5.4.2.

Some of the key issues discussed included the following:

- Impacts on visual amenity, specifically regarding the future height of the overburden during operation, mining closer to the Project boundary and how changes to the landscape may impact the flight path.
- Concern regarding noise, in particular noise level increase, blasting and the maintenance of existing noise mitigation rights. It was also raised that there was a preference for blasting to occur earlier in the day.
- Air quality was a key concern specifically related to increases in dust and emissions during operation and dust generation from construction. There was concern that this would impact on existing health issues and allergies as well as impacts to the health of visiting family, particularly to children.
- Impacts on private groundwater bores, alluvial system, discharge conditions and water licences.
- Multiple issues emerged with discussion surrounding the Lemington Road realignment:
 - A benefit that was recognised included flood immunity and road speed/safety improvements associated with the new road.
 - Concern was raised for travel distance and time difference, changes in levels of traffic and the level of future access to Moses crossing post realignment with change in Lemington Road.
- Impacts relating to people's livelihood that were raised included concern for the increase in power bills due to running air conditioning as a result of dust impacts and concern for a decrease in property values.
- Anxiety also raised surrounding negotiating property acquisition and stress experienced as a result of moving away from the area or remaining.
- Other concerns included:
 - The fairness of mitigation measures for the residences who are entitled to migration rights (eg do all residences receive roof insulation, windows, air conditioners/air condition repairs, solar panel cleaning).

- Concern regarding the continuation of the near neighbour amenity resource (tank cleaning and water filters). An opportunity was raised for more community engagement surrounding how to access these benefits.

ii In depth landholder interviews

SIA in depth interviews were conducted by EMM with near neighbours and landholders from 25 August 2022 – 25 September 2022. The interviews involved a discussion of the values, vulnerabilities and strengths of the local community, as well as the identification of perceived impacts and benefits as a consequence of the Project.

Within Jerrys Plains and Maison Dieu, 29 community members were invited to participate in an in-depth interview with EMM. A total of 10 people participated, nine community members who live in the local area and one near neighbour (R245, refer to Figure 3.1) of the Project. The key findings from the interviews are summarised in Section 5.4.1 and 5.4.2.

Key issues raised;

- cumulative impacts of noise, vibration, air quality and water quality, with HVO and other mines encroaching further toward Jerrys Plains, and potential impacts on drinking tank water, groundwater quality, and the quality of Hunter River;
- human health impacts, as a result of air quality and dust emissions;
- increased traffic concerns, specifically with the new realigned Lemington Road and Golden Highway intersection, including the potential for additional travel time from Jerrys Plains to Singleton and the potential for increased road safety risks;
- continuation of and additional property mitigation, ie water filter tank replacement, tank cleaning etc;
- impacts on the structural integrity of properties due to blasting impacts;
- concerns relating to current and future pest and animal management; and
- concerns about visual amenity impacts, specifically raised overburden heights at HVO South and land rehabilitation.

5.3.3 In-depth service provider interviews

In-depth interviews were conducted with service providers from the local and regional areas from 25 August 2022 to 25 September 2022. Information was used to validate existing baseline data and enhance understanding of existing social baseline conditions. During the interviews, service providers offered insights into the potential impacts and benefits of the Project to specific areas of service in the community. A total of 271 interviews were conducted with the following:

- one interview with three representatives of Muswellbrook Shire Council (MSC);
- one interview with two representatives of Singleton Council (SC);
- one representative of Singleton Business Chamber;
- one representative of Muswellbrook Business Chamber;
- two representatives of Ungooroo Aboriginal Corporation (including one from the Barranggirra Aboriginal Employment and Mentoring Services) (Ungooroo Services);

- one representative of JobLink employment and training service;
- two representatives of community services (one from Upper Hunter Community Services Inc and one from Singleton neighbourhood centre) in Singleton and Muswellbrook;
- one representative of NSW Fire and Rescue services;
- one representative of the rural fire service;
- one representative of the HVO CCC;
- one representative of a real-estate service;
- three representatives of accommodation services;
- one representative from an educational service;
- one representative of a local business within the local area (veterinary service);
- two local community groups closest to the HVO Complex - HVGC and Singleton Clay Shooting Club (SCTS);
- three RAPs;
- one representative of a general practitioner (GP) service; and
- three representatives of a local bus service.

The key findings from the in-depth interviews are provided in Section 5.4.

5.3.4 Workforce continuation survey

To gain an understanding of the characteristics of the existing workforce, a workforce continuation survey was undertaken between August 2021 to September 2021. The survey was offered to the HVO workforce (a total of 1,223 people) of which 429 people completed it. Of the 410 respondents who notified of their residential location, this comprised of;

- 170 live in the regional SIA study area, with 146 (35.6%) residing in Singleton LGA, and 24 people (5.9%) living in the Muswellbrook LGA;
- 205 live in the area of reference of the SIA study area, with 115 people (28%) living in Cessnock LGA, 63 people (15.4%) living in Maitland LGA, 5 people (1.2%) residing in Dungog LGA, 5 (1.2%) residing in the Upper hunter and 17 people (4.1%) residing in Newcastle LGA; and
- the remaining 35 personnel live outside the one-hour drive commute and are placed throughout other NSW communities with most people living in Lake Macquarie LGA (6.6% or 27 people), in Port Stephens LGA (1% or 4 people), Central coast LGA (0.2% or 1 person), Mid-Coast LGA (0.2% or 1 person), Sidney (0.2% or 1 person), and 1 person (0.2%) who lives outside of NSW.

The place of residence reported by survey workforce have been grouped according to the SIA study area (see Section 1.5). Key findings of the survey are outlined below. Full details of the SIA workforce continuation survey is in Appendix F.

The working age of the workforce surveyed ranges between 35 to 54-year age bracket, with 31.2% of the surveyed workforce being between the 35–44 age bracket, followed closely by 29.3% in the 45–54 age bracket and 23.2% personnel in the 25–34 ages.

The surveyed workforce identifies as either married (62.7%), de facto relationship (15%) in a relationship (11.7%) or single (10.6%). Families were the most prevalent form of household with 65.8% of surveyed personnel live in a family house with children, followed by 19.3% of family households (without children), with 49.6% of the workforce surveyed indicated they have children enrolled in a day care service or school.

The household income levels indicate a large proportion of the workforce surveyed (84.4%) are part of high-income households, (ie those earning \$125,000–\$200,000 plus per year) with only 15.6% being a part of low-income households (earning less than \$100,000–\$124,999 per year).

Most of the surveyed workforce were employed fulltime (87.6%) followed by contractors/temporary basis (9.6%). The workforce is characterised by long-term workforce (59%) who have worked at HVO for five years or more, with 31.6% of the surveyed workforce indicating they have worked at HVO for 11 years or more followed by 27.4% who have worked at HVO for five to 10 years.

The top three occupations of respondents are machinery operators and drivers (36.5%), technicians and trades workers (23.5%) and professionals (18.4%) with a small proportion employed as managers (9.2%), clerical and administrative workers (3.5%), and labourers (3.3%), with the remainder in other mining roles (5.4%).

A higher proportion (76.5%) of the workforce surveyed holds formal qualifications (eg certificate/TAFE qualification or tertiary qualification/degree), and a lower proportion (55.5%³) of the workforce surveyed hold no formal qualifications completing either Year 12 or lower.

Prior to their employment with HVO, over half of the workforce surveyed (56.1%) were employed in the mining industry with the remaining responses spread across the following industries; construction (11.7%), manufacturing industry (6.1%) and the retail industry (4.5%).

The workforce indicated how confident they believed they were in finding employment in the mining industry if they were not working at HVO. Results varied and demonstrated personnel believed they were either highly confident (19.9%) or confident (35.1%), or had some confidence (27.6%), while the remaining (17.3%) had little confidence (10.3%) or no confidence at all (7.0%) in finding employment in the mining industry If they were not employed at HVO.

A large proportion of the workforce surveyed (96.5%) indicated they see themselves continuing to work at HVO in the near future.

There is a diverse range of skillsets within the workforce surveyed. The top five job skills⁴ selected were equipment operation skills (45.0%), trade skills (eg carpentry, electrical, mechanic, plumbing etc) (37.7%) and management (24.9%), safety and training (22.5%) and Project management (19.4%).

The workforce surveyed was asked to indicate if they felt confident that their job skilled allowed them to work in an industry other than mining. 67.6% of respondents, indicated they felt confident in their own skill sets while 32.39% indicated they did not feel confident in working in another industry other than mining. Among the workforce surveyed, the most common transferable skills outside of mining were operation of machinery, construction skills, trades, and engineering skills base.

³ Q31 received a total of 522 responses. The workforce was able to select multiple answers.

⁴ Q12 received a total of 994 responses. The workforce was able to select multiple answers

ii Workforce feedback on the Project

The workforce surveyed were asked how important it is to them that the Project is approved and rate it as either very important, important, moderately important, slightly important and unimportant.

Workforce project support is shown in Figure 5.1. Out of the 427 respondents, almost all of the workforce surveyed (94.1%) indicated it was either very important (82.9%) to them or important (11.2%) that the Project is approved. When asked why they feel this way the most common responses included:

- HVO would provide personal job and income security in the future;
- the Project provides job opportunities for future personnel and future generations and long-term employment;
- the Project is supporting the local economy; and
- supporting community growth and development in the region.

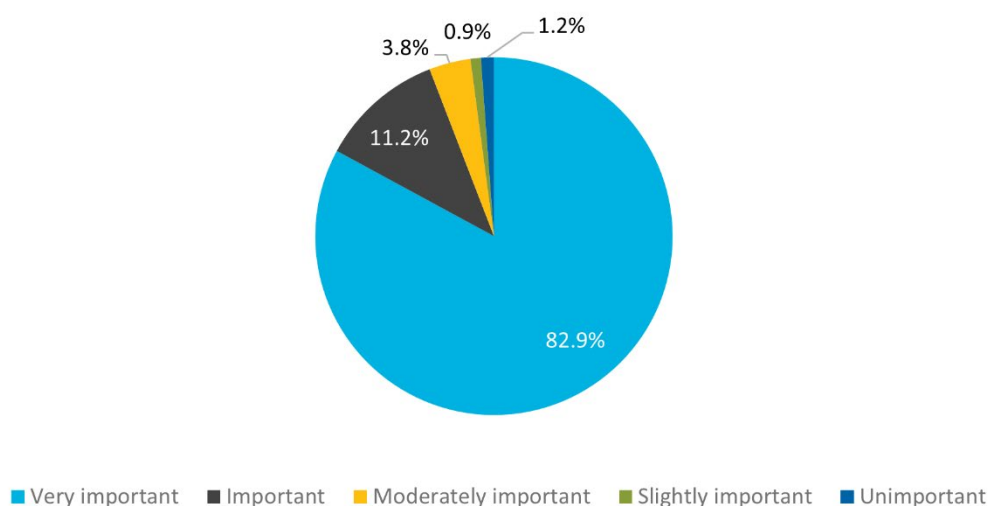


Figure 5.1 Workforce Project support

Extrapolated findings from the HVO workforce survey are;

- The average annual salary of the workforce surveyed was \$174,999 per year (416 people) which is almost double the average annual salary in NSW. When inferred to the current operational workforce of approximately 1,500 personnel, this translates to an estimate of \$262 million in employee salaries over the year, with approximately \$98 million (37.7%) of this amount being paid to personnel within the local and regional area, and approximately \$247 million (94.4%) being paid to personnel with the area of reference.
- Based on ABS household income and expenditure survey 2016–2016 (2017), 52% is the average amount spent on goods and services from a person's yearly salary, applying this methodology using 52% as the baseline it is predicted that of the HVO personnel (ie, up to 1,500 people) has spent an estimated \$136 million over one year (this is excluding spend on housing, utilities and telecommunication)
- Of annual employee expenditure, it is estimated that approximately \$51 million (37.7%) is spent on goods and services within the local and regional area, with \$128 million (94.4%) spent on goods and services within the area of reference (based on the assumption that employee's expenditure occurs largely within their local communities – see Section 1.5).

- The majority of the workforce identified reside in the townships of Singleton, Maitland, Newcastle, Cessnock and Muswellbrook and therefore it is assumed that most people access services in the local, regional and area of reference (see Appendix F for the full list).
- Results showed workforce surveyed personnel are highly involved in their communities outside of working hours, including volunteering in the community (25.8%) or playing for a local sporting club (30.9%).
- 82.6% of the surveyed workforce advised they either own their own homes or have a mortgage.

5.3.5 Supplier survey

To gain an understanding of the characteristics of supplier to HVO, a survey was undertaken between July 2021 and August 2021. The supplier survey consisted of 17 questions relating to the following;

- location of suppliers' head and local offices;
- number of supplier employees;
- business expenditure by suppliers; and
- suppliers' estimated business reliance on the HVO operations.

The supplier survey was undertaken online, with a link and instructions provided to 798 suppliers that currently service HVO. A total of 124 suppliers responded, representing 15% of HVO suppliers, and the data generated is not considered definitive.

Of the survey respondents, the largest proportion of businesses are within the Hunter Valley region (75.4%), followed by businesses in other states of Australia (13.9%) and within the broader state of NSW (10.7%). A summary of the results of the survey are provided below, with full details included in Appendix E.

i Key employment insights

Surveyed businesses were asked to identify the size of their workforce, with over three quarters of all businesses categorised as small businesses (44.3%), which is defined by the ABS as having fewer than 20 employees. This is followed by medium sized businesses (40.2%) with 20–199 employees and larger supplier businesses who employ 200 employees or more (11.5%).

Businesses were asked to identify what working arrangements they offered to their employees. A total of 221 individuals are employed within supplier businesses⁵. Most were employed on a full-time basis (59.1%), followed by casual employment (22.7%), part-time (18.2%) and lastly contractual or temporary arrangements (11.6%).

Businesses were asked to identify where their workforce resides and if this was within the regional area (Singleton LGA or Muswellbrook LGA). The results show a small proportion of employees in Muswellbrook or Singleton LGAs 100% of the time (14.6%), and a larger proportion live outside of the regional area 100% of the time (41.5%).

ii Key customer insights

Businesses were asked to indicate the industries their clients operate in. The highest proportion of clients were associated with the mining sector (75%), followed by manufacturing (41.9%) and construction (39.5%).

⁵ The results are based on weighted results, with 221 responses to Q 2 of the supplier workforce survey

a Number of customers

Half of all businesses relied on a small number of clients, customers or buyers to generate a significant proportion of their income with 58.7% indicating they have less than 199 clients/customers:

- 20–99 clients/customers (25.6%);
- 1–19 clients/customers (17.4%); and
- 100–199 clients/customers (15.7%).

A smaller proportion of HVO suppliers have upwards of 200 clients/customers, the highest of this category falling into the 200–299 clients/customers (11.6%), followed by 1,000–1,999 clients/customers (9.1%), 3,000 plus clients/customers (3.3%) and 2,000–2,999 clients/customers (2.5%).

b Number of contracts

Of businesses that noted the size of their supplier contracts, the largest proportion of suppliers (50.4%) have a small number of contracts at less than 20 contracts, followed by suppliers with 20–99 contracts (18.8%). A smaller number of suppliers (4.3%) have more than 100 contracts and 1.7% have up to 3,000 plus contracts.

c Customer industries

The top industries of the business' operations and contracts were (refer also to Figure 5.2):

- 17.5% of supplier contracts were related to professional, scientific and technical services;
- 15.8% of supplier contracts were related to manufacturing;
- 12.5% of supplier contracts were related to retail trade;
- 12.5% of supplier contracts were related to construction; and
- 10.8% of supplier contractors were related to mining.

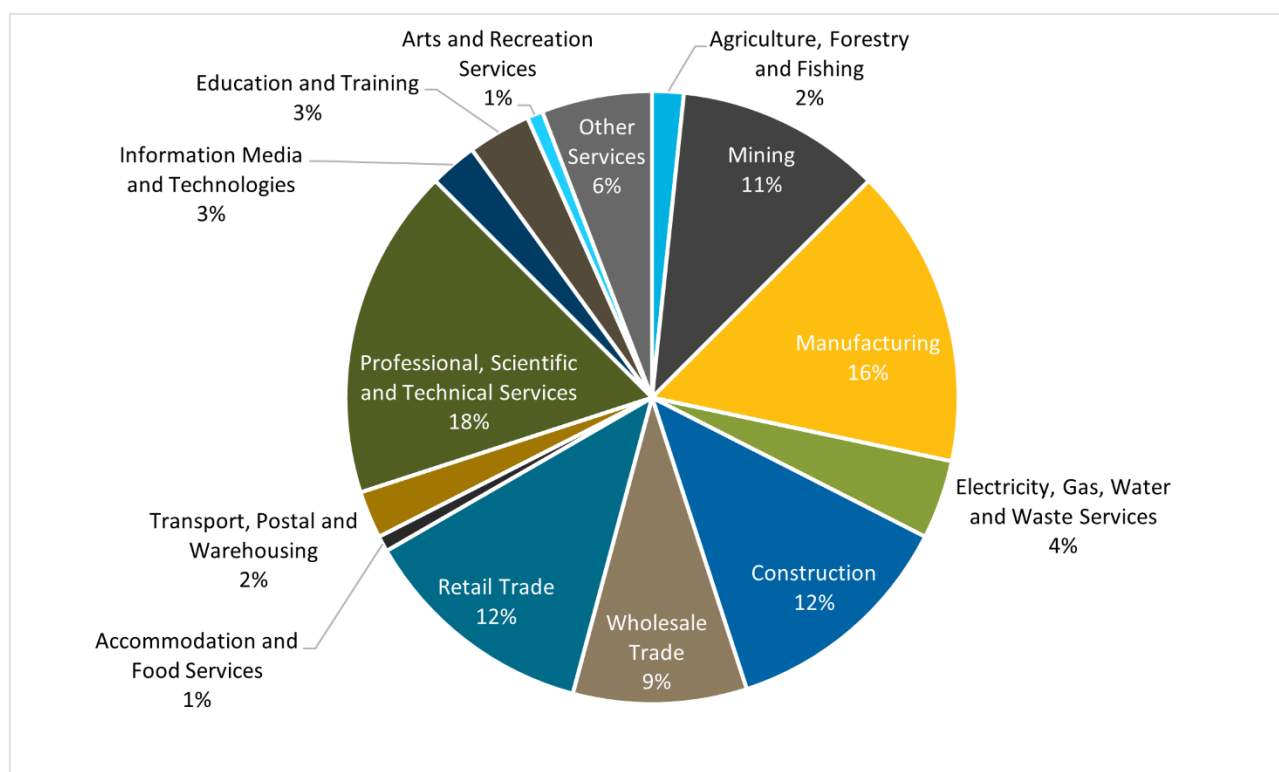


Figure 5.2 Nature of supplier business operations and contracts

iii Main supplier of goods and services

Surveyed businesses reported details on the location of where they sourced their good and services from, their main supplier included the following locations; ⁶

- 66.9% of suppliers source goods and services within the SIA area of reference (Maitland, Cessnock, Newcastle region and surrounds);
- 44.4% of suppliers from the broader New South Wales;
- 42.7% of suppliers within regional areas Muswellbrook and or Singleton LGAs;
- 33.1% of suppliers overseas; and
- 4.8% of suppliers supply goods and services to customers elsewhere.

Suppliers were asked to comment on the proportion of their annual income spent on goods and services. There were 109 responses that varied from 5% through to 100% of income spent on goods and services, with an average annual expenditure of 44.8%.

Of the responses:

- 12.8% selected the 80–100% option;
- 16.5% selected the 60–79% option;
- 10.1% selected the 40–59% option;

⁶ Suppliers were able to select multiple options with a total of 290 responses to Q 16

- 25.7% selected the 20–39% option;
- 11.9% selected the 1–19% option; and
- 22.9% selected this question was not applicable

iv Revenue required to maintain workforce

Surveyed businesses were asked how much revenue is required to maintain their existing workforce.

The 24 suppliers who responded to this question indicated that a total of approximately \$265 million in contracted revenue would be required to maintain existing employment levels. As shown in Figure 5.3, a breakdown of the revenue required per year to maintain existing workforces is as follows:

- 41.7% require under \$5 million dollars per year;
- 25.0% require over \$20 million dollars per year;
- 20.8% require between \$5 million to \$9 million dollars per year; and
- 12.5% require between \$10 million to \$19 million dollars per year.

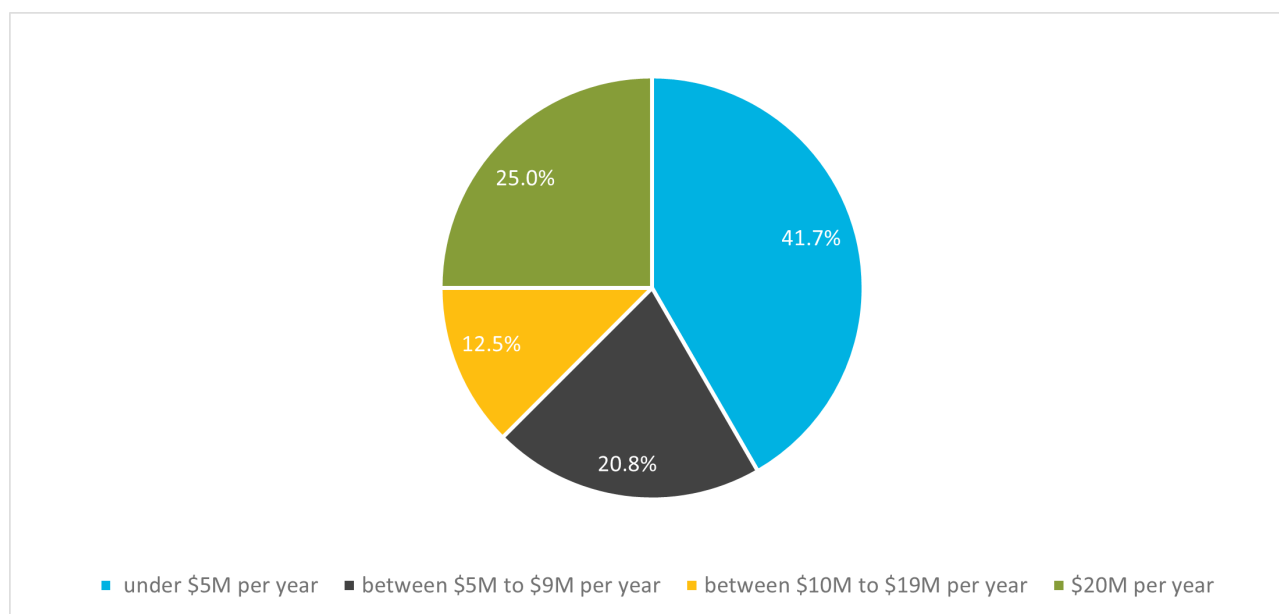


Figure 5.3 Total of revenue required to maintain supplier workforce

v Revenue from the mining industry

As shown in Figure 5.4, survey results show a significant proportion of suppliers (54.2%) depend on the revenue earned directly from the mining industry, indicating a high degree of reliance on the continuation of mining activity in the region, with;

- 46.3% of suppliers earning 80–100% percent of their total revenue from mining;
- 7.9% of suppliers earning 60–79% of their total revenue from mining; and
- 13.0% of suppliers earning 40–59% of their total revenue from mining.

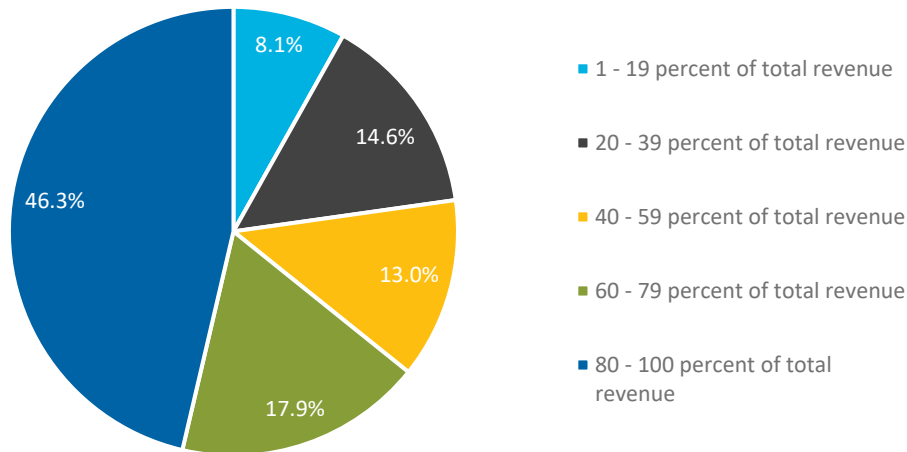


Figure 5.4 Percentage of HVO supplier income earned from the mining industry

vi Dependence on HVO as a customer

Of the 124 survey suppliers who responded to this question, a total of 4.8% are extremely dependent on the relationship with HVO as business revenue, 12.1% are very dependent on HVO and 16.9% are dependant. A total of 42 suppliers indicated revenue was dependent on their relationship with HVO. However, 38.7% indicated they are slightly dependent on the relationship with HVO and 27.4% are not dependent at all.

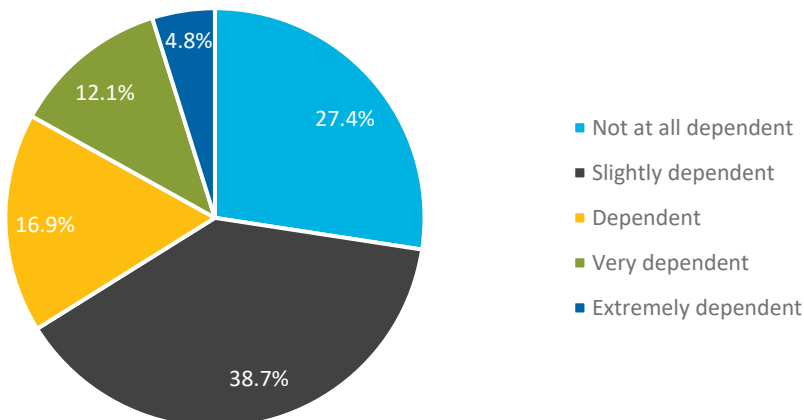


Figure 5.5 Business revenue dependent on supplier relationship with HVO

Of the 123 suppliers who responded, 92.7% of suppliers answered yes to exploring further opportunities to work with HVO and 7.3% answered no.

vii Dependence on HVO as a customer (revenue)

Suppliers were asked what percentage of their total revenue was earned from contract/s with HVO. Of the 122 businesses, the results show;

- 71.3% earned between 1–19% of their total revenue from HVO;
- 10.7% earned between 20–39% of their total revenue from HVO; and
- The remaining 18% earned between 40% and 100% of their revenue from HVO.

Based on survey results, 49.2% indicated the revenue earned from HVO is either 5% or less of their total income, 12.3% indicated no income earned is from any contracts with HVO.

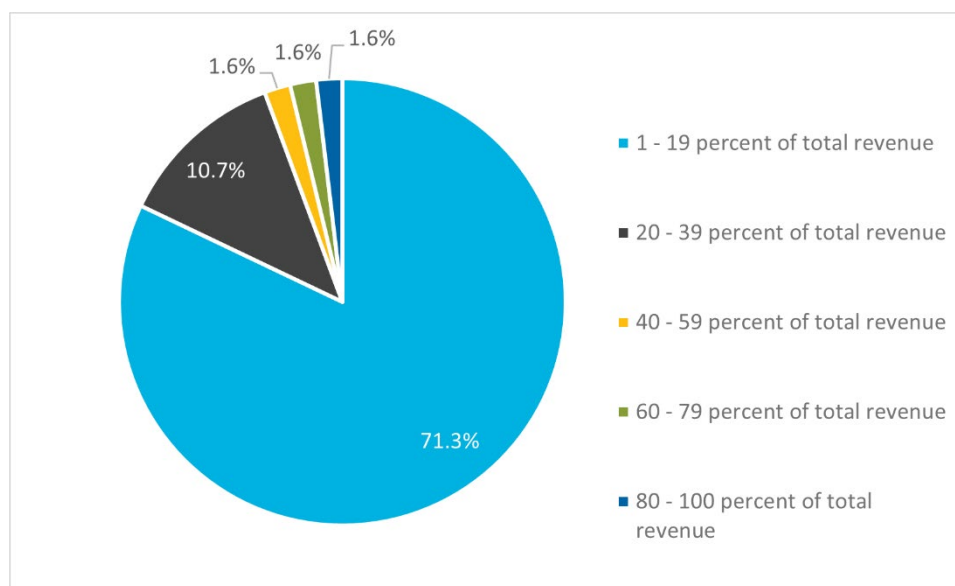


Figure 5.6 Percentage of supplier income directly earned from HVO

a Years as a HVO supplier

A high proportion of the suppliers surveyed have long standing business relationships with HVO, with 32.2% indicating they have provided services to HVO for 20 plus years. 9.9% have been a HVO supplier for 15–19 years and 15.7% for 10–14 years. 20.7% have provided services to HVO for 5–9 years and 21.5% for 4 years or less.

viii Spare capacity

Suppliers were asked how much spare capacity they had to deliver additional contracts with HVO. Of the 123 responses, over 84.5% of suppliers indicated they have adequate to high amounts of capacity to take on more contracts. 11.4% of suppliers indicated they have some capacity, 1.6% had very little, and 2.4% had no capacity to deliver any additional contracts with HVO.

Of the HVO suppliers that responded to the survey:

- just under half are small businesses;
- 14.6% of their employees reside in Muswellbrook or Singleton LGA;
- 41.5% of their employees live outside of Muswellbrook or Singleton LGA;
- the top three customers are from mining (75.0%), manufacturing (41.9%) and construction (39.5%);
- 18% earned between 40% and 100% of their revenue from HVO;
- 70 suppliers indicated they have been working with HVO for around 10 to 20 years or more;
- 84.4% of suppliers indicated they have capacity to take on more contracts;
- 42.7% of goods and services are sourced within Muswellbrook and Singleton LGAs; and
- 75.4% of suppliers' main offices are based in the Hunter Valley region.

5.3.6 Community survey

The purpose of the community survey was to gain an understanding from the broader community of the potential social impacts and benefits of the Project. The survey was available for a period of four months, from July 2021 to October 2021. The community survey was publicised using the following methods;

- the survey was published in the local paper via the online newspaper and the print version for three weeks from July to August 2021 within the Singleton Argus, Hunter Valley News and Hunter River Times;
- the survey link was emailed to 113 people, including near neighbours, landholders, HVO CCC members, Councillors, community groups and RAPs; and
- the survey link was placed on the HVO Social Pinpoint page and advertised within the HVO community newsletter.

The community survey consisted of 24 questions. A total of 42 responses were completed online and a further nine responses were collected in hardcopy, totalling 51 responses received.

Of the total online responses received;

- 21 community members are within the SIA local area (Jerry Plains – 2 responses, Maison Dieu – 2 responses, Singleton – 13 responses, and Muswellbrook – 4 responses);
- 17 community members are located within the SIA regional area (this also includes the total number from the local area, Singleton LGA – 13 responses and Muswellbrook – 4 responses);
- 13 community members are located within the SIA area of reference (Cessnock LGA – 6 responses, Maitland – 5 responses, and Upper Hunter – 2 responses); and
- 3 community members are located outside of the SIA locality and within NSW (Tamworth – 2 responses and Narrabri LGA – 1 response).

Survey respondents identified⁷ as landholders (22.5%), local residents (47.5%), business owners (15%), HVO employees /contractors (52.5%) and as a person employed by the mining industry (other than HVO) (20%). The results of the survey are outlined below. Full details of the SIA community survey are in Appendix D.

The nine hard copies received were by people in the Singleton LGA and Muswellbrook LGA and identified as local residents, with four business owners, two employees/contractors and one Aboriginal person. Full details of the findings of the community survey are provided in Appendix D.

i Participation and Project awareness – online survey

Respondent awareness of the Project varied, with 31% indicating they have a fair awareness of the Project and 61.9% indicating good or very good awareness. The remaining respondents (7.1%) indicated having poor awareness of the Project.

ii Project support – online survey

Participants were asked how they felt about the Project. Project support varied across the responses received, as shown in Figure 5.7. The majority of respondents, at 59.5%, indicated they are strongly supportive, and a further 19.1% were supportive. 11.9% of respondents indicated they are opposed to the Project, 2.4% were strongly opposed, and 9.5% indicated they are neutral, neither supportive nor resistant to the Project.

Of the nine hard copies received, eight were supportive of the Project due to the Project providing ongoing employment and training opportunities and procurement and business opportunities for local people, stating:

Ongoing business relationship will continue with HVO operation provides new business relationship will no doubt be available and possible with the construction and upgrade works required for the continuation Project.

One response was not supportive of the Project due to the concern relating to consultation efforts and ongoing impacts to Aboriginal people.

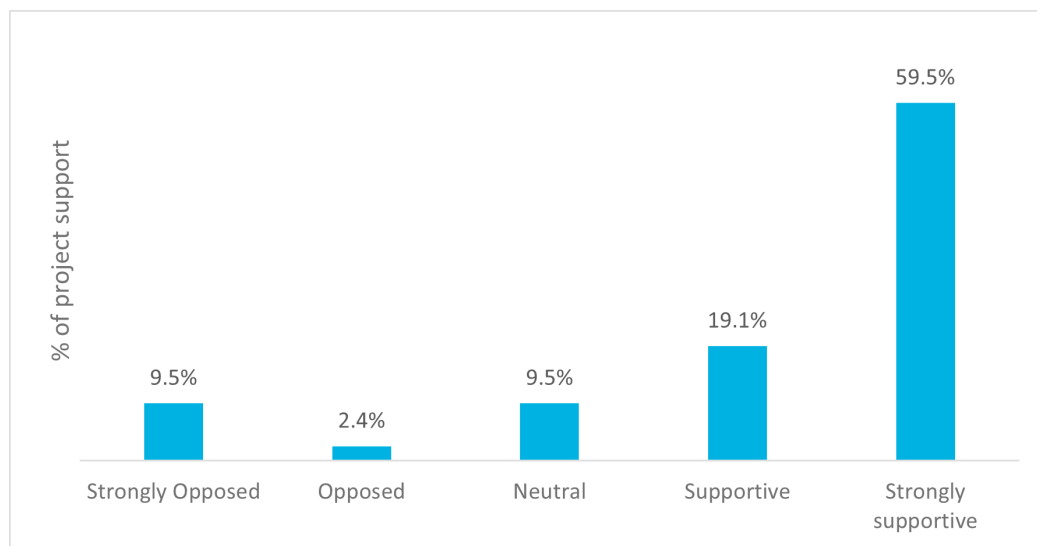


Figure 5.7 Project support as indicated by community survey results

⁷ 34 people responded to this question.

iii Key issues raised – online survey

An overview of the key issues raised by respondents to the online and hardcopy community survey is provided below.

a Community support

Support for schools, health services and recreational groups and facilities was the highest benefit recorded, with 85.4% identified by the respondents noting key community groups and services receive direct financial support from HVO and the continuation of the Project will see this support continue for the next 25 years. Others noted their support for lifting of the bridge height at Lemington Road and received positive feedback for the new bridge 58.5% of the respondents in favour and 54.8% supportive of the realignment of Lemington Road.

b Employment and training opportunities

Respondents (hard copy and via online survey) indicated that education and training opportunities (81%) would be a positive thing for the region noting the Project would provide stability and ongoing employment for the current employees (83%) and create job opportunities during the construction phase as well as suggesting there could be further apprenticeship opportunities for young people in the area.

Local procurement and business opportunities (73.8%); and continued supply of valuable resources (73.8%) was also perceived as very positive for the community

c Impacts to surroundings and amenity

Impacts of air quality (31%), noise and vibration (28.6%), climate change (24.4%); and visual amenity (21.4%) all rated as highly negative impacts within the online survey. Followed by concern around (16.7%) rehabilitation and final landform, and property prices (16.7%).

The online survey demonstrates while the community perceive the above to be negative impacts a large number also perceived them to be neutral impacts if the Project proceeds; impacts on water quality (50%), visual impacts (47.1%), noise and vibration (42.9%), climate change (41.5%) and dust (40.5%).

A snapshot of respondents comments included:

“The impacts of dust on the local community area real and the artificial limits of exposure are false.”

“we feel the blasts and vibration and noise on occasions. It makes our house shake.”

“the current dust generation and its impacts on surrounding community will just continue for longer. It may decrease with a decrease in production annually but it won’t be any significant change to what it is today. Yesterday and all the years before.”

“That is life in the Hunter. It’s not just HVO it’s the combination of all the sites with close proximity and surrounding communities.”

“Water quality people using tank water are greatly affected by the dust” “Hunter River does receive runoff from mining areas.”

Visual amenity feedback included:

“No different or change to what we have already.”

“Overburden piles are not attractive to see in our backyards.”

Rehabilitation and final:

“Post rehab, the land will probably be better than what is was before they started. The rehab closure requirements are so strict and regulated now, I have full confidence in the final land being positive for the future land use.”

Respondents also raised climate change as an issue. It was noted by several respondents that continuation of an existing mine is preferable to a new mine being developed along with acknowledgement that there will inevitably be a transition to industries other than coal.

d Impacts to livelihood

Impacts to livelihood was a key concern in regard to procurement and business opportunities that provide benefits to business owners and flow on economic impacts. Other respondents raised concerns about perceived devaluing of property prices in the area due to the ongoing mining operations and proximity to the mine. The flow on impact this may have on their ability to sell their home and move out of the area was noted, suggesting this may lead to impacts on the way of life enjoyed by some nearby residents. Impacts on the structural integrity of properties due to blasting impact was also raised. A breakdown of responses from the online community survey regarding perceived impacts of the Project is shown in Figure 5.8.

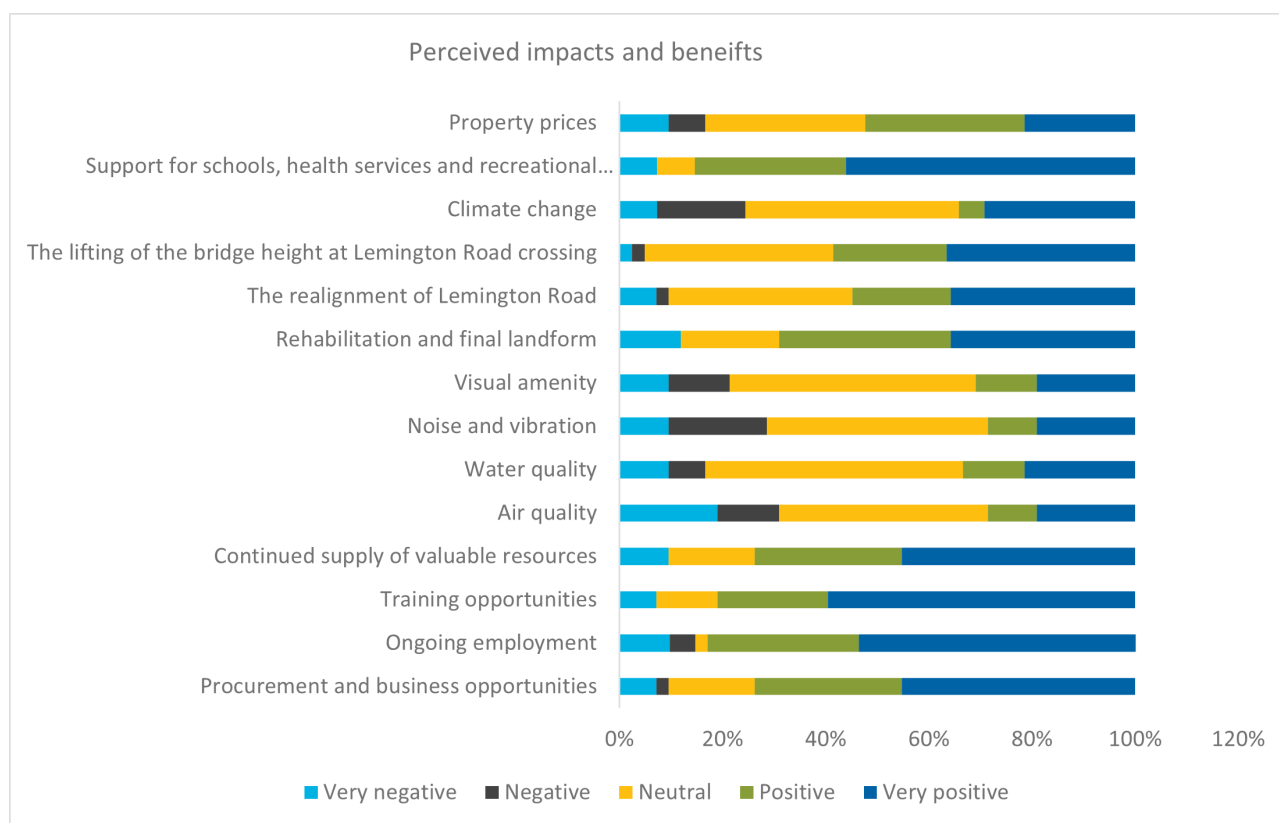


Figure 5.8 Perceived impacts and benefits of the Project in community survey

5.3.7 Consultation with Aboriginal people

i Two-day mitigation and management workshop with RAPs

A two-day mitigation and management workshop was conducted with RAPs and was attended by 27 individuals. The workshops sought to identify key areas of concern within the local Aboriginal community and discuss options for meaningful mitigation measures.

Key areas of concern identified by RAPs across seven key themes included cultural awareness at HVO, employment, mental health, business, housing, disability, and aged care support and financial. Feedback from the workshop is shown in Table 5.3.

Table 5.3 Feedback from two-day mitigation and management workshop with RAPs

Themes	Consultation details
Employment	Aboriginal identified positions need to be more meaningful. Consideration should be given to committing to retaining suitable employees for a period of time longer than 3 months. There are mental health issues, especially around confidence and sense of self worth if Aboriginal Employees are seen as a means to gaining a grant, rather than being recognised for their own merits. Short term employment affects superannuation, increases need for welfare. Opportunities for permanent employment need to be maximised.
Mental Health and Addition	Previously, the Government has opened rehabilitation facilities, only to close them down again shortly after. For residents of Singleton and Muswellbrook, the closest mental health facilities are almost an hour away (in Newcastle). There aren't enough mental health /rehabilitation facilities in Newcastle, or even NSW. There have previously been government funded facilities that incorporate western and traditional healing methods, especially in regard to mental health; however, they are no longer operational. All the local initiatives put in place keep losing their government funding, however there is still a need for them to be in place. There would be value in having men's/women's groups – facilitated mental health programs. Mental health initiatives targeted towards Aboriginal youth are recommended. Support should be given to support Aboriginal people to be job ready and mentally fit for work. Empowering confident youth in the workforce. There is Aboriginal identified support for drug rehabilitation. People want to get off drugs, however there is no support that truly understand Aboriginal history and incorporates traditional healing methods with western medicine. Suggestion that mentoring/sponsorship programs could be developed to support recovering addicts.
Business	Support of developing Aboriginal businesses. They need capital, contracts and business training, school based training, subsidised wage for school leavers entering a program. HVO should consider contracting Aboriginal businesses. Training and support should be given to Aboriginal business owners so that they can make their tenders more competitive. Support should be given to help them get through the door. Aim to build long standing contracts and ongoing partnerships. Consider providing procurement training ie grant and tender writing, so that proposals and tenders for Aboriginal businesses can be more competitive.
Closing the Gap	A trust fund should be set up to service Aboriginal people in the valley until the mine ceases in 2050. Aboriginal people are able to apply for funding for Closing the Gap initiatives. Consideration to be given to offering microloans for white goods, cars, repairs to property. The trust fund should be aligned with the Government's Closing the Gap initiatives. Our challenge for the future is to embrace a new partnership between Indigenous and non-Indigenous Australians. The core of this partnership for the future is Closing the Gap between Indigenous and non-Indigenous Australians on life expectancy, educational achievement and employment opportunities. This new partnership on Closing the Gap will set concrete targets for the future: within a decade to halve the widening gap in literacy, numeracy and employment outcomes and opportunities for Indigenous children, within a decade to halve the appalling gap in infant mortality rates between Indigenous and non-Indigenous children and, within a generation, to close the equally appalling 17 year life gap between Indigenous and non-Indigenous when it comes to overall life expectancy.

A one-day outcome workshop was held to provide an overview of the outcomes of the Project assessment. The meeting was attended by 13 individuals. Full details of community engagement findings are provided in Chapter 6 of the EIS.

A key outcome of this discussion was agreement from RAPs in attendance regarding the appropriateness of salvage of scarred trees identified as being potentially of cultural origin, (HVOCP TR212-ST1 and HVOCP TR216-ST1) and the preference for long-term management being for the salvaged portions to be kept near to their original location or at an established keeping place. This discussion also included an overview of HVO commitments to Closing the Gap initiatives following discussions with RAPs at the mitigation and management workshop. Based on the feedback from the workshop, HVO has committed to implementing a number of social enhancement strategies, which are discussed in Section 6.6.

5.4 Summary of SIA field study findings

Across the Project, the social impacts and benefits raised by stakeholders that were consulted with were clearly linked to construction and operation phases of the Project given this is a continuation of existing operations. Community identified values, strengths and vulnerabilities and key impacts and benefits are summarised in the Table 5.4 and Table 5.5 below.

5.4.1 Community values, strengths and vulnerabilities

All consultation activities sought to understand how participants viewed their community and identify how the Project may impact on their community. Participants identified values, strengths and vulnerabilities as shown in Table 5.4.

Table 5.4 Summary of community identified values, strengths, and vulnerabilities

Values	Strengths	Vulnerabilities
- Inclusive, caring community. - Strong community, goodwill in a crisis - Community want more people to contribute locally, volunteer.	- Community resilience due to pandemic experience. - Muswellbrook town centre is not flood or bushfire prone. - Singleton has experienced 5 floods and bushfires. - Large industries present but the area has retained its rural amenity. - Strategic location due to relative closeness to major centres such as Newcastle and Sydney.	- Uncertainty with some mines closing in the area. - Lack of resources for the transition. - Multi-generational mining workforce can be resistant to change.
Indigenous people are connected to country.	Supportive community groups including Singleton Neighbourhood Centre, Singleton Clay Shooting Club and Hunter Valley Gliding Club.	- Transient community, large DIDO workforce reduces community involvement. - High levels of unemployment, especially within Aboriginal population.
- Quiet area in an attractive rural setting, mountain ranges. - Value on rural community and lifestyle.	Benefited from HVO financial support for various community groups and facilities.	Community services are reliant on direct support from HVO.

Table 5.4 **Summary of community identified values, strengths, and vulnerabilities**

Values	Strengths	Vulnerabilities
Section of the community that opposes mining.	- Some diversification including vineyards, agriculture, tourism and horse breeding. - Community tolerance for long term air quality, noise and vibration impacts due to long term mining in the area.	- Recent influx of new residents who are not community minded. - New residents from cities purchasing property has increased prices. - Lack of affordable housing, strong demand for housing support and meals.
Variety of sporting codes brings the community together.	Quality primary education.	Lack of shopping amenities and play centres.
High community interest in recreation, keeping active – walking, cycling, spending time outdoors.	- Free camping available at the Jerry Plains Recreational Reserve. - Community Hall that encourages regular events.	- Lack of services – mental health, specialist medical services, public transport, lack of quality upper high school education and TAFE education. - Delay to seeing those limited services (ie 6 month process for appointments). - Low educational attainment and household incomes, high unemployment. - Disengaged youth, low incomes and homelessness. - Relocation of young people to bigger regional centres (both education and employment opportunities, then don't return).
Scenic tourist drive along Golden highway.	- Transition commencing with Upper Hunter University construction to support innovative manufacturing ideas. - Community know change is happening and will support good Projects.	- Dust resulting in health issues. - Additional maintenance and cleaning for residences and community facilities required due to dust impacts from existing mine operations. - School bus delays due to blasting road closures.
Connection to land and waterways.	Successful Singleton Business Chamber program encourages local spending through "we live here" cards.	Ageing population, skills shortages and lack of construction workforce locally.
The community value the new bypass that will be built in Singleton by 2025.	- Strong Chamber of Commerce in Muswellbrook with a diverse membership advocate and provides services for local businesses such as networking events. - Some large events facilitated in the area, eg Great Cattle Dog Muster.	- Local businesses are heavily reliant on HVO and the mining industry more broadly. - Economic reliance on the mine, particularly for businesses and accommodation.
Volunteering for community groups such as Fire and rescue.	- Valued indigenous employment and social services provider – Ungooroo Offers Culturally appropriate services. - Large indigenous population. - Wonnarua traditional owners trialling traditional land management and conservation, and native grass seed and grain flour production. Strong conservation mindset.	- Flood prone areas result in road closures, some residents can be cut off from their homes. - Drought prone area.

Table 5.4 Summary of community identified values, strengths, and vulnerabilities

Values	Strengths	Vulnerabilities
Importance of climate change and consultation during closure planning (eg want to see mine closure and rehabilitation plans).	Recent improvements in train noise due to application of Sydney Rail noise standards.	A large number of mining Projects impact condition of local country roads via service vehicles and oversized vehicles requiring additional maintenance.
		Traffic and congestion at peak times mornings and afternoons.
		Farming land and farming in general has declined, local area is struggling to get enough people to support the farmers who remain, eg specialised veterinarian services.
		'High' demand for rental accommodation (in Singleton LGA). - Rents for an average 2–3 bed house have increased 10–15% in last 18 months. - Rising rents and limited availability makes affordability difficult for many renters, particularly those in need of crisis accommodation.
		Emergency services already under strain.

5.4.2 Community identified impacts, benefits and opportunities

A summary of the most prominent potential social impacts of the Project identified by local service providers and key stakeholders through the SIA field study and EIS engagement activities are presented in Table 5.5.

All consultation activities sought to understand how participants viewed their community and identify how the Project may impact on their community. The key issues or potential impacts, and opportunities or potential benefits identified by the community are organised into categories of social impact theme.

Table 5.5 Community identified impacts, benefits and opportunities associated with the Project

Impacts	Benefits	Opportunities
Way of Life		
- Continued ongoing issue with dust if the Project continues for the next 25 years impacting home solar panels on roofs, windows, coating the gutters etc. - Concerns of noise (eg noise from night operations, existing mine operations, water pump operation, vehicle movements, and noise created from blasting).	Lemington Road realignment will include a new bridge replacing Mosses crossing. This will mean that the community will have improved access along Lemington Road during rain events.	- Increased number of houses qualifying for voluntary mitigation measures to reduce impacts as per the Voluntary Land Acquisition and Mitigation Policy (eg double glazed windows). - Strategies for dealing with dust (ie water tank cleaning, under-sink water filters, gutter cleaning, solar panel cleaning, window cleaning, installation of first flush systems on downpipes).

Table 5.5 Community identified impacts, benefits and opportunities associated with the Project

Impacts	Benefits	Opportunities
- Concerns about cumulative impacts of noise, dust and vibration from blasting impacts from existing operations. - Increased travel time when travelling between Jerrys Plains associated with the proposed Lemington Road realignment. - Concerns for emergency services (police, fire ambulance) response times, relating to the Lemington Road realignment. - Minor impacts to bus travel times and continue traffic congestion at main intersections. - Road delays from blasting events.		Continuation of a program similar to the existing Near Neighbour Amenity resource (NNAR) program, in a more structured form.
Community		
- Loss of mining sponsorship for community events, schools, health services and recreational groups if the mine does not continue. - Loss of employment if mine does not continue. Community identified local people might relocate – population change concerns and flow on effects. - Temporary construction workers can impact on sense of community. - Property acquisition can cause stress and social fragmentation.	Continued support for the local communities financially through sponsorship such as support for local schools, TAFE, community groups and services.	- Continuation of mine provided student pathways including work placement experiences, traineeships, apprenticeships. - Opportunity for educational purposes (eg possibility of school excursions to see the science behind the mining industry, as well as how the mines manage environmental impacts). - Could increase engagement (eg with schools and townships).
Access		
Concern related to future access to Mosses crossing after the Lemington Road is realigned.	New road alignment and bridge would reduce road and bridge closures due to flooding.	- Improved access with the new bridge will provide access for the community access at all times. - The existing Lemington Road will remain open for community access to the Hunter River at Moses Crossing.
Culture		
Significant concerns regarding impacts to Aboriginal cultural values and cultural heritage.	Improvement in outcomes for Aboriginal people in the local area.	- CM-CD1, in recognition of the high significance of the site, HVO committed to continue full avoidance of CM-CD1. - Salvage of the culturally scarred portions of scarred trees HVOCP TR212-ST1 and HVOCP TR216-ST1. - Salvage of artefacts to be impacted by the Project in consultation with the RAPs. - Implementation of initiatives across key Closing the Gap themes including health, education, business, finance, employment, culture, and community.

Table 5.5 Community identified impacts, benefits and opportunities associated with the Project

Impacts	Benefits	Opportunities
Health and wellbeing		
- Continued dust generation affecting air quality and impacting on health of community and nearby residents. - Continued health impacts from noise and vibration. - Concerns that land values will decrease, which in turn leads to impacts on health and wellbeing. - Uncertainty regarding the continuation of the mine. - Stress experienced by the community as a result of reported uncertainty towards moving away from the area or remaining.		- Separate to the properties who are afforded mitigation rights, HVO currently operates a near neighbour amenity resource program, which is a voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps. - Implementation of all reasonable and feasible noise mitigation measures identified. - Opportunity for HVO to develop a funding framework to enable funding of programs and Projects that align with Closing the Gap initiatives or community mental health. HVO has committed to the value of \$1,000,000 over the first 10 years of the Project. This may be continued following an implementation review.
Surroundings (including public safety)		
- Concerns about ongoing visual impacts, particularly relating to overburden emplacements. - Concerns regarding water quality, impacts on the alluvial system and discharge conditions. - Concerns regarding traffic impacts in the area, specifically traffic congestion in and out of Singleton, which is a significant issue for local residents. - Concerns the new Lemington road may affect emergency services and extend the route. - Concern about the mine as 'buffer land' for animal control. - Concern around climate change.	- Community members discussed the final landform and reducing the number of final voids as a positive. - The realignment of Lemington Road and lifting of the bridge height over the Hunter River means that the community will have improved access during rainfall events. - Travel time will be reduced along Lemington Road for travellers coming from the east.	Implementation of a structured water tank cleaning service for all privately owned residences within 4 km of the proposed mining area. Final rehabilitation of the land is seen as positive – opportunity to incorporate natural design features into the final landform.

Table 5.5 Community identified impacts, benefits and opportunities associated with the Project

Impacts	Benefits	Opportunities
Livelihood		
• Economic impacts on procurement and local business if the mine does not continue. • Concerns for the economic viability of the region if the Project does not continue. • Potential loss of ongoing sustainable employment. • Concern that property prices are already affected by the mines in the area, and concerns the continuation will cause further deduction in value. • Perception that money from the mines does not flow through the rest of community and surrounding area, but instead leaves with the workers. • Concern for the impact of the Project on private groundwater bores and water licences. • Concern was raised regarding the increase in power bills due to the necessity of running air conditioning due to dust.	• Positive support for ongoing sustainable employment and the continuation of employment. • Possibility of more jobs for local people during construction. • Continued employment and support of local businesses. • Provide new employment opportunity generally for school leavers. • Perception of increased employment will have indirect benefits to economy (eg rental and housing market). • No additional water licences are required for the Project.	• Opportunity for local services to increase capacity due to increased demand during construction and ongoing operations. • Continued support for local business means money spent locally. • Opportunities for new business relationships with the construction/upgrade works required for the Project. • opportunities for upskilling, traineeships, apprenticeships. • local school leavers will have continued employment and training opportunities (eg targeted recruitment).
Decision-making systems		
• Concerns around the fairness of mitigation measures for the residences who are entitled to migration rights (eg do all residences receive roof insulation, windows, air conditioners/air condition repairs, solar panel cleaning). • Concern and anxiety regarding the negotiation of property acquisition.	• Continued supply of valuable resources.	• Opportunity for increased community engagement. • Implementation of a structured water tank cleaning service for all privately owned residences within 4 km of the proposed mining area.

6 Assessment of social impacts and benefits

6.1 Introduction

This chapter groups and analyses the identified social impacts and benefits associated with Project construction and operation. The aim of the SIA is to assess the potential Project induced change to current baseline social conditions using data collected from relevant sources, to develop a layered picture of potential social impacts and benefits to the community.

To prioritise the identified social impacts, a risk-based framework, as outlined in Section 2.1 of the SIA Guideline Technical Supplement (2021b), has been adopted to assess social impacts. Findings from technical reports and stakeholder perceptions have been used to capture expert and local knowledge, and to develop appropriate impact mitigation 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 some aspects of the Project as both negative and positive as they relate to different groups of people and have differing levels of significance;
- included negative impacts on local communities while documenting the benefits to the broader region;
- considered the impacts on vulnerable groups and management strategies designed to ensure that social disadvantage is not exacerbated; and
- considered each community's access to critical resources, such as housing and health care, and how this affects their resilience to change.

The social impacts identified have been assessed on a worst-case scenario initially and then the residual effect is assessed on the basis that mitigation of negative impacts or enhancement of positive impacts are assumed to be effectively implemented. The assessment uses the terms unmitigated and mitigated when referring to negative impacts and un-enhanced or enhanced when referring to positive impacts (benefits).

The following data and information have been used to identify and assess impacts and benefits:

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

Application of the likelihood and magnitude framework, as outlined in Section 2.1 of this report, informs assessment of the level of significance of a social impact as being low, medium, high or very high. Both impacts and benefits have been assessed.

Given that the Project is seeking the continuation of HVO mining operations, analysis of potential social impacts and benefits includes consideration of the ramifications if the Project was not to proceed. Whilst a full risk assessment has not been completed for such impacts and benefits, discussion of the 'Project does not proceed' scenario has been provided for relevant impact categories.

6.2 Assumptions

6.2.1 Population changes due workforce requirements

Population change underpins many of the social impacts associated with State significant developments. According to established benchmarks developed by Burdge (2015), population change above or below a threshold of 5% is considered to have the potential to impact on social cohesion due to:

- the limited capacity of the communities to absorb newcomers (ie housing availability);
- the loss of social capital and connections due to persons entering or leaving an area; and
- the ability of a community's physical and social infrastructure to provide required social services.

This benchmark has been referenced in assessing the significance of predicted population change attributable to the Project.

As discussed in Section 3.1.3, the maximum acceptable daily commute distance from a worker's usual place of residence to the study area has been defined as one hour. The following population change assumptions represent best-case, worst case and median-case scenarios regarding the proportion of the workforce likely to be sourced from the local and regional study areas. This social assessment adopts the median case scenario. It is assumed that 'non-local hires' (NLHs) will be required to seek short-term accommodation within either the local or regional area and thus contribute to temporary population change. The predicted temporary population change associated with the construction workforce is shown in Table 6.1.

Table 6.1 Predicted temporary population change associated with construction workforce sourced outside of a 1 hour commute

Level of analysis	Population size	Best-case scenario		Worst case scenario		Median case	
		Number of workers sourced outside of a 1 hour commute	Percentage (%) change	Number of workers sourced outside of a 1 hour commute	Percentage (%) change	Number of workers sourced outside of a 1 hour commute	Percentage (%) change
Local area	28,844	120 or 20%	0.4%	240 or 40%	0.8%	180 or 30%	0.6%
Regional area	39,073	120 or 20%	0.3%	240 or 40%	0.6%	180 or 30%	0.4%

6.3 Way of life

This section provides an assessment of potential benefits and impacts of the Project on people's way of life.

The identified Project related benefit on way of life is:

- benefit of the realigned Lemington Road and new bridge over the Hunter River.

Identified potential Project derived impacts on way of life are:

- impact of continued traffic congestion and road delays; and
- impact of continued generation of dust and diminished air quality.

6.3.1 Benefit of the realigned Lemington Road and new bridge over the Hunter River

The Project would result in the realignment of Lemington Road to the east of HVO South, linking the existing Comleroi Road with newly constructed sections of Lemington Road to the New England Highway (Figure 1.3). The realignment will be undertaken by HVO in consultation with relevant approval authorities including Singleton Council.

The new road will be constructed 'off-line' to minimise disruption to existing road users. The realigned Lemington Road will decrease the length of the existing Lemington Road by 6.5km from 17 km to approximately 11.5 km and will be designed to maintain the existing 100 km/h standard.

The Traffic Impact Assessment (TIA) undertaken for the Project (WSP 2022) concluded the realignment of Lemington Road would deliver improved road conditions and decrease travel time by approximately 9–10 minutes if travelling to/from the east of Comleroi Road/New England Road alignment (ie, travelling from Bulga or Mount Thorley). However, it also concludes that there would be a minor increase in travel time by 1 minute 40 seconds if travelling at the design speed of 100 km/h to/from communities west of the current Lemington Road alignment such as Jerrys Plains. This would affect approximately 5% of the trips currently recorded on Lemington Road. This is further discussed in Section 6.7.4.

As outlined in Section 5.3.6, just over half the respondents to the community survey (54.8%) rated the realignment of the road as a benefit of the Project, with 35.7% rating the change to the road network having a neutral impact.

The proposed Lemington Road realignment would include a new bridge over the Hunter River. This would replace the existing 'Moses Crossing', which is a one lane low level bridge that is often closed due to flooding. The new bridge would substantially improve flood resilience. As outlined in the TIA, the current crossing has been underwater for a combined total of more than eight months since 2010. The improved design of the proposed new bridge would have kept Lemington Road clear of flooding for all of these rainfall events. The new Lemington Road alignment would therefore provide a more reliable access between the New England Highway and Golden Highway, thereby improving access for the community.

In interviews completed to inform the SIA key feedback included:

"Building a bridge to replace Moses Crossing would provide positive outcomes for the community."

"We used to go down Lemington Road, but it is impassable now as we can't go past the Moses Creek crossing."

"Benefit to the community means access during floods. Over the past two years that road has been closed a lot and a new bridge means access during a flood."

"No longer unable to cross the Hunter River when in flood will be a big positive."

Emergency services interviewed as part of the SIA mentioned that the new bridge would have a positive effect on the provision of emergency response.

Nearby neighbours highlighted the potential benefits of not being isolated during flood periods and having access between the New England and Golden Highways at all times.

"If they are building a bridge over the Hunter River this would be a plus, plus, plus and we would be able to cut across and not have to go around."

Community support for a new bridge over the Hunter River was expressed in the online community survey, with 58.5% of respondents reporting this as a highly positive benefit of the Project.

The (unenanced) significance of benefits derived through the realigned Lemington Road and new bridge over the Hunter River is assessed as **very high**. The likelihood is **almost certain**, and the magnitude is assessed as **major**.

There is no proposed enhancement to the benefits realised through the realigned Lemington Road and new bridge, however a suggestion was raised by a nearby resident:

“Make the waterhole a community space for people to gather. They [HVO] could install picnic area and tables and it could be a great place for the whole community. Right now we park on the gravel and there is no car park no BBQ facilities and picnic facilities it would make a nice little area.”

As outlined in Table 6.2, the significance of benefits derived through the realigned Lemington Road and new bridge over the Hunter River remains **very high**. The likelihood is **almost certain**, and the magnitude is assessed as **major**.

Table 6.2 Summary of way of life benefit of the realigned Lemington Road and new bridge over the Hunter River

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Benefit of the realigned Lemington Road and new bridge over the Hunter River	Road users	Operation	Local area	Very high	Very high (benefit)

6.3.2 Impacts of continued traffic congestion and road delays

Increased travel times, traffic congestion or diversions of traffic have the potential to impact on the ability to access neighbours, towns or services. The Project would contribute to traffic in two ways:

- a short-term increase in heavy and light vehicles associated with construction; and
- the continuation of traffic generated by the existing operations workforce.

Impacts associated with construction and operation are addressed separately below as the nature of respective impacts and mitigation measures differ.

i Construction

The Project construction program would occur over an approximate five-year period. The peak construction period would occur around the end of Year 2 of the Project with a construction workforce of up to 600 people over a 6 month period.

Construction involves a number of upgrades to existing facilities across the Project area and road works to realign Lemington Road. The TIA estimated that peak construction truck movements would occur towards the end of Year 2, where up to 1,072 truck movements (combined inbound and outbound) are forecasted. Total truck movements across the 5 year construction period are anticipated to be around 17,989.

Light vehicle traffic generation includes a conservative assumption that all workers (peak of 600) would travel individually by car, arriving/departing across a two-hour period in the morning and afternoon peak periods.

Multiple stakeholders highlighted road safety concerns regarding additional construction traffic:

“During the morning (at 7:30 am) its already bumper to bumper for at least 20 minutes [road safety concerns with additional construction traffic].”

“The increased construction workers will add to the already congested traffic in the morning and in the afternoons.”

“The traffic jams in and out of Singleton shows most employees at mine sites are not local.”

It was also noted that local communities were used to the high volume of traffic and perceived the Project construction traffic would have minimal impact:

“I am not really sure there will be construction impacts as we are used to high volumes of traffic. We have 1,000s and 1,000s of people coming and going and the roads are adequate for this volume as well additional volume with construction workforces.”

Whilst the cumulative contribution to total traffic generated by the Project construction workforce would be minimal, it does represent an incremental increase on a road network already operating under pressure. The TIA concluded that some minimal treatments were warranted to mitigate traffic impacts associated with construction. The TIA determined all intersections in the study area are expected to operate at acceptable levels of service, with mitigation measures limited to the following intersections that were found to be operating at capacity:

- the Lemington Road/New England Highway intersection (AM peak only); and
- the Old New England Highway/New England Highway intersection.

The unmitigated significance of the impact on traffic congestion and road delays during the construction phase is assessed as **medium**. The likelihood is **almost certain**, and the magnitude is assessed as **minor**.

Proposed mitigations would serve to reduce the impact the construction workforce has on traffic congestion.

To minimise construction traffic impacts the TIA recommends:

- to reduce the risk of adverse traffic queueing at the intersection, outbound heavy vehicle activities accessing Lemington Road should be minimised where possible during the morning peak hour period (6.00 am – 7.00 am), and
- the Old New England Highway not to be used as a primary construction haul road to ensure traffic demand using this road is low; and
- documenting mitigation measures in a Traffic Management Plan (TMP), including a Vehicle Movement Plan (VMP).

The TMP will be prepared and implemented by the appointed construction contractor in accordance with Transport for NSW Traffic Control at Worksites and relevant Austroads guidelines and in consultation with Transport for NSW and Singleton Council. The TMP may consider matters such as the following:

- appropriate traffic management and signposting of access/egress points to minimise conflicts with vehicle movements on the road network;
- measures to minimise disruption to pedestrians, cyclists and motorists;
- development of Traffic Guidance Scheme (TGS) to manage traffic around, past or through the construction sites as appropriate; and
- consultation with the relevant road authority and stakeholders to inform road users of the proposed works on the road network including liaising with the public transport services (ie relevant school bus services and bus providers) during construction.

Access along the existing Lemington Road and Comleroi Road will be maintained during construction of the Project realigned road, and traffic control will manage traffic interaction, where required in accordance with any approved TGS. Mitigation measures serve to reduce the likelihood of the impact from almost certain to **possible**; however, the magnitude remains **minor**. The assessed significance of the impact of the construction phase on traffic congestion and road delays remains as **medium**. A summary of the assessment is provided in Table 6.3.

ii Operations

There would be no increase in the operations workforce and no predicted change to current Project operational contributions to traffic. However, some stakeholders engaged to inform the SIA reported concerns regarding continuation of traffic congestion contributed to by the ongoing operations workforce, and the impact which blasting at HVO contributes to travel delays.

A number of stakeholders reported blasting as a contributor to traffic concerns:

“Closing the road is the requirement of the Act to make sure a rock doesn’t hit you. The concern is the timing of the blasting 10.00 am – 12.00 pm is a good time but when the school bus is held up in the afternoon because they let the blast off after 3.00 pm that is the issue. This impacts the people at the other end of the bus waiting for their child to get off. It’s an inconvenience but if they change these times, it goes a long way to keeping the local happy.”

“The road is closed during blasts – for safety if there is a rock, there is a 2km distance of safety or if the blast is toxic and harmful. now there is notice.”

However, a local bus company stated:

“In the last 5 years we have never been held up from blasting. We have from road accidents not from blasting.”

“They do blast in the morning after our bus run and after we do our bus run in the afternoon.”

In relation to blasting, according to the 2021 HVO Annual Environmental Review, a total of 214 blast events were initiated at HVO; 153 blasts were fired at HVO South, and 61 at HVO North. As per the current conditions of consent, blasting occurred between the hours of 7.00 am and 6.00 pm Monday to Saturday and it is reported that no blasting was carried out on Sundays or Public Holidays. Details of the blasting included:

- no more than three blasts were fired per day;
- the maximum number of blasts fired during any week was nine (which is less than the maximum weekly blasting frequencies allowed in both approvals (12 for HVO North and 15 for HVO South));
- HVO closed Lemington Road a total of 1 hour and 8 minutes, on four occasions for an average of 17 minutes each time; and
- the Golden Highway was closed a total of 3 hours and 28 minutes, on 16 occasions for an average of 13 minutes each time.

Blasting is undertaken in coordination with the blasting schedule of neighbouring mines, including Ravensworth Operations and United Wambo.

In relation to the ongoing operation of the road network, the TIA found that the impact of the Project during continued operations on the local road network is anticipated to be minor and will perform at acceptable levels. The TIA concluded that some deterioration in the level of service at intersections along the New England Highway is expected to occur beyond 2035 (around Year 13 of the Project); however, this is due to background traffic growth on the road network, not the contribution of traffic from HVO. These intersections (Lemington Road, Old New England Highway and Liddell Station Road access with the New England Highway) would operate in a similar manner regardless of the Project.

The unmitigated significance of the impact on road safety risk associated with continuation of traffic congestion and road delays during operation is assessed as **low**. The likelihood is **likely**, and the magnitude is assessed as being **minimal**.

As per the TIA report, no mitigation measures are necessary to mitigate the impacts of the HVO traffic during operations as the Project will not adversely impact the road network. There is no change to the likelihood or magnitude of the impact and subsequently retains a **low** level of significance. A summary of the assessment is provided in Table 6.3.

Table 6.3 Summary of way of life impacts of continued traffic congestion and road delays

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Impacts of continued traffic congestion and road delays.	Road users	Construction	Local area	Medium	Medium
Way of life	Impacts of continued traffic congestion and road delays.	Road users	Operation	Local area	Low	Low

iii Project does not proceed

The TIA concluded that traffic congestion on the local road network, particularly the New England Highway, will continue irrespective of the Project. The TIA found that the impact of the continuation of HVO would be minor, and that the deterioration of the level of service at intersections along the New England Highway will be due to background growth of traffic volumes, increasing the difficulty for drivers to find a break in traffic when entering/exiting the intersections along the highway. Such traffic congestion would continue with or without the Project. It is noted that subject to the level of activity at other mines and industries in the region, people may still change their travel patterns to accommodate peaks in mine traffic on shift changes.

6.3.3 Impacts due to continued generation of dust and diminished air quality

i Operations

The creation of dust can impact on the amenity of a local area, including dust accumulation in homes and residential area and affect visual and recreational amenity (NSW Health 2017).

Concerns surrounding impacts from mine site dust often relate to "visibility" of dust plumes and dust sources. According to NSW Health, visible dust is usually due to short-term episodes of high emissions, such as from blasting.

Various local community members noted the nuisance of additional housekeeping and increased cleaning workload due to deposited dust:

“We are forever cleaning things – vehicles and washing, cleaning. You can’t keep things clean. We might clean the windows and buses and then in two days we have to clean it again.”

“The issue is I can clean the table outside today and it will be dirty again tomorrow, dust on everything.”

“Impacts everything, cars are filthy all the time and the windows are covered, and swimming pool is always dirty and we are constantly cleaning it from the dust.”

In the SIA community survey dust generation affecting air quality was identified as a potential negative impact of the Project by 19.1% of respondents whilst 40.5% of respondents were neutral. It was further noted by survey respondents that they were:

“Concerned about the dust generation and its impacts on the surrounding community as this will just continue for longer, whilst also acknowledging the dust also is generated by surrounding mines.”

The Air Quality and Greenhouse Gas Assessment (AQGHGA) undertaken for the EIS (Jacobs 2022) assessed the possible impact of dust, post-blast fume and odour, diesel exhaust, odour and other substances, and greenhouse gas emissions from the Project on the surrounding environment based on a 30 km radius from the Project area.

The AQGHGA notes that dust generation in the construction phase will be produced largely through the realignment of Lemington Road and has the potential to increase overall dust emissions from HVO in the early phase of the Project by 3 to 4%, but these increases are not predicted to be of a magnitude that will change the air quality outcomes for nearby neighbours. Management and monitoring of air quality outcomes will continue throughout construction in accordance with an approved Air Quality Management Plan.

During operations, modelling undertaken for the air quality assessment found that total suspended particulates (TSP) and deposited dust concentrations will comply with air quality criteria at all privately owned sensitive receptors not subject to existing air quality acquisition rights. Notably, this is the dust that community members are referring to when they observe dust settling on windows, cars etc. The Project will not be the cause of any exceedance of criteria relating to TSP and deposited dust at neighbouring residences, nor are exceedances of criteria predicted when contributions from other mines are also accounted for.

In relation to finer dust particles (PM₁₀ and PM_{2.5}), the air quality assessment found that the maximum 24 hour PM₁₀ and PM_{2.5} concentrations may continue to exceed air quality criteria from time-to-time; however, these events would be within the range of historically measured days above the criteria, excluding extraordinary events. The review of recent and historical air quality monitoring data showed that, in the representative year, all monitoring locations recorded between one and two days above the air quality criteria. Based on modelling outputs, the Project is not anticipated to change this outcome, and the potential for exceedances is expected to be successfully managed using existing management measures, as demonstrated by HVO’s air quality compliance history and reported in the Annual Environmental Reviews.

Further to the above results, under the NSW Government’s *Voluntary Land Acquisition and Mitigation Policy* (VLAMP), voluntary acquisition rights may apply to a landholder where, even with best practice management, the development contributes to exceedances of the specified criteria on more than 25% of privately owned land where there is an existing dwelling or where a dwelling could be built under existing planning controls. The assessment found that the Project may contribute to an exceedance of the VLAMP criteria for annual average PM₁₀ and PM_{2.5} at two properties:

- Receptor 308 (in Jerrys Plains). This receptor already has acquisition rights under the UWJV development consent relating to noise, and mitigation rights relating to noise under the HVO South Project Approval; and

- Receptor 121 (in Maison Dieu). This receptor already has mitigation rights for air quality and noise under the HVO South Project Approval.

With regard to post-blast flume, it was concluded that the Project will not lead to adverse air quality impacts if proposed site-specific pre-blast procedures are implemented.

Unmitigated, impacts related to continued feelings of frustration and annoyance regarding dust and air quality is assessed as **high**, with the likelihood of the impact occurring being **likely** and magnitude being **moderate**.

The Project will continue to implement best practice air quality management measures.

The Project seeks to provide a direct benefit to eligible properties, build trusting and long-term relationships. While the air quality modelling demonstrates the Project itself is unlikely to cause adverse air quality outcomes, HVO is aware of the contribution which existing and continued operations make to local and regional air quality. Separate to the properties who are afforded mitigation rights, HVO currently operates a near neighbour amenity resource (NNAR) program, which is a voluntary commitments to offer a water tank cleaning or supply of water filters to neighbours such as residences of Jerrys Plains, Maison Dieu, and Long Point that request such a service. While the NNAR program has primarily been positively received, some beneficiaries of the scheme expressed they have only been offered the NNAR a small number of times. To effectively mitigate confusion over the NNAR, HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.

HVO is also committed to ongoing high levels of communication and engagement under various community engagement mechanisms and strategies, including ongoing engagement with the broader community and interested organisations through holding quarterly HVO CCC meetings, distribution of quarterly newsletters, and implementation of the approved HVO environmental management plans.

HVO's complaints and grievance procedure (which includes a dedicated Project phone number and Project email), is a key mitigation measure providing the opportunity for stakeholders to raise complaints, grievances, and provide feedback relating to dust and air quality. The complaints and grievances mechanism will facilitate the timely response to grievances and enable the monitoring and reporting of grievances.

Mitigation measures serve to reduce the magnitude of potential air quality impacts on neighbouring properties impact from moderate to **minor** with a **possible** likelihood. The mitigated significance of the impact is assessed as **medium**. A summary of the assessment is provided in Table 6.4.

Table 6.4 **Summary of way of life impacts due to continued generation of dust and diminished air quality**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Way of life	Impacts and feelings of frustration due to continued generation of dust and diminished air quality	Local residents	Operation	Local area	High	Medium

ii Project does not proceed

If the Project does not proceed, then the way of life impacts due to continued generation of dust and diminished air quality experienced by near neighbours, and people living in the local and regional area, would gradually decrease over time as air quality improves, and the two properties that were proposed to receive acquisition rights for air quality would no longer be afforded these rights under the HVO Project (existing rights would be maintained under current approvals). However, it is noted that HVO is one contributor amongst numerous mining operations, power stations and other land uses such as agriculture to the local air quality. Impacts on quality of life from other mines and land uses in the area will therefore remain until mines throughout the region cease operation.

6.4 Community

This section provides an assessment of Project benefits and impacts upon community. The identified Project related benefits on community are:

- benefit of the Project contributing to the ongoing stability of the local population through ongoing employment opportunities; and
- benefit of continued royalty payments to the NSW Government.

The following Project derived impacts on community were identified:

- impact on sense of community due to population change; and
- impact on community cohesion due to divergent opinions on the Project.

6.4.1 Benefit of the Project contributing to ongoing stability of the local population

i Operations

The continuation of the current HVO operational workforce will contribute to population stability which provides certainty in planning and delivering social infrastructure and services. Such population stability also maintains community social cohesion with social networks and social capital being preserved.

The HVO workforce and their families primarily live in the surrounding local government areas of Singleton, Muswellbrook, Maitland, and Cessnock, with a small number residing in Dungog, Newcastle and the Upper Hunter. They are part of their communities and contribute to social vitality through participation in community organisation and events and supporting the provision of social services.

Research demonstrates that social infrastructure planning and provision often rely on “on population-based methods” with planning guidelines prescribing service provision and funding parameters. Such methods are adopted by agencies responsible for the provision of social infrastructure including primary schools, early childhood services, and community centres with public open space (Davern et al 2017).

Should the Project proceed, it will provide stability and continuity of employment opportunities for the existing approved HVO workforce of around 1,500 FTEs. Such population stability in the local and regional area will facilitate planned and well managed demand and service delivery.

The unenhanced significance of the benefit of the Project contributing to population stability, which facilitates planning and delivery of social services, is assessed as being **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.5.

To further enhance the positive benefits of workforce and population stability over the Project life, HVO will continue to encourage local workforce participation when new positions become available (when workers retire for example).

HVO will also take a coordinated and planned approach to mine closure. Workforce projections by HVO indicate that employment will reduce gradually, in line with the production profile, with operations at HVO South closing in 2045 and operations at HVO North running through to 2050. The workforce would also be supported and assisted in the transition from their current work roles, either within Glencore/Yancoal, other mining companies, or into other sectors.

As per the International Council on Mining and Minerals (ICMM) *Integrated Mine Closure: Good practice guide*, it is a requirement that a full assessment of social impacts is undertaken well before the cessation of operations (2019). This would enable HVO to better understand and manage the impacts on the community of operational closure, further minimising population change impacts on the local and regional provision of social infrastructure and services. Such planning would involve consultation with local and regional stakeholders and would explore potential legacy benefits for the community.

The enhanced significance of population stability benefitting on going social cohesion and planning and delivery of social infrastructure is assessed as being **high**. The likelihood of the impact occurring remains **likely**, and the magnitude of the impact is assessed as being **major**. A summary of the assessment is presented in Table 6.5.

Table 6.5 Summary of the community benefit of the Project contributing to ongoing stability of the local population

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Community	Benefit of the Project contributing to ongoing stability of the local population.	Local and regional community Vulnerable groups	Life of mine	Local and regional area	High	High (benefit)

6.4.2 Benefit of continued royalty payments to the NSW state government

i Operations

A royalty is the amount charged by the NSW Government under the *Mining Act 1992* for the transfer of the right to extract a mineral resource. It may be a coal royalty, mineral (non-coal) royalty or petroleum royalties. It is paid by the holder of the mining lease or sub-lease (NSW Department of Revenue 2022).

In regional areas, coal mining royalties make a significant contribution to delivery of infrastructure and services. In future years, state government planning for royalty allocation is anticipated to deliver this funding to impacted communities more directly and with additional transparency. While the Project has no control over how royalties are allocated, some interview respondents expressed the desire for a clearer line of sight on how royalties benefit impacted communities.

The Minerals Council of Australia (2021) identified that between 2010–2011 and 2019–2020, the minerals sector (including coal) contributed a total of \$238.8 billion in taxes and royalties to federal, state and territory governments, comprising \$132.8 billion in tax and \$106 billion in royalties.

The Economic Impact Assessment (EIA) of the Project (EY 2022) found that the total estimated net benefit of the Project to NSW will be \$4,848.5 million in Net Present Value (NPV) terms, comprising \$2,122.5 million in direct benefits Project, \$2,739.6 million in indirect benefits, and an estimated \$13.7 million in indirect costs.

The direct benefits of the Project include \$1,555.7 million in royalty payments, \$129.6 million in payroll taxes and \$39.7 million in council rates and land taxes.

The NSW Government's Resources for Regions program allocates state funding to support the ongoing prosperity of mining communities in regional NSW (NSW Government 2022a). In 2021 under round eight of the program, \$8,005,210 in funding was announced for the Singleton LGA in response to Council's application. \$6,955,210 of the funding was spent on infrastructure, and \$1,050,000 for community programs. The Singleton Council website provides a detailed breakdown of how funding was allocated (Singleton Council 2021). In addition, after a review of the program in 2019 an annual allocation of \$1 million is provided for LGA's affected by mining to ensure funding will flow where it is needed most. MSC has also applied for grants under round nine of the programs this year. The details of Projects that would benefit are posted on the MSC website (Muswellbrook 2022).

The Hunter Valley will receive 25 million dollars annually under the Royalties for Rejuvenation Fund, which was approved and launched in October 2022. The Hunter Regional Expert Panel (the Panel) will determine how these funds are allocated in accordance with the applicable legislation (Department of Regional NSW 2022).

The role of the Panel is to provide local knowledge and advice on Projects and initiatives designed to support economic diversification and create future jobs in coal mining communities by administering the funding (Singleton Argus 2022).

During in-depth interviews, feedback from service providers included:

"In regard to mining there is resentment by the community as so many royalties are paid to the government and the community don't get back our share in resources."

"Economic input in the community is so great, they are needed for quite a long time into the future to sustain economic employment and royalties for NSW government and taxation and the like."

"It could have a very negative impact on Muswellbrook and Singleton and goes further into the valley and into western Sydney if the supply of products and services to HVO and the other mines stop. The flow on effect is felt state wide and felt by government in terms of return reduced royalties and export dollars."

"Push for more royalties for the region to go into roads and development, and always demand for more."

The recent funding program changes provide the community with further clarity around allocation of state funds to coal mining communities, including Singleton and Muswellbrook.

The significance of the benefit of continued royalty payments to the NSW state government is assessed as being **high**. The likelihood of the benefit occurring is **almost certain**, and the magnitude of the impact is assessed as being **moderate**.

As the Project has no control over royalties or State Government funding allocations, this benefit cannot be directly enhanced. The assessed significance subsequently remains **high** as outlined in Table 6.6.

Table 6.6 Summary of community benefit of continued royalty payments to the NSW state government

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Community	Benefit of continued royalty payments to the NSW state government	Regional area and State community	Operation	Regional area and broader NSW	High	High (benefit)

ii Project does not proceed

If the Project was not to proceed, HVO's community contributions and contribution to royalties would end in June 2025 when approved mining at HVO North ceases.

Feedback from the Muswellbrook Business Chamber was that:

Closure could have a very negative impact on Muswellbrook and Singleton and goes further into the Valley and into western Sydney with HVO and [with closure of] the other mines - the flow on effect is felt state-wide and felt by government in terms of reduced royalties and export dollars.

Whilst the loss of this revenue stream would impact the funding of social infrastructure and services, it would require the NSW Government to find alternative finances to maintain current levels of funding committed to delivery of social infrastructure and services across the region.

6.4.3 Impacts on sense of community due to population change

The introduction of new groups of people to an area or the out flux of a proportion of the population can impact existing values and sense of community. While communities are generally resilient to natural population change, a rapid or large scale change can be a source of adverse social impact. In some cases, the influx of population can place pressure on local community networks and associations, and potentially create a social divide between established community members and non-resident workers.

The Project would not result in any change to the existing operations workforce and therefore there is little to no long-term substantial population change associated with the Project.

The Project may result in slight short-term changes to local populations through the temporary influx of the construction workforce which is anticipated to peak at 600 workers (for a duration of 3–6 months), with up to 180 non-local workers seeking accommodation in the local area. There were some concerns raised by stakeholders that the transient nature of construction and mining workforces had a negative effect on community identity and cohesion. As outlined in Section 6.1, due to the limited supply of required labour, 30% of the construction workforce may need to be sourced from places beyond a one-hour commute to the work site. This equates to 180 workers coming into the local area which represents a temporary increase of 0.6% to the population should all workers be accommodated in the local area. This is a substantially lower degree of population change than the 5.0% benchmark identified by Burdge (2015). On this basis it is not considered that the influx of the construction workforce would have any long-term impact on community networks and associations, but it may have a temporary impact on social cohesion if large number of Project construction workers are accommodated in a sensitive location in the community.

In terms of community concerns regarding the transient nature of populations associated with construction and mining, varied perspectives were raised by stakeholders. One landholder from Jerrys Plains spoke to the tensions between those who work in the mine and those who don't, raising that there is somewhat of a 'divide in the community'. Others perceived that with new people entering the area, there has been a reduction of community participation. However, many noted that the community's cohesion is resilient despite the transient nature of the population:

"Considering there is a large influx of contract workers in and out for the mining community there is a good sense of community and support in the community."

Communities in the local study area demonstrated strong social capital and sense of community with interview participants reporting that "Community spirit is a huge value" and "all my family are here, friends and networks". Multiple participants noted that they have lived in the area for 20+ years, with connection to place being valued by landholders.

Speaking to the challenges of maintaining community connectedness, some community members noted the transient nature of workforces:

“I’ve seen a change in the people there are new people in the area. The wave of new people who have come into the community...we are trying to get them more involved in the community.”

“Transient population with mining and construction and maintenance Projects and people coming and going.”

The unmitigated significance of the impact on sense of community due to Project induced population change is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is presented in Table 6.7.

Maintaining social trust and cohesion are matters of high importance to both HVO and the local community. While the Project would not result in any change to the existing operations workforce and therefore not generate any prolonged population change, the Project may result in slight short-term changes (3–6 months) which could have a temporary impact on community dynamics. Proposed mitigation measures include:

- prioritising local employment and procurement where possible to avoid changes to the local population caused by the influx of external workers;
- continued administration of HVOs Community Grants Programme which invests in programmes, events and services that promote community cohesion, connectedness and support; and
- continued stakeholder engagement to ensure that community benefits are being delivered to enhance the values of the local area and to ensure better targeting of community investment

The mitigated significance of the impact on sense of community due to Project induced population change is assessed as being **low**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **minimal**. A summary of the assessment is presented in Table 6.7.

Table 6.7 Summary of community impacts on sense of community due to population change

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Community	Impacts on sense of community due to population change	• Local and regional community • Nearby landholders	Construction/ life of mine	Local and regional areas	Medium	Low

i Project does not proceed

If the Project does not proceed, it is estimated that 30% of the workforce might find it difficult to attain comparable alternative employment in the local area and subsequently these workers and their families may migrate out of the region. Families of workers would be directly impacted as well as the communities they contribute to. If families relocate, it may result in social instability and diminished social networks.

The sense of community of rural localities in the local study area may be impacted by an outflux of people and families from the area. Indirect outmigration could also occur due to the loss of indirect employment associated with local contractors and suppliers supported by HVO.

Should 30% of the operations workforce and their families relocate due to the requirement to find alternative employment, this would equate to a 0.5% decline in total population of the local area. Singleton LGA would face the greatest population change with an estimated 0.9% decrease in the overall population. This falls under the 5% benchmark of population change creating an impact on social cohesion (Burdge, 2015). However, as this represents permanent population change, it can be considered a potentially significant impact on community composition and character should the Project not proceed.

6.4.4 Impact on community cohesion due to divergent opinions on the Project

Differing community values around economic, social and environmental impacts and benefits of the Project have the potential to divide communities. A particularly divisive issue for the region is the confluence between the Project's economic benefits achieved through coal resource extraction and increasing community concerns regarding climate change impacts.

The Project will enable further coal extraction as a resource for energy production. This directly contributes to the community's local and regional economic development without significantly increasing the Project footprint, being the continuation of a brownfield mine, and the community have shown strong support for these outcomes, as identified in Section 5.3 of this report.

Climate change is an indirect impact of coal resource extraction and consumption through greenhouse gas emissions. While the Project forms a small piece of the puzzle when it comes to climate change, this matter is nonetheless of high importance to the broader Australian community. It is noted that the Project will be subject to carbon regulation and pricing. The effect of the applicable legislation is to establish a stance that determines the balance of environmental and social impacts, while enabling economic and social benefits.

The Commonwealth Government's Net Zero 2050 plan was a divisive issue in the recent 2022 Federal election for the Hunter electorate, with the Labour Party representative winning 54%–46% against the Nationals candidate for the region. Labour demonstrated a +1% swing from the previous election, while the Nationals gained +3% (ABC 2022). In an article called "Hunter candidates clash over net zero in coal mining heartland" (McLeod 2022), the Labour candidate expressed general support for net zero emissions targets, while the Nationals party candidate did not. The community divide represented by the election outcome may, in part, be attributed to the divergence of position regarding mining and Net Zero 2050. Electoral results indicate the community split and shift in opinion on this issue over time and demonstrate that coal and planning for transition away from mining is a principal concern for the regional community.

It is notable that public submissions made regarding Modification 3 (HVO North) and Modification 5 (HVO South) raised concern around greenhouse gas emissions. Appendix B (EMM 2020), Survey Responses identifies that of 105 responses, Air Quality (67) Climate Change (59) Ecology (57) and Cumulative Mining Impacts (56) were perceived as having a "very negative" potential impact. Further assessment of the impacts revealed that most respondents who were "strongly opposed" to the Project were from outside of the local area. While 11 strongly opposed respondents did not specify their location, 31 were from outside of the local and regional study area (13 from other states), and 13 strongly opposed respondents were within the regional area. Inversely, 7 "strongly supportive" residents were from outside of the regional area, and 15 were from inside it.

The 2020 survey indicated that people from outside of local and regional Project areas are actively interested in and provide feedback on mining Projects. This may be due to the increased availability of information, or the fact that many of the impacts perceived as "very negative" can be experienced beyond the Project's immediate geographical area. This may also be due to interest-focused activism, which is also geographically dispersed, as information is disseminated through special interest groups over social media.

In relation to the Project, some members of the community identified climate change as a potential impact of concern through the online community survey, with 7.3% perceiving the issue as very negative (3 respondents), 17.1% noting the issue as negative (7 respondents) and 41.5% identifying the issue as neutral (17 respondents). One landholder was concerned that the Project does not support government commitments to deliver green energy and questioned “why are we then doing the opposite”.

In summary, the Project has demonstrated consistency with the applicable legislation around emissions and GHG targets. It can also be seen that the local community highly values the Project’s benefits, though there are significant concerns related to climate change which are likely to continue to cause dissent around the Project. Such divergence of opinion has the potential to cause conflict and have a negative impact on social connections and community cohesion.

The unmitigated significance of impacts on community cohesion due to differing opinions on the Project is assessed as being **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment is presented in Table 6.8.

The AQGHGA (Jacobs 2022) report finds that HVO’s “mitigation measures, strategies and initiatives outlined above demonstrate that HVO is actively engaged in minimising greenhouse gas emissions associated with their coal operations and supporting the State government objectives of net-zero emissions by 2050”.

The AQGHGA also notes that HVO will review and update greenhouse gas minimisation measures, including consideration of electricity efficiency and source, diesel use and fuel efficiency, where reasonable and feasible. The HVO Air Quality and Greenhouse Gas Management Plan will also be updated to incorporate the Project, subject to conditions of any development consent.

While this approach may minimise the Project’s direct greenhouse gas emissions, it will not reduce emissions from the use of coal, though these occur overseas and will be managed under the relevant country’s policy frameworks and subject to future emissions reduction technologies. As such, the impact pathway for community dissent around climate change is not resolved. The effectiveness of mitigation measures will be dependent upon thorough ongoing stakeholder engagement with the local and broader community.

Historically, Yancoal and Glencore have assisted the community through shocks and stresses related to climate related events through financial support. This includes a \$2 million flood recovery pledge in March 2022, bushfire relief in 2020 (\$1 million), North Queensland flood recovery in 2019 (\$1 million) and financial support for farming families affected by the drought in 2019 (\$1.7 million) by Glencore (Glencore 2022). Glencore also provided \$1 million to BlazeAid, Aussie Ark and NSW Rural Fire Service in 2020 (Thompson 2020). Yancoal provided \$1.4 million in 2021 and \$2.2 million in 2020 via its Community Support Program to local and regional health, environmental, education and training, arts, culture and community initiatives (Yancoal 2020 and 2021). These financial contributions do not resolve the impacts but do assist in building resilience and relieving conflict caused by shocks and stresses due to climate change.

The mitigated significance of impacts on community cohesion due to differing opinions on the Project remains **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact remains **moderate**. A summary of the assessment is provided in Table 6.8.

Table 6.8 **Summary of community related to impact on community cohesion due to divergent opinions on the Project**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Community	Community cohesion due to divergent opinions on the Project.	All stakeholders	Life of Mine	Local and Regional areas	Medium	Medium

The closure of HVO South and HVO North would reduce the export of coal to overseas consumers and would mean a cessation of direct production of greenhouse from mining activities at HVO. It is likely that future site rehabilitation and development related to the proposed post-mining land uses will also produce some emissions on a smaller scale. Cessation of mining in 2025 in accordance with the current HVO North development consent would not relieve the impacts of climate change already predicted to be experienced by the community but may reduce the potential for associated social conflict and division.

6.5 Accessibility

This section provides an assessment of Project benefits and impacts upon accessibility. The Project related benefits on accessibility identified are:

- benefit related to access to community grants and sponsorship.

The identified potential Project derived impacts on accessibility are:

- impact on the increase demand for local/regional social infrastructure and services during the construction phase of the Project;
- impact on an increased housing demand impacting rental affordability and availability during the construction phase of the Project; and
- impact on constraints for vulnerable groups to access short term accommodation (STA) due to the construction workforce.

6.5.1 Benefit related to access to community grants and sponsorship

HVO has provided more than \$240,700 in funding to 79 Projects since 2018. A table demonstrating the full history of the mine's financial support for the regional area of Singleton and Muswellbrook is provided as Appendix G.

The HVO Project has a legacy of investment in the communities of the Singleton and Muswellbrook regional area, which is expected to continue for the duration of the Project. In 2021, HVO provided \$37,000 to 14 local Projects and initiatives, which included funding for school holiday activities at the local Singleton PCYC, local schools, events at community spaces, support for local recreation activities, education support and events run for social causes such as ovarian cancer.

Groups with interest in the continuation of grant funding may include community groups, schools, service providers, in particular social services that receive funding from the mine and the people who receive support from these social services.

When grants provided by the mine for community capacity building are available, information is accessible on Project HVO's community investment program website (Glencore 2022a), in Project newsletters and in local newspapers such as the Hunter Valley News (2022) and the Singleton Argus (2022). The process for selecting successful applications is available, though the policy for selecting grant recipients is not publicly accessible.

Residents of Jerrys Plains, Maison Dieu and Long Point rely on Singleton and/or Muswellbrook for social infrastructure and services. The services in these communities that are available outside of Singleton and Muswellbrook are limited to a primary school and police station located in Jerrys Plains. The social baseline (Chapter 4) identifies communities which are socially disadvantaged and may receive the most benefit from outside financial assistance. Camberwell has a particularly high incidence of disadvantage factors.

Future commitments proposed as part of the Project include:

- Commitment to fund closing the gap initiatives for Indigenous Australians, for example in relation to life expectancy, educational achievement, employment and mental health, to the value of \$1,000,000 over the first 10 years of the Project. This commitment is part of a broader social and cultural mitigation and enhancement strategy committed to by HVO, as an outcome of cultural values workshops held with RAPs (as discussed in Section 5.3.7). Further details on measures committed to by HVO is provided in Section 6.6.
- Continuation of funding through the community investment program. The community investment program funding rounds will be a public application process with two funding rounds per annum, each April and September. HVO may also consider applications outside of the funding rounds; however, this will be limited to Projects that have a valid reason for out of round funding or considered of high value. This strategy is set to be reviewed in 2023.
- A Voluntary Planning Agreement aimed at mitigating direct impacts of the Project to be established with Singleton Council, which may be used by Council for community programs.

The above information is provided as an indication, noting that future community grants are a voluntary added benefit offered by HVO on the premise that the Project proceeds. There is no legislative requirement for the mine to proceed with these contributions.

Community and stakeholder feedback is strongly supportive of the economic benefits of Project the continuation of HVO and commended Project HVO on its contributions.

Community survey responses showed that 85.4% view the Project's support for schools, health services and recreational groups and facilities as 'positive' or 'very positive' and one respondent identified:

"HVO Continuation Project will mean continuation of community programs and support for local schools, services and groups into the future."

The workforce survey responses stated that in addition to providing jobs and financial security for workers, the Project will support community growth and development in the region.

The in-depth interview with Singleton Council indicated:

"We have a policy position on VPA" – this position is provided in the "Community and Economic Development Fund Policy" (Singleton Council 2021a).

MSC indicated that:

"We don't get HVO rates, right now we only benefit from employees who live here and their contributions to rates."

"We don't have a planning agreement with HVO because the mine has been around for such a long time."

"HVO traffic uses the Muswellbrook Road network and does not contribute to maintenance costs."

During in-depth Project and social impact assessment interviews, a local resident stated:

"They [make] generous donations to the community, people accept them. They should accept the mines."

"I know they donate money to Jerry Plains school."

Singleton and Muswellbrook business chambers indicated that they have a good working relationship with HVO, which results in financial benefits for local businesses, as demonstrated in Section 6.9.1. Interviews with the Singleton and Muswellbrook Business Chambers and with service providers identified:

“The neighbourhood centre has received grant funding from HVO one or two times over the last 10 years. Once was for \$3,000 for a community garden in the backyard for our gardening group. We don’t get a lot of money from HVO because you have to pick the right thing and they tend to like you to publicise it too. But if we need to access funding we will.” The Neighbourhood Centre is a self-identified “soft entry point” for the community, providing connections to other services and community activities. They are also a hub for service provision, including visiting services such as “Upper Hunter Homeless Support, Alcoholics Anonymous, Women’s Health Clinic, Financial Counselling, Interrelate Family Centre/Mediation, Lifeline Aftercare, Dr Gail McDonnell Psychologist.”

“They do support some things in town, but this is not necessarily supporting vulnerable groups like they can’t help the neighbourhood support me feed more people I can’t apply for HVO money like I can apply through the other mines.”

“I can apply \$5,000 to put people through first aid course but we need \$\$ to pay for more employees to help be there to cook meals and provide information.”

“If there is a VPA, council has a stated agreement and if the money goes into the fund and the council looks at spending each year on community Projects and diversity and alert economic and help people.”

“I would like to see a revamp of the HVO sponsorship/grant model.”

“It’s time to speak to HVO about some sponsorship and funding. We need to further our relationship.”

Interviews with two local Aboriginal service providers identified that:

“Helping business, helping fund programs and Projects and gain employment is a big one [benefit] and this is helping community.”

“Grants and funding assistance is the main thing [regarding key challenges of indigenous businesses as] finding people who are genuine and interested in helping us and interested in getting us off the ground and contributing to the community [is difficult]”. The stakeholder also noted “We currently pay for things from our own pocket.”

“Glencore funding support[ed?] Aboriginal art office fit out.”

Some interviewees expressed frustration with the perceived lack of access to funding offerings:

“There has some frustration with difficulty of accessing the programs - we have been advised accessing HVO grants is tricky and this impacts community groups applying for funding.”

“Asking for funding with HVO is tricky though, so I just need to put some time into this”

The unenhanced significance of the benefit related to community grants and sponsorship is assessed as being **high**. The likelihood of the benefit occurring is **almost certain** and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.9.

A possible enhancement for the benefit of community grants, contributions and partnerships is through provision of improved transparency around possible funding pathways.

An easy and accessible application process would ensure that all community groups with a need for funding can easily apply for funding when it’s available, enabling their resources to be well spent and ensuring equal opportunity for all interested parties.

The *Future-proofing the Hunter: Voices from our community* strategy (Hunter Renewal and Hunter Jobs Alliance 2021) has set a priority for grants and training for local businesses. HVO could consider partnering with the Alliance to deliver grants funding which has co-benefits targeted at capacity building and future transitions planning (see Section 6.9.2 of this report).

Strategic targeting of grant investment may also lead to improvements for communities experiencing extreme social disadvantage in the region. Collaborating with local councils to coordinate funding allocation from a Voluntary Planning Agreement is strongly encouraged to improve the potential social benefit, as can be seen in the case of the *Community and Economic Development Fund Policy* Singleton Council (2021) established in collaboration with Glencore and other local mines in the region.

The enhanced benefit related to community grants and sponsorship is assessed as being **high**. The likelihood of the benefit occurring is **almost certain** and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.9.

Table 6.9 Summary of accessibility benefit related to community grants and sponsorship

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Accessibility	Benefit related to community grants and sponsorship	Community groups, schools, service providers, in particular people in the local area	Operation	Local and Regional areas	High	High (benefit)

i Project does not proceed

If the Project does not proceed, economic support for local community groups and programs would continue to be in the order of \$100,000/year until 2025 when it would likely cease with the closing of operations at HVO.

HVO implements a range of strategies to manage social impacts and maintain a positive relationship with the community. These strategies include community engagement under HVOs various community engagement mechanisms and strategies (HVO CCC, quarterly newsletters, website, complaints management, and HVO's internal Stakeholder Community Engagement Plan and Environmental Management Framework), and implementation of the approved HVO environmental management plans.

With the support provided by HVO, it is likely that some community groups and programs would no longer have the financial capacity to provide ongoing services.

6.5.2 Impact on the increase demand for local and regional social infrastructure and services

Impacts on social infrastructure and services due to Project induced population change is a common social impact associated with major projects. The following aspects of the Project have the potential to impact on social infrastructure and services:

- change in demand due to an increase in population during the construction phase of the Project; and
- changing behaviours of users, such as workforce rosters, which can determine patterns of peak service demand.

With respect to the construction workforce, there will be a peak of approximately 600 FTE workers working on site over a construction period of up to 5 years. Assuming the median-case scenario, 30% (180 workers) of the construction workforce will be NLH which means they will need to be temporarily accommodated within the local, regional area and area of reference when working. Such workers may also utilise particular services while temporarily residing in the area, such as health, emergency, recreation services, community services and transport/road infrastructure. The median-case scenario for NLH will result in a 0.6% population increase in the local area and a 0.4% increase in the regional area. Whilst this does not represent a significant increase in population, there may be some associated increase in demand for specific infrastructure and services.

Low income and vulnerable communities are most at risk of being affected by the increase in demand for social infrastructure, with service providers commenting that:

“People on lowest wages, people are working hard, and they only get a basic wage there isn’t enough to pay the rent and there is nothing left over. People on low incomes are constrained the most.”

“I think everyone thinks everyone is rich here, but there are issues like health, education and housing issues and homeless people are hidden under the carpet.”

Correlating with findings from the social baseline (see Section 4.6), health facilities in the local community were described by service providers to be ‘basic’ with access to specialist services being particularly difficult (see Section 4.6.2). Beyond basic healthcare, it was reported that community members often need to travel outside the regional area to Newcastle or Maitland to access more comprehensive medical services. Travelling regionally to access health services was reported by service providers as a key challenge for low-income and vulnerable communities:

“Transportation is a high issue [in accessing health services] – Newcastle, Maitland...they just can’t afford to get there.”

“Public transport is limited there is a local bus service, and you can catch public transport from Muswellbrook to Maitland, but the times are limited... If you missed the 1pm train...you have to wait for the next day.”

“Referrals are to Maitland and to Newcastle and you can’t dictate your appointment time with public transport...they charge \$70 return for community transport but who can afford that.”

Should demand for social infrastructure in the regional area increase due to the construction workforce, low-income and vulnerable communities may face challenges in accessing services. Service providers have further indicated that for more complex health service provision such as MRI scans, high risk maternity care and mental health care, community members need to travel outside the regional area. Based on the workforce survey data, HVO employees’ access and utilise health services in the local area as well as resource centres across the region, specifically Maitland and Newcastle.

Overall, there is a reported high level of demand for health, emergency, community and transport services in the Singleton LGA; however, service providers did not directly link this demand to the HVO workforce and their families. The *Singleton Community Strategic Plan* (2022) recognises the need to expand health care provision in Singleton, with the procurement of an MRI machine and improved mental health services at Singleton Hospital.

Whilst prolonged demand on social infrastructure is not anticipated, the presence of 180 construction workers may mean that health services such as GPs and emergency services may experience temporary elevated demand.

There is no predicted change to the currently approved operational workforce levels, and it is assumed that the workforce of around 1,500 people currently employed by HVO will continue to utilise the social infrastructure and services in the places they reside. Of the current operational workforce, it is assumed that 129 employees live outside the threshold of a 1 hour commute. It is assumed that these 129 employees will continue to be accommodated in local short-term and rental accommodation and during this time may utilise services in the townships of Singleton and Muswellbrook. The workforce roster (ie 7 days on/7 days off and 12 hour shifts) dictates when these workers are in the local area and potentially accessing services. Changes to such arrangements will affect patterns of peak service demand generated by this cohort of the operational workforce.

The unmitigated significance of increased demand for local and regional social infrastructure and services is assessed as being **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is presented in Table 6.10.

HVO could seek to further reduce pressure on social infrastructure and services through the following measures:

- provision of first aid facilities at work sites;
- engaging in communication with health care providers (hospital services, health and wellbeing services and GPs) across the regional area to ensure they are informed regarding the Project schedule, workforce arrangements and workforce size;
- if applicable and where possible, encouraging construction workers to seek routine health care check-ups and any required pre-employment medicals at their place of usual residence and not in communities when on shift roster; and
- consider direct monetary contributions to support improvements to health facilities and services such as through the Community Grants Program.

There is a further opportunity for HVO to consider contribution to community infrastructure and services through commitments detailed in a SIMP or Voluntary Planning Agreements (VPA).

The mitigated significance of the impact of increased demand for local and regional social infrastructure and services is assessed as being **low**. The likelihood of the impact occurring is **unlikely**, and magnitude of the impact is assessed as being **minor**. A summary of the assessment is presented in Table 6.10.

Table 6.10 Summary of accessibility impact on the increased demand for local and regional social infrastructure and services

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Impact on the increase demand for local and regional social infrastructure and services.	Mine workforce, their families and local residents living in Singleton and Muswellbrook LGA	Construction	Local and regional area Area of reference	Medium	Low

a Project does not proceed

The closure of HVO North and HVO South and the loss of around 1,500 operational jobs may place further pressure on social infrastructure and services. Loss of employment can place significant strain on affected individuals and their families and increase demand for services such as mental health, family support and employment and training services.

Community service providers noted the scarcity of mental health services in the regional area:

“[There] is a shortage of [mental health] counsellors here – if you receive an appointment, it might take 6 weeks to see someone or longer.”

Muswellbrook Council noted that access to specialist services, like mental health, is very difficult and often can only be accessed by travelling to other townships in the area of reference such as Maitland.

In this context of under supply, any increase in demand for social services can have a significant impact on access and availability.

The social baseline indicates that there is:

- high levels of unemployment in the local and regional area compared to the NSW; and
- high levels of youth unemployment in the local and regional area.

This suggests that there is currently a high demand for employment services, which was confirmed by employment service providers engaged in undertaking the SIA.

6.5.3 Impact on an increased housing demand impacting rental affordability and availability

It is likely that all construction workers sourced from within a one-hour commute (LH) will be accommodated at their existing place of residence within the local, regional area and area of reference. As outlined in Section 6.1, the assumption that around 30% of the construction workforce would need to be sourced from beyond a 1 hour commute distance, would result in up to 180 construction workers needing to be accommodated when working on the Project. It is anticipated that the preferred form of accommodation sought by these workers would be short-term accommodation (hotels/motels etc); however, due to the limited availability of short-term accommodation, rental accommodation may also be sought.

HVO owns approximately 40 properties in the areas surrounding the mine, eight of which are vacant and 32 are being rented to HVO mine employees. As outlined in Table 6.11, all vacant properties are scheduled to be demolished and therefore not able to be used to accommodate Project workforces.

Table 6.11 HVO home ownership

Status	Jerrys Plains SSC	Maison Dieu SSC	Long Point SSC	Gouldsville SSC	Warkworth SSC	Lemington SSC	Ravensworth SSC	Total
HVO owned – vacant	0	2 ¹	0	1 ¹	6 ¹	0	0	8
HVO owned – occupied	7	6	1	5	7	5	1	32
Total	7	8	1	6	13	5	1	40

Notes: 1. Property scheduled to be demolished includes Maison Dieu, Gouldsville, Warkworth, totals 8 properties

Consultation with local real estate agents and community service providers revealed highly constrained availability of private rental properties in the regional area. It was communicated that the region has recently experienced a substantial increase in demand for properties for rent and for purchase, largely as a consequence of the COVID-19 pandemic which prompted increased rates of migration away from population centres to relocate in regional areas.

While data describing the supply of short term accommodation in the Singleton Council recorded 330 rooms with an average occupancy rate of 65.4%. available in 2011 and in 2016 there were a recorded 227 rooms of short-stay accommodation in the Muswellbrook Shire Council, with an average occupancy rate of 40.6%. It is estimated that in the Hunter Region there are 7,010 rooms of short-stay accommodation, with an average occupancy rate of 56.1% (see Section 4.5.3).

In 2022, there were more than 326 active Airbnb rentals in the regional area, with the majority in Singleton (294). There are an estimated 1,147 active Airbnb rentals within the area of reference with 1,025 properties within Cessnock LGA and 122 in Maitland LGA (see Section 4.5.3). However, feedback provided by stakeholders spoke to a trend of properties being purchased and transferred out of the stock of private rental or owner-occupied housing and into the short-term accommodation or holiday rental market.

Many service providers spoke to the challenge faced by people/families on low incomes ‘competing’ with mine workers on significantly higher incomes. People employed by the mine are perceived as being more competitive in the rental market and being able to afford higher rental payments.

“While rents continue to increase, it becomes a matter of affordability for a lot of renters. There are a lot of people applying for properties that they just can’t afford and the options for those renters are very limited. This isn’t isolated to just our area, it’s a broader issue across the State.”

“Finding a rental is difficult. If mines want to rent a house, they pay a lot more money than the average person that works in Woolworths. Those people on lower incomes are competing against the mines.”

“Rental property availability in Singleton is null and void and extremely difficult ... There are at least 60 to 70 people applying for the 1 house.”

Feedback from community service providers highlighted that housing constituted the predominant challenge faced by clients, with little funding being allocated to assist the capacity of services to respond effectively. Lack of affordable housing has left many vulnerable people experiencing housing stress and homelessness and concerns were raised that the Project could exacerbate these vulnerabilities.

“The people we see are under housing stress, they are living in cars, and can’t rent anywhere and they can’t afford to rent and a % of them have jobs and just can’t find anywhere to rent.”

“Client had rented for 3 years and had a good rental record and was given the eviction notice so the owner could bump rent up from \$300 to \$750 per week.”

A local real estate agent highlighted that, apart from mining and construction workers, it is predominantly low-income families that are seeking local rental accommodation. Vulnerability in terms of access to housing is heightened in regional towns such as Singleton and Muswellbrook where there are very limited alternatives available should a person or family find themselves priced out of the housing market.

Analysis of housing affordability trends in the local and regional area (Section 4.5) shows:

- a trend of increasing residential property prices and increasing demand from buyers;
- decreasing housing affordability; and
- low rental vacancy rates with a corresponding limited supply of available rental properties.

Singleton Council’s draft Local Housing Strategy reflects these observations identifying that: *Changes in demand in industries such as mining mean that temporary workers may need to find accommodation in market rental stock which can increase competition with local residents* (Singleton 2021).

The influx of up to 180 construction workers due to the Project may result in additional demand for rental accommodation which places upward pressure on rental prices. However, it is also noted that the peak construction period in which there is the potential for heightened demand for accommodation is only anticipated to occur for up to 6 months. Subsequently any upward pressure on rental prices is likely to be marginal and short lived and therefore potential impacts on vulnerable groups would possibly not eventuate.

The unmitigated significance of impacts on accessibility to the local rental market is assessed as being **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.12.

Effective mitigation of this impact requires a planned approach to workforce accommodation to avoid negative impacts on the rental market in the local and regional area. This will be further considered by HVO as part of a SIMP should this be required.

Mitigation measures which serve to avoid negative impacts on the capacity and affordability of the local rental market include:

- where possible prioritise other forms of workforce accommodation during the construction phase of the Project; and
- maximise local workforce participation.

i Prioritise other forms of accommodation

Alternative accommodation options which avoid additional demand on the rental market include short-term tourist accommodation, demountable/towable buildings and cabins or temporary workforce accommodation. Private rental accommodation is also available via platforms such as Airbnb; however, feedback from councils and real estate agents is that these serve to reduce the overall supply of housing available for (long term) rental.

In addition, HVO owns a small number of houses in the communities surrounding the mine, most of which are occupied or scheduled to be demolished (see Table 6.11). Should HVO find it feasible, there is an opportunity to explore using this land for temporary accommodation or if these properties became vacant, some members of the construction workforce could temporarily reside in these HVO-owned properties.

Singleton Council's draft Local Housing Strategy (see Appendix C.3) identified an opportunity to "increase the amount of housing aimed at short-term stays and temporary workers [which] would reduce pressure on market rental dwellings and contribute to reducing rental stress".

ii Maximise the number of local hires

Maximising the proportion of the workforce sourced from the local and regional area would reduce the number of NLH requiring temporary accommodation. While there is a mature mine construction industry in the region, there is a limited pool of applicable skills and a low unemployment rate, and it has therefore been conservatively assumed that around 30% of the construction workforce may need to be sourced from outside the region. Through a highly targeted construction workforce attraction strategy which incentivises local employment, this proportion may be reduced.

The mitigated significance of the impact on accessibility to the local rental market is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is presented in Table 6.12.

Table 6.12 **Summary of accessibility Impact on an increased housing demand impacting rental affordability and availability**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Accessibility	Impact on an increased housing demand impacting rental affordability and availability	- Mine workforce, their families and local residents living in Singleton and Muswellbrook LGA. - Vulnerable groups .	Construction	Local and regional area Area of reference	Medium	Medium

iii Project does not proceed

As discussed above, impacts on housing would depend on where the workforce lives at the time they are no longer employed. Currently, the majority of the workforce lives across the Hunter Region (including Singleton Muswellbrook, Maitland, Cessnock, Upper Hunter) as well as some living in other areas across NSW. It is assumed that:

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

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

- for low-income households and vulnerable groups, access to the private rental market could be made easier; and
- for local businesses and services requiring additional workforce, prospective workers would more likely be able to find affordable housing.

Both Singleton and Muswellbrook Shire Council spoke to the benefits towards greater access to housing and short-term accommodation should the Project not proceed.

6.6 Culture

This section provides an assessment of Project benefits and impacts upon culture. The Project related benefit identified in relation to culture is:

- benefit from the ongoing support of empowerment programs for local Aboriginal groups.

The following Project derived impacts on culture are assessed:

- impact on the ability of Aboriginal people to maintain connection to country and waterways; and
- impact of disturbances to cultural artefacts or sites.

6.6.1 Benefit from the ongoing support of empowerment programs for local Aboriginal groups

Yancoal and Glencore engage in a number of Indigenous community initiatives, including:

- as a long-term partner of the Ungooroo Aboriginal Corporation, which helps to build business capacity within Aboriginal communities;
- through the Indigenous Youth Leadership Program which enables Aboriginal youth to build leadership skills (Glencore Coal Community Investment 2021); through the Galuwa Scholarship Program which has provided almost \$2 million for 130 scholarships for Indigenous students in partnership with the New South Wales Department of Education (Glencore 2022);
- the support of \$100,000 per annum for the Clontarf Foundation, to support indigenous youth education and employment pathway services throughout Australia (Yancoal 2019).

Indigenous groups interviewed as part of the SIA commented that the current funding program is short term focussed and is insufficient to meet the needs of local indigenous groups.

At the time of the 2016 Census, there were 1,516 Aboriginal and/or Torres Strait Islander people in the local area (50.1% male, 49.7% female), comprising 7.5% of the total population within the local area. In the regional area, there were 2,644 Aboriginal and/or Torres Strait Islander people (6.8% of the total population), and 17,321 in the area of reference (5.2% of the total population). These proportions are higher than the proportion of Aboriginal and/or Torres Strait Islander people across NSW (216,176, or 3% of total population). Jobactive data shows 383 indigenous people who reside in Singleton and Muswellbrook were registered for employment assistance in June 2022 and accounted for 24.1% of the total caseload for the area.

The Aboriginal population nationally has a lower life expectancy that is particularly acute in Aboriginal males (AIHW 2020), with much of this gap explained by the relationships between increased socioeconomic disadvantage, worsened mental health outcomes, and health risk behaviours, including greater proportions of smoking and alcohol use (AHMAC 2017).

One indigenous stakeholder noted:

“Confidence is a barrier, and it doesn’t help when the mines given them a traineeship and after the traineeship is complete, they are not offered employment when its finished. It is disheartening and their confidence is taken right back to the start, and we have to build them up again and what happens is the mental health cycle happens all over again. And this happens with other businesses too.”

An identified key challenge for Aboriginal businesses is how to apply for grants and funding assistance, which one indigenous stakeholder explained:

“Finding people who are genuine and interested in helping us and interested in getting us off the ground and contributing to the community. We currently pay for things in our own pocket and having people who can spend their time to help us [would help].”

“Currently we have fulltime jobs, and we have to have sick days from our jobs so we can get this off the ground. Help to assist in economic structure and we need help to make this a viable business so we can pay wages.”

The unenhanced significance of benefits derived from the ongoing support of empowerment programs for local Aboriginal group is assessed as **low**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as **minimal**. A summary of the assessment is presented in Table 6.14.

Cultural benefits may be enhanced through more significant and sustainable funding for Indigenous programs and creation of a partnership which empowers local Aboriginal people.

Recognising this, HVO held a cultural values workshop with RAPs to identify key areas of concern within the local Aboriginal community and discuss options for meaningful enhancement measures. Participants noted the challenge for the future is to embrace a new partnership between Indigenous and non-Indigenous Australians. The core of this partnership for the future is closing the gap between Indigenous and non-Indigenous Australians on life expectancy, educational achievement and employment opportunities.

Discussions between HVO and the RAPs at the workshop enabled the identification of a number of initiatives across key closing the gap themes including health, education, business, finance, employment, culture, and community. As an outcome of the workshop, HVO has committed to meaningful mitigation of Aboriginal cultural heritage impacts of the Project. Initiatives are summarised below in Table 6.13. These measures will be further developed and documented in the SIMP for the Project.

Table 6.13 Social and cultural enhancement measures for the Aboriginal community

Theme	RAP feedback	Proposed mitigation measure
Employment	- Aboriginal identified positions need to be more meaningful. Consideration should be given to committing to retaining suitable employees for a period of time longer than three months. - There are mental health issues, especially around confidence and sense of self worth if Aboriginal Employees are seen as a means to gaining a grant, rather than being recognised for their own merits. - Short term employment affects superannuation, increases need for welfare. - Opportunities for permanent employment need to be maximised.	To assist in closing the gap HVO would consider a program to assist in increasing job readiness and work experience for local Aboriginal people. HVO would investigate linking programs with a third party provider, and any similar programs that have been established by the participants in the HVO Joint Venture. The program would initially run for the first 5 years of the operations and may be continued following an implementation review.
Business	- Support of developing Aboriginal businesses. They need capital, contracts and business training, school based training, subsidised wage for school leavers entering a program. - HVO should consider contracting Aboriginal businesses. - Training and support should be given to Aboriginal business owners so that they can make their tenders more competitive. Support should be given to help them get through the door. - Aim to build long standing contracts and ongoing partnerships. - Consider providing procurement training ie grant and tender writing, so that proposals and tenders for Aboriginal businesses can be more competitive.	As part of the development of the SIMP for the Project, HVO would liaise further with the Aboriginal Community to define an appropriate location and a frequency where briefings could be held on the HVO procurement processes to enable Aboriginal suppliers to be able to tender for work. In addition to briefings, HVO would consider providing funding to support business/procurement training programs. This would be considered as part of the Closing the Gap funding program to be detailed in the SIMP for the Project.
Closing the Gap	- A trust fund should be set up to service Aboriginal people in the valley until the mine ceases in 2050. Aboriginal people are able to apply for funding for Closing the Gap initiatives. - Consideration to be given to offering microloans for white goods, cars, repairs to property. - The trust fund should be aligned with the Government's Closing the Gap initiatives. - Our challenge for the future is to embrace a new partnership between Indigenous and non-Indigenous Australians. The core of this partnership for the future is Closing the Gap between Indigenous and non-Indigenous Australians on life expectancy, educational achievement and employment opportunities. This new partnership on Closing the Gap will set concrete targets for the future: within a decade to halve the widening gap in literacy, numeracy and employment outcomes and opportunities for Indigenous children, within a decade to halve the appalling gap in infant mortality rates between Indigenous and non-Indigenous children and, within a generation, to close the equally appalling 17-year life gap between Indigenous and non-Indigenous when it comes to overall life expectancy.	Following grant of approval, as part of the SIMP for the Project, HVO would develop a funding framework to enable funding of programs and Projects that align to Closing the Gap initiatives or community mental health, to the value of \$1,000,000 over the first 10 years of the Project. This may be continued following an implementation review.

Table 6.13 Social and cultural enhancement measures for the Aboriginal community

Theme	RAP feedback	Proposed mitigation measure
Mental Health and Addiction	• Previously, the Government has opened rehabilitation facilities, only to close them down again shortly after. • For residents of Singleton and Muswellbrook, the closest mental health facilities are almost an hour away (in Newcastle). There aren't enough mental health/rehabilitation facilities in Newcastle, or even NSW. • There have previously been government funded facilities that incorporate western and traditional healing methods, especially in regard to mental health; however they are no longer operational. • All the local initiatives put in place keep losing their government funding, however there is still a need for them to be in place. • There would be value in having men's/women's groups – facilitated mental health programs. • Mental health initiatives targeted towards Aboriginal youth are recommended. • Support should be given to support Aboriginal people to be job ready and mentally fit for work. Empowering confident youth in the workforce. • There is Aboriginal identified support for drug rehabilitation. People want to get off drugs, however there is no support that truly understand Aboriginal history and incorporates traditional healing methods with western medicine. • Suggestion that mentoring/sponsorship programs could be developed to support recovering addicts.	To assist in mental health and addiction HVO would consider providing funding to support Projects which target mental health and addiction support to Aboriginal people in the region. This would be considered as part of the Closing the Gap funding program to be detailed in the SIMP for the Project.

The enhanced significance of benefits from empowerment programs for local Aboriginal groups is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.14.

Table 6.14 **Summary of culture benefits from the ongoing support of empowerment programs for local Aboriginal groups**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	Benefit from the ongoing support of empowerment programs for local Aboriginal groups	Local Aboriginal people	Construction and operation	Project area and regional area	Low	High (benefit)

6.6.2 Impact on the ability of Aboriginal people to maintain connection to country and waterways

Impacts experienced by indigenous stakeholders for mining projects include the ability of Aboriginal people to maintain cultural connection to country and waterways due to restricted access to the physical environment. Indigenous groups interviewed as part of the SIA noted various impacts on access to the site for maintaining connection to country and waterways, and Aboriginal artefacts and sites:

“You have to understand it’s on a mine site, so access is restricted, and you go to the office and you wait, and you need someone to escort you. So we have access, but for many reasons access is limited.”

The Wonnarua people (sometimes called Wanaruah and by other variations) are the traditional landowners (EMM 2022a). The Wonnarua people have occupied the area for at least 30,000 years, with traditional knowledge holding that occupation extends back to the early stages of the Dreaming (Singleton Council 2020).

To further understand traditional and contemporary cultural values associated with the Project area, cultural mapping was undertaken for the Project by Dr Philip Clarke, a highly experienced anthropologist, with the participation of RAPs. All RAPs were invited to participate, and participants from the Upper Hunter Wonnarua Council Incorporated, Wonnarua Nation Aboriginal Corporation, Ungooroo Aboriginal Corporation, and Widescope Indigenous Group Pty Ltd self-nominated during the consultation process when the cultural mapping was being discussed and organised. The full cultural values mapping report is providing in Appendix C of the ACHA (refer to Appendix M of the EIS).

The cultural values mapping identified Aboriginal cultural values or places, beyond archaeological sites already identified by the ACHA, within the Project area. Seven places of cultural significance were identified outside (and some distance from) the Project area, as follows:

- Baiaime’s Cave (story place and archaeological site);
- Broke Cemetery (historic place);
- Loder/s Creek (archaeological place);
- Lookout Point (story place);
- Redbournberry Hill (historic place);
- St Clair Mission (historic place); and

- Wallaby Scrub Bora Ground (story place and archaeological site).

The cultural values assessment concluded the Project will have no direct or indirect impact on the identified sites above primarily due to the reasonable distance from the Project area, and therefore there were no proposed mitigation measures recommended.

The cultural assessment report explained while the above key places are protected, the experience of Aboriginal people is shaped by processes that involve the total landscape. A term 'solastalgia' helps to explain the long term psychiatric and cultural impacts that coal mining in the Hunter Valley region has had upon the people who have been based there for generations.

RAPs that were engaged as part of the EIS expressed the view that mining continues to cause fragmentation to the cultural, spiritual and historic values of the cultural landscape including degradation to important waterways.

During the SIA field study one Aboriginal stakeholder explained;

"[It] Impacts the mythology stories and stories to the sites. Part of the connection to cultural lands is also the things you don't see. It's the spiritual side of the landscape you feel it out there."

"When the mines destroy the land it's like taking a page out of the story book. That page is gone and then it's a blank."

"To get the blank page back you have to build it back. You have to rebury them and hold ceremony or you have to hold the artefacts in an art centre and a space that Aboriginal people can tell the continue the story and continue that connection."

"That is why the cultural values mapping is important. It shows the connection to land and country."

Whilst there is a high degree of sensitivity surrounding the impact of mining activities on the ability of Aboriginal people to maintain connection to country across the broader region, the specific contribution of this Project is limited. The Project is an existing mining operation situated on majority freehold land where there has already been extensive modification of the landscape and environmental integrity of waterways. Combining the historical disconnection of people from place with the extensive landscape modification since settlement means that the Project area has a reduced level of cultural significance when compared to other places within the wider region.

In addition, the area in which HVO undertakes its operations will remain largely the same for the Project, which will involve the continuation of mining within existing mining tenements, and largely within previously disturbed areas.

The unmitigated significance of the impact related to the ability of Aboriginal people to maintain connection to country and waterways is assessed as **medium**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as **minor**. A summary of the assessment is presented in Table 6.15.

Recommendations and mitigation measures in relation to Aboriginal cultural heritage are outlined in Section 10 of the ACHA report (see Appendix M of the EIS) and will be documented in the HVO North and HVO South Aboriginal Heritage Management Plan (AHMP), which will be updated and consolidated for the Project. The effectiveness of these mitigation measures will be dependent upon thorough ongoing engagement with the local indigenous community. As described in the ACHA (Section 10.2.1), the AHMP will include details of maintaining Aboriginal community access to the Project area, and will outline procedures and protocols for ongoing consultation and involvement of RAPs.

These proposed management measures are anticipated to provide opportunities the local Aboriginal community to maintain a cultural connection with the landscape by having continued access to sites of high significance and will help to achieve intergenerational equity by allowing retention of cultural materials for cultural and educational purposes.

The mitigated significance of the impact related to the ability of Aboriginal people to maintain connection to country and waterways is assessed as **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is assessed as **minor**. A summary of the assessment is presented in Table 6.15.

Table 6.15 **Summary of impact on the ability of Aboriginal people to maintain connection to country and waterways**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	Impact on the ability of Aboriginal people to maintain connection to country and waterways.	Local Aboriginal groups	Construction and operation	Project area and regional area	Medium	Low

6.6.3 Impacts to cultural artefacts or sites

Indigenous people experience grief and loss due to the loss of cultural artefacts or sites. These impacts are identified as significant to Aboriginal peoples.

Indigenous groups interviewed noted various impacts associated with potential impacts to heritage sites:

"[scar trees] are important and they are old enough to still be a scar tree and once they grow a new sprig from the side we have lost them."

"It's very important for the mine to work around significant sites."

"It's up to community how do they save them (the trees)."

"This impacts us through the grief and loss of this whole situation, moving of trees that have significant, moving of artefacts. The whole thing."

Of the total 304 extant Aboriginal sites in the Project area that were identified by the Aboriginal Cultural Heritage Assessment undertaken for the Project:

- 145 (48%) are in the additional disturbance area/approved disturbance area for another mine (HVO North: n = 138/45%), HVO South: n = 7/2%); and
- 159 (52%) are in the existing and approved disturbance area (HVO North: n = 96/32%), HVO South: n = 63/21%).

Impacts associated with the Project will result in partial harm to 39 sites (13%) and total harm to 183 sites (60%). The Project will avoid impacts/harm to 82 (27%) Aboriginal sites. Of the 222 Aboriginal sites to be impacted by the Project, 86% (n = 190) are assessed as being of low scientific significance, 6% (n = 14) are low-moderate scientific significance, 3% (n = 6) are of moderate scientific significance, 9 (4%) are of moderate-high significance, and 1% (n = 3) are of high scientific significance.

Notably in relation to Aboriginal sites, a previously recorded AHIMS site 37-2-1877 (CM-CD1) is located within HVO North. As part of the ACHA, excavation of CM-CD1 was completed to obtain OSL samples and to confirm the age of the site. Results from OSL dating confirmed the 'Older Stratum' of CM-CD1 is of significant age relating to the early Holocene and late Pleistocene periods (10,000–12,000 years ago). As such, this is one of the few deposits in the Hunter Valley of this age, and the site is considered of high scientific (archaeological) and cultural significance.

Once the high significance of the site was understood, and as part of the Project HVO has committed to the continued avoidance of this site.

The unmitigated significance of impacts related to disturbances to material cultural artefacts or sites is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment is presented in Table 6.16.

Mitigation measures identified for sites within the additional disturbance area associated with the Project are documented in Section 10 of the ACHA (contained in Appendix M of the EIS), and include surface collection of sites, salvage excavation and salvage of the scarred portion of two scarred trees within the footprint of the proposed Lemington Road realignment. The methodology for the salvage and excavation to be documented in the AHMP which will be updated to incorporate the Project.

An Aboriginal stakeholder who has been involved in cultural heritage and salvage of artefacts for the past 20 years expressed the potential positives that could come from the previously disturbed lands explaining it could be “given back” and they could “start the bush tucker and walking tracks” on offset land. Reference was made to another nearby mine which has created a “mini teaching practice there now” for Aboriginal people.

The mitigated significance of impacts related to the disturbance of Aboriginal artefacts and sites, when the above mitigation measures are accounted for, is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.16.

Table 6.16 Summary of culture impact of disturbances to cultural artefacts or sites

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Culture	Impacts of disturbances to cultural artefacts or sites	Local Aboriginal groups	Construction and operation	Project area and regional area	High	Medium

6.7 Health and wellbeing

This section provides an assessment of Project benefits and impacts upon health and wellbeing.

The following potential impacts on health and wellbeing are assessed:

- impacts from noise and vibration;
- impact of continued anxiety about potential effects on water quality;
- impact of exposure to dust and decreased air quality;
- impact of perceived reduction in safety due to realignment of Lemington road; and
- impact of perceived continuation of road safety risks.

6.7.1 Impacts from noise and vibration

Potential impacts on health and wellbeing due to noise and vibration from construction and operational activities was raised as a concern by multiple stakeholders. Exposure to noise and vibration can result in health effects including physical impacts on hearing, such as tinnitus, but also impacts on disturbance of sleep, cognitive effects, and decreased mental wellbeing due to annoyance (DH 2018).

The 2021 HVO Annual Environmental Review reported that there were 25 complaints received, predominantly about blasting (15), noise (5), lighting (3) and dust (1). Complaints made were from people located in Maison Dieu (13), Long Point (6), and Jerrys Plains (3). By comparison there were 16 complaints made in 2020 for blasting (2), dust (1), noise (5) and lighting (4).

a Noise

Feedback generated through the SIA field study confirmed a mixed community perception of noise and vibration impacts including a significant level of community acceptance due to the Project being operational for a prolonged period and the context of many other mines located in the area.

“We are not living here in noise and dust like we were 10 years ago. That was a lot worse and the impact was worse. Now it’s better.”

“Noise? If we have our window open we can hear the United Wambo mine, but nothing really from HVO. Maybe if there is a blast with water we might hear that. It’s very quiet now.”

“We have noise impacts from United Wambo mine and currently the noises experienced by HVO is less. However, if HVO are doing boundary work there we are concerned about the increased noise from that.”

“Machines working at night-time on a calm and still night you can hear it when your outside. The tracks rattling and the noise from trucks.”

Noise from operations was reported as bearable and part of the background noise of the Project; however, noise during the night and weekends was reported as disruptive and inconvenient. Multiple residents and service providers also raised concerns about the impacts of noise on residential and business amenity.

In relation to construction activities, predictions from modelling undertaken as part of the noise impact assessment (NIA) for the Project (EMM 2022b) indicate that privately owned residences in Maison Dieu are expected to experience noise levels that are higher than the ‘noise affected’ management level, but well below the ‘highly noise affected’ management level, as specified in the *Interim Construction Noise Guideline* (ICNG) (EPA 2009). These are worst case construction noise predictions that may occur during noise enhancing weather conditions during the peak of the construction period, that is, an expected infrequent occurrence. Consequently, received levels should typically be less than those presented in the NIA. Construction noise predictions are below the ‘noise affected level’ for all other receptors around HVO. Construction road traffic noise impacts are not predicted, with changes in road traffic noise levels resulting from Project construction traffic increases found not to be measurable or perceptible at privately owned residences.

In relation to ongoing operations, the design of the Project has been an iterative one, taking into account outcomes of the noise impact assessment and involved the identification of reasonable and feasible measures that could be included in the Project design to reduce residual noise levels at nearby residences. With these measures implemented, the assessment found that:

- 19 receptors will be entitled to voluntary mitigation rights based on predicted marginal residual noise impacts as a result of the Project, of which:
 - 13 already have existing rights under current HVO approvals.
 - 6 are on the outskirts of Jerrys Plains, and while a marginal noise impact is predicted at these receptors due to the Project, it is noted that the noise criteria for the Project (known as Project Noise trigger Levels (PNTLs) for these receptors in the evening and night time periods are less than the current criteria that applies to these residences, and the recommended noise criteria for these receptors is consistent with the current criteria that applies.

- 7 receptors that already have mitigation rights in accordance with the HVO South Project approval are not predicted to experience noise levels such that they would be entitled to voluntary mitigation rights for the Project; however, HVO proposes to retain voluntary noise mitigation rights for these receptors.

The extensive investigation into noise mitigation measures for the Project resulted in HVO committing to the following:

- Various levels (height options) will be provided for overburden emplacement to allow shielded emplacement to occur deeper in the mining area during adverse meteorological conditions.
- Haul route alignments within the mining area will maximise the available topographical shielding provided by the mine design, where practical.
- The remaining fleet will be progressively attenuated and best available technology economically achievable (BATEA) sound power will be implemented, where reasonable and feasible, for significant noise generating mobile equipment.
- Dozers will be restricted if deemed to be a primary source of noise during periods of meteorological enhancement.
- Best management practices will continue to be implemented, as described in Section 4.1 of the NIA (refer to Appendix H of the EIS).
- Significant fixed infrastructure at the yet to be constructed Lemington CPP area will include cladding and BATEA sound power, where practical.
- Operation of exposed drills will be restricted, if required, during periods of meteorological enhancement.
- Significant fixed infrastructure at the yet to be constructed Lemington CPP area will include cladding and BATEA sound power, where practical.
- Operation of exposed drills will be restricted, if required, during periods of meteorological enhancement.
- An 8 m high roadside bund will be constructed on the exposed side of the haul road from the HVO North pit towards the Howick CPP for approximately 900 m.
- A review of both real-time and attended compliance monitoring locations will be undertaken to ensure the monitoring network provides adequate coverage of the Project area, and the existing NMP will be updated accordingly.

b Sleep disturbances

The combination of noise and vibration impacts from mining operation and construction activities can contribute to negative impacts on the quality of sleep of nearby neighbours.

“Noise during the daytime is not the issue, its noise during the evening.”

“you can hear diggers and trucks and holes being blowed and movement of heavy vehicles all throughout the night time.”

“I’m physically tired and then I have to go to work the next day and get on with life and it is as if you don’t matter at all.”

“Truck noises this impacts my neighbours as they do shift work and find it hard to sleep.”

Sleep plays a vital role in brain function and overall health and wellbeing. According to Medic et al (2017) sleep disruptions have substantial adverse short and long-term health consequences. Numerous factors contribute to sleep disruption, ranging from lifestyle and environmental factors to sleep disorders and other medical conditions.

The NIA assessed nine local residences in Shearers Lane, Maison Dieu as having a proposed noise level 1 dB above the HVO sleep disturbance criterion. These residents will continue to be afforded voluntary mitigation rights due to the Project such that the likelihood and frequency of exceeding the noise level is low. One local residence had a predicted result greater than the current HVO South sleep disturbance criterion. This is receptor 121, which already has mitigation rights with the Project. Sleep disturbance model predictions are less than the L_{Amax} trigger level of 52 dB for all receptors. As such, there is no sleep disturbance impact predicted.

c Blasting

Multiple community members raised concerns about the impact of blasting on their homes:

“Vibration and blasting impacts – it shakes the house on its foundations. I don’t know who to contact as I am not sure who does the blasting.”

“We feel the blasts and will it be louder and the house shakes and you can only imagine if this continues then we will get more cracks. Who is going to fix that? Sure we have an older house but all of the small shakes add up and it its going that is a continuous impact.”

“I have cracks in the home and tiles come loose in bathroom and house shakes but you don’t hear it.”

This was also raised by respondents of the community survey, who raised:

“Concerns of noise and vibration including blasting shaking properties close to the mine.”

The blast impact assessment undertaken for the Project (refer to Appendix I of the EIS) assessed the potential blasting related impacts on private residences during continued mine operations within a 5 km radius of the Project. The assessment concluded that exposure to vibration and airblast overpressure can be effectively managed via existing blast management practices on site and the application of reduced charge masses where required for private residential receptors in Maison Dieu and Jerrys Plains.

In particular, western sections of HVO North and HVO South will require appropriate blast design and increased airblast control measures to manage airblast overpressure impacts on the community. The BIA confirms that with the application of lower charge masses, reduced airblast overpressure to below the assessment criteria can be achieved (Enviro Strata Consulting 2022).

Concurrent blasting will be avoided through interaction with nearby mines. The notification interaction protocol with the Hunter Valley Gliding Club will be updated.

Over time, as the two mining areas reach greater depths, some topographical shielding will emerge which will assist with reducing impacts associated with airblast overpressure and lower the impacts on the surrounding community (Enviro Strata Consulting 2022).

The continuation of other mitigation and management measures, such as limitations on the number of blasts per day (as per existing approvals) and the days and times in which blasting can occur, and road closure protocols in consultation with relevant road authorities, will continue to address amenity impacts. A review of the Amenity Management Plan that is already in place for the HVGC will also be undertaken for the Project. Blast monitoring will continue, as well as the use of an additional four monitoring stations, as recommended by the BIA.

The unmitigated significance of impacts related to noise and vibration is assessed as **high**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as **major**.

Effective implementation of mitigation measures described above will serve to reduce the likelihood and severity of the impact. The mitigated significance of impacts related to noise and vibration is assessed as **medium**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment is presented in Table 6.17.

Table 6.17 Summary of health and wellbeing impacts from noise and vibration

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Impacts from noise and vibration	Landowners and residents	Construction and operation	Local area	High	Medium

6.7.2 Impact of continued anxiety about potential effects on water quality

The Project will generate dust through proposed construction activities and due to mining operations.

Research by Abbasi and Abbasi (2011) suggests that dust can be transported from roofs into water tanks during rainfall. Particulate matter (ie dust) carried from rooftops can clog the filtration and piping system and assist microbial growth in the harvested rainwater. This is especially prevalent after a prolonged dry period, whereby rainfall can carry a very high concentration of these pollutants into rainwater tanks (Abbasi and Abbasi 2011).

Impacts caused by dust from mining activity identified by the NSW Health (2017) include dust depositing on fabrics (such as washing) or on house roofs, and the transport of dust into groundwater. Hence, dust from mining activities can impact on the water quality of the surrounding area.

Feedback received from local residents included concerns about potential effects on water quality in the surrounding area.

“Concerned how close they are mining to the Hunter River. It’s mainly used for rural activities and the mine owns a lot of the river fronts.”

“Either side it’s used for cropping and feed for livestock...”

“‘Clean and green’ is the thing people want to feel. People then start to think about sediment entering the water ways and the mines polluting the water tables.”

Concerns were also raised about impacts on water sources for private use.

“I have a bore on my land, and I would be worried about the water situation if they are digging deeper and this water supplies water to my stock.”

“They did come clean our water tanks once about 4–5 years ago – I am not sure if I am eligible I’m not sure its fell on deaf ears. I thought they came every 12 months to clean tanks.”

“Dust caused me to replace the gutters way earlier then expected as they were covered in dust, coal and dirt and all rusted.”

Notably, this concern also includes how changed water quality may affect livestock and hence livelihoods:

“Impacts to the livestock water – there is a dust film in the bottom and I’m sure that is not good.”

“Its my livelihood, I earn an income growing pecans and significantly concerned about the water quality.”

In the SIA survey, water quality was raised as a potential impact of the Project, with 9.5% of survey respondents claiming its impact would be ‘very negative’, 7% viewing it as ‘negative’, and 50% registering a neutral response. More specifically, the community raised concerns about the possibility of dust entering privately-owned water tanks, or in other ground water sources, and hence impacting the quality of available drinking water. These impacts were considered dependent on the proximity of mining to the Hunter River, and the impact on the ‘clean and green’ character of the area.

The unmitigated significance of the impact of continued anxiety about potential effects on water quality is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment is presented in Table 6.18.

To ease anxiety about potential dust related impact on water tanks, HVO will implement a more structured water tank cleaning service for all privately owned residences within 4 km of the proposed mining area. HVO currently operates a near neighbour amenity resource program, which is a voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. However, HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.

Assumed effective implementation of these measures will serve to reduce the severity of the impact. The mitigated significance of impacts related to continued anxiety about potential effects on water quality is assessed as **medium**. The likelihood of the impact occurring remains **possible**, whilst the magnitude of the impact is reduced to **minor**. A summary of the assessment is presented in Table 6.18.

Table 6.18 **Summary of health and wellbeing impacts of continued anxiety about potential effects on water quality**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Impact of continued anxiety about potential effects on water quality	Local residents	Construction and operation	Local area	Medium	Medium

6.7.3 Impact of continued exposure to dust and decreased air quality

Mining has been occurring in the Project area for a prolonged period and continuation of operations would continue to contribute to dust generation. Dust has the potential to exacerbate health issues for people with respiratory conditions and those sensitive to changes in air quality. As outlined in Section 4.8.1, rates of hospitalisations attributable to asthma in Singleton LGA and Muswellbrook LGA exceed the NSW rates.

Community members also mentioned dust in terms of potential health and wellbeing concerns when interviewed or surveyed for the SIA. One nearby landholder specified concerns regarding sulphur in the air and associated allergic reactions. Others noted:

“I would see the doctor 4–5 times a year and I would go to the doc, and he would say bronchitis and take antibiotics and you need 3–4 days off and it would take 1–2 weeks to get better...But 40 days out of the year I would be sick and not able to work.”

“Issue with dust – during the drought it is worse.”

“It floats over town... the town always looks crook and hazy. You drive 20km away and the sky is clear.”

The general area surrounding HVO is comprised of various operating coal mining operations. Existing open cut pits, mine-related infrastructure and rehabilitated former mining areas are to the north, south-east and south-west of HVO. Surrounding operating mines include Glencore's Liddell Coal Operations (due to close in 2023), Ravensworth Operations and the Mount Owen Complex, as well as United Wambo (a Glencore and Peabody JV), Peabody's Wambo Underground Mine and Yancoal's Mount Thorley and Warkworth mines, also referred to as Mount Thorley Warkworth (MTW) and Ashton. AGL's Bayswater and Liddell power stations are to the north-west.

As already described in Section 6.3.3, the AQGHGA undertaken for the EIS (Jacobs 2022) assessed the possible impact of dust from the Project on the surrounding environment and communities.

During the key construction activity associated with the Project – the realignment of Lemington Road – the AQGHGA found this has the potential to increase overall dust emissions from HVO by 3% to 4%, but these increases are not predicted to be of a magnitude that will change the air quality outcomes for nearby neighbours. Management and monitoring of air quality outcomes will continue throughout construction.

During operations, modelling undertaken for the air quality assessment of finer dust particles (PM₁₀ and PM_{2.5}) found that the maximum 24 hour PM₁₀ and PM_{2.5} concentrations may continue to exceed air quality criteria (which is a cumulative criteria; ie accounts for contributions from HVO and surrounding mines) from time-to-time; however, these events would be within the range of historically measured days above the criteria, excluding extraordinary events. The AQGHGA identified that air quality conditions are strongly correlated to climatic conditions and are heavily influenced by drought, dust storms and bushfires.

A review of recent and historical air quality monitoring data by the AQGHGA showed that, in the representative year modelled (ie 2014, which was identified as the most representative of the long term, local conditions around HVO), all monitoring locations recorded between one and two days above the air quality criteria. Based on modelling outputs, the Project is not anticipated to change this outcome, and the potential for exceedances is expected to be successfully managed using existing management measures, as demonstrated by HVO's air quality compliance history and reported in the Annual Environmental Reviews.

The unmitigated significance of the impact of continued exposure to dust and decreased air quality is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.19.

In relation to mitigation measures for air quality, HVO will continue to operate an extensive air quality monitoring network and implement best practice management measures. In addition, two new mitigation measures have been identified for the Project with respect to air quality, as follows:

- A review of the existing air quality monitoring locations will be undertaken prior to the commencement of the Project to make sure that the monitoring network provides adequate coverage of the Project area, particularly in areas identified by the modelling with a potential for increased air quality impact risk. Any changes to the monitoring network will also be included in a revised Air Quality and Greenhouse Gas Management Plan.
- As described in Section 6.3.3 and 6.7.2, a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.

The two properties identified where modelling showed the Project may contribute to an exceedance of the VLAMP criteria for annual average PM₁₀ and PM_{2.5} will also be entitled to voluntary acquisition rights. These properties are receptor 308 (in Jerrys Plains) and receptor 121 in Maison Dieu. Notably, receptor 308 already has acquisition rights under the UWJV development consent relating to noise, and mitigation rights relating to noise under the HVO South Project Approval, while receptor 121 already has mitigation rights for air quality and noise under the HVO South Project Approval.

HVO is also committed to ongoing high levels of communication and engagement under various community engagement mechanisms and strategies, including ongoing engagement with the broader community and interested organisations through holding quarterly HVO CCC meetings, distribution of quarterly newsletters, and implementation of the approved HVO environmental management plans.

The mitigated significance of the impact of continued exposure to dust and decreased air quality is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.19.

Table 6.19 **Summary of health and wellbeing impact of continued exposure to dust and decreased air quality**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Impact of continued exposure to dust and decreased air quality.	Local residents	Construction and operation	Local area	High	Medium

6.7.4 Impact on perceived safety risks due to realignment of Lemington road

The realignment of Lemington Road was perceived by some stakeholders engaged to inform the SIA as potentially resulting in a deterioration of safety. This was associated with two factors:

- increased travel time for emergency services accessing areas to the west; and
- increased traffic volumes on the existing Comleroi Road and the intersection with the Golden Highway.

The Project will involve realignment of part of Lemington Road to the east of HVO South, linking the existing Comleroi Road with newly constructed sections of Lemington Road to the New England Highway.

Some service providers and landholders expressed concern that shifting the realigned Lemington Road intersection from the current intersection a further 9.2 km south to connect to the Comleroi Road linking with the Golden Highway will increase their travel times.

“Lemington road is a key road to link two major Highways plus linking Jerrys Plains residents.... Emergency services will definitely be affected from the move.”

“Lemington Road will create additional traffic and travel time – emergency service (police, fire ambulance) they use as a route to Jerrys Plains and even if it adds 30 secs extra travel time that is a concern for those services.”

“The fact that its moving Lemington Road to connect with Comleroi Road means for anyone coming to west they have to drive further east to get onto it.”

“Lemington Road is an important connection in local community, if there are accidents on either New England or Golden Highway the road is used as a way to go around the accident.”

As described in Section 6.7.4, the TIA undertaken for the Project (WSP 2022) concluded the realignment of Lemington Road would deliver improved road conditions and decrease travel time by approximately 9–10 minutes if travelling to/from the east of Comleroi Road/New England Road alignment (ie, travelling from Bulga or Mount Thorley). However, it also concludes that there would be a minor increase in travel time by 1 minute 40 seconds if travelling at the design speed of 100 km/h to/from communities west of the current Lemington Road alignment such as Jerrys Plains. This would affect only approximately 5% of the trips currently recorded on Lemington Road.

Notably, emergency services interviewed as part of the SIA mentioned that the new bridge would have a positive effect on the provision of emergency response.

The Hunter Valley Gliding Club (HVGC) also raised a concern that increased traffic past the club heightened the potential for accidents when entering and exiting the HVGC site. The realignment of Lemington Road, using the existing Comleroi past the HVGC, means that there will be an increase of 64 vehicles in the morning and 42 vehicles in the afternoon travelling past the HVGC. However, this was not identified by the TIA as source of increased risk to users of the road or the intersection.

Importantly, the TIA found that the realigned Lemington Road will deliver an improved travel experience for users in terms of reliability, safety and average speed, providing improved travel conditions (larger radius, improved clear zone and shoulder widths, and removal of existing single-lane bridge crossing over the Hunter River known as Moses Crossing).

Notwithstanding, some community members remain concerned about the road realignment. The unmitigated significance of the impact on *perceived* safety due to changes to the road network has therefore been ranked as **medium**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is presented in Table 6.20.

A range of measures will be implemented to reduce risks associated with traffic and transportation, which in turn should reduce the perceived risk for the community relating to the realigned Lemington Road. Prior to construction starting, a TMP will be prepared by the appointed construction contractor in accordance with Transport for NSW Traffic Control at Worksites and relevant Austroads guidelines. The TMP will include appropriate traffic management measures and signposting of access/egress points to minimise conflicts with vehicle movements on the road network. It will also identify measures to maintain and ensure safe access for emergency vehicles and to existing properties, such as the HVGC, during construction, or provision of suitable alternatives.

Access along Lemington Road and Comleroi Road will also be maintained during construction of the realigned road, and traffic control will manage traffic interaction, where required.

A key mitigation measures for this issue is ongoing community and stakeholder engagement to educate the community about the benefits of the road realignment.

The mitigated significance of perceived public safety risk due to realignment of Lemington road is assessed as being **low**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is presented in Table 6.20. As previously described, the TIA concluded the quality of Lemington Road (horizontal alignment, road width, provision of road shoulders and clear zones) will be significantly *improved* by the Project to enable a more reliable travel route and safer road features. However, it is acknowledged there is a perception within the community regarding concerns about the road realignment, which is acknowledged in the ranking of this risk.

Table 6.20 **Summary of health and wellbeing impact of perceived safety risk due to realignment of Lemington**

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Health and wellbeing	Impact of perceived safety risk due to realignment of Lemington road.	Local area	Operation	Local area	Medium	Low

6.8 Surroundings

This section provides an assessment of Project benefits and impacts upon surroundings. The Project related benefit on surroundings identified for assessment is:

- benefit of rehabilitation, future land use and ongoing land management.

The following Project derived impacts on surroundings are assessed:

- impacts on the changes to the visual amenity;
- impact of lighting on nearby neighbours; and
- impact on land use management and pest control.

6.8.1 Benefit of rehabilitation, future land use and ongoing land management

One of the Project's key benefits is that it would enable improved rehabilitation outcomes through contemporising the proposed final landform for areas to be disturbed by the Project, incorporating natural design landform features.

In feedback received through the community survey and interviews conducted to inform the SIA, rehabilitation and final landform were principal considerations for stakeholders including Singleton and Muswellbrook Councils, as well as landholders and nearby neighbours. Based on this feedback, it is considered likely that community interest in rehabilitation and final landform will continue. Concerns raised included the large voids in proximity to the Hunter River and potential views of high overburden emplacement areas.

Notably in the online community survey, 35.7% of respondents identified "rehabilitation and final landform" as a "very positive" benefit of the Project, while 11.9% of respondents identified it as one of the top three potential "very negative" impacts.

Respondents to the community survey noted the need for extensive rehabilitation to occur to restore the biodiversity of the land.

"Extensive rehab should occur on all mine sites at end of life."

"Visually it should look like it was never touched providing a natural habitat for wildlife."

Some respondents put forward their belief that rehabilitation would substantially improve the land.

“Post rehab the land will probably be better than what it was before they started. The rehab closure requirements are so strict and regulated now, I have full confidence in the final land being positive for future land use.”

“It’s great to see the environment be put back to what it was and recreate the land for local wildlife and residents.”

Whilst others held the view that rehabilitation efforts would not restore the agricultural value of the land.

“You will take prime farmland and give back formed rehab covered in trees and no good for farming.”

Singleton Council and MSC noted that they want to be involved in and actively consulted on rehabilitation and closure plans as they progress. Councils are also conscious of the cumulative impact of mine closures in the region on rehabilitation processes and desired final land uses, noting that 2037–2047 is a critical period of multiple mine closures.

The VIA (EMM 2022d) confirms that an updated rehabilitation approach under the Project would progressively improve the Project’s visual impact through use of advanced techniques to incorporate contemporary natural landform design principles. The report concludes that the result of restoration will be a landform that is more sympathetic to the surrounding landscape through decommissioning and removal of infrastructure not required to support the conceptual final land use and the reshaping and revegetation of disturbed areas to establish a mixture of native vegetation and open grassland areas. In addition, adaptive reuse approaches are proposed, consistent with the *Draft Hunter Regional Plan 2041* (DPE 2021). For example, the final voids have been designed so that other potential beneficial uses that may be identified and become viable in the future are not precluded.

Further in relation to the final voids, the Groundwater Impact Assessment (AGE 2022) found that the lakes created by the final voids will act as a groundwater sink, with no risk of overflows to the surface environment. The Surface Water Assessment (EMM 2022c) concluded that there may be a “reduction in streamflow in the Hunter River and its tributaries in the vicinity of the Project at closure”; however, notes that due to the lack of water users downstream of the site, and the fact that the Hunter River is a regulated river system, this will not impact water users.

As noted above, the Project provides the opportunity to incorporate natural design features in the final landform, creating a landform that is more sympathetic to the surrounding landscape. Should the Project not proceed, existing development approvals for the site would continue to apply, reducing the potential benefits of rehabilitation that would be experienced if the Project were to replace existing approvals.

The unenhanced significance of the benefits of rehabilitation and future land use is assessed as **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment of surroundings impacts is presented in Table 6.21.

Should the Project be approved, an updated Rehabilitation Management Plan (RMP) will be prepared and submitted to the Resource Regulator prior to commencement. The Mine Closure and Rehabilitation Strategy prepared for the Project (EMM 2022e) identifies an opportunity for revegetation trials and monitoring to provide feedback into the most appropriate species, revegetation and propagation methods, and substrate suitability for rehabilitation. This would reduce risks associated with revegetation processes and improve environmental outcomes.

Respondents to SIA surveys identified potential beneficial future uses such as installation of solar panels on some areas of rehabilitated land. The Project Mine Closure and Rehabilitation Strategy identified that in the future, rehabilitated areas could include the development of alternate, commercially viable final land uses, possibly including solar farms and battery energy storage systems, or industrial use of mining infrastructure areas (EMM 2022e). Final rehabilitation and Project closure requirements will ultimately be formulated in consultation with key government agencies and other relevant stakeholders, to be undertaken during the detailed closure planning phase, which will occur well in advance of mine closure (ie at least 5 years prior to closure) in consultation with the HVO workforce, the community and relevant government stakeholders. Stakeholders will therefore have the opportunity to have input into the final detailed closure plan for the Project.

Opportunities to participate in rehabilitation to benefit continuing connection to land was also identified by Aboriginal stakeholders. If the Project did not occur, rehabilitation would be based on the existing rehabilitation requirements and not the strengthened rehabilitation requirements if the Project were to continue.

“You never would get it [the land] back to natural stage and the rehab is huge. We can make sure that Aboriginal people are part of this, give this back to the traditional owners.”

The enhanced significance of the benefit of rehabilitation, future land use and ongoing land management is assessed as being **high**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment of surroundings benefits is presented Table 6.21.

Table 6.21 **Summary of surrounding benefit of rehabilitation, future land use and ongoing land management**

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Surroundings	Benefit of rehabilitation, future land use and ongoing land management.	Residents, travellers, businesses, Singleton and Muswellbrook Councils	Operation/decommissioning	Regional area	High	High (benefit)

6.8.2 Impact of changes to visual amenity

The character of the immediate visual environment is strongly influenced by existing mining operations, with mining making up a large part of the surrounding land use and having been present at HVO for over 70 years. Typical views of HVO predominantly include rehabilitated land and overburden emplacement areas.

The VIA undertaken for the Project (EMM 2022d) concluded that HVO South is significantly more visible from privately-owned dwellings and the local road network than HVO North, and that views of HVO North are limited to passing motorists on the New England Highway and partially obstructed views from privately-owned dwellings off Jerrys Plains Road (at a distance of approximately 4.7 km). The dominant visible element for HVO South is the eastern part of the Cheshunt Pit overburden emplacement area, which is currently being rehabilitated (including revegetation). Electricity transmission line infrastructure traverses the Project area and is a prominent visual feature of the landscape.

With regard to visual amenity impacts on motorists/general public, a number of stakeholders engaged as part of the SIA valued the importance of the scenic tourist drive along the Golden Highway and those negative visual impacts “gives you negative feelings about the area”.

Nearby landholders expressed concern regarding the visual impact of the perceived height of overburden on visual amenity:

“If they are going deeper the overburden might be higher. I can look out to the west and see the overburden now, and I want to know high will it go. It means I might not be able to see the mountains [from my property]. Its already affected the visual aspect and if goes higher it will make it worse.”

“The new heights may impact the amount of sun I receive in the afternoons.”

While another nearby landholder in Maison Dieu commented;

“If you live the valley you are used to seeing it and they do manage the visual impacts well. They do a lot of tree planting and the existing rehab plans seem to be working. There is a lot of planting to screen the overburden to reduce impacts and that will only get better in the next 20 years as the trees mature.”

It is noted that the approved height of overburden emplacement areas will not change as a result of the Project.

Other stakeholders raised the potential continued impact on “scenic and rural views” expressing the continuation of the Project essentially means a continuation of “industrial views and views of stockpiles”.

One nearby neighbour in Jerrys Plains commented the visual aspects is currently “negative” and could be more positive “If there were some attractive trees planted, like a row of wattles trees then right now it would be blooming yellow flowers and that is a much nicer view then the views of the mine” and suggested HVO should be “tidying the place up if they are planning on continuing, tidying the place up first should be the number one priority”.

The most visible activities during Project construction will be experienced by landholders with views of active work areas during the realignment of Lemington Road, noting this will be temporary. Construction activities may be visible from scattered rural residences within Camberwell (at a distance of at least 2.5 km) and Maison Dieu (at a distance of at least 1.3 km) and motorists on Maison Dieu Road, Knodlers Lane, Shearers Lane and New England Highway. The Hunter River and associated riparian vegetation, remnant vegetation east of the Project area and undulation in the landscape will help to screen views of this infrastructure from rural residences.

Other construction activities at HVO North are expected to have limited visual amenity impacts on nearby receptors and motorists due to the presence of existing vegetation screening, the prevalence of electricity transmission line infrastructure within the existing visual landscape, and intervening topography between the Project area and surrounding private receptors or key public vantage points.

At HVO South, the prevalence of electricity transmission line infrastructure within the existing visual landscape will limit the visual impacts of the realignment of transmission infrastructure. As part of the Project, Lake James will increase in capacity from around 0.7 GL to approximately 2.0 GL. Part of Lake James (Dam 15S) is currently visible from Maison Dieu. Construction works associated with the enlargement of Lake James may be visible from Maison Dieu; however, impacts will be temporary and limited to the approximate 13 month duration of construction.

In relation to operations, visual impacts associated with HVO’s existing mining operations have previously been assessed and approved and are considered as part of the existing environment. While it is acknowledged that there are privately-owned receptors and road corridors that are already subject to a high visual impact from HVO’s existing mining operations and other surrounding mining operations, the level of visual impact on these properties will not materially change as a result of the Project when compared with the approved operations.

The existing ridgeline between HVO North and the Jerrys Plains township will continue to provide an effective visual amenity barrier from the mining activities (EMM 2022d). While motorists travelling along the Golden Highway, New England Highway and the realigned Lemington Road may experience transitory and distant views of Project elements within the Project area, as is currently the case, the VIA concluded that the Project is unlikely to affect the journey experience of road users.

The unmitigated significance of impacts on visual amenity due to the Project is therefore assessed as **low**. The likelihood is **unlikely**, and the magnitude of the impact is assessed as **minor**. A summary of the assessment is presented in Table 6.22.

Given that significant impacts are not predicted to occur, the VIA found that additional mitigation measures during the construction phase associated with the Project are not warranted.

During operations, disturbed areas will continue to be progressively rehabilitated. Visual impacts will continue to decrease over time as this progressive rehabilitation proceeds and as mining ceases at the end of 2050 at HVO North and 2045 at HVO South. In addition, HVO will investigate the feasibility of planting vegetation adjacent to the realigned Lemington Road to provide an effective visual screen and reduce views of this infrastructure from residences and local roads.

The mitigated significance of impacts on changes to the visual landscape remains at **low**. The likelihood is **unlikely**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is provided in Table 6.22.

Table 6.22 Summary of surrounding impact of changes to visual amenity

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Impacts on changes to visual amenity.	Near neighbours and wider community	Construction and operations	Immediate surrounds of the Project	Low	Low

6.8.3 Impact of lighting on nearby neighbours

Visual impacts at night from operational lighting at HVO was identified as a sensitive issue by some nearby landholders. There are a number of existing operational lighting sources produced by mining activities. Lighting types at HVO include free-standing lighting structures; light fittings attached to infrastructure and buildings; temporary lighting plant; and lighting attached to mobile mine machinery (eg light vehicles, haul trucks, dragline, shovels, excavators and dozers).

Nearby landholders raised visual impacts associated with night-time operational lighting:

“Lights on dumper during the evening and noise from blast and dust.”

“I see the lights during the nights.”

There have been a number of complaints registered by nearby landholders regarding lighting. These have particularly been from landholders in Maison Dieu and Long Point and relate to night-time lighting.

The continuation of the operations at HVO will mean the continued generation of night lighting, which may be viewed by some surrounding rural residences.

The unmitigated significance of impacts to nearby landholders due to lighting is assessed as being **medium**. The likelihood is **likely**, and the magnitude of the impact is assessed as **minor**. A summary of the assessment is provided in Table 6.23.

Under the conditions of current development consents, HVO implements a range of mitigation measures which manage lighting impacts on neighbouring landholders. These measures include installation of external lighting to as low intensity lighting (except where required for safety or emergency purposes) and in compliance with *Australian Standard 4282:2019 – Control of the Obtrusive Effects of Outdoor Lighting*. Other current mitigation measures include raising awareness with employees of potential impacts of equipment and lighting on nearby landholders and ensuring lighting is directed away from dwellings.

Current visual amenity control measures in place at HVO will continue throughout the continued mine life. Measures to minimise light spill from the Project will include:

- night lighting will be minimised where appropriate to the minimum required for operations and safety requirements;
- use of unidirectional lighting techniques and adequate aiming of lights (including consideration of mounting heights);
- use of shielded fittings to limit the spill of lighting where available and safe to do so; and
- lighting will generally be directed either downwards or away from residences.

Following completion of the realignment of Lemington Road, potential lighting impacts from headlights of passing motorists on residences in Maison Dieu and Long Point will be reviewed.

The TIA recommends HVO continue to work with landholders who feel they are being adversely impacted by specific night-time lighting installations or vehicle movements associated with the Project to see if changes can be made to minimise impacts without adversely impacting the safe operation of the Project.

A key management measure is ongoing engagement with surrounding stakeholders and the provision of an effective complaints and grievance procedure which provides the opportunity for stakeholders to raise complaints, grievances, and provide feedback.

The mitigated significance of the impact of lighting on nearby landholders is assessed as **medium**. The likelihood is **unlikely**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment is provided in Table 6.23.

Table 6.23 Summary of surrounding impact of lighting impacts on nearby neighbours

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Impact of lighting on nearby neighbours.	Near-neighbours to Project	Operations (long term)	Immediate surrounds of the Project	Medium	Low

6.8.4 Impacts on land management and pest control

Several near neighbours reported issues with pest animals including dogs, foxes and pigs which were potentially contributed to by adjoining HVO managed lands. Wild dogs and foxes and were considered a particular threat to livestock. Recent efforts of HVO and residents in the area to implement strategies such as baiting, were considered important to continue.

“Wild dogs and foxes can easily cross the river and we know HVO are doing something but they need to step it up as we are losing livestock.”

“As long as they keep on top of the feral animals, they are causing a nuisance.”

“We know they are coming from HVO side as the farmers between us and the river tell us that see our dead chickens on their land.”

Multiple community members and services commented that despite HVO’s current management plans, the issue is of concern. Some community members also raised concerns about the potential spread of disease due to pest animals.

“Along the river, the mine buffer land, the wild pigs are breeding, and they could be carting diseases.”

“[I’m] worried about if they get into the mountains and foot and mouth disease could take off in the National Park.”

“An outbreak of foot and mouth disease within the cattle industry, could be devastating. I have cattle and I am worried about the impacts to my cattle.”

“We have wild dogs and they were a concern as the mine haven’t been controlling them. They are breeding on protected areas within the mines.”

The Biodiversity Development Assessment Report (BDAR) prepared for the EIS (Umwelt 2022) notes that introduced fauna species such as deer, foxes, rabbits, pigs, wild dogs and feral cats could change in distribution and abundance as future areas are cleared, mined and then rehabilitated.

The unmitigated significance of the impact of pests on land management is assessed as being **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is provided in Table 6.24.

Current mitigation measures at HVO include the implementation of the Pest Management Plan, which includes measures to manage animal pests, weeds and kangaroo populations on HVO lands (HVO 2021, Section 8.10). According to HVO’s 2021 Annual Environmental Review, these management plans include wild dog and fox baiting programs, wild dog and pig trapping programs, and ground-based shooting. Thus far in 2022, these programs have achieved the baiting of a total of 288 wild pests, including 121 wild dogs and foxes, 107 pigs, and 60 kangaroos. The Pest Management Plan will be updated to reflect the Project.

The BDAR (Umwelt 2022) notes that pest and feral animal control measures will continue to be undertaken in accordance with current mine practices and as outlined in the HVO Integrated Biodiversity Management Plan.

Successful pest control programs rely on coordination with other mine sites and landholders. The community perception of the problem is ongoing and suggests that more coordination and community consultation and engagement is required.

The mitigated significance of the impact of pests on land management as a result of the Project is assessed as being **medium**. The likelihood of the impact occurring remains **possible**, and the magnitude of the impact is assessed as **minor**. A summary of the assessment of surroundings impacts is presented in Table 6.24.

Table 6.24 Summary of surroundings impacts on land management and pest control

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Impacts on land management and pest control	Nearby landholders	Ongoing	Local area	Medium	Medium

6.9 Livelihood

This section provides an assessment of Project benefits and impacts upon livelihood.

The Project related benefits identified for assessment include:

- benefit of continued opportunities for local employment and training during construction and operation;
- benefit of employment and training pathways for Aboriginal and Torres Strait Islander people; and
- benefit of continued procurement opportunities for local businesses.

The following Project derived impacts on livelihood are assessed:

- impact related to perceived effect on property values; and
- impact of perceived decreased water quality impacting agriculture-based livelihoods.

6.9.1 Benefit of the continuation of local employment and training opportunities

The Project will provide the opportunity for continued long term employment and training for existing employees and new employees where natural attrition and retirement occurs. Ongoing access to meaningful employment and the subsequent ability to financially support individuals and families provides the foundation of a sustainable community.

From responses provided to the workforce continuation survey, it is estimated that:

- the majority of the current workforce resides in suburbs in the local and regional area of the SIA study area, with around 26% residing in Singleton LGA and 9% in Muswellbrook LGA; and
- in communities within the area of reference, 23% of the current workforce lives in Maitland LGA, 19% in Cessnock LGA, 2% in Dungog LGA, 3% in the Upper Hunter and 6% in Newcastle LGA.

The EIA (EY 2022) considered both the net economic benefits and the regional and state impacts of the proposed Project (the Project proceeds scenario) relative to a no development case (referred as the Project does not proceed scenario).

The EIA estimates the total wages paid to employees as a result of the Project will be \$2,379 million in NPV terms.

As outlined in the EIA, continued operations delivered through the Project would give existing employees at the HVO Complex an opportunity to have access to stable employment in an environment where global factors mean that alternative opportunities in coal mining in NSW are becoming increasingly scarce. The EIA asserts that should the Project not proceed, it cannot be assumed that those who would lose their jobs would readily find comparable employment, due to the shift towards a trend of decline in coal mining projects.

As outlined in Section 5.3.4, the workforce survey estimated the percentage of income that is spent by existing employees in the LGA in which they reside. It is estimated that approximately \$51 million (37.7%) of annual employee expenditure is spent on goods and services within the local and regional area, and a further \$128 million (94.4%) is spent on goods and services within the area of reference. Employee contributions to the regional economy would be substantially reduced should job losses occur.

Feedback provided through the community survey presents Project support indicating 78.6% of the survey respondents were either supportive (19.1%) or strongly supportive (59.5%) of the Project with ongoing employment (83%) and training opportunities (81.0%) identified as primary benefits delivered by the Project (see Appendix D for full details).

81.4% of respondents to the community survey also identified traineeship and apprenticeship opportunities stimulated by Project construction would be a positive outcome for local communities. However, there was also recognition that there was limited availability of skilled labour and potentially not enough skilled people in the local area to take up the roles required for construction.

The unenhanced benefit of ongoing employment opportunities as a result of Project operations is assessed as **high**. The likelihood of the impact is assessed as **almost certain**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.25.

Stakeholders interviewed to inform the SIA identified an opportunity for HVO to further develop opportunities for local workforce participation including:

“During the tender process [for the construction phase] HVO could select contractors that identify and target a percentage of the workforce that hire local people first, being young or mature aged people, and [the workforce plan] also includes a proportion of those local hires that are specifically created for local Aboriginal and Torres strait islander people.”

“I would like to see local people and who have suitable skills to be given the opportunity first.”

“A % of local employees should be part of the total required 600 construction workers.”

“There are people that don’t want to work but the ones that do can’t get them [jobs].”

“Could the jobs be advertised as local people only first to give local people.”

It was recommended that the SIMP include measures to encourage local participation, including:

- identify training and employment agencies in the local and regional area who have demonstrated success in training and placement of young and mature aged people in construction industry roles;
- seek to identify particular job positions and supply work packages that will be targeted for local people; and
- continue partnerships with secondary education providers in the regional area to support skill development ie provision of work experience opportunities at HVO, provision of school-based certificate level training opportunities in skill sets that support employment in the construction and mining sector.

The enhanced significance of the benefit of ongoing local operational employment is assessed as **high**. The likelihood of the impact occurring is assessed as **almost certain**, and the magnitude of the impact is assessed as being **moderate**. A summary of the assessment is presented in Table 6.25.

Table 6.25 Summary of livelihood benefit of continued local employment and training opportunities

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihood	Benefit of continued of local employment and training opportunities.	Labour force	Operation	local and regional area	High	High (benefit)

a Project does not proceed

If the Project does not proceed, there would be a loss of approximately 1,500 direct jobs and many more indirect jobs associated with HVO's direct local spend and that expended by the workforce buying goods and services locally, predominantly in the Singleton LGA, Muswellbrook LGA, Maitland LGA, and Cessnock LGA. This impact would also be experienced cumulatively with the planned closure of other mining operations in proximity to HVO. Loss of direct and indirect jobs may also have a flow on effect on people's health and wellbeing and on families.

"Concern for the unemployment of those 1,500 people and impact that will have on families. Will these people be able to find alternative employment and if not, they may need to leave the area."

"This would impact mental health and anxiety, and this uncertainly is not good."

"In general I've heard Mount Arthur is closing in 10 years and this Project ends this would be significant job losses and this would impact mental health and anxiety of people and families."

"Supportive [of the Project] for the reason of the families that rely on the mine to continue. There is a lot of families rely on mining."

6.9.2 Benefit related to employment and training pathways for Aboriginal and Torres Strait Islander people

The Project would provide ongoing employment and training opportunities for Aboriginal and Torres Strait Islander people. Glencore invests in indigenous employment through its Indigenous Employment Pathways Program and there are currently 30 full time Aboriginal and Torres Strait Islander employees at HVO.

As outlined in Section 4.5.3, persons of Aboriginal and Torres Strait Islander heritage experience a range of social disadvantage including reduced access to employment opportunities. Feedback provided by RAPs included recognition of mental health considerations which can affect confidence and sense of self-worth of Aboriginal employees. It was highlighted that long-term meaningful employment plays a large role in building individual and social responsibility and that opportunities for permanent employment should be maximised.

Employment service providers engaged as part of the SIA identified strong support for placement of Aboriginal and Torres Strait Islander people in both construction and operational roles and highlighted that there was a sizeable pool of unemployed and underemployed Aboriginal and Torres Strait Islander people in the regional area. The provision of on-the-job mentoring was identified as critical to retain Aboriginal and Torres Strait Islander People, particularly youth in jobs.

"If there are opportunities they will stay in the community."

"There is a lot of skilled and unskilled people who can work."

"We provide a mentoring program to trainees and apprentices."

Whilst the Project will generate employment opportunities, there may be a need for additional capacity building and support for Aboriginal and Torres Strait Islander people to access these opportunities.

The unenhanced significance of the opportunity for employment of Aboriginal and Torres Strait Islander people is assessed as **medium**. The likelihood of the impact occurring is **unlikely**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment of livelihood benefits is presented in Table 6.26.

As described in Table 6.13, as part of the Project HVO will consider a program to assist in increasing job readiness and work experience for local Aboriginal people. HVO will investigate linking programs with a third party provider, and any similar programs that have been established by the participants in the HVO Joint Venture. The program will initially run for the first 5 years of operations and may be continued following an implementation review.

The enhanced significance of the opportunity for employment of Aboriginal and Torres Strait Islander people is assessed as **medium**. The likelihood of the impact occurring is **possible**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment of livelihood benefits is presented in Table 6.26.

Table 6.26 Summary of livelihood benefit related to employment and training pathways for Aboriginal and Torres Strait Islander people

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihood	Benefit related to employment and training pathways for Aboriginal and Torres Strait Islander people.	Local indigenous groups	Construction and operation	Local and regional area	Medium	Medium (benefit)

6.9.3 Benefit of the continued procurement opportunities for local businesses

The Project will provide commercial opportunities for local contractors, local businesses and suppliers during the construction and operation phase.

An analysis of current supply chains indicates in 2019 HVO has procured goods and services worth approximately \$315 million from approximately 400 businesses across the Hunter Valley and greater Newcastle region. Of the 124 supplier business who responded to the supplier survey, 75.4% indicated their main office is based in the Hunter Valley region, with just under half being small businesses. Of those businesses, 14.6% of their employees reside in the Singleton or Muswellbrook LGAs. Most of the suppliers advised they have spare capacity to deliver additional contracts with HVO and over 84.5% of suppliers indicated they have adequate to high amounts of capacity to take on more contracts.

The EIA confirms that the extended life of the Project and the associated required capital and operational expenditure of the mine is expected to increase the demand for services and supplies relative to the base case of the Project not proceeding. The effect of this is that the same margin is applied to increased turnover which can be considered as a supplier benefit associated with the Project. The Project will generate indirect benefits to local suppliers of an estimated \$760 million in NPV terms. It is estimated that the Project will provide a net benefit to the Lower Hunter SA3 region of \$1,739million in NPV terms.

Stakeholders engaged to inform the SIA identified indirect employment opportunities related to the Project (where local and regional suppliers will be able to continue to employ local people) as a significant potential benefit. This includes potential opportunities for Indigenous owned businesses to participate in the Project supply chain.

The unenhanced significance of the opportunity for local businesses to benefit from Project procurement is assessed as **high**. The likelihood of the impact occurring is assessed as **likely**, and the magnitude of the impact is **moderate**. A summary of the assessment is provided in Table 6.27.

There is an opportunity for HVO to encourage procurement of local labour and from local suppliers.

With respect to Indigenous owned or operated businesses, and as described in Table 6.2, HVO will liaise further with the Aboriginal community to provide awareness for to Aboriginal suppliers around works programs that may be suitable. This includes working with the community to define an appropriate location and a frequency where briefings could be held on the HVO procurement processes. In addition, HVO will consider providing funding to support business/procurement training programs. Such measures would be documented in a Social Impact Management Plan (SIMP) for the Project should this be required.

The enhanced significance of the opportunity for local businesses to benefit from Project procurement is assessed as **high**. The likelihood of the impact occurring is **almost certain**, and the magnitude of the impact is assessed as **moderate**. A summary of the assessment is provided in Table 6.27.

Table 6.27 **Summary of livelihood benefit of the continued procurement opportunities for local businesses**

Social impact	Matter	Affected parties	Duration	Extent	Unenhanced	Enhanced
Livelihood	Benefit of the continued procurement opportunities for local businesses.	Local businesses	Construction and operation	Local and regional area	High	High (benefit)

i Project does not proceed

If the Project does not proceed, a large number of businesses across the Hunter Valley region would be impacted by the loss of supplier contracts with HVO. This would have material flow on effects into the regional economy.

Stakeholders noted the economic input in the community is so great that the mining industry would need to continue for some time into the future to sustain economic activity and employment:

“1,500 employees at HVO and good number of contractors and suppliers (the video mentioned there was 164 local businesses), so I would say a 1/3 of those would be Muswellbrook based business from that point of view the loss of that activity would have a strong negative impact on the local economy.”

“Also the mines are spending money in the other group of business - the contracting business who support the mines. it’s also the employment for this group of people that support the mining industry and those jobs and business get to continue.”

6.9.4 Impact related to perceived effects on property values

In engagement undertaken to inform the SIA, some surrounding landholders raised a perception that the Project may result in devaluation of their property. This was primarily due to the continuation of noise, dust and visual amenity effects associated with operations.

This was particularly an issue for those landholders who may be afforded mitigation rights but not voluntary acquisition rights. A landholder in Jerrys Plains expressed that they bought their property for the rural lifestyle it provides and with the mine continuing, the landholder raised concern their property would be devalued due to the amenity impacts. Other sentiment included:

“Lived here for 20 years, run livestock cattle for personal use, 100 acres. Bought for the lifestyle. Concerns of mine devaluing my property...Have not had the property valued and maybe I should.”

“[When] I brought my property I didn’t expect the value to go down.”

Of respondents to the community survey, 16.7% expressed concern regarding the negative impact of the Project on property prices and this was one of the top five identified negative potential impacts. Respondents noted to the potential cumulative impact on property prices:

“Property prices are already affected by the mines in the area...who would want to live next to a mine unless it was cheap as it’s definitely not enjoyable so more mines closer is only going to make it worse.”

“Property owners will obtain substantially less for their properties due to the surrounding mines.”

Some also noted the flow on impact this may have on their ability to sell their home and move out of the area, suggesting this may lead to impacts on health and wellbeing. However, respondents also highlighted that whilst mining in the area may affect the value of some properties, this would be balanced by the positive effect the Project would have on property prices due to the generation and maintenance of employment opportunities in the area:

“Unfortunately, coal mining has an effect on property prices, compared to those areas not affected. Though maybe countered by employment opportunities made available by the mines.”

“May decrease value if [properties are] very close. If further away from the mine, the land in local area may increase value due to overall economic activity.”

“Generally there wouldn’t be a negative effect [on property prices] in the overall area as employment would be seen as a positive while the perceived detriment of mining would be seen as a negative...most people in the area would think having employment high in the region would be a positive for property prices.”

According to realestate.com (2022), there has been a general increase in property prices between 2017–2022. In particular, over the past 12 months (September 2021 – August 2022), there has been an 31.3% increase in property prices in Singleton, with a current median house price of \$550,000. Similar trends can be seen across the regional area.

The Project is not anticipated to significantly impact property values; however, the perception of this occurring is an expressed fear of the community and nearby landholders. Unmitigated, it is possible that the perception that the Project may have an influence upon property values will continue.

The unmitigated significance of the perceived impact on property is assessed as being **medium**. The likelihood is **possible**, and the magnitude of the impact is assessed as **minor**. A summary of the assessment of livelihood benefits is presented in Table 6.28.

Whilst some nearby neighbours reported they were concerned about impacts on property values, housing price trends in the local and regional area do not support this perception. Impacts are mainly associated with fears and concerns surrounding the impact of future mining on the amenity of the area. There is an opportunity for HVO to address these community fears and concerns through maintaining open, accessible, and clear communication with nearby neighbours via various forums such as through the development of the SIMP, regular newsletters and via the HVO CCC.

The mitigated significance of the perceived impact on property values is assessed as being **low**. The likelihood is **unlikely**, and the magnitude of the impact is assessed **minor**. A summary of the assessment of livelihood benefits is presented in Table 6.28.

Table 6.28 Summary of livelihood impacts related to perceived effect on property values

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Livelihood	Impact related to perceived effect on property values.	Nearby property owners and surrounding rural communities	Construction and operation	Local area – closest to the mine	Medium	Low

6.9.5 Impact on the perceived decreased water quality impacting agriculture-based livelihoods

Landholders expressed a dependence on water resources to maintain agriculture-based livelihoods. There was a perception that the Project could impact on water resources due to groundwater being affected by the extraction of coal from deeper seams in HVO North as well as the discharge of mine water from the site into the Hunter River. The stakeholders who primarily hold these concerns are landholders who rely on irrigated water for agricultural activities and those who draw water from privately owned bores.

A number of landholders raised concerns regarding the impact of existing operations on water resources, with most focusing on the cumulative impact of coal mining on ground and surface water quality and supply.

“My main concern is water quality. I am not sure if its HVO or other mines, Wambo or higher up at Muswellbrook or its coming from the west.”

“The water is impacted by all the other mines up the Hunter Valley, coming from all those mines.”

Landholders expressed observations of the declining condition of the Hunter River over time;

“Water quality in Hunter River it’s not as good as it was back then. In 1971, you could look in the river and see the bottom...I used to be able to see all catfish nests and now its just murky.”

“When we moved here, the Hunter River was crystal clear and over the years its gotten more and more murky...everyone says it is because of the mines...You could see fish swimming.”

More specifically, landholders who draw water from the Hunter River reported increasing salinity as having the potential to impact agricultural livelihoods.

“It impacts salinity in the water and if that goes to high it’s like putting sea water on your land... I grow pecans and if the salinity gets to high I won’t be able grow anymore... It’s my livelihood, I earn an income growing pecans and I’m significantly concerned about the water quality.”

Concern was also raised for the implications on groundwater resources from extracting coal from deeper seams. Specifically, one landholder expressed the impacts deeper mining would have on their own water bore;

“I have a bore on my land, and I would be worried about the water situation if they are digging deeper and this water supplies water to my stock.”

Technical assessments of surface and groundwater systems were conducted as part of the EIS, with reports indicating that there will generally be minimal impact on water resources as a result of the Project, with proposed management and mitigation measures in place (EMM 2022c and AGE 2022). Key findings include:

- there are no known private water supply bores situated within the zone where drawdown is predicted to exceed the Aquifer Interference Policy threshold, thus no impacts are predicted to any privately owned bores;
- the Project is not expected to impact any downstream water users on the Hunter River;

- the Hunter River is a regulated river (ie controlled by a dam upstream), and any take from the river be HVO will be undertaken in accordance water access licences held by the mine. No additional water licences will be required by the Project;
- discharge of mine water from the site via the Hunter River Salinity Trading Scheme (HRSTS) is proposed to continue as needed within the existing EPL limits and HRSTS credits. The water quality is expected to remain within the existing range experienced in the Hunter River with no significant adverse impacts identified; and
- negligible impacts are anticipated on aquatic ecology.

Whilst the technical risk remains low as demonstrated by the outcomes of the assessments conducted for the EIS, the unmitigated significance of perceived impacts on water quality is assessed as being **medium**. The likelihood of the impact occurring is **likely**, and the magnitude of the impact is assessed as being **minor**. A summary of the assessment of livelihood benefits is presented in Table 6.29.

Mitigation measures already in place for the current operation of the mine include HVO's Water Management Plan. Primary measures include minimising freshwater use from the Hunter River, using mine water for dust suppression, recycling on-site water, discharges in accordance with EPL conditions, and maintaining an extensive groundwater and surface water monitoring system.

The proposed Water Management System (WMS) as outlined in the Surface Water Report, has been designed to continue to divert clean water around the mining operations and segregate, store and reuse mine impacted water to minimise adverse effects on water quality from mining operations to downstream surface waters. The proposed WMS limits the potential impacts on downstream water quality by managing water that has the potential to cause environmental harm. In conjunction with the proposed WMS, a series of erosion and sediment control measures will be utilised during operational and rehabilitation phases to manage water quality.

The existing and proposed WMS is designed to enable HVO to meet licence conditions taking account of both historical and current water qualities in the surrounding watercourses, and downstream water users. HVO's Water Management Plan (WMP) allows for the ongoing assessment of risk as mining operations progress, and the implementation of improvements and changes where required.

To mitigate any perceived social concerns relating to impacts on water sources, HVO will maintain complaint mechanisms available to concerned landholders. Results from water monitoring will be communicated to affected landholders using a 'plain English' approach to support meaningful engagement.

The mitigated significance of perceived concerns relating to decrease in water quality is assessed as **low** with the likelihood being **unlikely** and magnitude being **minor**. A summary of the assessment of surroundings impacts is presented in Table 6.29.

Table 6.29 Summary of livelihood impact on the perceived decreased water quality impacting agriculture-based livelihoods

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Surroundings	Impact on the perceived decreased water quality impacting agriculture-based livelihoods	• Local residents and near neighbours to the mine • Agricultural irrigators	Operation	Local and regional communities	Medium	Low

6.10 Decision-making systems

This section provides an assessment of Project benefits and impacts upon decision making systems.

The Project related benefits which have been assessed are:

- benefit of allowing more time for transition planning.

The Project would deliver an additional 25 years of mining at HVO North, and a further 15 years of mining at HVO South. The Project would secure continued support for local businesses and employment opportunities for around 1,500 operational employees.

The Project proceeding would provide the community additional time to transition before mine closure, including opportunities for:

- workers to transition to new industries through reskilling;
- transition planning to manage withdrawal of the mine's direct and indirect economic contributions to business and community organisations;
- the local and regional community to make more informed and considered inputs into the Project's approach to closure; and
- new infrastructure and employment opportunities in the region which are likely to develop and become viable, as there is a strong local and regional planning context for transition of the economy from economic reliance on the mining sector, which has not yet been fully realised.

The *Draft Hunter 2041 Plan* (DPE 2021) confirms that the NSW Government will work to support coal-dependent communities to diversify for the future with employment opportunities. In this regard, ongoing operations as proposed by the Project, including the direct and indirect employment and economic benefits resulting from the Project, will enable and support the transition to other work. The Draft Plan notes that alternate use of mine land and associated infrastructure such as transmission lines, rail lines and water storages will play a key role in the transition of the local economy as existing mines cease operations.

The Rehabilitation Strategy (EMM 2022e) affirms that the Project is aligned with this approach, and the Project will assist the local economy to diversify and transition away from mining by providing ongoing employment opportunities for around 1,500 personnel, along with the associated direct and indirect economic contributions, whilst an appropriate social and economic transition plan can be implemented.

Furthermore, EnergyCo NSW is currently exploring the option of a Hunter-Central Coast Renewable Energy Zone (2022) under NSW Govt Electricity Roadmap. If endorsed, this would provide a significant benefit in clarifying the region's path forward to transitioning from coal, while enabling use of the community's existing human capital.

The local planning context within Singleton and Muswellbrook Councils acknowledges the region's dependence on mining and the need to consider and plan for sustainable mining transitions.

- The Singleton Local Strategic Planning Statement emphasises the need to plan for sustainable a post-mining transition that enhances agricultural productivity in the region and ensures that rehabilitated mining land is prioritised for agricultural activity.
- The Singleton Socio-Economic Development Strategy proposes several actions to plan for a mining industry transition that considers education, training, local employment and wellbeing to ensure the transition does not adversely impact the community.

- The MSC Community Strategic Plan recognises the need to improve economic viability and ensure job security (Muswellbrook Shire Council 2017, p.2). This derives from the impacts of mine closures on the local economy and the uncertainty surrounding the future of coal mining.

The Social Baseline (Chapter 4 of this report) and Section 6.9 demonstrate the community's need for sensitive transition planning due to existing economic and cultural reliance on the mining industry. Section Workforce continuation survey of this report provides a detailed summary of responses to the workforce survey, which provides an understanding of potential workforce transition requirements. Workers believed it was important or extremely important that the Project continue.

The confidence which members of the workforce had in being able to find employment in the mining industry if they were not working at HVO varied between highly confident to no confidence at all.

The workforce mostly felt confident that their job skills allowed them to work in an industry other than mining, with 68% indicated they felt confident in their own skill sets. Among the workforce surveyed, the most common transferable skills outside of mining were operation of machinery, construction skills, trades, and engineering.

Respondents to the HVO supplier survey (Section Supplier survey) indicated that 75% of their existing business is constituted by services to mines. A total of 54% of suppliers were found to be dependent on mining industry income and 42 suppliers were directly dependant on income from HVO. These results highlighted the need for future transition planning to factor in alternate income sources and investment to be implemented to develop alternatives.

Singleton and Muswellbrook Councils and Chambers of Commerce raised concerns around transition planning including:

"2035–2045 are a pinch point for closure of mines in the region."

"More high-level studies have looked at the impact likely to happen and pointed to the need to be replacing employment with skilled workers with reasonably the same income level so people are able to maintain their standard of living."

"Economic inputs of major coal Projects in the community are so great, they are needed for quite a long time into the future to sustain economic wellbeing."

"Alternative industry is nowhere near ready to replace the economic value of coal."

"[Closure would mean] thousands of people that would be looking for alternative employment and even though there is a skill shortage and there is not that many positions available in alternative industries."

"We used to talk about transition and now it's more about innovation and diversification the agenda for a long time – it takes time to bring these things to realisation and good ideas are not of any use unless we deliver something."

It is clear that communities in the LGA's of Singleton and Muswellbrook are intrinsically culturally and economically linked to the mining industry and there is a need for a well planned and sensitive pathway of transition. The Project will facilitate improved transition outcomes by reducing the immediate pressure for the directly impacted communities to transition. It is also clear that currently many of the actions to deliver economic diversification and alternate jobs have not yet been realised.

The unenhanced benefit of the Project providing more time for transition planning is assessed as **high**. The likelihood of the benefit occurring is **almost certain** and the magnitude of the benefit is assessed as **moderate**. A summary of the assessment is presented in Table 6.30.

There is an opportunity for HVO to further contribute to regional transition through investment in mine closure planning processes. Key factors influencing the success of mine closure include:

- clear closure objectives and supporting policy framework;
- initiation of the process well in advance of the date of closure;
- formation of effective partnerships with all tiers of government;
- involvement of the community and stakeholders in articulating a shared closure vision; and
- adequate investment of time and resources in the closure planning process.

The enhanced significance of the benefit of the Project providing more time for transition planning is assessed as **high**. The likelihood of the benefit occurring is **almost certain** and the magnitude of the benefit is **moderate**. A summary of the assessment of surroundings impacts is presented in Table 6.30.

Table 6.30 Summary of decision-making system benefit of allowing more time for transition planning

Social impact	Matter	Affected parties	Duration	Extent	Unmitigated	Mitigated
Decision making systems	Benefit of allowing more time for transition planning	Local businesses Mine employees Regional community members	Project closure	Regional area	High	High (benefit)

6.11 Cumulative impacts

6.11.1 Overview

A community may experience cumulative impacts when multiple projects occur in a similar timeframe. Simultaneous development or decommissioning of multiple projects can exacerbate the social and economic impacts and benefits associated with a single project as well as stimulate additional unique impacts.

Consideration of cumulative impacts is particularly important in the Hunter Valley with a high concentration of mining operations amongst a range of other land uses and residential areas. Many communities throughout the Hunter Valley are economically and socially linked to the coal industry and have experienced boom and bust cycles reflecting fluctuations of commodity prices and Project viability.

This section considers the potential cumulative impacts of surrounding projects which are either proposed or are anticipated to close in a timeframe that overlaps with the Project. The assessment is restricted to those projects which for which there is information in the public domain which are primarily major resource sector projects. The construction activities associated with the Project are considered separately to ongoing operations.

6.11.2 Projects contributing to cumulative impacts

There are currently around 19 active coal mines across the Hunter Valley, some of which are nearing closure whilst others have recently had their life extended with the approval of continuation projects, such as the Mangoola (SSD 8642) and Mt Pleasant mine (SSD 10418).

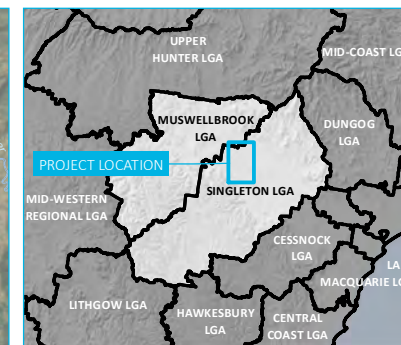
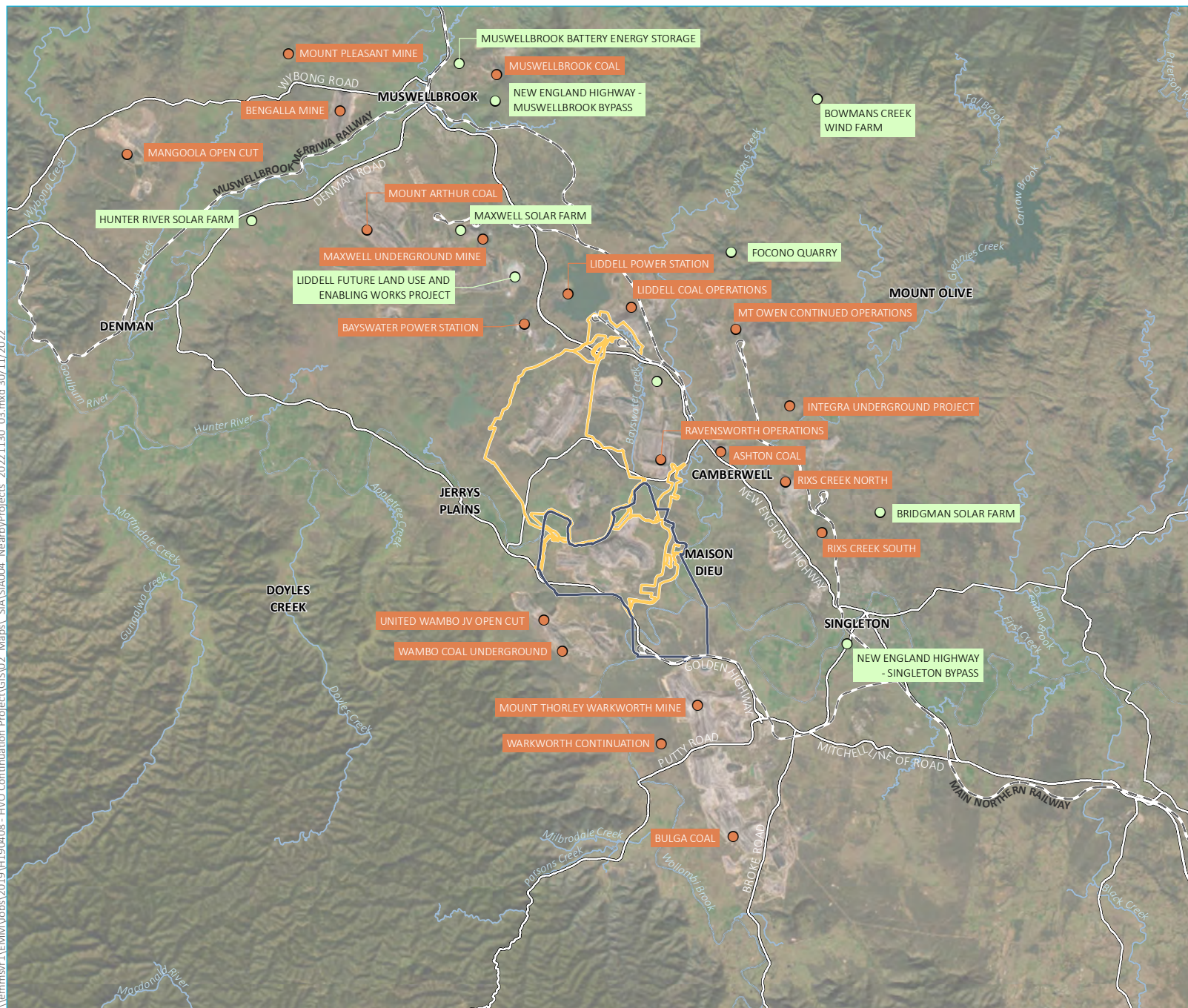
Cumulative impacts are contributed to by infrastructure and industrial projects which require sizable construction or operational workforces. These include major transport and social infrastructure projects such as the Singleton Bypass. The last five years have also seen the proliferation of renewable energy projects across much of NSW. These include solar and wind energy projects, large scale battery and pumped hydro projects. In relation to the Hunter Valley, the NSW Government's Electricity Infrastructure Roadmap has identified the Hunter-Central Coast Renewable Energy Zone (REZ) as a hub for investment in renewable projects, and at the time of writing has begun the process of declaring the REZ under the *Electricity Infrastructure Investment Act 2020*.

Projects identified as being relevant to cumulative impacts are those which would likely contribute to changed social conditions in the local and regional study areas. This is limited to the Singleton and Muswellbrook LGA's. Projects which are located further afield (such as closer to Newcastle) have not been included as they would not have a significant effect upon cumulative impacts associated with the Project.

It is noted that the estimated timing of projects is based on the best information available but are subject to change. Some projects have not yet gained regulatory approval whilst others require internal stakeholder approval and access to finance. Such factors strongly influence whether the project proceeds to development. Similarly, estimated timing of project closure is often difficult to accurately predict as commodity prices, the regulatory environment and technology improvements all have an influence on the predicted timing of closure.

Identified resource sector projects in the Singleton and Muswellbrook LGA's which have the potential to contribute to cumulative impacts are listed below. Those which closest to HVO are shown in Figure 6.1.

\\lemmsvr1\EMM\Jobs\2019\190408 - HVO Continuation Project\GIS\02 Maps\ SIA\IA004 NearbyProjects 20211130 03.mxd 30/11/2022



- KEY**
- HVO North proposed development consent boundary
 - HVO South proposed development consent boundary
 - Resource sector project
 - Existing
 - Proposed
 - Existing environment
 - Main road
 - Rail line
 - Named watercourse

Nearby projects and mining operations

HVO Continuation Project
Social Impact Assessment
Figure 6.1



Source: EMM (2022); HVO (2022); DFSI (2017); GA (2011); ASGC (2006)

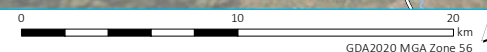


Table 6.31 **Concurrent resource sector (coal) projects**

Project name	Anticipated timeframe/Project life	Construction workforce	Operational workforce
Mt Owen Continued Operations	Mining operations may take place until 2037.	n/a	660
Liddell Coal Operations	Ceasing operations in 2023.	n/a	460
Ravensworth Operations	Mining operations may take place until 2039.	n/a	550
Ashton Mine Complex and Ravensworth Underground	Modification to both approvals recently approved, allowing processing of coal from Ravensworth Underground at the Ashton coal pit top area until 2035.	n/a	270
Rixs Creek South	Mining operations may take place until 2040.	n/a	375
Rixs Creek North	Mining operations may take place until 2035.	n/a	254
Integra Underground Mine	Mining operations may take place until 2035.	n/a	260
United Wambo Open Cut Coal Mine	Undertaken over a 36-month construction phase (with the peak in first 24 months). Mining operations may take place until 2042.	Construction complete	500
Wambo Coal underground mine	Mining operations may take place until 2042.	n/a	370
Mt Thorley Continuation Project	Mining operations may take place until 2036.	n/a	121
Warkworth Continuation Project	Mining operations may take place until 2036.	n/a	1,187
Maxwell Underground Coal Mine Project	Undertaken over a 36-month construction phase (with the peak in first 24 months)/Mining operations may take place until 2047.	90 – 250	350
Mangoola Coal Continued Operations	Undertaken over a 16 month construction phase. Mining operations may take place until 2030.	145	480
Bulga Open Cut	Undertaken over a 24-month construction phase. Mining operations may take place until 2039.	Construction complete	700
Bulga Underground	Mining operations may take place until 2031, noting that operations ceased in 2018.	n/a	-
Mount Arthur Mine Complex	Undertaken over a 24 month construction phase. Mining operations may take place until 2026*.	n/a	300
Muswellbrook Coal	Mining operations may take place until December 2022.	n/a	150
Mount Pleasant Optimisation Project	Mining operations may take place until 2048.	500	600

Table 6.31 Concurrent resource sector (coal) projects

Project name	Anticipated timeframe/Project life	Construction workforce	Operational workforce
Bengalla Mine	Mining operations may take place until 2039.	n/a	900
Total		895	8,547

Note: * DPE Planning Portal Mt Arthur Coal Modification (Pathway to 2030) - Continuation of mining operations and the continued employment of approximately 2,200 people for an additional 4 years to 2030.

The construction and operation of non-resource sector projects in the Singleton and Muswellbrook LGA's which intersect with the construction and operation of the Project are also relevant to the assessment of cumulative impacts. Non-resource sector projects considered as part of the cumulative assessment are summarised in Table 6.32.

Table 6.32 Concurrent non- resource sector projects

Project name	Anticipated timeframe/Project life	Development type	Construction workforce	Operational workforce
Bridgman Solar Farm (proposed)	6–9 construction phase/30 years operational	Electricity Generation – Solar	50	8
New England Highway – Singleton Bypass (TfNSW)	Current construction schedule anticipated to commence in late 2022 and conclude late 2026	Road infrastructure project	250 ¹	n/a
Bowmans Creek Wind Farm (under assessment)	18 month construction phase/25 years operational	Electricity Generation - Wind	156	15
New England Highway – Muswellbrook Bypass (TfNSW) (proposed)	Current construction schedule commencing in 2022 and ending in 2026 ²	Road Infrastructure Project	120 ³	n/a
Muswellbrook battery energy storage (proposed)	12 months construction phase / 20 years operational	Electricity supply	75	2–3
Maxwell Solar Farm	Approved in 2020	Electricity Generation - Solar	50	2
Hunter River Solar Farm (proposed)	18 month construction phase/50 years operational	Electricity Generation – Solar	150–200	3–4
Liddell Power Station – Future Land Use and Enabling Works Project (proposed)	20 years operational	Electricity Generation – Other	75–100	

Table 6.32 **Concurrent non- resource sector projects**

Project name	Anticipated timeframe/Project life	Development type	Construction workforce	Operational workforce
Focono Quarry (proposed)	12 month construction phase	Extractive industries	5–10	35
Total			1,011	67

1. The Singleton Bypass REF does not quote construction numbers, so a peak construction workforce has conservatively been assumed.
2. It is considered unlikely that the Singleton and Muswellbrook bypass will be constructed at the same time, therefore only one (Singleton Bypass) has been included in the cumulative construction numbers.
3. <https://roads-waterways.transport.nsw.gov.au/projects/01documents/new-england-highway/muswellbrook-bypass/muswellbrook-bypass-ref-10-2021.pdf>

6.11.3 Cumulative construction impacts

i Cumulative construction workforce demands

Assuming a ‘worst case’ scenario, and all Projects identified above occur as scheduled, the cumulative requirement for construction labour in the timeframe proposed for the Project construction (2023–2027) is presented in Figure 6.2. All projects considered are expected to conclude construction activities by 2028; however, it is almost certain that additional projects will eventuate in the intervening timeframe and subsequently it is not likely that demand for construction labour would reduce to such an extent.

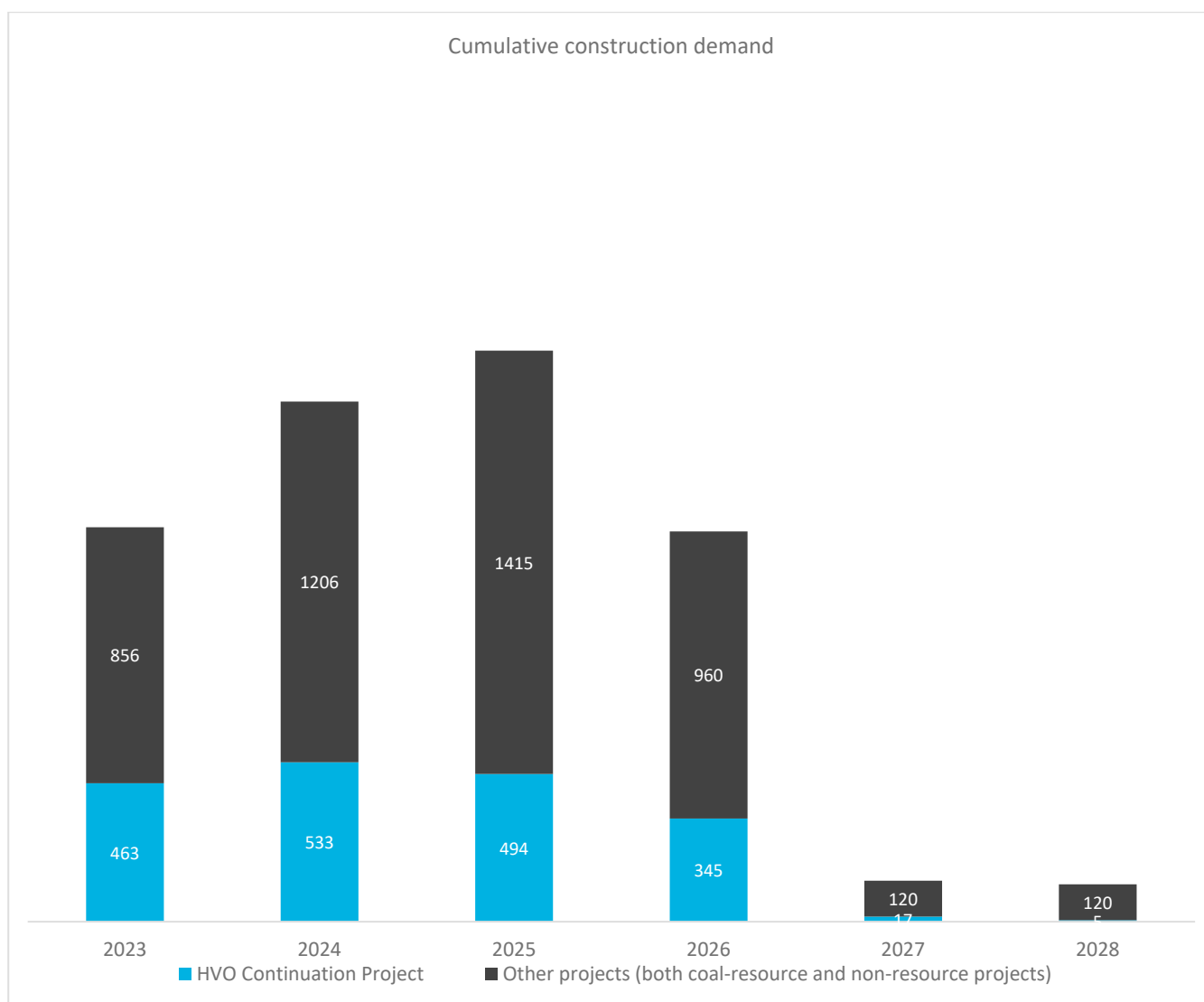


Figure 6.2 Cumulative construction demand

In year 2025, the total construction labour required equates to a peak of 1,909 construction workers, this includes a peak of 1,415 construction workers required for the other projects and approximately 494 workers required for the HVO continuation Project (see Figure 6.2). The contribution of the Project to estimated peak cumulative construction employment demand in 2025 is approximately 25.9%.

Given the long history of mining in the Hunter Valley, there are a large number of well-established businesses providing support services to mining projects and a regional labour force with applicable skills. As presented in Table 6.36, analysis of labour force characteristics of Singleton and Muswellbrook LGA's suggests that the total labour force with skills applicable for mine construction (includes industries of construction, electrical, gas and water and mining) is approximately 5,624 workers. Construction skills may be also sourced from the broader region. The size of the labour force of the Hunter Valley including Newcastle with skills applicable to mine construction is 24,807 workers. This suggests there is a sufficient labour pool in the local and regional areas as well as the area of reference, to meet the cumulative construction demand, as discussed further below.

Table 6.33 Labour force characteristics and skills in the regional area and area of reference

Area	Mining	Electricity, gas, water and waste services	Construction
Muswellbrook LGA	1,474	322	328
Singleton LGA	2,531	291	678
Regional total	4,005	613	1,006
Hunter Valley SA4	9,936	1,813	9,434
Newcastle SED	692	417	2,515
Area of reference total	10,628	2,230	11,949

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

ii Employment and population change

Change to population occurs if there is a need to bring workers into an area to meet labour requirements. As outlined above, total construction labour required for identified projects equates to a peak of 1,909 construction workers in 2025, including the construction workforce for the Project (approximate peak of 494 workers).

In the Singleton and Muswellbrook LGA's the total size of the labour force with skills required for mine construction is 5,624 persons. The cumulative demand generated by identified Projects would account for 64.5% of the total regional pool of skills. This indicates that a portion of required construction labour would need to be sourced from outside of the region to meet cumulative demand.

Construction labour may be sourced from the broader area of reference which has a total labour force with compatible skills of 24,807 people. Cumulative demand for construction labour of a peak of 1,909 construction workers would account for 7.7% of the total pool of skills. Whilst it is difficult to predict the availability of construction skills in 2025, and the data indicates there will be available workers, there is a well-documented shortage of construction skills across Australia, including across the Hunter Valley. There may therefore be a need to be source labour from outside of the area of reference to meet cumulative demand.

As described in Section 6.2, for the purposes of this assessment was therefore conservatively estimated that up to 30% of cumulative demand for construction labour would need to be sourced from areas outside of the region and area of reference. This could generate short-term population change as these workers come into the region to work on construction Projects. It is not anticipated that there would be any significant permanent population change due to cumulative demand for construction labour.

The temporary influx of 30% of the cumulative construction workforce (approximately 573 workers) would result in a 2.0% increase to the population of the local study area, a 1.5% increase to the regional population and a 0.2% increase to the area of reference. Such population change could cause minor disruption to the existing social networks and relationships and affect community cohesion in the local study area.

iii Competition for labour

The cumulative peak demand for up to 1,909 construction workers between 2023–2028 could affect existing businesses and initiatives which require similar skills. Businesses may be impacted as a result of:

- labour draw from other businesses and industries who are dependent on construction labour and skills; and
- competition for construction labour affecting proposed construction schedules of other Projects in the region.

Estimates from the Australian Constructors Association (ACA) suggest that the Australian construction industry faces a critical workforce shortage of more than 100,000 workers (Paper submitted to the Jobs Summit September 2022). In August 2022, the Newcastle Herald published an article speaking to the pressures of ongoing construction labour shortages in the Hunter Valley Region (Parris 2022). The article demonstrates that the construction industry in the Hunter region is facing an unprecedented amount of demand with increased volatility in the levels of staffing, due to reliance on immigration for key trades. This has been exacerbated by the effects of COVID-19, with migrant workers not being able to come to Australia to fulfil this labour demand.

Competition for labour due to the cumulative demand for construction skills could affect the viability of some existing businesses in the local and regional study area and the livelihoods which they support.

iv Housing and accommodation

As discussed in Section 6.4, the availability of rental and short-term accommodation in the local and regional study areas is constrained. Construction labour sourced from outside a distance of a 1 hour commute each way may require accommodation which may place further strain on the availability of rental housing and short-term accommodation.

If 30% of the cumulative peak construction labour force were to require accommodation in the Singleton LGA and Muswellbrook LGA, this would equate to demand for up to 573 rooms of accommodation. Within the Muswellbrook LGA, there are an estimated 227 rooms, with an average occupancy rate of over 40.6% and an estimated 330 rooms with an average occupancy rate of 65.4%. The assumption is that in the regional area (inclusive of Singleton LGA and Muswellbrook LGA), there are approximately 557 rooms of short-term accommodation. This would accommodate 100% of the 526 rooms of accommodation required for the cumulative construction workforce.

Analysis of available on-line short-term accommodation data suggests that in 2022 there are approximately 326 active Airbnb rentals in the regional area. As of June 2022, there were 41 houses available to rent in the regional area. The regional area has demonstrated consistently low vacancy rates with availability stated to be further declining. This is a trend that can be observed across the Hunter region.

Cumulative demand for accommodation of temporary construction could have:

- an impact on low-income and vulnerable groups in the regional area who seek access to affordable rental housing;
- accessibility impacts on vulnerable groups needing access to short-term emergency accommodation through specialist homelessness providers relying on hotels, motels etc;
- an impact on the growing tourism industry by reducing access to short-term accommodation for visitors to the region, particularly visitors attending for key regional events; and
- impacts on service workers (people not employed by the mining industry) who seek affordable housing.

The cumulative concern most frequently raised by stakeholders related to housing and accommodation. Representatives from both Singleton Council and MSC noted that the local area had limited capacity to absorb the housing demand generated by construction projects given the multiple developments in the area. Both councils highlighted that demand for temporary accommodation in the regional area is set to only increase given the multiple construction phases occurring over the next 5 years. Cumulative impacts on both rental housing and short-term accommodation were identified as critical issues during consultation with both councils and a number of service providers. MSC noted that this demand on temporary housing could impact access to the private rental market.

“[Multiple construction periods] will push prices up and makes housing less affordable and this flows onto people working in retail...they won’t be able to find houses.”

Commitments to local hiring, provision of training and apprenticeship opportunities for local workers, and partnerships with local employment and training services could reduce the need for outsourcing of workers.

The number of projects in the regional area suggests a long-term pipeline (possibly upwards of 10 years) of construction work opportunities located in the regional area. With industry collaboration there is an opportunity to draw a larger permanent resident construction workforce to the regional area. This would have a positive effect on accommodation demand as workers may seek to buy in the regional area and relocate permanently if there is a clear pathway forward for long-term employment. Encouraging a larger permanent construction workforce in the regional area would benefit long term sustainability of these communities and the services and facilities they provide, as well as supporting long term economic benefits for business operators.

v Traffic

There are a number of projects in the regional area that are anticipated to have overlapping construction phases, and thus have a cumulative impact on traffic congestion and potentially on road safety. Specific projects to note in regards to cumulative traffic impacts in close proximity to the Project include the New England Highway Singleton Bypass and the Muswellbrook Bypass. These concurrent construction phases will increase the number of vehicles (both light and heavy) travelling in and out of the local and regional area.

Traffic was raised as a key issue by stakeholders in relation to concurrent projects and developments in the local area. MSC raised the concern that scarcity of rental housing and short-term accommodation due to the multiple construction demands of the regional area, will:

“Encourage drive in drive out employment as they are prepared to drive long distances and it’s not good from road capacity and road safety.”

Many stakeholders felt that local roads are unable to accommodate increased traffic and truck movements due to their condition.

Notably in relation to the Project, only two intersections were predicted to be affected by the Project construction workforce, with background traffic growth taken into account, and that is at the Lemington Road/New England Highway intersection (AM peak only) and the Old New England Highway/New England Highway intersection, where the intersections were found to operate at capacity. To minimise this impact, outbound heavy vehicle activities accessing Lemington Road will be minimised where practical during the peak hour (6.00 am – 7.00 am). The Old New England Highway will also not be used as a primary construction haul road. It is understood that no other approved or proposed projects will further exacerbate this impact.

Prolonged demand on social infrastructure is not anticipated; however, health services such as GPs and emergency services will likely experience temporary elevated demand with multiple SSD construction phases occurring within a 5 year period. It is assumed that at least 70% of construction workforces will have their place of residence within the broader area of reference. The social baseline suggests that social infrastructure in the area of reference can support greater demand; however, locally and regional, services may be placed under strain.

Beneficially, local socio-economic growth (temporary or permanent) associated with projects and development can justify increased funding for the provision of services.

vii Amenity

Potential cumulative impacts to regional amenity may occur due to the number of SSD Projects in the region, as well as the proximity of projects to residential areas and towns. A key issue raised by stakeholders was the impact on amenity caused by noise and dust from mining operations throughout the local and regional area.

It is noted that the EPA air quality assessment criteria relate to the total concentration of pollutants in the air (that is, cumulative). The impacts of the Project in the context of surrounding developments has therefore been considered in the air quality assessment. Results are discussed in Sections 6.3.3 and Section 6.7.3.

6.11.4 Cumulative operational impacts

i Cumulative operational mining workforce demands

From the data summarised in Table 6.31 and Table 6.32, it is evident that the operational workforces sustained specifically by resource sector (coal) projects (total of 8,547 jobs) are far larger than that of renewable energy and other projects (total of 67 jobs). Assuming all of the coal resource projects listed operate as currently scheduled (and no further life of mine extensions are sought), the cumulative requirement for operations labour within the coal mining industry is presented in Figure 6.3.

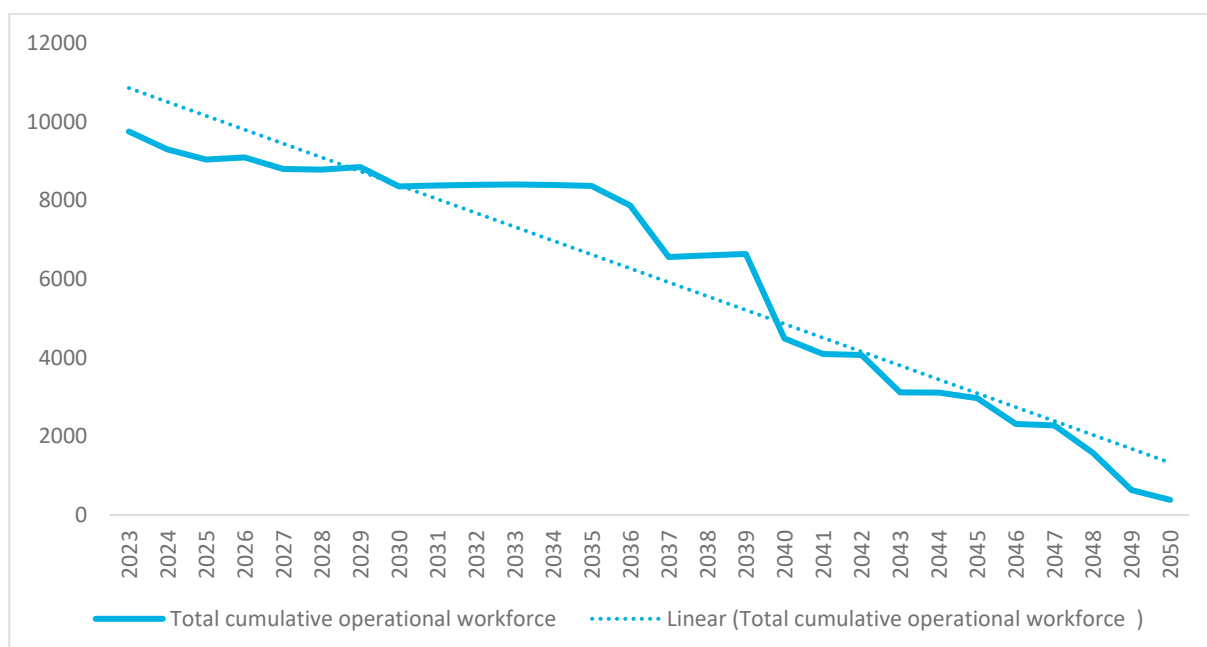


Figure 6.3 Cumulative requirement for operations labour in the regional area

This indicates that operational employment for the coal mining industry in the regional area is predicted to decline steadily over the next 25 years. The graph above does not capture the expected employment opportunities associated with rehabilitation and closure as such workforce data is not yet available. Nor does it capture the other jobs which are going to be created through transition technologies and post mining utilisation of infrastructure and skills.

ii Employment and population change

There are a number of mines closing in the regional area in the period up until around 2030. This includes Liddell Coal Operations, Mount Arthur, Mangoola, and Muswellbrook Coal. The anticipated cumulative job loss numbers and predicted population change is presented in Table 6.35. There will be an estimated cumulative job loss in the regional area associated with these Projects of approximately 1,691 jobs up to 2030. In this period alone, if the assumption is made that 30% of the mine workers are unable to find alternative work in the regional area and relocate with their families, this would mean that a predicted 1,319 people would leave the regional area. Between 2030–2040, mine closures in the regional area would result in the loss of in the order 4,105 jobs which could equate to 3,202 people leaving the region.

Table 6.34 Cumulative job loss and population change

Time period	Cumulative job loss	Estimated workers unable to gain other employment in their area of residence (based on 30% of the workforce relocating)	Population change ¹
2020–2030	1,691	507	-1,319
2030–2040	3,865	1,160	-3,015
2040–2050	4,105 (including 2050 HVO mine closure)	1,232	-25903,202

Notes: 1. Estimated workers unable to gain other employment in their area of residence multiplied by the average household size of 2.6.

iii Housing and accommodation

Many resource projects in the regional area are continuations of current operations, with non-resource projects having significantly smaller operational workforces. It is not anticipated that the operational workforces for these projects will significantly change the demand for housing and accommodation. Here, the cumulative impact primarily intersects with broader state-wide trends of low vacancy rates, lack of affordable rental housing and out-migration from urban to regional areas.

The cumulative concern most frequently raised by stakeholders related to housing and accommodation. Multiple service providers spoke to the cumulative impacts on housing and accommodation due to the COVID-19 pandemic with increasing number of people choosing to relocate to less-urban locations. It was cited as a major challenge for low-income households to compete with people relocating from more metropolitan areas like Sydney.

“People are buying from Sydney because it’s cheaper and people here can’t afford to buy the houses. Eg last year a house sold for \$1M and it’s a nice house but its not a \$1M house. So how can local people afford to buy a house here.”

Singleton Council and MSC both advised of the difficulties faced by local businesses not being able procure workers as they are not able to find housing in the area.

“Other business that also require accommodation like the abattoir struggle to find accommodation and housing for their workforce... a vineyard is in need workers but when you are competing with high [housing] prices you can’t get the workers.”

The housing market in the regional area is connected to mining project activity, with a large proportion of dwellings being associated with mines in the area, either directly or indirectly. With mine closures occurring over the next 25 years with associated job losses, the property market may be adversely impacted by declining property values. This would affect homeowners and investors. However, declining property prices also has a positive impact for low-income and vulnerable people in being able to access the private housing market.

There was a perception among some stakeholders that a number of properties have been purchased by mining companies as a result of properties falling within defined acquisition zones.

iv Social infrastructure

The planning and provision of social infrastructure requires “a careful balance of current understanding and future predictions of population needs, along with sequencing of infrastructure delivery to meet current and future demands in a timely and equitable way” (Davern et al 2017). The continued stability of job provision that the Project would provide is beneficial in a cumulative scenario of multiple mine closures over the next 10 years. It will help to ensure planned and well managed demand and service delivery whilst the region begins its transition away from mining.

v Amenity

The cumulative amenity concerns most frequently raised by stakeholders related to the effects of dust, visual and noise. Multiple projects near each other can result in cumulative amenity impacts that impact the way a landscape and environment is experienced. Cumulative amenity impacts can arise from the presence of similar Projects that may have a low impact individually, but when experienced together, can have a significant amenity impact on the local and regional environment.

a Air quality

Whilst the current conditions of air quality experienced by local residents will continue in the short term, the cumulative impact of dust and diminished air quality should decrease over time as other mines in the region cease operations. Effective rehabilitation of mine sites will play an important role in the improvement of air quality.

b Visual

A number of viewpoints of HVO will continue to experience cumulative visual amenity impacts (ie concurrent views of multiple open cut mining operations). Each of the mining and industrial developments are well-established features of the visual landscape surrounding the Project area and are predicted to close prior to the completion of the Project. Therefore, the visual landscape surrounding the Project area will undergo significant (positive) change over the life of the Project.

c Noise and vibration

As other mines in the local area close (thus ceasing their noise impacts), the Project’s proportional contribution to cumulative noise impacts will increase. Cumulative noise impacts have been assessed and considered by the Noise and Vibration Assessment prepared for the Project, and voluntary mitigation rights will be afforded to properties as triggered by the VLAMP. Notably, HVO will continue to offer voluntary mitigation rights to all residences that currently hold them around the complex, despite these rights not being triggered by predicted noise levels associated with the Project at all of these properties. It is also noted that a number of residences hold voluntary mitigation and acquisition rights with numerous mines in the area.

In relation to blasting, the risks associated with different open cut operations acting simultaneously can be effectively managed via the implementation of appropriate protocols (Enviro Strata Consulting 2022). There is a well-developed system of email notification and interaction with the adjacent mines already in place.

vi Decision making systems

a Concerns regarding community cohesion, climate change and sustainable production and consumption

Progressive closure of coal mines in the region will reduce social pressure associated with mining practices contributing to climate change, though it will not resolve existing climate change impacts such as the increased frequency of extreme weather events.

The broader community may be coming to view that the existing rate of extraction of coal is unsustainable, as discussed in Section 6.4, as well as supporting resources (Climate and Health Alliance 2022, Geoff Evans 2007). The policy position around coal mining has changed to a transition approach that seeks equity and sustainability within the planning context, as outlined in the NSW Strategic Statement on Coal Exploration and Mining in NSW (the Strategic Statement) and Net Zero 2050. The Strategic Statement commits to continue to support the responsible development of the state's abundant, high quality coal resources for the benefit of the state and to consider responsible applications to extend the life of current coal mines, such as the HVO Complex.

Social discourse on climate change and responsibility for sustainable production and consumption will continue to evolve over the coming decades.

b Access to and use of local environments which have sustained biodiversity and ecological health

The BDAR report (Section 6.2) identifies that cumulative impacts to biodiversity will only occur in the medium term, as it is expected that the proposed rehabilitation strategy will restore habitats and connectivity in the locality in the long-term. As such, it is not expected that access to biologically diverse environments will be impeded for future generations, though existing generations will and are experiencing the impact of fragmented environments. Section 6.8 describes the rehabilitation benefits in the long-term outcomes as a result of the Project. In the interim, mine closures and rehabilitation will be occurring, likely providing a progressive improvement in the region's biodiversity and improved community access to the benefits offered by these large rehabilitated areas.

c Impacts to access and quality of places of local social and cultural significance

The ACHA prepared for the Project identifies that while a number of Aboriginal cultural heritage sites are within the Project's disturbance area, the investigations of the Project area have contributed to the archaeological and scientific understanding of the region.

The RAPs have also expressed a desire to place any salvaged artefacts from the Project in a keeping place accessible to the Aboriginal community, creating a new 'Aboriginal place' which would form an important continuation and re-imagining of cultural heritage of the region for future generations. The Project has also been designed to continue avoidance of the highly significant cultural heritage site, CM-CD1, in HVO North.

These proposed management measures are anticipated to provide opportunities the local Aboriginal community to maintain a cultural connection with the landscape by having continued access to sites of high significance and will help to achieve intergenerational equity by allowing retention of cultural materials for cultural and educational purposes.

Discussions between HVO and the RAPs facilitated the identification of a number of initiatives across key Closing the Gap themes including health, education, business, finance, employment, culture, and community.

The context for surrounding mine closures occurring between 2023 and 2045 is provided in Section 6.11.1, with Sections 6.11.3i, 6.11.3ii and 6.11.3iii addressing the closure impacts on employment. Other than HVO, the Mount Pleasant Optimisation Project and Maxwell underground are anticipated to be the only remaining resource sector (coal) projects past 2042 and will only offer up to 1,670 jobs.

AGL has also announced the planned closure of the two power stations in the Hunter Valley, both of which are in close proximity to HVO; with Liddell to close in 2022–2023 (AGL 2022) and Bayswater between 2030 and 2033. This will result in further pressure and job competition as local workers transition to alternate employment.

The Government's position around transition planning for the region is principally to secure alternate employment in similar sectors, particularly focusing on renewable energy. It is noted that the Hunter Regional Plan 2041 is still in draft a. Of particular concern is securing equity in employment opportunities for mature people, particularly given the possible need for skills transitioning, although renewables and government projects are now required to deliver Indigenous Participation Plans under the First Nations Guidelines for major energy projects (NSW Department of Planning and Environment 2022).

While the broader planning context of transitioning to renewables may improve cumulative employment equity for indigenous employment in the region, this is reliant on realisation of planned transition outcomes for the region. Furthermore, management of transition opportunities for mature employees is particularly important, as this is not enabled under existing structures and the proposed transitions to "new" industries.

Within the cumulative context of regional employment, the Project will contribute to intergenerational equity within the region as it adds further defined provision of employment and training opportunities, and a structure within which transition planning and related upskilling can occur over the Project lifetime. A defined workforce management plan is critical to defining need, setting Project responsibilities and providing clear outcomes for the workforce within the context of regional transition from mining.

7 Mitigation and management

This section provides a summary of social impacts and benefits along with the corresponding assessed level of significance. Proposed mitigation and enhancement measures are specified along with the entities which have responsibility for implementation. Whilst HVO will maintain central responsibility for most mitigation and enhancement measures, effective implementation is reliant in part upon partnerships with state and local government, social infrastructure and service providers other community and advocacy groups. A summary is provided in Table 7.1.

This section also provides an overview of the associated monitoring and management framework.

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Way of life	Impact of continued traffic congestion and road delays – construction.	Medium	- To reduce the risk of adverse traffic queueing at the intersection, outbound heavy vehicle activities accessing Lemington Road will be minimised where possible during the morning peak hour period (6.00–7.00 am). - The Old New England Highway will not be used as a primary construction haul road to ensure traffic demand using this road is low. A TMP will be prepared by the appointed Construction Contractor in accordance with Transport for NSW Traffic Control at Worksites and relevant Austroads guidelines and in consultation with the road authority to identify the potential transport-related delays and disruptions that may arise during the works and plan for a suitable mitigation accordingly. The plan may consider matters such as: - appropriate traffic management and signposting of access/egress points to minimise conflicts with vehicle movements on the road network; - measures to minimise disruption to pedestrians, cyclists and motorists; - development of Traffic Guidance Scheme (TGS) to manage traffic around, past or through the construction sites as appropriate; - inclusion of a Vehicle Movement Plan (VMP) to manage safe vehicle access/egress from construction compounds and other construction work areas; - measures to maintain and ensure safe access for emergency vehicles and to existing properties during construction, or provision of suitable alternatives; and Active liaison with relevant road authority and stakeholders and informs road users of the proposed works on the road network.	Medium	HVO, construction contractor

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Way of life	Impacts due to continued generation of dust and diminished air quality.	High	HVO will continue to implement best practice air quality management measures to minimise dust-related impacts. In addition, two new mitigation measures will be implemented for the Project: • A review of the existing air quality monitoring locations will be undertaken prior to the commencement of the Project to make sure that the monitoring network provides adequate coverage of the Project area, particularly in areas identified by the modelling with a potential for increased air quality impact risk. Any changes to the monitoring network will also be included in a revised Air Quality and Greenhouse Gas Management Plan. • HVO currently operates a near neighbour amenity resource program, which is a voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. However, HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.	Medium	HVO
Community	Benefit of the Project contributing to ongoing stability of the local population.	High	• Over the Project life, HVO will continue to encourage local workforce participation when new positions become available (when workers retire for example).	High (benefit)	HVO
Community	Impacts on sense of community due to population change – influx of construction workers.	Medium	• Prioritising local employment and procurement where possible to avoid changes to the local population caused by the influx of external workers. • Continue to administer the community grants programme which invests in programs, events and services that promote community cohesion, connectedness and support. • Continued stakeholder engagement to ensure that community benefits are being delivered to enhance the values of the local area and to ensure better targeting of community investment	Low	HVO

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Community	Impact on community cohesion due to divergent opinions on the Project.	Medium	Continued, regular stakeholder engagement to ensure the community is informed about operations, including the outcomes of monitoring results, and for HVO to receive feedback so that it can be responded in a timely and appropriate manner.	Medium	HVO
Accessibility	Benefit related to access to community grants and sponsorship.	High	- Continuation of HVO's support for community grants and scholarship programs. - Clear communication to the local community of the application process, to improve accessibility and help contribute to equal opportunity across community groups. - Consider strategic targeting of grant investment and partnerships that may also lead to improvements for communities experiencing extreme social disadvantage in the region.	High (benefit)	HVO, Local recipients of community grants, councils.
Accessibility	Impact on the increase demand for local and regional social infrastructure and services.	Medium	- Provision of first aid facilities during construction activities. - Engaging in communication with health care providers across the regional area so that they are informed of the Project schedule, workforce arrangements and workforce size. - If relevant and where possible, encourage construction workers to seek routine health care check-ups and any required pre-employment medicals at their place of usual residence and not in communities when on shift roster. - Consider direct monetary contributions to support improvements to health facilities and services such as through the Community Grants Program.	Low	HVO, Construction contractor, SC
Accessibility	Impact on an increased housing demand impacting rental affordability and availability.	Medium	- Where possible prioritisation of short-term accommodation rather than rental accommodation to meet construction workforce requirements. - Maximising the number of workers with applicable skills able to be sourced from within a 1 hour commute from the Project site.	Medium	HVO, Construction contractor, Singleton Council, MSC

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Culture	Benefit from the ongoing support of empowerment programs for local Aboriginal groups.	Low	- To assist in closing the gap HVO will consider a program to assist in increasing job readiness and work experience for local Aboriginal people. HVO will investigate linking programs with a third party provider, and any similar programs that have been established by the participants in the HVO JV. The program will initially run for the first five years of the Project and may be continued following an implementation review. - As part of the development of the SIMP for the Project, HVO will liaise further with the Aboriginal Community to define an appropriate location and a frequency where briefings could be held on the HVO procurement processes to enable Aboriginal suppliers to be able to tender for work. In addition to briefings, HVO will consider providing funding to support business/procurement training programs. This will be considered as part of the Closing the Gap funding program to be detailed in the SIMP for the Project. - Following grant of approval, as part of the SIMP for the Project, HVO will develop a funding framework to enable funding of programs and Projects that align to Closing the Gap initiatives or community mental health, to the value of \$1,000,000 over the first 10 years of the Project. This may be continued following an implementation review.	High (benefit)	HVO, RAPs
Culture	Impact on the ability of Aboriginal people to maintain connection to country and waterways.	Medium	- Continued avoidance of the Aboriginal Cultural Heritage site CM-CD1. - Salvaged artefacts to be kept near to their original location or at an established keeping place. - Procedures and protocols for ongoing consultation and involvement of RAPs will be documented in the HVO AHMP, which will be updated to incorporate the Project.	Low	HVO, RAPs
Culture	Impacts of disturbances to cultural artefacts or sites.	High	In addition to the mitigations proposed in Section 6.5.1, proposed management actions include: - Continued avoidance of the Aboriginal Cultural Heritage site CM-CD1. - Salvage of the scarred portion of the two trees within the proposed Lemington Road realignment footprint. - Surface collection of artefacts, and salvage excavation where recommended by the ACHA, in consultation with the RAPs. The methodology for the salvage and excavation to be documented in the AHMP which will be updated to incorporate the Project.	Medium	HVO, RAPs,

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Health and wellbeing	Impacts on noise and vibration.	High	• Various levels (height options) will be provided for overburden emplacement to allow shielded emplacement to occur deeper in the mining area during adverse meteorological conditions. • Haul route alignments within the mining area will maximise the available topographical shielding provided by the mine design, where practical. • The remaining fleet will be progressively attenuated and best available technology economically achievable (BATEA) sound power will be implemented, where reasonable and feasible, for significant noise generating mobile equipment. • Dozers will be restricted if deemed to be a primary source of noise during periods of meteorological enhancement. • Best management practices will continue to be implemented, as described in Section 4.1 of the NIA (refer to Appendix H of the EIS). • Significant fixed infrastructure at the yet to be constructed Lemington CPP area will include cladding and BATEA sound power, where practical. • Operation of exposed drills will be restricted, if required, during periods of meteorological enhancement. • Significant fixed infrastructure at the yet to be constructed Lemington CPP area will include cladding and BATEA sound power, where practical. • Continuation of existing blast design and management protocols in place at HVO. • Appropriate blast design and increased airblast control measures in the western sections of HVO North and HVO South will be required to manage airblast overpressure impacts on the community. • A review of the Amenity Management Plan that is already in place for the HVGC will also be undertaken for the Project. • Blast monitoring will continue, as well as the use of an additional four monitoring stations, as recommended by the BIA.	Medium	HVO
Health and wellbeing	Impact of continued anxiety about potential effects on water quality.	Medium	• HVO currently operates a near neighbour amenity resource program, which is a voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. However, HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps.	Medium	HVO

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Health and wellbeing	Impact of continued exposure to dust and decreased air quality.	High	- HVO will continue to operate an extensive air quality monitoring network and implement best practice air quality management measures. - A review of the existing air quality monitoring locations will be undertaken prior to the commencement of the Project to make sure that the monitoring network provides adequate coverage of the Project area, particularly in areas identified by the modelling with a potential for increased air quality impact risk. Any changes to the monitoring network will be included in a revised Air Quality and Greenhouse Gas Management Plan. - HVO currently operates a near neighbour amenity resource program, which is a voluntary commitment to offer water tank cleaning or supply of water filters to neighbours that request such a service. However, HVO proposes to replace this program with a more structured program whereby private residences within 4 km of the proposed mining area will be eligible for tank inspections and cleaning and installation of first flush filter systems for residential water tanks and domestic taps. - Two properties where modelling showed the Project may contribute to an exceedance of the VLAMP criteria for annual average PM₁₀ and PM_{2.5} will be entitled to voluntary acquisition rights (receptor 308 in Jerrys Plains and receptor 121 in Maison Dieu, noting that receptor 308 already has acquisition rights under the UWJV development consent relating to noise, and mitigation rights relating to noise under the HVO South Project Approval, while receptor 121 already has mitigation rights for air quality and noise under the HVO South Project Approval).	Medium	HVO
Health and wellbeing	Impact of perceived reduction in safety due to realignment of Lemington road.	Medium	Ongoing community and stakeholder engagement to educate the community about the benefits of the road realignment.	Low	HVO

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Surroundings	Benefit of rehabilitation, future land use and ongoing land management.	High	A detailed closure plan will be prepared for the Project well in advance of mine closure (ie at least 5 years prior to closure) in consultation with the HVO workforce, the community and relevant government stakeholders.	High (benefit)	HVO, Singleton Council, MSC, HVO CCC, local businesses, business chambers, community groups in Singleton and Muswellbrook
Surroundings	Impacts on the changes to the visual amenity.	Low	- Progressive rehabilitation of disturbed areas. - Investigation of the feasibility of planting targeted vegetation adjacent to the realigned Lemington Road to provide an effective visual screen and reduce views of this infrastructure from residences and local roads.	Low	HVO
Surroundings	Impact of lighting on nearby neighbours.	Medium	- Night lighting will be minimised where appropriate to the minimum required for operations and safety requirements. - Use of unidirectional lighting techniques and adequate aiming of lights (including consideration of mounting heights). - Use of shielded fittings to limit the spill of lighting where available and safe to do so. - Lighting will generally be directed either downwards or away from residences. - Following completion of the realignment of Lemington Road, potential lighting impacts from headlights of passing motorists on residences in Maison Dieu and Long Point will be reviewed by HVO.	Low	HVO
Surroundings	Impact on land management and pest control.	Medium	- Pest and feral animal control measures will continue to be undertaken in accordance with current mine practices and as outlined in the HVO Integrated Biodiversity Management Plan. - Continued stakeholder engagement to manage the community perception of the issue. - Successful pest control programs rely on coordination with other mine sites and landholders.	Medium	HVO, Neighbouring mining operations

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Livelihood Benefits	Benefit of the continuation of local employment and training opportunities.	Medium	The SIMP will identify measures to encourage local participation, including: - Identify training and employment agencies in the local and regional area who have demonstrated success in training and placement of young and mature aged people in construction industry roles. - Seek to identify particular job positions and supply work packages that will be targeted for local people. - Continue partnerships with secondary education providers in the regional area to support skill development ie provision of work experience opportunities on HVO Projects, provision of school-based certificate level training opportunities in skill sets that support employment in the construction and mining sector.	High (benefit)	HVO, RAPs, Indigenous and non-Indigenous service providers
Livelihood Benefits	Benefit related to employment and training pathways for Aboriginal and Torres Strait Islander people.	Medium	HVO will consider a program to assist in increasing job readiness and work experience for local Aboriginal people. HVO will investigate linking programs with a third party provider, and any similar programs that have been established by the participants in the HVO Joint Venture. The program will initially run for the first five years of operations and may be continued following an implementation review.	Medium (benefit)	HVO, Indigenous service providers
Livelihood Benefits	Benefit of the continued procurement opportunities for local businesses.	High	- Procurement of local labour will be encouraged, and from local suppliers. - HVO will liaise further with the Aboriginal community to provide awareness for to Aboriginal suppliers around works programs that may be suitable.	High (benefit)	HVO, Indigenous and non-Indigenous service providers, local businesses, local businesses, business chambers
Livelihood	Impact related to perceived effect on property values.	Medium	There is an opportunity for HVO to address community fears and concerns through maintaining open, accessible, and clear communication with nearby neighbours via various forums such as through the development of the SIMP, regular newsletters and via the HVO CCC.	Low	HVO

Table 7.1 Mitigation and enhancement measures

Impact category	Impact/benefit	Unmitigated significance	Proposed mitigation and enhancement measures	Mitigated significance	Responsibility/ implementation partners
Livelihood	Impact on the perceived decreased water quality impacting agriculture-based livelihoods.	Medium	Management and mitigation measures related to water resources in place at HVO will continue, including: • minimising freshwater use from the Hunter River; • using mine water for dust suppression and recycling water captured on-site; • discharges in accordance with EPL conditions; and • maintaining an extensive groundwater and surface water monitoring system.	Low	HVO
Decision-making system	Benefit of allowing more time for transition planning.	High	A detailed closure plan will be prepared for the Project well in advance of mine closure (ie at least 5 years prior to closure) in consultation with the HVO workforce, the community and relevant government stakeholders. The closure planning process will include: • identification of clear closure objectives within the supporting policy framework; • formation of effective partnerships with all tiers of government; • involvement of the community and stakeholders in articulating a shared closure vision; and • adequate investment of time and resources in the closure planning process.	High (benefit)	HVO, Singleton Council, MSC, HVO CCC, Local businesses, business chambers, community groups in Singleton and Muswellbrook

7.1 Monitoring and management framework

This section provides an overview of the social impact monitoring and management framework which will be developed post determination of the Project and in accordance with any conditions of development consent. As per the SIA Guideline (DPE 2021a), social impact conditions of consent may include the requirement for development of a SIMP that describes the measures to be implemented and the impacts they will address. The SIMP will serve to:

- enhance and refine mitigation, enhancement, monitoring and management of social impacts over the life of the Project;
- set out how the community can provide feedback as part of adaptive management.

To guide the adaptive management of social impacts, the SIMP will include a monitoring and management framework which describes how the requirements of performance-based and prescriptive conditions will be implemented and monitored through a monitoring and auditing program. This would include elements such as indicators, baseline values, frequencies, triggers, stakeholders and responses.

It is proposed that the monitoring and management framework address elements which include the following:

- providing regular Project updates to the broader community and targeted notifications and Project updates to affected parties;
- ongoing community engagement as impact mitigation through participation in and reporting on regular local stakeholder briefings and meetings with:
 - Landowners and adjacent nearby neighbours;
 - Singleton Council;
 - Muswellbrook Shire Council;
 - Registered Aboriginal Parties; and
 - Relevant State government agencies;
- track progress of mitigation and management strategies;
- regular review of actual Project impacts against predicted impacts;
- identify how information will be captured for reporting to impacted stakeholders including landholders, and adjacent landowners, communities and government on progress and achievements;
- key performance indicators, targets and outcomes;
- effective, monitored and reported complaints handling processes;
- clear deliverables for responsible parties; and
- Project wide mechanisms for ongoing adaption of management measures when and if required.

In addition, the extensive suite of environmental management plans that are currently in place at HVO will be updated to account for the Project, incorporating any conditions of development consent, and include the additional management and mitigation measures for each environmental aspect, as identified by relevant technical studies and identified throughout this report (and summarised in Table 7.1).

8 Conclusion

This SIA identifies and evaluates the potential social impacts and benefits of the Project. The SIA was completed in compliance with applicable legislation and guidelines, including the SIA Guideline (DPE 2021a) and the SEARs specific to the Project.

The SIA study areas were defined to reflect the geographic distribution of different types of social impacts and benefits. The local study area includes communities which directly surrounding HVO, being Jerry Plains, Maison Dieu, Camberwell, and Long Point, along with two key nearby townships of Singleton and Muswellbrook. The regional study area comprises the LGAs of Singleton and Muswellbrook. The regional study area sits within a broader area of reference which includes the Hunter Valley region and Newcastle.

Through primary and secondary research, this SIA has sought to identify social impacts and benefits associated with the construction and operation of the Project. The Project will have various social impacts and benefits, accruing in both the local study area and regional study area. The communities of the local area are most likely to experience direct social impacts associated with the Project such as those related to amenity (ie dust, noise and visual amenity), traffic, demands on social infrastructure and services, housing and accommodation, employment, business and industry opportunities, and community health and wellbeing. Communities in the regional study area may not be directly affected by Project activities but they may experience impacts associated with use of infrastructure, supply chains, transportation of goods, materials and equipment, employment, accommodation demand and movement of workers, along with cumulative impacts arising from other Projects in the area.

Identified social impacts and benefits were assessed according to their relative level of significance.

The most significant positive social benefits of the Project relate to:

- continuation of local employment and training opportunities;
- improved access and travel experience due to the realignment of Lemington Road, including the construction of a new bridge over the Hunter River;
- contributing to ongoing stability of the local population;
- continued royalty payments to the NSW state government;
- ongoing provision of community grants and sponsorships;
- continued procurement opportunities for local businesses;
- enabling more time for transition planning with respect to the reliance on the coal mining industry in the Hunter Valley; and
- improved rehabilitation outcomes.

Key negative social impacts identified for the Project relate to:

- continued generation of dust;
- continued sources of noise;
- continued traffic congestion and road delays during construction;
- impact on community cohesion due to divergent opinions on the Project;
- possible impact on an increased housing demand impacting rental affordability and availability;

- direct impact of cultural artefacts; and
- continuation of Project related traffic.

A summary of impacts and benefits and their associated level of significance is provided in Table 8.1.

Table 8.1 **Summary of identified social impacts and benefits**

ID	Impact category	Impact/benefit	Affected parties	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
SO1	Way of Life	Benefit of the realigned Lemington Road and new bridge over the Hunter River.	Road users	Operation	Local area	Very high	Very high (benefit)
SO2		Impacts of continued traffic congestion and road delays.	Road users	Construction	Local area	Medium	Medium
SO3		Impacts of continued traffic congestion and road delays.	Road users	Operation	Local area	Low	Low
SO4		Impacts due to continued generation of dust and diminished air quality.	Local residents	Operation	Local area	High	Medium
SO5	Community	Benefit of the Project contributing to ongoing stability of the local population.	Local and regional community Vulnerable groups	Life of mine	Local and regional area	High	High (benefit)
SO6		Benefit of continued royalty payments to the NSW state government.	Regional area and State community	Operation	Regional area and broader NSW	High	High (benefit)
SO7		Impacts on sense of community due to population change.	Local and regional community Nearby landholders	Construction / Life of mine	Local and regional areas	Medium	Low
SO8		Impact on community cohesion due to divergent opinions on the Project.	All stakeholders	Life of mine	Local and Regional areas	Medium	Medium
SO9	Accessibility	Benefit related to access to community grants and sponsorship	Community groups, schools, service providers	Operation	Local and Regional areas	High	High (benefit)

Table 8.1 **Summary of identified social impacts and benefits**

ID	Impact category	Impact/benefit	Affected parties	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
SO10		Impact on the increase demand for local and regional social infrastructure and services.	Mine workforce, their families and local residents living in Singleton and Muswellbrook LGA	Construction	Local and regional area Area of reference	Medium	Low
SO11		Impact on an increased housing demand impacting rental affordability and availability.	Mine workforce, their families and local residents living in Singleton and Muswellbrook LGA Vulnerable groups	Construction	Local and regional area Area of reference	Medium	Medium
SO12	Culture	Benefit from the ongoing support of empowerment programs for local Aboriginal groups.	Local Aboriginal people	Construction and operation	Project area and regional area	Low	High (benefit)
SO13		Impact on the ability of Aboriginal people to maintain connection to country and waterways.	Local Aboriginal groups	Construction and operation	Project area and regional area	Medium	Low
SO14		Impacts of disturbances to cultural artefacts or sites.	Local Aboriginal groups	Construction and operation	Project area and regional area	High	Medium
SO15	Health and Wellbeing	Impacts from noise and vibration.	Landowners and residents	Construction and operation	Local area	High	Medium
SO16		Impact of continued anxiety about potential effects on water quality.	Local residents	Life of mine	Local area	Medium	Medium
SO17		Impact of continued exposure to dust and decreased air quality.	Local residents	Construction and operation	Local area	High	Medium
SO18		Impact of perceived safety due to realignment of Lemington road.	Local area	Operation	Local area	Medium	Low

Table 8.1 **Summary of identified social impacts and benefits**

ID	Impact category	Impact/benefit	Affected parties	Duration	Extent	Unmitigated/unenhanced	Mitigated/enhanced
SO19	Surroundings	Benefit of rehabilitation, future land use and ongoing land management.	Residents, travellers, businesses, Singleton and Muswellbrook Councils	Operation and decommissioning	Regional area	High	High (benefit)
SO20		Impacts on changes to visual amenity.	Nearby landholders	Operation	Immediate surrounds of the Project	Low	Low
SO21		Impact of lighting on nearby neighbours.	Near-neighbours to Project	Operation	Immediate surrounds of the Project	Medium	Low
SO22		Impact on land management and pest control.	Nearby landholders	Operation	Local area	Medium	Medium
SO23	Livelihood	Benefit of continued local employment and training opportunities.	Labour force	Construction	local and regional area	High	High (benefit)
SO24		Benefit related to employment and training pathways for Aboriginal and Torres Strait Islander people.	Local indigenous groups	Construction and operation	Local and regional area	Medium	Medium (benefit)
SO25		Benefit of the continued procurement opportunities for local businesses.	Local businesses	Construction and operation	Local and regional area	High	High (benefit)
SO26		Impact related to perceived effect on property values.	Nearby property owners and surrounding rural communities	Construction and operation	Local area – closest to the mine	Medium	Low
SO27		Impact on perceived decreased water quality impacting agriculture-based livelihoods.	Local residents and near neighbours to the mine, agricultural irrigators	Operation	Local and regional communities	Medium	Low
SO28		Benefit of allowing more time for transition planning.	Local businesses Mine employees Regional community members in jobs market	Project closure	Regional area	High	High (benefit)

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Appendix A

SIA Guideline review questions

The SIA review questions as outlined in the SIA Guideline (DPE 2021a) and corresponding responses are presented in Table A.1.

Table A.1 Responses to SIA Guideline review questions

Reference number	SIA Guideline review question	Response
General		
1	Does the lead author meet the qualification and experience requirements?	Yes – see Section 1.6 and Appendix B
2	Has the lead author provided a signed declaration?	Yes – see Section 1.6
3	Would a reasonable person judge the SIA report to be impartial, transparent and suitably rigorous given the nature of the Project?	Yes
Project's social locality and social baseline		
4	Does the SIA report identify and describe all the different social groups that may be affected by the Project?	Yes – see Chapters 3, 4, 5.
5	Does the SIA report identify and describe all the built or natural features that have value or importance for people, and explain why people value those features?	Yes – see Section 3.1.1, and Chapter 5 and Section 6.6
6	Does the SIA report identify and describe historical, current, and expected social trends or social changes for people in the locality, including their experiences with this project and other major development projects?	Yes – see Chapters 3, 4, 5, 6
7	Does the social baseline study include appropriate justification for each element, and provide evidence that the elements reflect both relevant literature and the full diversity of views and likely experiences?	Yes – see Chapters 3, 4, 5, 6, 7, and 8
8	Does the social baseline study demonstrate social-science research methods and explain any significant methodological or data limitations?	Yes – see Chapters 3, 4, 5.
Identification and description of social impacts		
9	Does the SIA report adequately describe likely social impacts from the perspectives of how people may experience them, and explain the research used to identify them? When undertaken as a part of SIA scoping and initial assessment, has the plan for the SIA report been detailed?	Yes – see Chapter 6
10	Does the SIA report apply the precautionary principle to identifying social impacts, and consider how they may be experienced differently by different people and groups?	Yes – see Chapters 3, 5, 6
11	Does the SIA report describe how the preliminary analysis influenced project design and EIS engagement strategy?	Chapter 5 Section 5.3.7i
Community engagement		
12	Were the extent and nature of engagement activities appropriate and sufficient to canvass all relevant views, including those of vulnerable or marginalised groups?	Yes – see Chapters 3, 5, and 6
13	How have the views, concerns, and insights of affected and interested people influenced both the project design and each element of the SIA Report?	Chapter 5, Section 5.3.2
Predicting and analysing social impacts		
14	Does the SIA report impartially focus on the most important social impacts at all stages of the project, without any omissions or misrepresentations?	Yes – see Chapters 7, 8

Table A.1 **Responses to SIA Guideline review questions**

Reference number	SIA Guideline review question	Response
15	Does the SIA report analyse the distribution of both positive and negative social impacts, and identify who will benefit and who will lose from the project?	Yes – see Chapter 6
16	Does the SIA report identify its assumptions, and include sensitivity analysis and alternative scenarios? (including ‘worst-case’ and ‘no project’ scenarios where relevant)	Yes – see Chapter 6
Evaluating significance		
17	Do the evaluations of significance of social impacts impartially represent how people in each identified social group can expect to experience the Project, including any cumulative effects?	Yes – see Chapter 6
18	Are the evaluations of significance disaggregated to consider the potentially different experiences for different people or groups, especially vulnerable groups?	Yes – see Chapter 6
Responses, monitoring and management		
19	Does the SIA report propose responses that are tangible, deliverable, likely to be durably effective, directly related to the respective impact(s) and adequately delegated and resourced?	Yes – see Chapter 7
20	Does the SIA report demonstrate how people can be confident that social impacts will be monitored and reported in ways that are reliable, effective and trustworthy?	See Chapter 7
21	Does the SIA report demonstrate how the proponent will adaptively manage social impacts and respond to unanticipated events, breaches, grievances and non-compliance?	See Chapter 7

Appendix B

Authors Curriculum vitae



Chris Mahoney

Associate Director, National Technical Leader
EMM Consulting Pty Limited

Professional Overview

Chris is a highly experienced social scientist with specialist skills in the design and delivery of social performance programs, social impact assessment and community and stakeholder engagement programs. With over 25 years of professional experience across the infrastructure, resources and international development sectors, he has provided specialist social services to a wide range of complex initiatives throughout Australia and the Asia-Pacific region.

Chris has consistently demonstrated a commitment to assisting major projects manage the interface with the community in which they operate so as to attain the best possible outcomes for all parties. With an extensive body of experience to draw upon, he is able to offer genuine insights into how complex and contentious projects can achieve and maintain a social license whilst successfully balancing corporate, operational and social objectives. Such experience extends to managing multi-faceted community development programs and design and delivery of comprehensive community and stakeholder engagement programs.

Qualifications and licences

Master of Urban and Regional Planning (Environmental Planning),
Griffith University

Bachelor of International Economic Relations, Griffith University

Member of the International Association of Impact Assessment
(IAIA): Social Impact Assessment Group

Member of the Planning Institute of Australia (PIA)

Specialisation

Provision of Social Performance specialist advice

Delivery of Impact Assessments (SIA) for large projects

Provision of community engagement programs

Design and delivery of community development initiatives

Representative experience

Social specialist

- Valeria project, provided technical oversight of the social impact assessment and associated social impact management plan along with strategic communications and engagement support to the project. Completion of a detailed assessment of housing and accommodation options including potential utilization of the Glencore occupied township of Tieri. Implementation of an engagement program which included requirements for the Progressive Rehabilitation and Closure Plan (PRCP). Central QLD (Glencore)
- Winchester South project, lead author and project manager of the social impact assessment and social impact management plan for a proposed coal project involving developing comprehensive suite of management plans relating to housing and accommodation, workforce management, local industry procurement and community health and wellbeing, Central QLD (Whitehaven Coal)
- Meadowbrook project led author and project manager for delivery of the social impact assessment and social impact management plan for the underground expansion of the existing Lake Vermont coal mine. A focus of the SIA was analysis of the social opportunity cost of the project not proceeding and the subsequent closure of open cut operations. Project included a targeted program of stakeholder engagement informed the development of social commitments measures formalised through the social impact management plan, Central QLD (Jellinbah Resources)
- ARTC Inland Rail project, provided specialist technical assessments and expert advice as lead advisor, review of social and economic impact assessments, community development and social management plans, overseeing the development of frameworks supporting the projects monitoring and evaluation program, National (ARTC)
- Isaac Downs Coal project, author of the social impact assessment and social impact management plan in the EIS for a greenfield coal project, completed a detailed assessment of land use compatibility and potential conflict, Central QLD (Stanmore Coal)
- Wafi Golpu project, lead social performance advisor for the approvals phase of the project, responsible for the delivery of the Socio-economic Baseline and Socio-economic Impact Assessment in accordance with national and international standards, development of social management plans relating to community development, in-migration management and re-settlement, Papua New Guinea (Newcrest/Harmony Gold)
- Ravenswood Gold project, update and revision of the social impact management plan to align with the requirements of the Queensland Social Impact Assessment Guideline (2018) and document the current social context and community sentiment towards the project's planned transition. A primary objective was to design a SIMP which is a useable adaptive management tool, providing the rationale and schedule of delivery for investments in community infrastructure and other initiatives which serve to ensure the ongoing sustainability of the Ravenswood township, Central QLD (Ravenswood Gold).
- Cross River Rail project – community infrastructure assessments, lead social planner advising on the community infrastructure elements of the project precincts, preparation of detailed baseline assessments and negotiation with stakeholders, Brisbane QLD (Cross River Rail Development Authority)
- Salisbury to Beaudesert Corridor Protection Study, project manager for the delivery of engineering design and consultation programs to support the gazettal of a passenger and freight 70 km rail corridor, involving the development of innovative engagement mechanics such as interactive web-based tools and collateral and direct engagement methods to refine project design and enable gazettal of the corridor, Brisbane, QLD (Qld Dept. of Transport)

- Warragamba Dam Raising project, lead author of the Socio-economic Impact Assessment, including delivery of multi-phased community and stakeholder engagement program and innovative assessment methodology, assessment of social vulnerability, Sydney, NSW (Water Infrastructure NSW)
- Cape York Water Planning Project, delivery of a social values assessment which included engagement with 12 communities, and the development of a decision support tool to assist the government to properly consider community values in natural resource planning processes (Queensland Department of Natural Resources)
- Frieda River project, social technical lead for the approvals phase for a large proposed open cut mine, delivery of the social impact assessment and social studies including resettlement, alluvial mining and in-migration management, Papua New Guinea (PanAust)
- PNG LNG Expansion project (P'nyang Project), development of a major gas field and pipeline including oversight across all social aspects of the project approvals process including socio-economic baseline, socio-economic impact assessment, stakeholder engagement program, health impact assessment and cultural heritage assessment, Western Province of PNG (Exxon Mobil)
- Waisoi Copper Project, technical oversight across all social elements of the environmental and social impact assessment, expansive fieldwork in 23 villages was undertaken to inform the ESIA and included implementation of stakeholder engagement programs involving studies on macro-economic effects, cultural heritage, traffic and land use, Fiji (Newcrest)
- Ok Tedi Mine Life Extension Review, gold and copper mine project involving peer review and adequacy assessment of social components of the feasibility study including community land and water resource utilization and potential health risks associated with mine life extension (OK Tedi)
- Telfer Mine, socio-economic baseline assessment of Traditional Owners of lands surrounding the mine which involved primary data collection in remote Aboriginal communities, included the preparation of a business development plan to assist in meeting ILUA obligations, Pilbara Region WA (Newcrest Mining)
- Kiribati Urban Development Program, project manager for the in-country implementation of New Zealand aid program comprising of urban development, water and sanitation, infrastructure delivery, economic development and capacity building projects, New Zealand (New Zealand Aid)
- United Nations Development Program (UNDP), social expert responsible for completing social and environmental risk assessments for climate change projects nominated by the countries for Global Environment Fund funding, Egypt, Bangladesh and Kyrgyzstan (UNDP)
- Bruce Highway Upgrade, author of the social impact assessment and social impact management plan for a major road infrastructure development, northern QLD (Department of Main Roads)
- Pacific Motorway Transit project, social impact assessment for the Pacific Motorway upgrade involving consultation with affected parties including the loss of affordable housing and an evaluation of social vulnerability (Department of Main Roads)
- Surat Basin Rail, technical lead responsible for the delivery of the social impact assessment, economic impact assessment and visual amenity assessment for a major proposed rail line, QLD (ATEC Rail Group)
- Toowoomba Pipeline project, completion of the social elements of the environmental impact statement for the construction of a 40 km pipeline, involving extensive community consultation and negotiation with landowners and Traditional Owners, Toowoomba (Toowoomba Pipeline Alliance)
- Bus Rapid Transport Project, author of the social impact assessment and the economic impact assessment of the Bus Rapid Transit System connecting inner Brisbane suburbs and the CBD (Brisbane City Council)
- Connors Range Rail Duplication, delivery of the social impact assessment and economic impact assessment for a coal rail line EIS, also co-managed delivery of the overall environmental impact assessment (Queensland Rail)
- Townsville Port Expansion, project manager for the delivery of the social impact assessment and economic impact assessment for a major port expansion project, including the development and implementation of an extensive stakeholder engagement program (North Queensland Bulk Ports)
- Legacy Way TransApex Tunnel, author of the social impact assessment for a road infrastructure project, involving design and delivery of the community consultation program supporting the project and specific consultation to inform the socio-economic impact assessment, Brisbane (Department of Transport)
- Social Infrastructure Model, development of a GIS-based social infrastructure model to determine social infrastructure gaps and the prediction of social infrastructure requirements in line with growth across the Mackay Regional Council area (Mackay Regional Council)
- Airport Link TransApex Tunnel, author of the social impact assessment for a major road infrastructure project (Department of Transport)
- Stuart Oil Shale Project, delivery of a social impact assessment addressing the proposed development of an oil shale industry, included extensive engagement with the community and key stakeholders and development of social impact management plans, QLD (Queensland Energy Resources)
- Exploration Projects, delivery of a community and stakeholder engagement program to support oil and gas exploration projects in the Otway and Cooper Basins, involved completing environmental management plans, VIC and SA (Beach Energy)
- LNG Plant Environmental Impact Statement, technical oversight of the social impact assessment and author of the social, economic and greenhouse gas assessment chapters of the EIS for a proposed LNG plant, QLD (Arrow Energy)
- Coal Infrastructure Masterplan, author of the 'social effects' chapter in the coal infrastructure master plan, QLD (Department of the Coordinator General)
- South East Queensland Priority Infrastructure Plan, preparation of policy guiding the delivery of essential infrastructure to service a region comprising 2.5 million people, involved extensive population modelling and collaborative policy development (QLD Department of Planning)



Alicia Minogue

Social Planner
EMM Consulting Pty Limited

Professional Overview

Alicia is a social planner and community services specialist with focus on social purpose and impacts. Designing and implementing processes that bring people and ideas together to plan the future, solve problems and create communities drives Alicia's work ethic.

With a diversity community services and management skills, Alicia has extensive experience working with people with special needs and disabilities. She has qualifications in Social Sciences and uses qualitative and quantitative methods to design people-based engagement and social impact studies. Her ability to combine a wide range of digital, face to face and traditional tools and techniques, with analysis and reporting tailored to projects needs and stakeholder preferences, continually exceeds expectations. Alicia uses her facilitation and mediation skills to reduce conflict and manage contentious issues and projects.

Alicia is proficient at understanding key audiences and delivering consistent, concise, and meaningful messages via targeted channels to effectively communicate to stakeholders. She is an experienced content editor, writing and editing for a range of communication tools. Alicia is a team player, collaborating with team members and clients to understand project objectives and expected outcomes.

Qualifications and licences

Bachelor of Social Sciences, University of Wollongong

Specialisation

Social impact assessment

Social research

Stakeholder and community engagement

Disability sector

Quantitative and qualitative research

Report writing

Representative experience

- Research and engagement, Goulburn mixed use development EIS
- Research and engagement, Deep Creek Quarry Project EIS
- Hunter Valley Operations (HVO) Continuation Project, technical assistance for social impact assessment and community engagement, survey analysis, social baseline study Hunter Valley NSW (Glencore)
- Birriwa Solar Farm Project, social baseline study, data analysis, technical assistance for social impact assessment ACEN Australia, Mid-Western Region of NSW
- Oven Mountain pumped hydro energy storage project, technical assistance for social impact assessment, delivery of baseline study preparation, early identification of potential social impacts, Stakeholder and community engagement, Armidale Regional Local Government Area and Kempsey Shire LGA
- Muswellbrook Solar, delivery of baseline study preparation, ESCO Pacific, in Muswellbrook NSW
- Integra Social Mine Closure, delivery of baseline study preparation, early identification of potential social impacts, Glencore in Singleton and Muswellbrook NSW
- Boorolong Wind Farm, community engagement and consultation, desktop social research for Boorolong Wind Farm Pty Ltd
- Pinecrest Solar Farm Project, delivery of scoping report, data analysis, Banpu, in Lithgow NSW
- Stubbo Solar Farm Project, social baseline study, community engagement, data analysis, social risk assessment, technical assistance for social impact assessment ACEN Australia, Mid-Western Region of NSW
- Dungowan Dam technical assistance for social impact assessment, development of community information sheets, community survey development, Tamworth region of NSW (WaterNSW)
- Sandy Creek Solar Farm Project, community engagement and consultation sessions, Lightsource BP in Dunedoo and Gulgong NSW
- Environmental Generalist, desktop research for development of communications facilities (US Space Force)
- Lake Conjola Coastal Management Program, community consultation and facilitation of stakeholder workshops, Shoalhaven city Council

Appendix C

Planning context

This section provides a summary of the relevant plans and strategies across the Project that inform the social risk assessment and mitigation and management strategies.

C.1 Federal

At a federal level, the Project is located within the federal electorate of Hunter.

There are no specific federal legislative or regulatory instruments that directly impact on the social impact assessment for the Project, however, the *Keep it in the Regions* report (Parliament of Australia 2018) in November 2018 is relevant. The report recommends several measures aimed at increasing the potential for local communities to benefit economically from resourcing projects located near their community.

C.2 State

At a state level, the Project is within the New South Wales state electorate of Upper Hunter. There are no specific state regulatory instruments which set directions for the social impact assessment of the Project, other than those which direct the EIS process listed in Chapters 2 and 2.2 of the EIS (EMM 2022), and requirements which affect the technical studies supporting the EIS process. These are listed in the EIS and its appendices.

C.2.1 State strategies

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

A 20-Year Economic Vision for Regional NSW 2018–2038 (NSW Government 2018) 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. This provides:

- a snapshot of Regional NSW today that presents the current economic and demographic environment, with reference to the thriving agricultural, energy and resources industries, and strong manufacturing, tourism, and services sectors;
- a description of the global forces shaping regional economies, and the implications of these trends;
- means to rise 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.

Table C.1 **Relevant priorities, principles, and actions outlined in the 20-Year Economic Vision for Regional NSW 2018–2038**

Relevant priorities	Relevant principles	Relevant actions
Priority 1: Infrastructure	Principle 1: Affordable, reliable and fast mobile and internet connectivity to support people and businesses.	Within 5 years we will investigate: Leveraging the power of a digital economy by: • accelerating and expanding access to metro-equivalent digital infrastructure and services (mobile/ broadband) to drive productivity in regional businesses, attract investors and workers to regional areas and meet community expectations for services such as telehealth and online education. Investigate: • regional public transport to assist commuters to travel to metropolitan areas and regional centres to access work opportunities; and • options to improve public transport services to access regional centres from surrounding areas.
Priority 2: Skills	Principle 5: A skilled labour force for current and future needs of the regions.	• Investigate targeted skills and work experience approaches for groups that are underrepresented in regional economic participation, including Aboriginal people. • Models for greater integration of students' learning and work experience, prioritising growth industries in regional areas. • Innovative training delivery models that leverage online learning, mobile classrooms and hybrid learning models. In addition, within 5 years we will investigate: Working with industry to enhance alignment between regional skills supply and demand by: • Accelerating the development of flexible models to acquire job-oriented skills and qualifications as additional career pathways. • Creating opportunities for better access and more flexible offerings from VET providers, including TAFE NSW and universities for regional students. • Supporting redeployment, reskilling and upskilling measures, including regional skills and employment brokerage, that focus on both immediate recovery and long-term workforce planning. • Co-developing courses and learning models that meet local workforce needs.
Priority 5: Economic strength and diversity	Principle 8: Sustainable economies and communities are better able to recover from shocks.	• Creating new opportunities in regional economies and supporting access to markets by integrating Aboriginal economic participation, education and skills development into government priorities focused on regional NSW, to increase Aboriginal employment and enterprise development.

Source: NSW Government 2018

The *State Infrastructure Strategy 2022–2042* (Infrastructure NSW 2022) sets out Infrastructure NSW’s independent advice on the current state of NSW infrastructure, and the infrastructure needs and priorities over the next 20 years. It looks beyond current Projects and identifies policies and strategies needed to provide infrastructure to meet the needs of a growing population and economy.

The strategy looks beyond the current Projects and outlines the importance of the following key themes:

- diversifying the infrastructure investment pipeline;
- maintaining service reliability in the existing asset base;
- embedding resilience;
- harnessing digital technology; and
- growing partnerships with the private sector.

The strategy provides:

- 9 long-term objectives, each with a dedicated chapter; and
- 57 recommendations (102 including sub-recommendations) to the NSW Government aimed at improving outcomes and living standards for the people of NSW.

The current State Infrastructure Strategy declining domestic and international demand for coal, coupled with earlier-than-planned closure of coal-fired power stations, will impact existing workforces. Forward planning and economic diversification are required to ensure that coal-dependent communities have access to alternative industries, skills, education and training. In addition, the legacy infrastructure in these areas may also form the basis for building future new industries that support a Net Zero economy, and re-use of this infrastructure should be actively pursued. Major economic transitions usually only succeed where, those most adversely affected are considered and supported.

Table C.2 Relevant objectives, strategic directions and recommendations outlined in the State Infrastructure Strategy 2022–2042

Relevant objectives	Relevant strategic directions	Relevant recommendations
Achieve an orderly and efficient transition to Net Zero	Social licence and public confidence are critical	Recommendation 25 - Share the benefits of the Electricity Infrastructure Roadmap with the regions hosting infrastructure and with communities in transition – extended program: a) Build skills and economic development to allow maximum participation in opportunities for affected communities. b) Pursue the re-use of existing infrastructure endowments in areas affected by the transition. c) Provide opportunities for Aboriginal economic development from the transition to renewable energy, including hosting infrastructure on Aboriginal owned land. d) Apply place-based approaches to identify and prioritise investment in strategic service and infrastructure priorities needed to support communities affected by the transition.

The *Strategic Statement on Coal Exploration and Mining* (the Statement) was released by the NSW Government in August 2020 to encourage a balanced approach in the effects of global coal mining industry transition and mitigate the negative impacts for coal-mining communities. The Statement outlines its position on the use of coal to 2050, and the approach to a global transition to a low carbon future and establishes a four-point action plan. The plan is to ensure a consistent policy framework for coal exploration and mining in the state, whilst managing the long-term impacts of the decline in thermal coal mining for regional communities. The four-point action plan outlined in the Statement is as follows:

1. improving certainty about where coal mining should occur;
2. supporting responsible coal production;
3. reducing the impact of coal mining; and
4. supporting diversification of coal-reliant regional economies to assist with the phase-out of thermal coal mining.

The Statement commits the NSW Government to consider responsible applications to extend the life of existing coal mines, which is consistent with the proposed applications for both HVO North and HVO South as part of the Project.

Table C.3 Relevant goals and strategic directions outlined in the NSW Government Strategic Statement on Coal Exploration and Mining

Relevant goals	Relevant strategic directions
Action 1: improve certainty about where coal mining should occur.	Recognise existing industry investment by continuing to consider responsible applications to extend the life of current coal mines, and by streamlining the process for exploring new areas and areas adjacent to current mining operations to deliver a better economic return to NSW.
Action 2: support responsible coal production.	Aims to recognise existing industry investment by continuing to consider responsible applications to extend the life of current coal mine such as HVO continuation Project, and by streamlining the process for exploring new areas and areas adjacent to current mining operations to deliver a better economic return to NSW.
Action 3: reduce the impact of coal mining.	The action aims to work with support the improved management of air and water impacts from coal mining, continue to ensure mining and monitor security of supply for domestic coal users during the transition to low carbon energy sources, including domestic users of coking coal.
Action 4: support diversification of coal-reliant regional economies to assist with the phase-out of thermal coal mining.	Continue to work to strengthen regional economies, including the development and implementation of location-specific plans to diversify those heavily dependent on coal mining. Noting there will be regional variations with some areas in NSW will see gradual decline over the next few years, while others like HVO Continuation Project could see increased coal production in the short to medium term. This Project aligns with the systematic, place-based approach to transition planning, starting with the regions that are expected to experience the earliest coal production declines and the Upper Hunter region given the importance of its coal industry.

The *Hunter Regional Plan 2036* aims to guide the NSW Government with future land use planning priorities and decisions within the Hunter region (NSW Government 2016). The plan provides an overarching framework for land use plans, development proposals and infrastructure funding decisions. The *Hunter Regional Plan 2036* establishes four goals to secure the Hunter region as the leading regional economy in Australia, promote a biodiverse environment, thriving communities, greater housing and employment.

The *Hunter Regional Plan 2036* is inclusive of actions that identify land and infrastructure requirements to develop the Hunter region's coal and alternative energy resources. The Project is aligned with the *Hunter Regional Plan 2036* key goals for the Hunter region including:

- the continued contribution to developing the Hunter region as the leading regional economy;
- the provision of ongoing opportunities for Hunter region communities to thrive; and
- ensuring the ongoing employment for approximately 1,500 FTEs in the region.

Table C.4 Relevant goals and strategic directions outlined in the Hunter Regional Plan, 2016 – 2036

Relevant goals	Relevant strategic directions
Goal 1: The leading regional economy in Australia.	Direction 2: Enhance connections to the Asia-Pacific through global gateways: Greater Newcastle is home to two nationally significant gateways, Newcastle Airport and the Port of Newcastle. These assets have enormous potential to enhance the connectivity of the Hunter to the Asia-Pacific region and beyond. The Port of Newcastle will continue to play an important role in the regional economy through the international export of goods and commodities (including coal and grains) from the Hunter and regional NSW. It is the largest coal exporting port in the world.
Goal 1: The leading regional economy in Australia.	Direction 4: Enhance interregional linkages to support economic growth: aims to support freight transport facilities, warehousing and distribution centres as they depend on efficient supply chains, access to customers, land availability and access to main roads. These elements need to be planned in the right locations to make the best use of existing and future improvements to road and rail.
Goal 1: The leading regional economy in Australia.	Direction 5 – Transform the productivity of the Upper Hunter: Strives to transform the productivity of the Upper Hunter, by specifically identifying the land and infrastructure requirements to support the future development of the region's coal and alternative energy resources.
Goal 1: The leading regional economy in Australia.	Direction 11 – Manage the ongoing use of natural resources: is aimed at the management and ongoing use of natural resources to achieve balanced outcomes. The direction states that “the combination of undeveloped coal resources in the Hunter and Newcastle coalfields and the export capability of the Port of Newcastle provide significant opportunities for growth”.
Goal 1: The leading regional economy in Australia.	Direction 13 – Plan for greater land use compatibility: is focused on managing future land use planning and compatibility; in particular, “identify and protect important agricultural land, including intensive agricultural clusters”.
Goal 2: A biodiversity-rich natural environment.	Direction 14 – Protect and connect natural areas: is aimed at identifying and protecting new and existing natural areas, through a holistic management approach across both public and private lands to ensure habitat connectivity.
Goal 2: A biodiversity-rich natural environment.	Direction 15 – Sustain water quality and security: identifies monitoring and management of existing land uses, and in the future, those associated with growth will be integral in the protection of the region's quality and security of water supplies.

Source: NSW Government 2016

A review of the HRP was undertaken by DPE in 2021, and the *Draft Hunter Regional Plan 2041* (draft HRP 2041) was published in December 2021. The draft HRP 2041 has not been finalised, and at the time of reporting the plan was open to further consultation and feedback and may be revised. Importantly, the draft HRP 2041 notes that mining, energy and industrial sectors all make the Hunter an economic powerhouse and will remain important contributors into the future.

vi Upper Hunter Strategic Regional Land Use Plan

The *Upper Hunter Strategic Regional Land Use Plan* (the Plan) provides a strategic framework for land use within the Upper Hunter Region to help inform Government investment priorities, servicing strategies and local environmental plan making to improve environmental outcomes and reduce land use conflict. The Plan emphasises the need to minimise land use conflicts that arise from coal mining activities and balance economic growth in the region, whilst protecting agricultural lands and managing natural resources sustainably.

Key challenges and actions defined in the Plan focus on balancing agriculture and resource development, infrastructure, economic development, employment, housing, cultural heritage, community health and amenity, natural hazards, climate change and the environment. Objectives of the Plan are as follows:

- protect agricultural land and water resources and ensure security and clarity for mining and agriculture;
- provide enhanced future opportunities for sustainable mining and agricultural industries;
- ensure a sufficient and balanced response to infrastructure provision across all key industries;
- ensure an adequate supply of labour for the needs of Upper Hunter industries and improve access to employment and training; and
- develop economic resilience and diversify the region's economy.

C.3 Local

The Project is primarily located in the Singleton LGA (approx. 96%) with a small portion of the HVO North proposed development consent boundary within the Muswellbrook LGA (approximately 4%).

The local councils have regional and strategic plans that articulate their vision for the future of their community. These are summarised in Table C.5.

Table C.5 **Local Government Area Planning Context**

Plan/strategy	Summary	Responsibility	Timeframe
<i>Singleton Local Strategic Planning Statement 2041</i>	The <i>Singleton Local Strategic Planning Statement 2041</i> (Singleton Planning Statement) outlines the key focus areas for local planning direction and provides a context for current and future planning and land use within Singleton. The Singleton Planning Statement establishes key policy priorities supported by actions to encourage diversity and innovation within the local economy. Five themes are established within the Singleton Planning Statement concerning the local community, environment, economy and government, with several objectives detailed throughout each theme. The objectives aim to: • develop an inclusive and resilient community; • ensure the region is well-planned, sustainable and safe; • protect and enhance the local environment and encourage sustainability; and • develop a diverse economy (Singleton Council 2020). The Singleton Planning Statement emphasises the need to plan for sustainable a post-mining transition that enhances agricultural productivity in the region and ensures that rehabilitated mining land is prioritised for agricultural activity.	Singleton Council	2020–2041
<i>Singleton Socio-Economic Development Strategy</i>	The <i>Singleton Socio-Economic Development Strategy</i> outlines socio-economic principles to guide socioeconomic development in the Singleton LGA and improve liveability for residents. The socio-economic principles aim to develop an industry and environment that: • supports local businesses and diversity within the industry base; • facilitates job creation and entrepreneurship; • provides residents with improved access to infrastructure and education; • supports activities that promote health and wellbeing; • minimises the impacts of social issues and environmental impacts; • promotes long term sustainability; and • establishes equity. The strategy takes into consideration the region’s dependence on the mining industry, with aims to promote sustainable transitions within the local industry and implement services to manage the affection of mining. The Socio-Economic Development Strategy proposes several actions to plan for a mining industry transition that considers education, training, local employment and wellbeing to ensure the transition does not adversely impact the community.	Singleton Council	2020–2024

Table C.5 **Local Government Area Planning Context**

Plan/strategy	Summary	Responsibility	Timeframe
Singleton Community Strategic Plan	The <i>Singleton Community Strategic Plan</i> titled “Create singleton 2022 - 2032” defines the vision for the future of the Singleton region over a ten-year period (2022–2032), as well as strategies to support the local community. The vision outlined in the plan is to develop a vibrant, progressive, connected, sustainable and resilient community. This is supported by five pillars: <i>our people, our places, our environment, our economy, and our leadership</i> (Singleton Council 2022). Each ‘pillar’ identifies various opportunities and challenges, informed by the community, with strategies and objectives in place to address community expectations. Such objectives and strategies are as follows: • provide safe and well-maintained facilities and infrastructure; • facilitate land use planning and development outcomes which respect and contribute in a positive way to the environment and community; • educate and advocate to improve air quality in Singleton; • collaborate to enhance, protect, and improve our environment; and • enhance relationships between local business, industry and government to set strategic economic goals (Singleton Council 2022). In accordance with the Singleton Socio-Economic Development Strategy, the plan details the need to implement a planned transition from the mining industry and is supported by a delivery program, resourcing strategy and operational plan.	Singleton Council	2022–2032
Singleton Local Housing Strategy (LHS)	The Draft Singleton Local Housing Strategy (LHS) 2041 is a strategic document which sets out the 20-year vision for housing in Singleton LGA. The LHS is supported by the Singleton Local Strategic Planning Statement 2041 (LSPS), aligning the vision with the housing objectives and targets recognised in the Hunter Regional Plan. The LHS will identify land for future supply and aims to deliver housing supply to meet the growing population in Singleton. The key objectives of the draft strategy are to: • Deliver a strategic approach to housing in our rural housing, urban and ‘lifestyle living’ areas. • Address housing diversity, supply and affordability. • Create well-planned, liveable and sustainable neighbourhoods that meet the needs of the existing and future population. • Minimise land use conflict. The draft LHS identified that changes in demand in industries such as mining, which are prevalent in the area, may result in temporary workers seeking accommodation in market rental stock which can increase competition with local residents. The LHS identified an opportunity to “increase the amount of housing aimed at short-term stays and temporary workers [which] would reduce pressure on market rental dwellings and contribute to reducing rental stress.”	Singleton Council	2022–2041

Table C.5 **Local Government Area Planning Context**

Plan/strategy	Summary	Responsibility	Timeframe
MSC Local Strategic Planning Statement	The <i>Muswellbrook Shire Council Local Strategic Planning Statement</i> (Planning Statement) identifies key outcomes for developing policies and making land use decisions within the Muswellbrook Shire. The strategic vision for the Muswellbrook Shire established in the Planning Statement encourages a transition towards a more sustainable community, environment and economy through diversification, to be achieved by: • developing the Muswellbrook Shire as the major innovative energy centre and food bowl in NSW; • becoming a major regional location for tertiary education services; • establishing a diverse visitor economy; • celebrating natural, cultural and Aboriginal heritage, landscapes and biodiversity; • establishing higher order services and facilities, specifically aged care, housing opportunities and entertainment facilities; and • becoming a leading location for the equine industries.	Muswellbrook Shire Council	2020–2040
MSC Community Strategic Plan	The <i>Muswellbrook Shire Council Community Strategic Plan</i> (Community Plan) establishes the shared visions and aspirations for Muswellbrook Shire and the future directions for the local community. The Community Plan is an outlining document with 25 identified goals and future aspirations for the community which informs the Council's delivery program. The goals within the Community Plan consider State priorities and Government plans 'to grow the economy, deliver infrastructure, protect the vulnerable, reduce human impacts on the environment and improve health, education and public services' (Muswellbrook Shire Council 2017). Overarching aspirations outlined in the Community Plan are as follows: • emphasise community wellbeing within decision making; • establish inclusivity and full participation within the community; • encourage culturally diverse communities within the Shire with strong identities and a shared sense of place; • develop a local economy with full employment and diverse, high value industries; and • pioneer environmental sustainability (Muswellbrook Shire Council 2017). The Community Plan recognises Muswellbrook Shire as the 'heart of the State's energy industry' with the need to improve economic viability and ensure job security (Muswellbrook Shire Council 2017). This derives from the impacts of mine closures on the local economy and the uncertainty surrounding the future of coal mining.	Muswellbrook Shire Council	2017–2027

Table C.5 **Local Government Area Planning Context**

Plan/strategy	Summary	Responsibility	Timeframe
MSC Delivery Program	The <i>Muswellbrook Shire Council Delivery Program</i> (DP) is a four-year Council plan which details the strategies for the delivery of community services and infrastructure during the Council's office term. The DP, in accordance with the Muswellbrook Shire Council Planning Statement and Community Plan, recognises the need to promote job creation, economic diversification and sustainable economic development. The DP outlines several objectives to encourage economic prosperity and facilitate a transition within the local economy. Key objectives are as follows: • facilitate the expansion and establishment of new businesses and industries; • Facilitate the diversification of local economy and support growth of existing industry and business enterprises; and • Develop the local agriculture industry (Muswellbrook Shire Council 2017b). The DP also focuses on the local environment, social equity and inclusion, cultural vitality, community infrastructure and leadership. The key objectives to take into consideration development proposals and the need for such developments to avoid and mitigate potential environmental impacts and facilitate positive environmental outcomes, where possible, as well as ensure sites or artefacts of Aboriginal significance are protected.	Muswellbrook Shire Council	2017–2021

Table C.5 **Local Government Area Planning Context**

Plan/strategy	Summary	Responsibility	Timeframe
Land Use Development Strategy	The Muswellbrook Shire Council <i>Land Use Development Strategy</i> (LUDS) identifies the long-term strategic direction for land use and development within the Shire. The LUDS aims to establish an overarching planning framework that responds to challenges, changing environments and opportunities within the Shire and guarantees future land use benefits the community. The LUDS establishes a coal mining land use strategy with strategic objectives that place planning considerations on the best use of land that does not compromise future sustainability and land use. Overarching strategic objectives in relation to coal mining purposes are as follows: • sustain best use of land as the overriding principle governing planning considerations; • ensure use of land for coal mining purposes does not impede on the use and future use of land for sustainable purposes; • mining developments that seek to intensify extraction is preferred over coal mining developments that seek to establish new and not presently approved disturbances; • ensure coal mining and associated activities positively contribute to the Shire's economy whilst maintaining a balance with the integrity of the natural environment; • ensure coal mining does not adversely affect the environment, heritage, or liveability of the Shire during or after the use of land for mining purposes; and • ensure land disturbed by coal mining activities is rehabilitated to a satisfactory standard for future use (Muswellbrook Shire Council 2015). Furthermore, the LUDS identifies several strategic directions by which coal mining activities must address. Within the Shire, coal mining activities must address the natural environment, physical environment (ie transport infrastructure), ensure effective management of competing land use (such as interaction of coal mining with urban, agriculture, equine, viticulture and tourism activities) and socio-economic matters.	Muswellbrook Shire Council	2015–2035

Appendix D

SIA Community survey

D.1 Community survey

This information provided is based on the survey data collected from the Hunter Valley Operations (HVO) Continuation community survey from July 2021 to October 2021. A total of 42 responses were received. The community survey questions, and number of responses received is shown in Table D.1.

Table D.1 Project workforce survey responses

	Question	Number of responses
Question 1	Have you had any previous communications with the Hunter Valley Operations?	41
Question 2	If yes, what was the topic of discussion?	17
Question 3	How would you rate your awareness of the proposed HVO Continuation Project?	42
Question 4	How do you feel about the proposed HVO Continuation Project? Why do you feel this way?	42
Question 5	Procurement and business opportunities was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local and regional community. In your view, how will procurement and business opportunities affect the local community?	42
Question 6	Continued supply of valuable resources was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will continued supply of valuable resources affect the local community?	42
Question 7	Ongoing sustainable employment was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will ongoing employment affect the local community?	41
Question 8	Training and apprenticeship opportunities was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will training opportunities affect the local community?	42
Question 9	Dust generation affecting air quality was identified by key stakeholders as a potential impact of the Project. Rate this potential impact (positive or negative) on the local community. In your view, how will air quality affect the local community?	42
Question 10	Water quality was identified by key stakeholders as a potential impact of the Project. Rate this potential impact (positive or negative) on the local community. In your view, how will water quality affect the local community?	42
Question 11	Noise and vibration due to blasting was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will noise and vibration affect the local community?	42
Question 12	Visual amenity was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will visual amenity affect the local community?	42
Question 13	Rehabilitation and final landform was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will rehabilitation and final landform affect the local community?	42
Question 14	The realignment of Lemington Road was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will the realignment of Lemington Road affect the local community?	42

Table D.1 **Project workforce survey responses**

	Question	Number of responses
Question 15	The lifting of the bridge height at Lemington Road crossing was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will the lifting of the bridge height at Lemington Road crossing affect the local community?	41
Question 16	Climate change was identified as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will the Project contribute to climate change?	41
Question 17	Support for schools, health services and recreational groups and facilities was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will support for schools, health services and recreational groups and facilities affect the local community?	41
Question 18	Property prices was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will property prices affect the local community?	42
Question 19	Are there any other potential impacts or benefits not listed above? Please provide any additional impacts or benefits of the proposed HVO Continuation Project and how they might impact the local community.	11
Question 20	Do you have any other comments?	11
Question 21	What is your suburb?	34
Question 22	Select your age bracket	42
Question 23	Which of the following do you identify as? Please select all that apply to you.	42
Question 24	Which of the following best describes you? Please select all that apply to you	40

D.1.1 Community survey responses

i Q1. Have you had any previous communications with the Hunter Valley Operations?

Respondents were asked to select yes or no if they have had any previous communications with the Hunter Valley Operations (HVO). Of the 42 responses, 56.1% (23 respondents) indicated they have not had any previous communication with HVO and 43.0% (18 respondents) selected yes, they have previously been in contact with HVO.

ii Q2. If yes, what was the topic of discussion?

Respondents were asked if they had any previous communications with HVO and is what was the topic of discussions. Of the 17 respondents, respondents advised the topics included; employment and training benefits, local procurement and business opportunities of the Project, raising issues of noise and blasting impacts, HVO community and engagement activities such as communication with near neighbours about the Project overview and engagement with Aboriginal stakeholders.

iii Q3. How would you rate your awareness of the proposed HVO Continuation Project?

Respondents were asked rate their awareness of the Project with response options ranging from very good, good, fair, poor, or very poor. Respondent awareness of the Project varied among the 42 respondents, with 31% (13 responses) indicating they have a fair awareness of the Project and 50.0% (21 responses) indicating to have a very good awareness and 11.9% (5 responses) having a good awareness of the Project. The remaining respondents (7.1% responses) indicated having very poor awareness of the Project.

iv Q4. How do you feel about the proposed HVO Continuation Project? Why do you feel this way?

Respondents were asked how they felt about the proposed Project with response options ranging from strongly opposed, opposed, neutral, supportive, or strongly supportive. Project support varied across the responses received, with 2.4% (1 response) are opposed and 9.5% (4 responses) who are strongly opposed followed by 9.5% (4 responses) having neutral feelings, with 19.1% (8 responses) who indicated to be supportive nor resistant to the Project and 59.5% (25 responses) as strongly supportive of the Project. A total of 78.6% (33 responses) indicated they are supportive or strongly supportive.

A snapshot of community views to Q4 include the follow key themes:

- Employment opportunities either from current employees or opportunities for future employment and training opportunities:
 - more jobs for local people;
 - employment opportunity;
 - keeps me in a job and it's a great thing for the community and the trade of coal for HVO and Australia;
 - I work there;
 - they are providing more jobs for the local community;
 - jobs for the community and economy;
 - continued employment;
 - it provides employment; and
 - existing operation that is providing ongoing employment to the local community.
- Support for the Project:
 - great company looking after Australia's future;
 - current employment;
 - coal is still a way of the future if done the right way, I believe at HVO they will follow all rules and regulations to produce coal the safest and environmentally friendly way; and
 - the area is already being mines, deeper seams being mined will extend the mine life but not the size. Economic benefits are immeasurable.

- Community support and contribution:
 - HVO takes its responsibilities very seriously and contributes hugely directly and indirectly through operation continuity; and
 - the great work they do with regeneration and also supporting the local communities financially through sponsorship. They are actually giving back every possible way.
- Continued employment and support of local businesses
 - the benefits of HVO continuing mining brings to the community and its employees and local business' is invaluable continuing into the future;
 - it's a Project that's not only considering communities but everything. HVO have definitely thought about the effects to the community and land as well as feedback and actioned the plan accordingly to extend the life of the mines;
 - economy needs mining;
 - brings jobs and money to the surrounding communities; and
 - supports the hunter community and a lot of families around the region.
- Impact to property:
 - I don't oppose development in the region, yet this development affects my own property in relation to its valuation and currently I am looking at selling my property. Over the decades I have owned my property the mine has more and more affected my lifestyle due to pollution, noise and vibrations;
 - ongoing production, minimal impact – doesn't appear to present any great change in risk or physically – a no brainer really;
 - valuable resource which is in demand for a few decades. Provides employment to a lot of people directly and indirectly. Provides a lot of money for State and local area; and
 - I support the idea of continuing their mining operations under controlled conditions.
- No support for the Project:
 - the fact that Moses crossing will be moved and mine will go into prime farm land, noise, dust and vibration; and
 - this site and the company above it are constantly taking environmental short cuts where they can and mistreating workers.

- v Q5. Procurement and business opportunities was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local and regional community. In your view, how will procurement and business opportunities affect the local community?

Procurement and business opportunities was identified by key stakeholders as a potential impact. Of the 42 responses, result indicate 45.2% (19 responses) rate this very positive, 28.6% (12 responses) as positive, 16.7% (7 responses) as neutral and 2.4% (1 response) as negative and 7.1% (3 responses) as very negative. A snapshot of community views to Q5 include:

- keeping people in jobs, looking after the financial future of Australia;
- it will continue to support local business and spend money locally;
- this will employ locals as well as keeping money in the local community;
- the work created will help the community in knowledge and training;
- increases jobs;
- by providing employment to local people and supporting local businesses;
- very positively, with a wide variety of products and services provided by local businesses;
- loss of jobs will affect the local community because there will be less money spent into the community;
- employment provides and income that gets used in the community economy;
- provide jobs, royalties and ongoing sponsorship;
- ongoing business relationships will continue with the HVO operation and new business relationships will no doubt be available/possible with the construction/upgrade works required for the continuation Project;
- ongoing economic support;
- the local community can benefit by creating jobs and future development; and
- provide employment and money into the local area.

- vi Q6. Continued supply of valuable resources was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will continued supply of valuable resources affect the local community?

Continued supply of valuable resources was identified by key stakeholders as a potential impact Of the 42 responses, result indicate 45.2% (19 responses) rate this very positive, 28.6% (12 responses) as positive, 16.7% (7 responses) as neutral, while no responses were selected as negative and 9.5% (4 responses) as very negative.

A snapshot of community views to Q6 include:

- reduces costs and puts money back into the community;
- keeping locals supplied with continued supply of valuable resources;
- jobs and spending in the community;
- it will bring in money to local areas plus keep allies with countries in need of product;

- they stockpile more coal than they sell;
- great financial benefits across a variety of businesses;
- may push people out of their homes so the mine can process more coal;
- provide jobs;
- the region has numerous mines, if the coal does not come from this Project it is supplied by another mine;
- it depends on the way the compensation to the community be it local or state I think more should go to local;
- cash flow in the region; and
- destruction of Wonnarua heritage no consultation.

vii **Q7. Ongoing sustainable employment was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will ongoing employment affect the local community?**

Ongoing sustainable employment was identified by key stakeholders as a potential impact. Of the 41 responses, result indicate 53.7% (22 responses) rate this very positive, 29.3% (12 responses) as positive, 2.4% (1 responses) as neutral, and 4.9% (2 responses) negative and 9.8% (4 responses) as very negative. A snapshot of community views to Q7 include:

- keeping locals employed, some 1,500 employees in a job;
- keeping jobs in the local community provides stability to many of the currently and future employees which is very important in today current world;
- benefits in employment are growing opportunities with traineeships, apprenticeships available to the public. Which will engage students, workers and others into learning about the mining industry;
- more jobs equal more money spent locally;
- by providing stable jobs for the local communities which underpin our property values and therefore net worth;
- it will produce more jobs for local people;
- simple, keeps the local community employed;
- ongoing employment pivotal for local economy;
- economic and social benefits;
- the traffic jams in and out of Singleton shows most employees at the mine are not local;
- provide jobs and financial support to existing and future employment and contractors, well into the future;
- ongoing economic support; and
- continued employment will be great however future employment after mining should be considered.

viii Q8. Training and apprenticeship opportunities was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will training opportunities affect the local community?

Training and apprenticeship opportunities was identified by key stakeholders as a potential impact. Of the 41 responses, result indicate 59.5% (25 responses) rate this very positive, 21.4% (9 responses) as positive, 11.9% (5 responses) as neutral, and no responses selected this impact as a negative, while 7.1% (3 responses) as very negative. A snapshot of community views to Q8 include:

- upskilling and employment opportunities for all is extremely positive and beneficial to all;
- more training and apprenticeship opportunities to the local community;
- this is great we need more local trades and trainees to reduce the need to bring people from other states or 456 workers keep local jobs local;
- more opportunities for younger generations to get into mining;
- training lets people who may be unemployed retain employment and spend money locally to keep small business afloat;
- providing trades and other skills transferable across other industries;
- more traffic drive up fuel prices because of more employees;
- the mine will continue to give locals jobs, whether it be apprenticeships or traineeships it's a win win;
- apprenticeships helps people with little skills obtaining regular employment;
- we have a massive skills shortage, any training and trade apprenticeships can only benefit the whole country;
- research shows that current apprenticeships generation will likely have at least 3 different career paths where they will need to retain to fill positions over their lifetimes;
- continuation of HVO will provide ongoing opportunities for training + apprentice partnerships well into the future;
- by better education for the future of the area;
- young people will be given a great career opportunity;
- provide new employment opportunity generally for school leavers; and
- training in many fields will be fantastic for the community.

ix Q9. Dust generation affecting air quality was identified by key stakeholders as a potential impact of the Project. Rate this potential impact (positive or negative) on the local community. In your view, how will air quality affect the local community?

Dust generation affecting air quality was identified by key stakeholders as a potential impact of the Project. Of the 42 responses, result indicate a 40.5% (17 responses) to be neutral followed by 19.1% (8 response) rated as very negative, and 11.9% (5 responses) as negative with 19.1% (8 response) as very positive and 9.5% (4 responses) as positive. A snapshot of community views to Q9 include:

- HVO spends a great deal of time and effort looking after the health of their surrounding neighbours;
- obviously reduced air quality is detrimental to the local community if not controlled;
- dust will need to be monitored and is an important factor to keep the local community healthy as well as just clean around their area;
- negatively as long we stay on top of controlling dust generation;
- controls are in place to protect the local community and the environment;
- depending on weather, they use every measure to keep the dust down.no different than a farmer ripping up paddocks;
- there's no dust on night shift;
- the price we pay for heavy industry;
- I believe that the mines are doing everything they can to keep dust down to stop the impact on the communities;
- I believe HVO will continue to do everything the right way and minimise all dust with controls in place;
- health impacts;
- we all need to breath and while the mine has supplied ducted air conditioning people should not be confined to being inside their homes always;
- the dust is already bad any more or bigger mines closer to towns like Jerrys Plains is not good;
- the current Dust generation and its impacts on the surrounding community will just continue for longer. It may decrease with a decrease in production annually, but it won't be any significant change to what it is today, yesterday and all the years before. That is life in the Hunter. It is not just HVO its the combination of all sites within close proximity to surrounding communities;
- better health for everyone and land value;
- don't believe the Project will change air quality;
- remain unchanged;
- we need to be breathing clean, dust-controlled air;
- current standards of air pollution does not appease the local community. Dust on buildings, cars and other infrastructure is dam aging and not adequate under current levels;

- dust in evidence value and can be a health issue depending on amount and particle size; and
- our roof is constantly coated in dust along with our solar panels.

x Q10. Water quality was identified by key stakeholders as a potential impact of the Project. Rate this potential impact (positive or negative) on the local community. In your view, how will water quality affect the local community?

Water quality was identified by key stakeholders as a potential impact of the Project. Of the 42 responses, result indicate a 50.0% (21 responses) to be neutral followed by 21.4% (9 response) as very positive and 11.9% (5 responses) as positive, with 9.5% (4 response) rated as very negative, and 7.1% (3 responses) as negative. A snapshot of community views to Q10 include:

- HVO spends a great deal of time and effort looking after the health of their surrounding neighbours.
- There is very little affecting water quality.
- As long as existing waterways are kept clean and no run off enters these I don't see a difference in the water quality.
- Water does not leave the mine site.
- will be no different than dirt, covid particles and sewage.
- Mine site water stays onsite will not affect the drinking water for the local communities.
- With controls in place the local water quality will not be affected.
- Water quality is ongoing, pollution affects the local community as well as all the properties down the river and out to sea.
- The Hunter river is already very salty why add to it?
- May impact on the demand for water. The quality I can't see being impacted as it's so tightly regulated. They don't have an opportunity to impact significantly anymore.
- Health + land value.
- Remain unchanged.
- So long as there's enough for the rest of the people, houses and environment to continue.
- Unlikely to affect as any discharge would be licenced with quality limits and specific times.
- People using town water are greatly affected by the dust etc. Hunter river does received runoff from mining areas.

xi Q11. Noise and vibration due to blasting was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will noise and vibration affect the local community?

Noise and vibration due to blasting was identified by key stakeholders as a potential impact. Of the 42 responses, result indicate a 42.9% (18 responses) to be neutral followed by 19.1% (8 response) as very positive and 9.5% (4 responses) as positive, with 19.1% (8 response) rated as negative, and 9.5% (4 responses) as very negative. A snapshot of community views to Q11 include:

- HVO spends a great deal of time and effort looking after the health of their surrounding neighbours.
- You can't feel the vibration and they are required to adhere to strict noise limits so I don't see this as a problem.
- notify when blasting and keeping to daylight hours.
- Very localised affects few if any.
- Mine sites set for a suitable time for the noise and vibration.
- Appropriate controls in place will stop the affect of noise and vibration.
- No more than what it does now.
- My home has been previously affected by mine vibrations. My timber windows used to shake when mine blasting occurred, yet the mine would not accept this.
- The blasts can already be felt and cracks on building have come from blasts in the area. Very common to have the orange blast fumes to go with i.t
- We feel that blasts and vibration/Noise on occasion. We shouldn't. It makes our home shake. There needs to be an open phone line/website we can go on an report it when it occasionally happens. The site/# shouldn't be for HVO but for all of the Hunter Mines, we don't know which site it is to point fingers but a site/phone number that covers all would allow it to go the site that has recorded a blast at that time + date.
- Health and land value.
- Remain unchanged.
- If affected move.
- Cracking in joints on housing is significant.
- Only applied to structures close to the blasting. Anything over 2km away will hardly notice the vibration.
- Brick work cracks affects our homes. Blasting noise still appears at times.

xii Q12. Visual amenity was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will visual amenity affect the local community?

Visual amenity was identified by key stakeholders as a potential impact. Of the 42 responses, result indicate a 47.6% (20 responses) to be neutral followed by 19.1% (8 response) as very positive and 11.9% (5 responses) as positive, with 11.9% (5 response) rated as negative, and 9.5% (4 responses) as very negative. A snapshot of community views to Q12 include:

- HVO spends a great deal of time and effort looking after the health of their surrounding neighbours.
- You don't notice anything different on this Project visually to any other pit in the valley.
- Looks the same as a giant bike track. yet will be rehabbed back to green and trees for the wildlife.
- Eyesore.
- Temporary.
- Land will be rehabbed after use.
- I can't see that the visual impact will be worsened by mining deeper.
- The mine overburden dump site is expected to be raised 70 m higher which will bring about shorter days as the sun sets behind the dump site.
- No different/change to what we already have.
- Will be rehabilitated and no longer visible one complete.
- Land value and enjoyment.
- Remain unchanged.
- Not affected, the good outweighs the bad.
- Changes to the landscape with overburden increasing in height blocking visual amenity.
- Large infrastructure spoil piles are visually unattractive. Depends on distance and how long left unrestored.
- Provided this process is controlled and kept to a height standard the final landform could be advantageous.

xiii Q13. Rehabilitation and final landform was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will rehabilitation and final landform affect the local community?

Rehabilitation and final landform was identified by key stakeholders as a potential impact. Of the 42 responses, result indicate 35.7% (15 responses) rate this very positive, 33.3% (14 responses) as positive, 19.1% (8 responses) as neutral, while no negative responses with 11.9% (5 responses) as very negative. A snapshot of community views to Q13 include:

- HVO spends a great deal of time and effort looking after the local flora and fauna.
- Always looks great once completed.

- The community may use this land for bush walking etc in the years after the mines close and visually should look like it was never touched providing a natural habitat for wildlife.
- Its great to see the environment be put back to what it was and recreate the land for local wildlife and residents.
- Extensive rehab should occur on all mine sites at end of life.
- Besides the Broken Back Ranges, Singleton is surrounded by flat top hills (former over burden dump sites).
- You will take prime farmland and give back formed rehab covered in trees no good for farming.
- Post rehab the land will probably be better than what it was before they started. The rehab closure requirements are so strict and regulated now, I have full confidence in the final land being positive for future land use.
- Enjoyment of natural surroundings.
- Remain unchanged.
- Make it look and perform at end of life would be nice.
- If rehabilitated with landforms and slopes incompatible with local area and revegetated it has potential impact.

xiv **Q14. The realignment of Lemington Road was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will the realignment of Lemington Road affect the local community?**

The realignment of Lemington Road was identified by key stakeholders as a potential impact. Of the 42 responses, result indicate 35.7% (15 responses) rate this very positive, 35.7% (15 responses) as neutral, 19.1% (8 responses) as positive, with 2.4% (1 response) as negative and 7.1% (3 responses) as very negative. A snapshot of community views to Q14 include:

- Upgrades to roads that would otherwise be left.
- The road will be upgraded but once complete I don't see any issues here.
- Will affect people travelling however will be great for the expansion of the mine.
- I don't think it will have any affect.
- No issue here.
- No longer unable to cross the Hunter River when in flood will be a big positive.
- Lemington road is a key road to link two major Highways plus linking Jerrys plains to other Ravensworth and workers at HVO. Many workers from Cessnock and Denman use the it to access mines. Emergency services will definitely be affected from the move.
- Temporary disruptions while work taking place. Will be better off once complete.
- Removal of a hazardous low level crossing.

- Shorted distance between highway.
- This will impact on heritage sites.

xv Q15. The lifting of the bridge height at Lemington Road crossing was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will the lifting of the bridge height at Lemington Road crossing affect the local community?

Rehabilitation and final landform were identified by key stakeholders as a potential impact. Of the 41 responses, result indicate 36.6% (15 responses) rate this very positive, 36.6% (15 responses) as neutral, 22.0% (9 responses) as positive, with 2.4% (1 response) as negative and 2.4% (1 responses) as very negative. A snapshot of community views to Q15 include:

- Doesn't really affect anyone.
- will be disruptive but better in the long run for larger equipment access in and out of the areas.
- I don't think it will have any affect.
- It was a big inconvenience for many when Moses Crossing was in flood.
- Lifting the height will be good however I don't see any advantage in lifting it if it were to move as the extra distance people travel to access it they may as well drive through singleton.
- Will make it more accessible for all. Will probably introduce temporary disruptions during works, but will be better once complete.
- Alternate access is available from either Golden or New England highways.
- Removal of a hazardous low level crossing.
- Makes the road usage possible with higher water level that would be over old bridge height.
- Long overdue.

xvi Q16. Climate change was identified as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will the Project contribute to climate change?

Climate change was identified as a potential impact. Of the 41 responses, result indicate 41.5% (17 responses) rate this question with a neutral response, 29.3% (12 responses) as very positive, with 17.1% (7 response) as negative and 7.3% (3 responses) as very negative and 4.9% (2 responses) as positive.. A snapshot of community views to Q16 include:

- I don't believe in climate change.
- Climate change affects everyone, but the mine is no different to farmland.
- High ups in this company regularly deny climate change science exists.
- The world needs energy if we don't supply someone else will with possibly dirtier coal.
- No more than coal does now which the jury is still out on.

- Research shows coal fuelled power stations affect climate change.
- At least it won't be a new mine being developed. The transition away from coal is inevitable and necessary.
- By providing high quality thermal coal to international power stations, rather than burning lower quality alternatives.
- Remain unchanged.
- Source cleaner/less emission.
- Climate change has always occurred. It is not all caused by human activity. This Project will either not impact it or have such a low impact that it is essentially insignificant.
- Diesel engines are to be phased out which will be a huge step forward.

xvii Q17. Support for schools, health services and recreational groups and facilities was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will support for schools, health services and recreational groups and facilities affect the local community?

Support for schools, health services and recreational groups and facilities was identified by key stakeholders as a potential impact. Of the 41 responses, results indicate 56.1% (23 responses) rate this very positive, 29.3% (12 responses) as positive, 7.3% (3 responses) as neutral, while the question did not have any negative responses with 7.3% (3 responses) as very negative. A snapshot of community views to Q17 include:

- Money allocated to these services that would otherwise go without.
- The money that is donated to these groups is a massive plus.
- Small schools and TAFEs will benefit from the donations and funding from HVO and money can be used locally where needed.
- They don't.
- Mining industry provides great financial assistance to local governments and organisations.
- We are an area forgotten by all levels of government. Unfortunately we rely on support from the private sector.
- Before the mines and after the mines these groups will continue with government assistance.
- HVO Continuation will mean continuation of community programs and support for local schools, services and groups into the future.
- More people to stay in the area and help businesses.
- Remain unchanged.
- Would be good to see some \$\$\$ invested.
- Should be addressed to other community members through compensation for damage.
- Mines supporting these local services means they are better.

- These areas receive good and continued support from the industry. This must continue.
- More mental health systems in local area.

xviii Q18. Property prices was identified by key stakeholders as a potential impact. Rate this potential impact (positive or negative) of the Project on the local community. In your view, how will property prices affect the local community?

Property prices was identified by key stakeholders as a potential impact. Of the 42 responses, result indicate 31.0% (13 responses) rate this question with a neutral response, 31.0% (13 responses) as positive, and 21.4% (9 response) as positive, with 7.1% (3 responses) as negative and 9.5% (4 responses) as very negative. A snapshot of community views to Q18 include:

- Increase to property prices for the community is always positive.
- It wont change anything.
- The demand for housing is higher due to increased workers in area.
- Property fluctuates no matter what, but housing for locals and for workers will still be available.
- Without these jobs local property prices plummet.
- More jobs for longer will increase prices.
- Surrounding property owners will obtain substantially less for their properties due to the surrounding mines.
- Unfortunately, coal mining has an affect on property prices, compared to those areas not affected. Though maybe countered by employment opportunities made available by the mines.
- Property prices are already affected by the mines in the area who would want to live next to a mine unless it was cheap as it's definitely not enjoyable so more mines closer is only going to make it worse.
- Property prices will be maintained with ongoing investment + employment opportunities within the local area.
- If it hurts my land value it leads to worry and health.
- Ongoing economic support will maintain property values. Loss of Jobs will create an economic disaster to the local community.
- Potentially increase.
- May decrease value if very close. If away from mine land will in local area may increase value to overall economic activity.

- xix Q19. Are there any other potential impacts or benefits not listed above? Please provide any additional impacts or benefits of the proposed HVO Continuation Project and how they might impact the local community.

Of the 11 responses, the key issues raised included:

- Our community needs mining for the economy.
- Even the survey team, see more potential impacts. Slack effort.
- HVO Continuation will be another reason to support and continue to push for a multi-lane Singleton bypass as the mine traffic travelling through the centre of town will continue to be here a long time to come. It is a huge issue for local residents particularly for school pickups and drop off. HVO Continuation is another reason we need the bypass.
- The impacts of dust on the local community are real and the artificial limits of exposure are false.
- Heritage and consultation.

- xx Q20. Do you have any other comments?

Of the 11 responses, the key issues raised included:

- Without mining I'm scared how our community will survive.
- Please shut this place down.
- The extension of life positively impacts my business and the locals I employ.
- In today's computer age it's sad to see this survey was hand completed.
- No consultation – No understanding or consideration of site.
- The Hunter Mining group need to seriously consider the combined hotline or website for reporting issues such as noise and vibration from blasts. We have a number of mines around us and we don't know which one is responsible, and it shouldn't be on me to call all 3 or 4 numbers to find out. If this already exists it should be advertised. I've been a resident for 18 months now and do not know about it, or who to contact when I have an issue.

- xxi Q21. What is your suburb?

Of the 34 responses, community members were asked to indicate what their suburb is, with results showing:

- 21 community members are located within the SIA local area (Jerry Plains – 2 responses, Maison Dieu – 2 responses, Singleton – 13 responses, and Muswellbrook – 4 responses).
- 17 community members are located within the SIA regional area (this includes the total number from the location area, Singleton LGA – 13 responses and Muswellbrook – 4 responses).
- 13 community members are located within the SIA area of reference (Cessnock LGA – 6 responses, Maitland – 5 responses, and Upper Hunter – 2 responses).
- 3 community members are located outside of the SIA locality and within NSW (Tamworth – 2 responses and Narrabri LGA – 1 response).

xxii Q22. Select your age bracket

Of the 42 responses, community members were asked to indicate their age bracket, with results indicating a majority of community members fall into the 25 to 44 aged bracket with, 38.1% (16 responses) are between 35–44 years old, 28.6% (12 responses) are between 25–34 years old. This is followed by 11.9% (5 responses) between 45–54 years old, 9.5% (4 responses) 65 years and 7.1% (3 responses) between 15–24 years old, and 4.8% (2 responses).

xxiii Q23. Which of the following do you identify as? Please select all that apply to you.

Of the 42 responses, community members were asked to indicate whom they identify as, with results showing a large proportion of community members who responded to this community survey were males 78.6% (33 responses), with 21.4% (9 responses) as females, 9.5% (4 responses) identifying as an Aboriginal person and 2.4% (1 responses) as a Torres Strait Islander person.

xxiv Q24. Which of the following best describes you? Please select all that apply to you

Of the 40 responses, community members were asked to indicate which category best describes them, with results showing:

- 52.5% HVO employee/contractor (21 responders).
- 47.5% local resident (19 responders).
- 22.5% landholder (9 responders).
- 20.0% employed by mining industry (other than HVO) (8 responders).
- 15.0% business owner (6 responders).

D.1.2 Key perceived impacts and benefits raised by community members

Respondents were asked to rate a variety of potential impacts associated with the Project as either very negative, negative, neutral, positive or very positive.

Grouping the perceived very negative and negative impacts together indicates the top five significant impacts raised during the community related to:

- Air quality (31.0%).
- Noise and vibration (28.6%).
- Climate change (24.4%).
- Visual amenity (21.4%).
- Property prices and Water quality (16.7%).

Grouping the perceived very positive and positive impacts together indicated the top five most significant benefits raised by the community that relate to:

- support for schools, health services and recreational groups and facilities (85.4%);
- ongoing employment (83%);

- training opportunities (81.0%);
- local procurement and business opportunities (73.8%); and
- continued supply of valuable resources (73.8%).

The identified neutral Impacts that the community felt were neither positive nor negative related to:

- water quality (50%);
- visual amenity (47.61%);
- noise and vibration (42.9%);
- climate change (41.5%); and
- air quality (40.5%).

The top three very negative impacts related to:

- air quality (19.1%);
- rehabilitation and final landform (11.9%); and
- noise and vibration, visual, property prices and water quality (9.5%).

The top three most positive impacts identified:

- training opportunities (59.5%);
- support for schools, health services and recreational groups and facilities (56.1%);
- local procurement and business opportunities (45.2%); and
- lifting of the bridge height at Lemington Road crossing (58.5%) and the realignment of Lemington Road (54.8%) road was also nominated as an important benefit.

A breakdown of responses from the online community survey regarding perceived impacts of the Project is shown in Figure D.1.

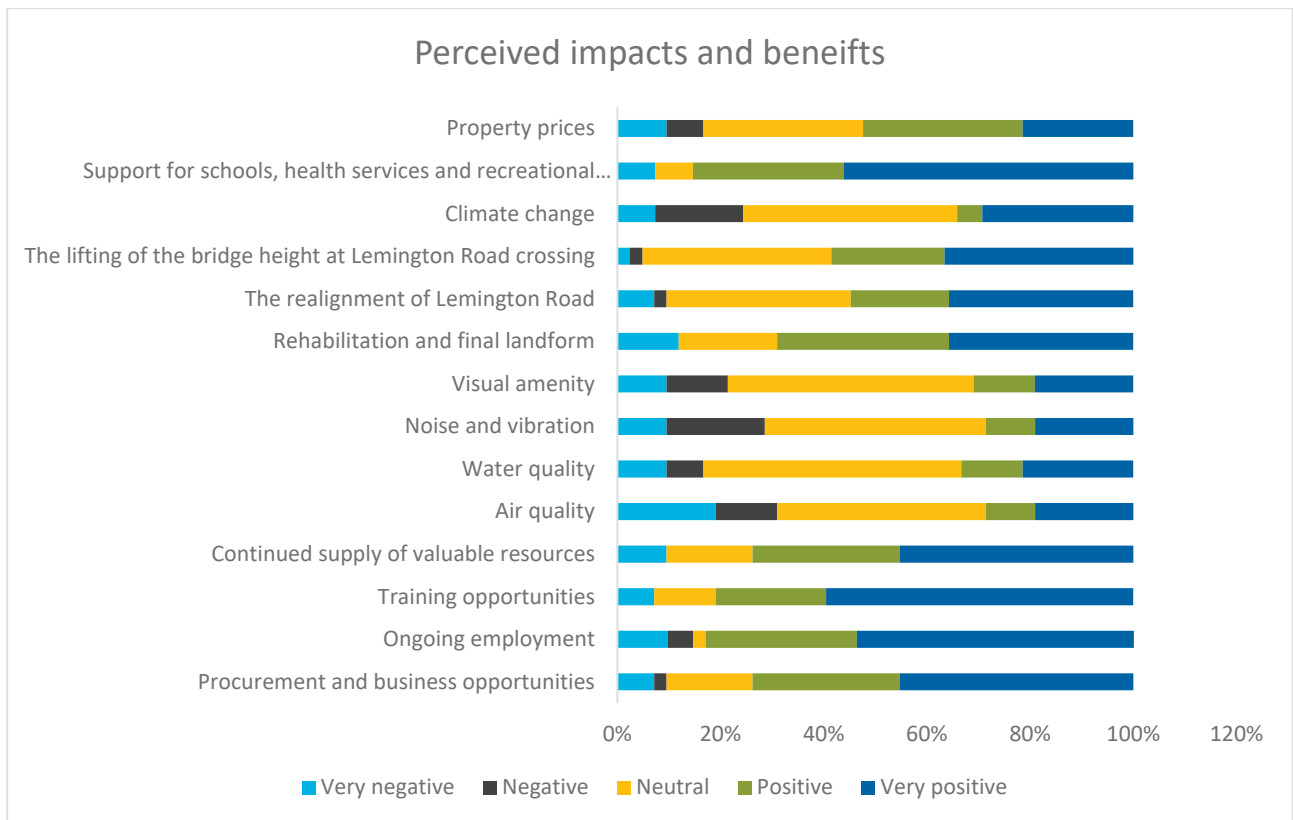


Figure D.1 **Key perceived impacts and benefits raised by community members**

Appendix E

SIA Supplier survey

E.1 Supplier survey

This information provided is based on the survey data collected from the Hunter Valley Operations (HVO) Continuation supplier survey from July 2021 to August 2021 and provides EMM consulting with information about businesses who supply goods and services to HVO. A total sample of 798 suppliers were emailed the survey of which 124 responded. The supplier survey questions, and number of responses received is shown in Table E.1

E.1.1 Supplier survey number of responses

Table E.1 Project supplier survey number of responses

Number	Question	Number of responses
Question 1	How many employees does your company hire?	122
Question 2	Approximately how many employees do you hire in each of the following categories? Please ensure your combined answers are equal to 100%.	121
Question 3	Approximately what percentage of your employees reside in the Muswellbrook or Singleton local government areas?	123
Question 4	What industry/s does your clientele operate in? Select all that apply.	124
Question 5	How many clients/customers does your business have?	123
Question 6	How many contracts does your business have?	121
Question 7	Overall, what is the nature of business' operations and contracts?	122
Question 8	What percentage of your total revenue is earned from the mining industry?	123
Question 9	What percentage of your total revenue is earned from contract/s with HVO?	122
Question 10	Do you foresee any further opportunities to work with HVO? If yes, please specify.	123
Question 11	How much revenue do you need to maintain your existing workforce? If you prefer not to say please indicate N/A	119
Question 12	How dependent is your business revenue on your supplier relationship with HVO? For example, does the majority of your business revenue rely on your contracted work for HVO?	123
Question 13	How many years have you been providing services to HVO?	123
Question 14	What percentage of your annual business income is spent on goods and services?	109
Question 15	How much capacity do you have to deliver additional contracts to HVO?	123
Question 16	What locations are your goods and services sourced from?	124
Question 17	What is the postcode of your main office?	124

i Q1. How many employees does your company hire?

Of the 123 suppliers who completed question 1, 48.4% (59) were small businesses, having fewer than 20 people employed as defined by the ABS. Of the 48.4% (59) of small businesses, 44.3% (54) of suppliers employed between 1–19 employees and 4.1% (5) of businesses belonged in the non-employing/sole trader category.

This is followed by 40.2% (49) of suppliers reported a to be a medium sized businesses with 20 – 199 employees, followed by large businesses that accounted for 11.5% (14) and the smallest proportion of the of HVO suppliers are who employ 200 employees or more.

ii Q2 Approximately how many employees do you hire in each of the following categories?

Based on results from question 2, 112 suppliers employ a total of 221 people within their businesses under a variety of employment. This includes, 52.9% (117) employed on a full-time basis, followed by 20.4% (45) casuals, 16.3% (36) employed as part-time 16.3% and 10.4% (23) on a contract/temporary bases. See Figure E.1 for total % of employees employed by suppliers.

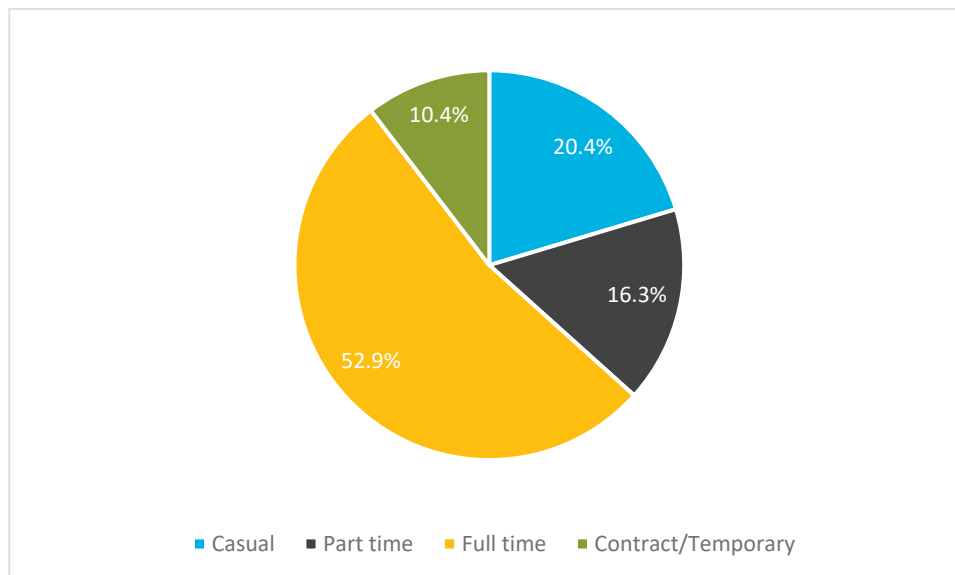


Figure E.1 Total % of employees employed by suppliers

iii Q3. Approximately what percentage of your employees reside in the Muswellbrook or Singleton local government areas?

Suppliers were asked to indicate what percentage of their employees live in the Muswellbrook LGA or Singleton LGA. Of the 123 responses, 14.6% (18) reside in Muswellbrook or Singleton LGAs 100% of the time, with 41.5% (51) of the workforce that live outside of Muswellbrook or Singleton LGAs 100% of the time. The remaining 26.8% (33) of the workforce live in Muswellbrook or Singleton LGAs 25% of the time, followed by 9.8% (12) live the LGAs 75% of the time, 7.3% (9) of the workforce reside in the Muswellbrook or Singleton LGAs 50% of the time. The proportion of suppliers' employees who reside in Muswellbrook LGA or Singleton LGA is shown in Figure E.2

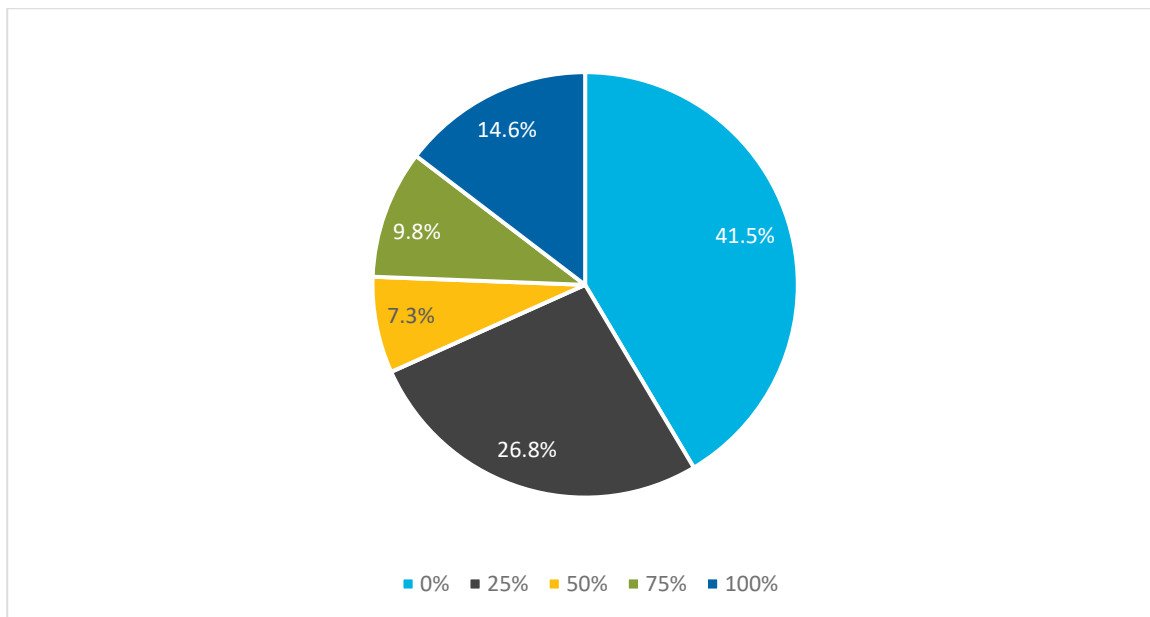


Figure E.2 Proportion of employees who reside in the Muswellbrook LGA or Singleton LGA

iv Q4. What industry/s does your clientele operate in?

Of the total 124 responses received, suppliers selected multiple answers across Questions 4 and a total of 401 answers were record. As shown in figure E.3 the responses to question 4 show the variation across the different industry sectors with the three top consumers operating in the following industries:

- mining (75.0% or 93 customers);
- manufacturing (41.9% or 52 customers); and
- construction (39.5% or 49 customers).

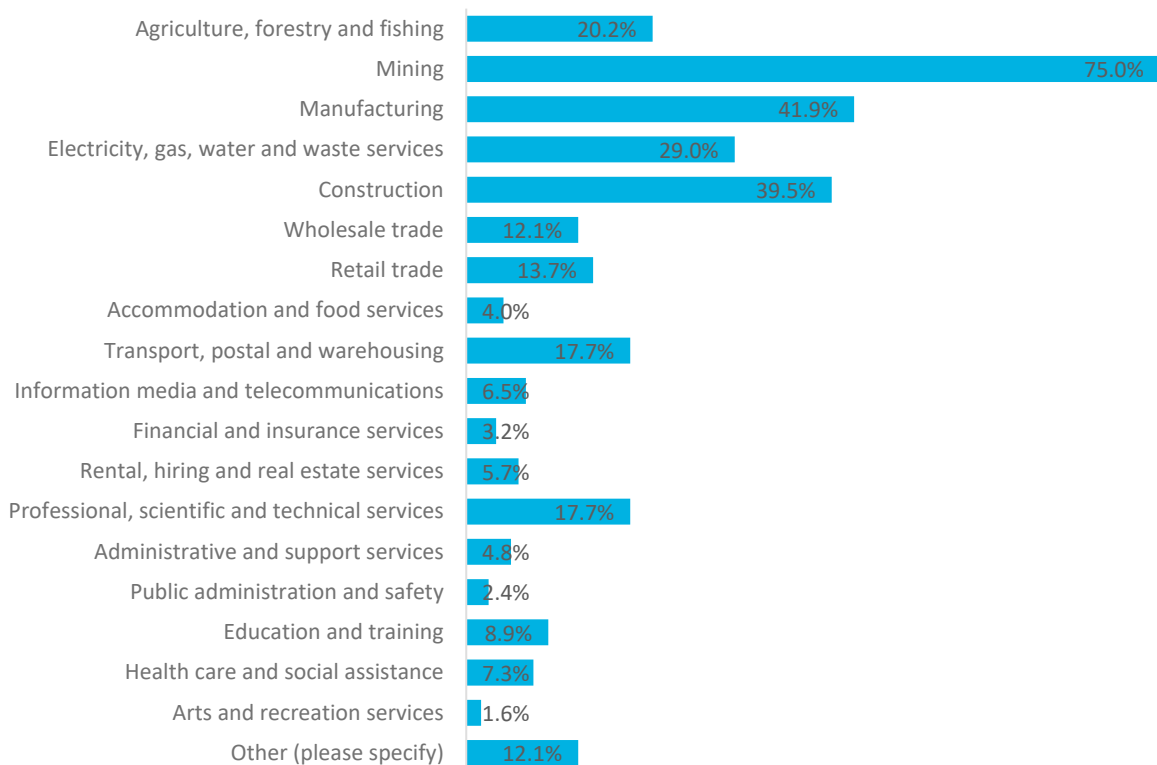


Figure E.3 Supplier clientele industry of operation

Q5. How many clients/customers does your business have?

Suppliers were asked to indicate how many clients/customers they provide goods and services to. The results of question 5 indicate the majority of suppliers indicated they have less than 199 clients/customers as follows:

- 20–99 clients/customers (25.6%, 31);
- 1–19 clients/customers (17.4%, 21); and
- 100–199 clients/customers (15.7%, 19).

A smaller proportion of HVO suppliers has upwards of 200 clients/customers, the highest of this category falling into the 200–299 clients/customers (11.6%, 14), followed by 1,000–1,999 clients/customers (9.1%, 11), 3,000 plus clients/customers (3.3%, 4) and 2,000–2,999 clients/customers (2.5%, 3). The number of supplier clients/customers shown in Figure E.4.

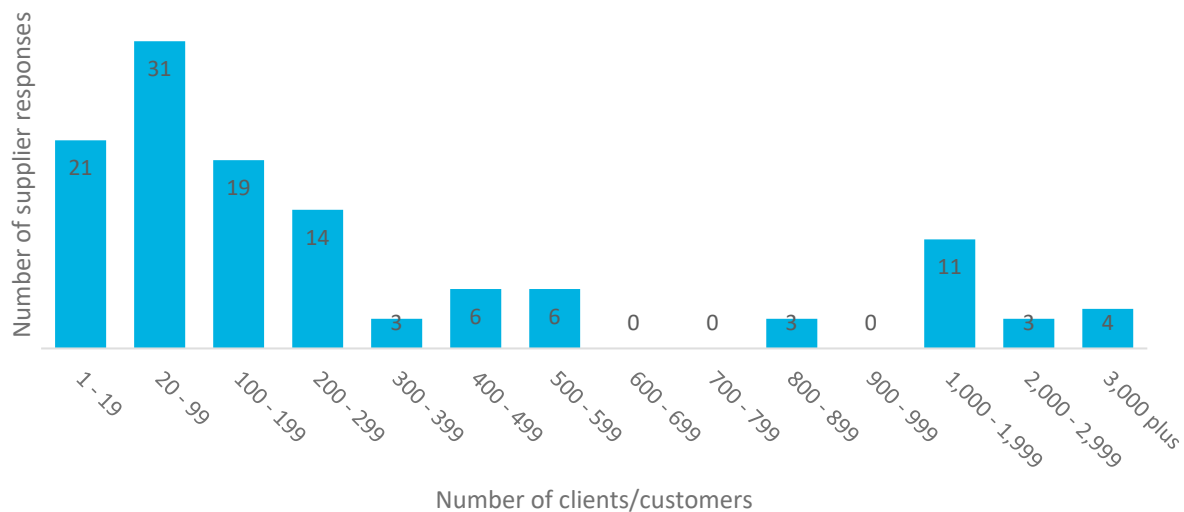


Figure E.4 Number of supplier clients/customers

vi Q6. How many contracts does your business have?

An analysis of responses to question 6 demonstrations of 121 supplier contracts, the largest proportion of suppliers have small contracts 50.4% (59) that fall under 1–19 contracts, followed by suppliers 18.8% (22) with 20–99 sized contracts.

As shown in Figure E.5, a smaller number of suppliers 4.3% (5) have more than 100 contracts and up to 3,000 plus contracts 1.7% (2), with the remaining suppliers 19.7% (23) advised they have no contracts, or this question was not applicable to the business.

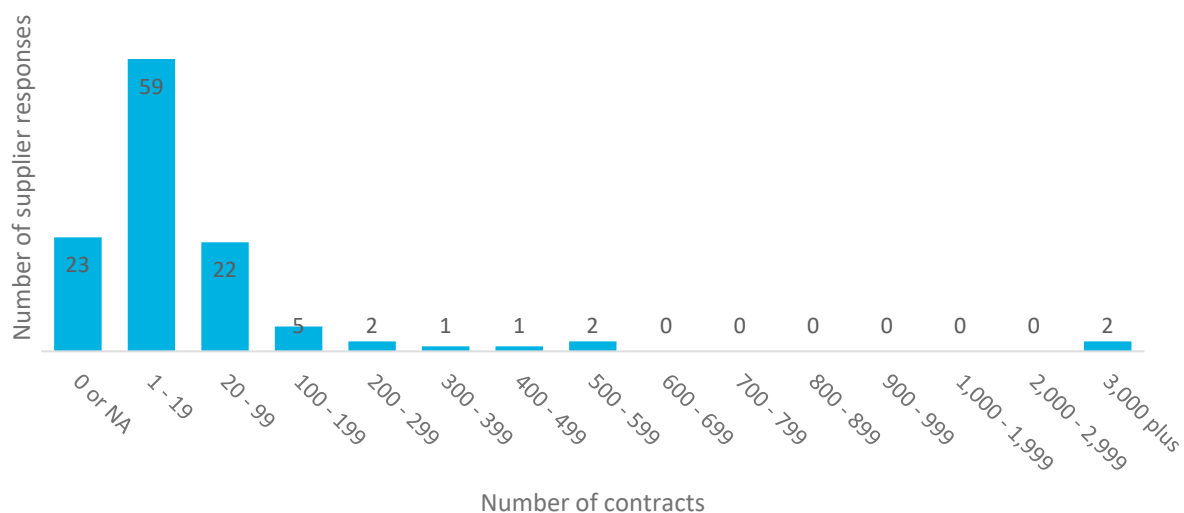


Figure E.5 Number of contracts held by suppliers

vii **Q7. Overall, what is the nature of business' operations and contracts?**

Suppliers were asked what the nature of business operations and contracts across a range of industries. Of the 122 responses the nature of their operations and contracts related to:

- 17.5% (21) of supplier contracts were related from professional, scientific and technical services;
- 15.8% (19) of supplier contracts were related from manufacturing;
- 12.5% (15) of supplier contracts were related from retail trade;
- 12.5% (15) of supplier contracts were related from construction; and
- 10.8% (13) of supplier contractors were related to mining.

Figure E.6 demonstrates the percentage of businesses' operations and contracts across a range of industries.

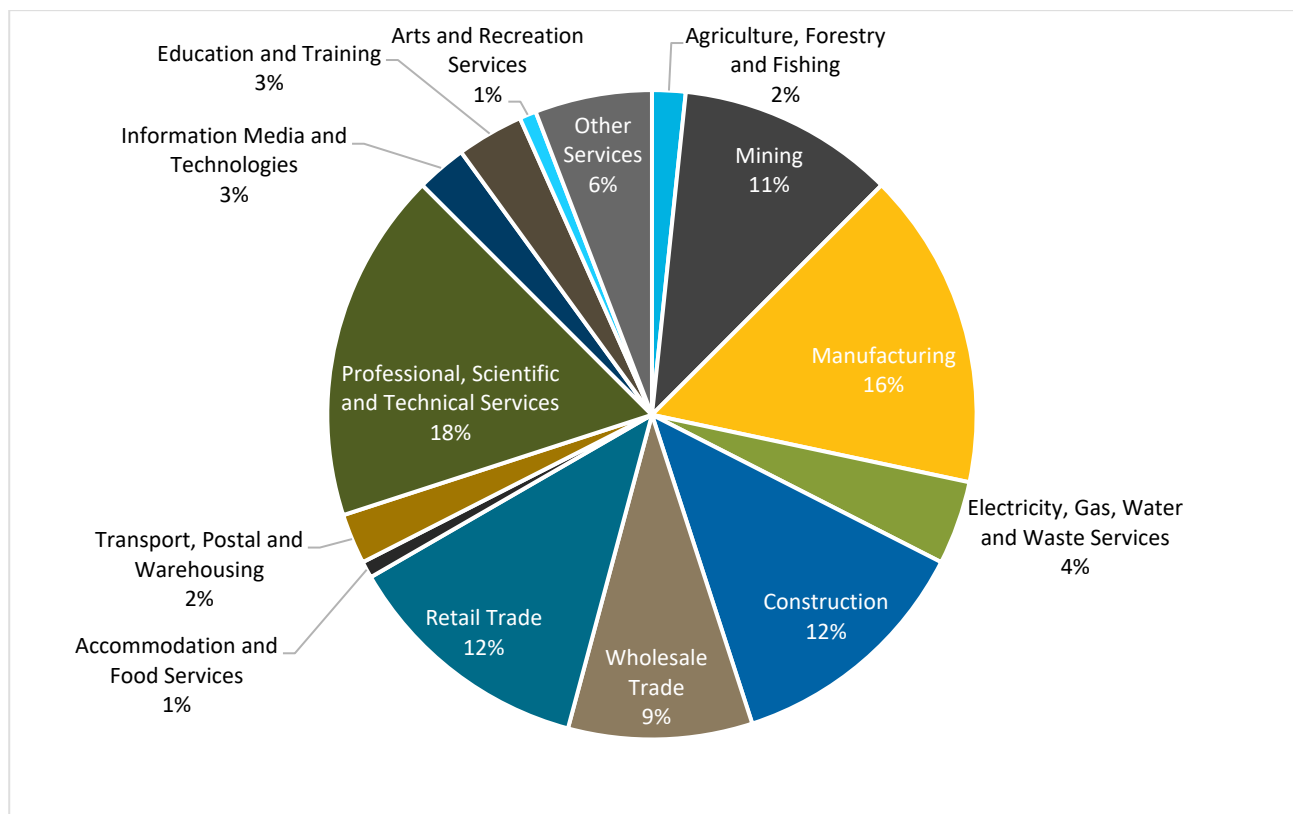


Figure E.6 What is the nature of businesses' operations and contracts

viii **Q8. What percentage of your total revenue is earned from the mining industry?**

Suppliers were asked what percentage of your total revenue is earned from the mining industry. An analysis of question 8 indicates:

- 46.3% of suppliers (57 business) earning 80–100% of their total revenue from mining;
- 7.9% of suppliers (22 businesses) earning 60–79% of their total revenue from mining; and
- 13.0% of suppliers (16 businesses) earning 40–59% of their total revenue from mining.

Based on survey responses a large proportion of the supplier income comes from the mining industry, shown in Figure E.7.

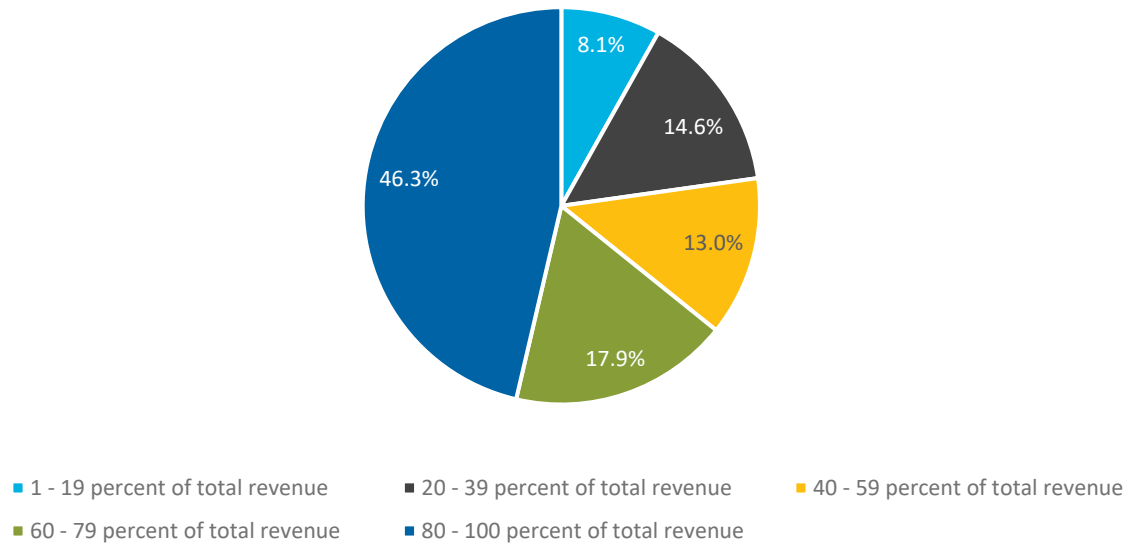


Figure E.7 Percentage of supplier income earned from the mining industry

ix Q9. What percent of your total revenue is earned from contract's with HVO?

Suppliers were asked what percentage of their total revenue was earned from contract/s with HVO. Of the 122 businesses, the results demonstrate;

- 71.3% (87 businesses) earned between 1–19% of their total revenue from HVO;
- 10.7% (13 businesses) earned between 20–39% of their total revenue from HVO; and
- the remaining 18% (6 businesses) earned between 40% and 100% of their revenue from HVO.

Based on survey results 49.2% (60 businesses) indicated the revenue earned from HVO is either 5% or less of their total income, 12.3% (15 business) indicated no income earned is from any contracts with HVO.

x Q10. Do you foresee any further opportunities to work with HVO? If yes, please specify.

Of the 123 suppliers who responded to question 10, 92.7% (114) of suppliers answered yes to exploring further opportunities to work with HVO and 7.3% (9) answered no.

xi Q11. How much revenue do you need to maintain your existing workforce? If you prefer not to say please indicate N/A.

Of the 119 suppliers who answered question 11, 79.8% (95 suppliers) stated N/A, or did not provide a revenue amount per year. A total of 24 suppliers provided a response to the amount of revenue required per year to maintain their existing workforce comprises of the following details:

- 41.7% (10 businesses) require under \$5 million dollars per year;
- 25.0% (6 businesses) require over \$20 million dollars per year;
- 20.8% (5 businesses) require between \$5 million to \$9 million dollars per year; and

- 12.5% (3 businesses) require between \$10 million to \$19 million dollars per year.

Figure E.8 shows, how much revenue suppliers required to maintain existing workforce.

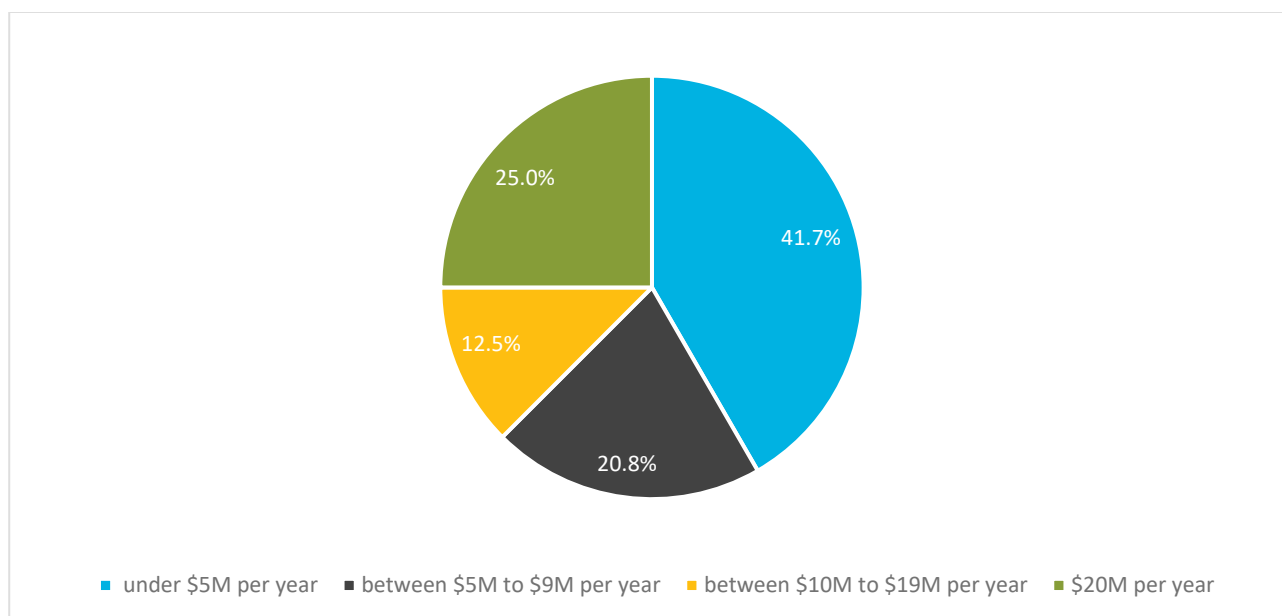


Figure E.8 Supplier revenue required to maintain existing workforce

xii **Q12. How dependent is your business revenue on your supplier relationship with HVO?**

Suppliers were asked to demonstrate how dependent their business revenue relies on supplier relationship with HVO operations. Of the 124 survey suppliers who responded to question 12, 4.8% (6 businesses) are extremely dependant on the relationship with HVO as business revenue, 12.1% (15 businesses) are very dependent on HVO and 16.9% (21 businesses) are dependant.

A total of 42 suppliers indicated revenue was dependent on their relationship with HVO. However, 38.7% (49 businesses) indicated they are slightly dependant on the relationship with HVO and 27.4% (34 business) are not dependant at all. Figure E.9 shows supplier revenue dependence on HVO.

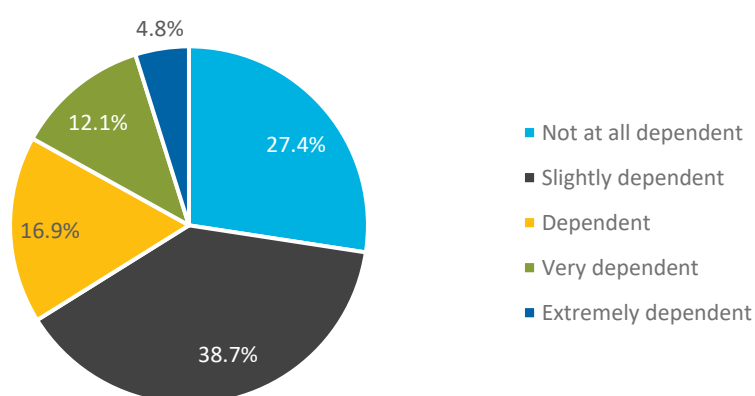


Figure E.9 Supplier revenue dependence on HVO

xiii **Q13. How many years have you been providing services to HVO?**

Results from question 12, a total of 70 suppliers have long standing business relationship and connections, with 32.2% (39 businesses) indicated they have provided services to HVO for 20 plus years, followed by 9.9% (12 businesses) providing services for 15–19 years, 15.7% (19 businesses) for 10–14 years.

While there remaining suppliers have newer relationships, with 20.7% (25 businesses) who provide services for 5–9 years and 21.5% (26 respondents) who provide services from 0–4 years to HVO. Years that suppliers have provided services to HVO, shown in Figure E.10.

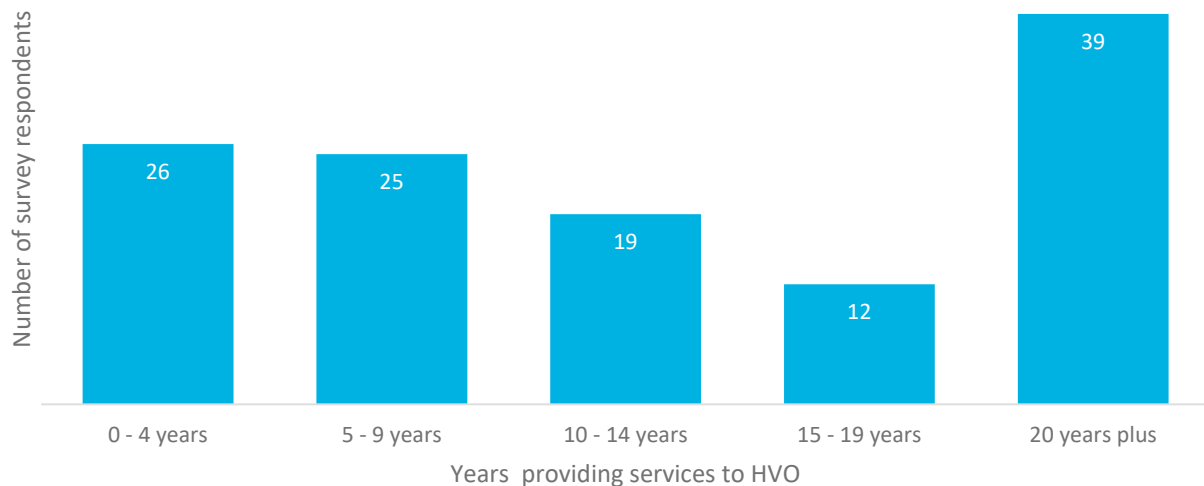


Figure E.10 Years that suppliers have provided services to HVO

xiv **Q14. What percentage of your annual business income is spent on goods and services?**

Suppliers were asked to comment on the proportion of their businesses annual incomes spent on goods and services. There were 109 responses that varied from 5% through to 100% of income spent on goods and services, with an average annual expenditure of 44.8%.

Of the responses:

- 12.8% (14 businesses) selected the 80–100% percent option;
- 16.5% (18 businesses) selected the 60–79% option;
- 10.1% (11 businesses) selected the 40–59% option;
- 25.7% (28 businesses) selected the 20–39% option;
- 11.9% (13 businesses) selected the 1–19% option; and
- 22.9% (25 businesses) selected this question was not applicable.

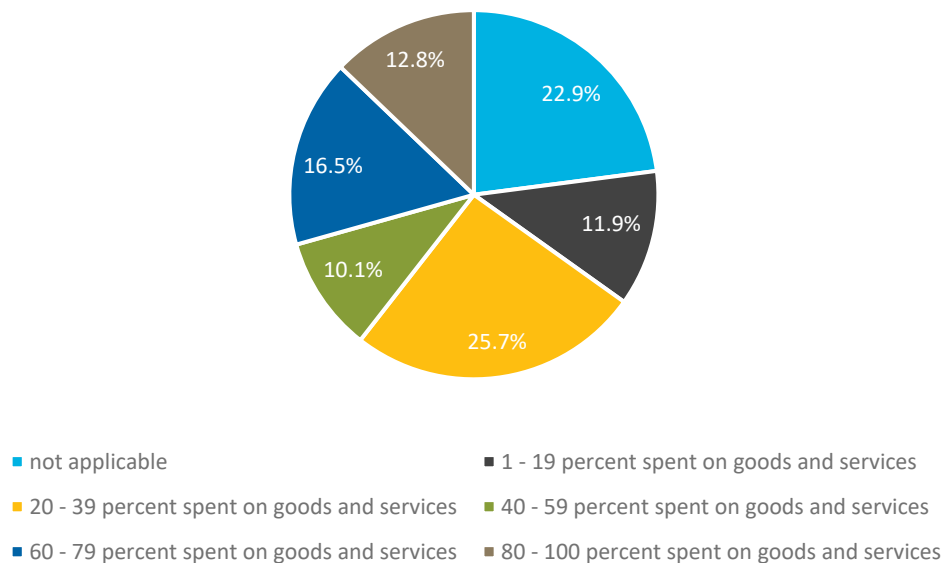


Figure E.11 Percentage of annual business income spent on goods and services

xv Q15. How much capacity do you have to deliver additional contracts to HVO?

When asked what the capacity is to deliver additional contracts with HVO. Of the 123 responses over 84.6% (104) of suppliers indicated they have adequate to high amounts of capacity to take on more contracts compared with 11.4% (14) of suppliers indicating that they have some capacity and 1.6% (2) had very little, and 2.4% (3) had no capacity to deliver any additional contracts with HVO.

xvi Q16. What locations are your goods and services sourced from?

An analysis of question 16 varies from sourcing locally, to overseas. Suppliers were able to select multiple options with a total of 290 selections. Results highlight goods and services are sourced from the following locations within the SIA study area:

- 66.9% (83 responses), within the area of reference (Maitland, Cessnock, Newcastle region and surrounds);
- 44.4% (55 responses) from the broader New South Wales;
- 42.7%, (53 responses) within the regional areas of Muswellbrook LGA and or Singleton LGA;
- 33.1% (41 responses) overseas; and
- 4.8% (6 responses) other areas outside NSW.

xvii Q17. What is the postcode of your main office?

Suppliers were asked to indicate the town in which their businesses main office was located. As shown in Table E.2. Of the 119 respondents the most common locations included Mainland LGA, followed by Singleton LGA, Newcastle LGA, Sydney region, Muswellbrook LGA and Lake Macquarie LGA with other suppliers having their main offices in South Australia. Results show, 75.4% (89 suppliers) were specifically based in the Hunter Valley region with a further 10.7% located in broader NSW and 13.9% (17 suppliers) in other states of Australia.

Table E.2 **What is the postcode of your main office?**

Locality of main office	Count of suppliers	Percentage of suppliers
Singleton LGA	30	25.5%
Newcastle LGA	12	10.1%
Maitland LGA	32	26.9%
Muswellbrook LGA	7	5.9%
Lake Macquarie LGA	7	5.9%
Moore Plains LGA	1	0.8%
Tamworth LGA	1	0.8%
Hunter Valley Region	1	0.8%
Sydney Region	10	8.4%
Illawarra Region	1	0.8%
QLD	3	2.5%
WA	1	0.8%
VIC	1	0.8%
SA	11	9.2%
TAS		0.8%

E.1.2 Key themes raised by supplier survey respondents

The key findings of the survey indicated that:

- 48.4% of HVO Suppliers are small businesses, having fewer than 20 people employed as defined by the ABS;
- 44.3% of suppliers employed between 1–19 employees;
- 53.8% of the workforce are employed on a full-time basis;
- 41.5% of the workforce live outside of Muswellbrook and Singleton LGAs 100% of the time;
- 14.6% of supplier business employees reside in Muswellbrook or Singleton LGAs (LGA) 100% of the time;
- three top consumers operating in the following industries: mining (75.0%), manufacturing (41.9%) and construction (39.5%);
- 18% earned between 40% and 100% of their revenue from HVO operations;
- a total of 70 suppliers indicated they have been working with HVO for around 10 to 20 years or more;
- 84.4% of suppliers indicated they have capacity to take on more contracts;
- 42.7% of goods and services are sourced within Muswellbrook LGA and Singleton LGA; and
- 75.4% of supplier's main office are based in the hunter valley region.

Appendix F

SIA workforce survey

F.1 Workforce survey

This information provided is based on the survey data collected from the Hunter Valley Operations (HVO) Continuation workforce survey from July 2021 to August 2021 and provides EMM consulting with information about the employees who work at HVO. A total sample of 1223 employees located in Singleton LGA, Cessnock LGA, Maitland LGA, Muswellbrook LGA, Lake Macquarie, Newcastle LGA and more broadly the Hunter Valley region with a small proportion located in Port Stephens LGA were emailed the survey of which 425 responded. The workforce survey questions and number of responses received is shown in Table F.1.

F.1.1 Workforce survey responses

Table F.1 Project workforce survey responses

	Question	Number of responses
Question 1	What is your job title?	411
Question 2	Which occupation best describes your employment with HVO?	425
Question 3	What is your current employment status at HVO?	427
Question 4	How long have you been working at HVO?	427
Question 5	Did you relocate to either Singleton or Muswellbrook local government area to take up the position at HVO?	427
Question 6	If yes, where did you move from? Provide the suburb/city/country. Please specify N/A if not applicable.	154
Question 7	What industry were you employed in prior to your role with HVO?	426
Question 8	Do you have another job in addition to your position at HVO? If yes, what sector?	427
Question 9	Do you see yourself continuing to work at HVO in the near future? If not, why?	427
Question 10	How important is it for you that the HVO Continuation Project gets approved?	427
Question 11	How confident are you that you could find employment in the mining industry if not working for HVO?	427
Question 12	Which of the following job skills apply to you? Please select all that apply	422
Question 13	Do you feel confident that your job skills allow you to work in an industry other than mining?	426
Question 14	When thinking about services near you, where are they mainly located?	397
Question 15	When you need access to medical/ health services, where do you usually go?	407
Question 16	What type of health services do you access?	415
Question 17	What locations do you source the following? Please provide the suburb/town/city.	422
Question 18	What community services do you use? Select all that apply to you.	407
Question 19	Where do you mainly access community services?	270
Question 20	How frequently do you access community services? (per year)	220
Question 21	Thinking about your involvement in your local community do you...	411

Table F.1 **Project workforce survey responses**

	Question	Number of responses
Question 22	How old are you?	427
Question 23	Where do you currently reside? Please specify your suburb/locality and postcode.	416
Question 24	Do you live in a...	426
Question 25	Which of the following best describes your current situation?	425
Question 26	Which of the following best describes your current relationship status.	426
Question 27	Which of the following best describes your household?	424
Question 28	Do you have any children?	423
Question 29	How many children, by age, currently live in your household? Please specify N/A if not applicable.	330
Question 30	Is your child/children enrolled in a day care service, kindergarten or school? If yes, please specify the suburb.	415
Question 31	What is the highest level of education you have completed?	425
Question 32	If you indicated having a tertiary qualification and/or certificate/TAFE Qualification please specify your qualification/s. Please specify N/A if not applicable.	334
Question 33	Are you currently studying? If yes, please specify what you are studying and where.	418
Question 34	What is your approximate average household income?	416

F.1.2 Workforce survey responses analysis

i Q1 What is your job title?

Of the 425 HVO employees who completed question 1, operators (33.6%), supervisors (8.8%), and mining (5.9%) roles were the top three responses, followed by coal handling and preparation plant (CHPP) (4.7%), engineering (4.2%), electrician (3.5%) and mining superintendent (3.2%) roles. See Figure F.1 job title word cloud.



Figure F.1 **Job title**

ii Q2 Which occupation best describes your employment with HVO?

Out of the 425 employee responses to question 3, 36.5% of the respondents (155) are employed as machinery operators and drivers, followed by 23.5% respondents (100) employed as technicians and trades workers, with 18.3% respondents (78) employed as professionals and 9.2% of the respondents (39) employed as managers at HVO.

The remaining occupations identified by survey respondents comprise 3.5% (15) clerical and administrative workers, 3.3% (14) labourers and 0.2% respondents (1) are sales workers. A total of 23 respondents (5.4%) selected “other (please specify)”, which includes the following stated occupations:

- shotfirer;
- bench hand blast crew;
- logistics;
- supervisor;
- plant operator;
- procurement;
- production;
- asset management and safety consulting;
- apprentice;
- commercial;
- contractor;
- storeman;
- safety; and
- blast team.

Based on the survey responses, machinery operators and drivers, technicians and trades workers and professionals make up the top three occupations at HVO (Figure F.2).

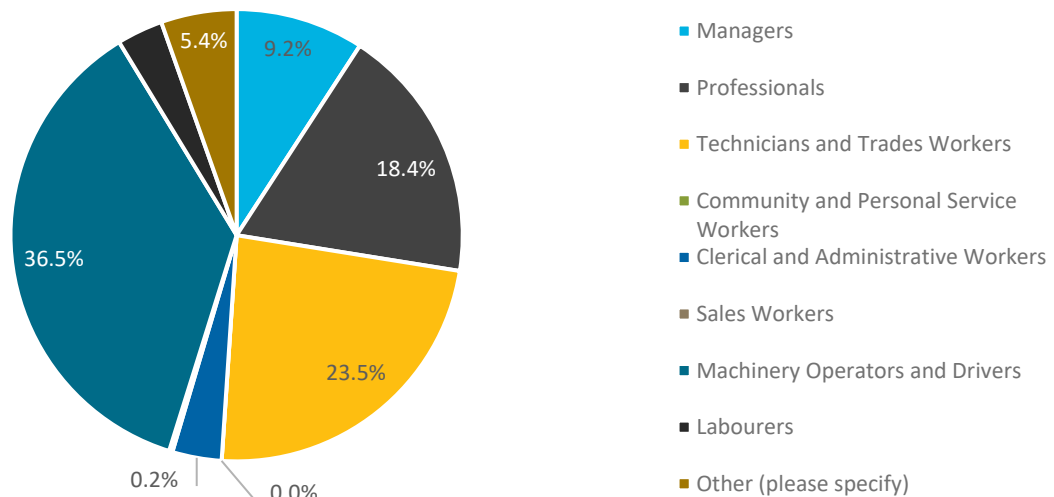


Figure F.2 Occupation

iii **Q3 What is your current employment status at HVO?**

Full-time employees comprise the largest proportion of employees at HVO. Out of 427 workforce survey responses, 87.6% of respondents (374) were employed full-time at HVO, working 35 hours or more per week. Of the survey responses, 9.6% of respondents (41) were employed on a contract/temporary basis, 2.6% (11) of respondents were casual, and 0.2% of respondents (1) were employed part-time. Based on the survey responses, full-time work is largely the predominant form of employment amongst the workforce at HVO.

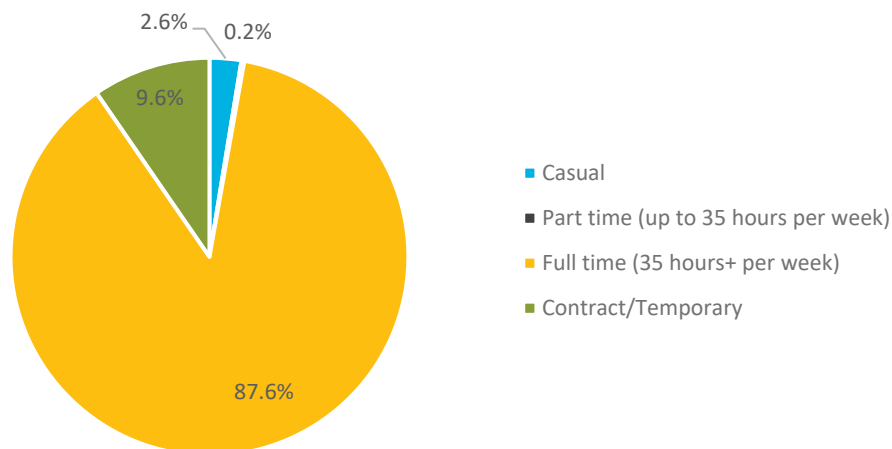


Figure F.3 Current employment status at HVO

iv **Q4 How long have you been working at HVO?**

Of the 427 responses who answered question 4 most people are long term employees. Over a third (31.6%) of the survey respondents (135) have worked at HVO for eleven or more years and just under a third (27.4%) of the respondents (117) indicated they have been employed at HVO five to 10 years.

This is followed by 7.5% of respondents (32) who have worked at HVO for four years, 7% employees (30) for three years, and 15% of employees (64) for two years at HVO. A further 5.9% of respondents (25) stated that they have worked at HVO for one year, with 5.6% of respondents stating they have been at HVO for six months or less

Based on survey results the workforce is well established with 59% of the respondents having worked at the operation for 5 years or longer, indicating a strong employee retention and potentially reliance on HVO as an employer.

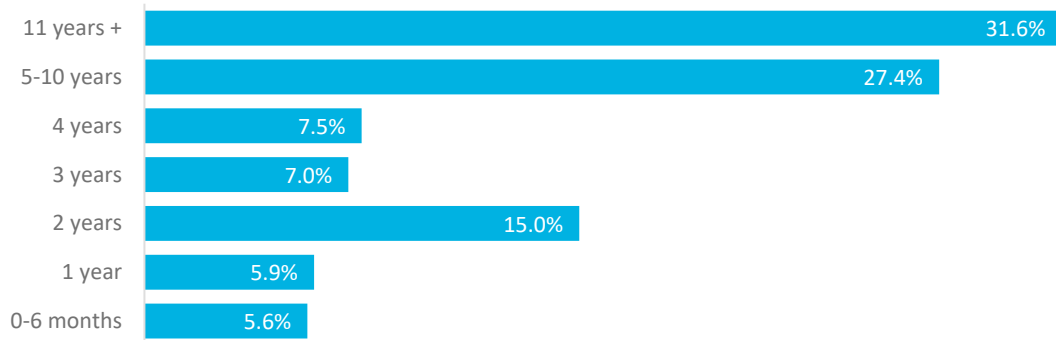


Figure F.4 Length of time working at HVO

v Q5 Did you relocate to either Singleton or Muswellbrook local government area to take up the position at HVO?

Of the 427 workforce survey respondents, 77.5% (331) stated that they did not relocate to either Singleton or Muswellbrook local government area to take up the position at HVO. However, 22.5% of respondents (96) stated that they did relocate to take their position at HVO. Based on results this indicated a strong local workforce.

vi Q6 If yes, where did you move from?

The main response of those respondents that relocated from their previous residential address to take up their position at HVO were, from locations in Queensland, in the Hunter Valley region, and broader locations in NSW. A few employees travelled from other states in Australia and one person relocated from overseas. More details are visually represented in Figure F.5.

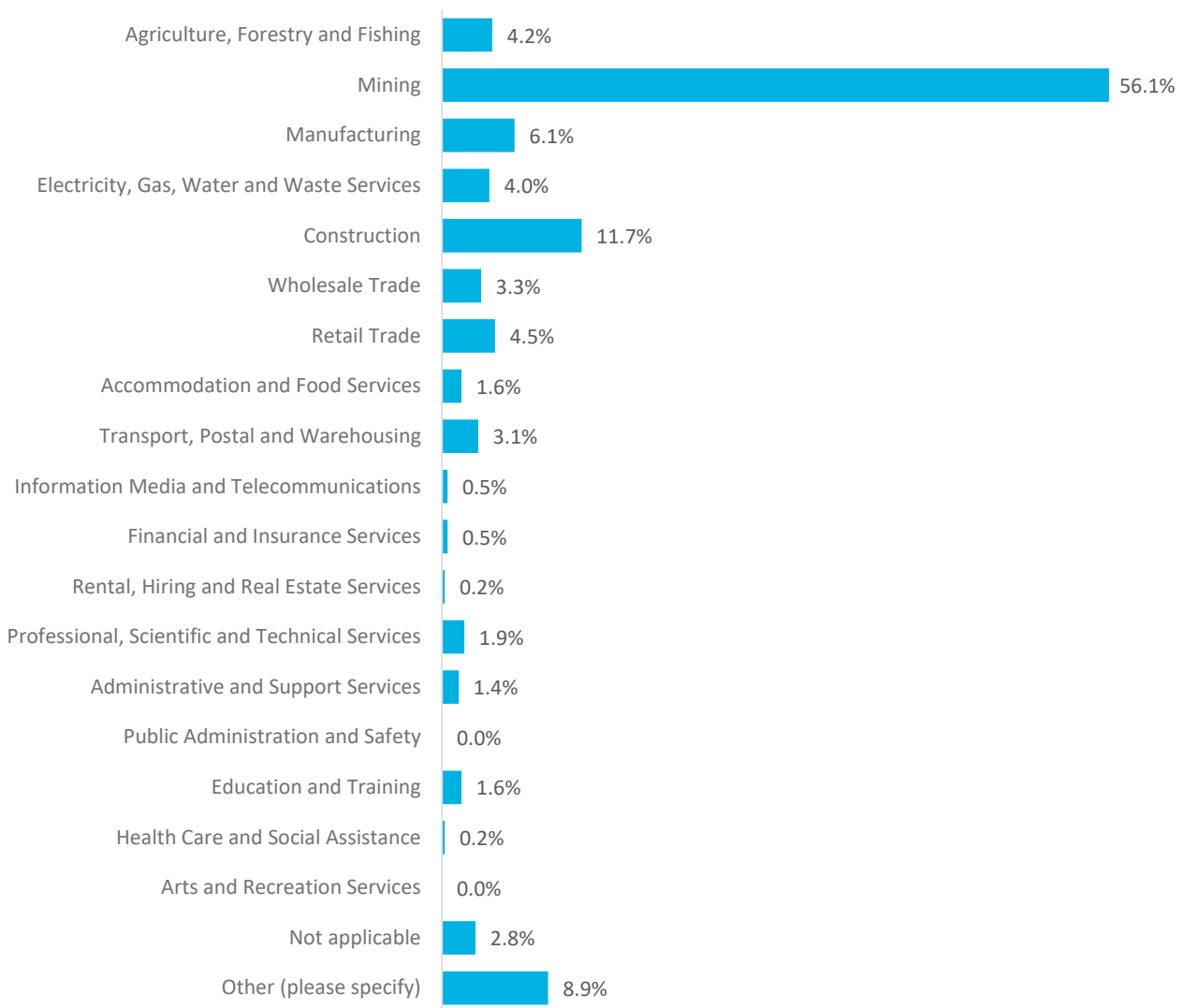


Figure F.6 Industry of employment prior to role with HVO

viii Q8 Do you have another job in addition to your position at HVO? If yes, what sector?

Analysis of the workforce survey shows that 91.3% of respondents (390) do not have another position and HVO is their only job, with 8.7% of respondents (37) stating that they hold another job in addition to their position at HVO. The most common sectors of the respondents with another job in addition to their position at HVO included:

- agriculture and primary production;
- fire fighter/fire and rescue; and
- engineering.

Based on the survey results most of the workforce respondents hold one job with HVO, while a less than 10% have an additional position. This indicates that a strong majority of the HVO workforce are reliant on their position at HVO.

ix Q9 Do you see yourself continuing to work at HVO in the near future? If not, why?

Most of the survey responses 96.5% of respondents (412) answered that they see themselves continuing to work at HVO in the near future.

Of the 3.5% of respondents (15) that did not see themselves continuing to work at HVO in the future, reasons included:

- nearing retirement (two responses);
- opportunities elsewhere (three responses);
- searching for full-time work as a current casual at HVO (two responses);
- relocating elsewhere (two responses);
- long hours and roster (one response);
- workplace culture (three responses);
- job satisfaction (one response); and
- management (one response).

Based on results almost all the respondents who work at HVO see themselves continuing their position at HVO and this suggests the importance that their role presents for them.

x Q10 How important is it for you that the HVO Continuation Project gets approved?

Out of the 427 respondents of the workforce survey, almost all (98.8% or 422 respondents) indicated it was very important and important to them that the HVO Continuation Project is approved. When asked why they feel this way the most common responses included:

- HVO would provide personal job and income security in the future;
- the Project provides job opportunities for future employees and future generations and long-term employment;
- the Project is supporting the local economy; and
- supporting community growth and development in the region.

Almost of all the respondents strongly indicated the importance to them for the approval of the HVO Continuation Project.

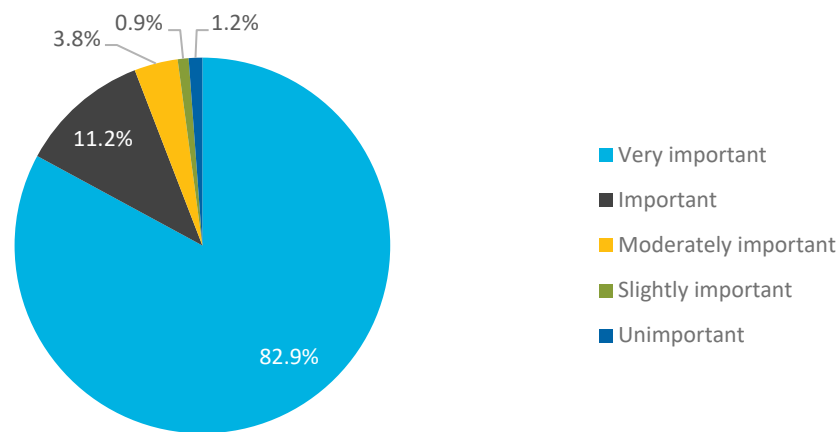


Figure F.7 Workforce ranking of importance of HVO Continuation Project approval

xi Q11 How confident are you that you could find employment in the mining industry if now working for HVO?

An analysis of how confident the workforce felt in finding other employment if they were not working at HVO and in the mining industry showed 19.9% of respondents (85) indicated they were highly confident, and 35.1% respondents (150) believed they could find employment in the mining industry if not working at HVO. However, 27.63% of respondents (118) and 10.30% respondents (44) had some to little confidence and 7.0% respondents (30) were not confident in finding employment in the mining industry if they were not working at HVO.

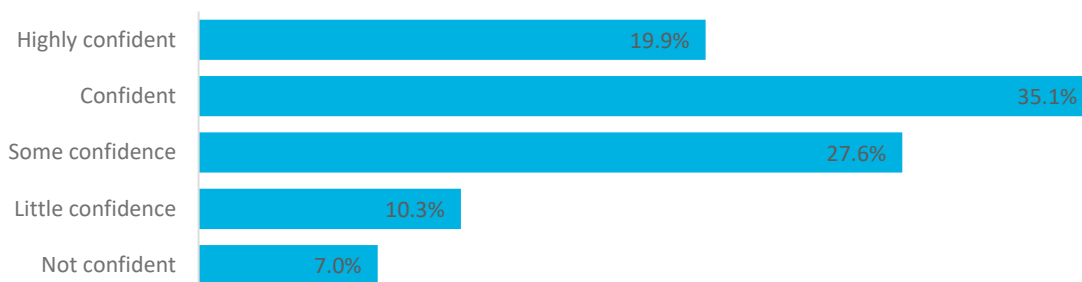


Figure F.8 Workforce confidence in finding other employment in the mining industry

xii Q12 Which of the following job skills apply to you?

The top three job skills that respondents indicated applied to their roles within the operation at HVO included 45.0% respondents (190) with Equipment operation skills, 37.7% respondents (159) with Trades skills (eg carpentry, electrical, mechanic, plumbing etc) and 24.9% of respondents with Management. This was closely followed by Project management (19.4%), Safety and Training (22.5%), Administrative skills (16.6%) and Construction skills (13.0%). Notably, the following job skills were identified when respondents were asked to select "other people specify" as a skill that applies to their roles:

- 5 respondents indicated shot firing;
- 7 respondents indicated blasting; and
- 14 respondents indicated engineering.

This demonstrates a diverse range of job skills that applies to the current workforce at HVO.



Figure F.9 Workforce skillset

xiii Q13 Do you feel confident that your job skills allow you to work in an industry other than mining?

Of the 426 respondents to question 13 in the workforce survey, 67.61% respondents (288) indicated they felt confident in their own employment skill set currently to be able to work in another industry other than mining. The most common responses were:

- operation of machinery;
- construction skills;
- trades; and
- engineering skills base.

While 32.39% of respondents (138) indicated they did not feel confident in working in another industry other than mining, the most common responses are transferable skills outside of mining.

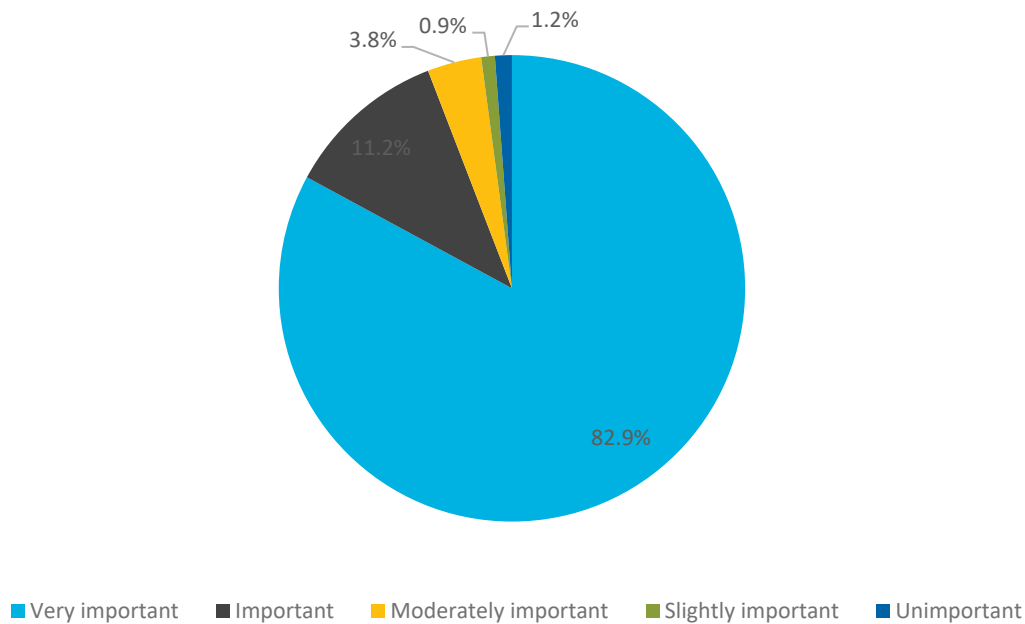


Figure F.10 Confidence in job skills allowing work in an industry other than mining

xiv Q14 When thinking about services near you, where are they mainly located?

When thinking about services that came to the respondent's mind of the 397 responses in the survey, Singleton (156) was listed as the most popular answer. This was followed by Maitland (84), Cessnock (37) and Muswellbrook (24) respectively which all fall within the local and regional area of social influence.

Based on survey results the HVO workforce mainly all the respondents have a good understanding of where their local services and this indicates where most people will be going to access services in the local area close to their workplace HVO.



Figure F.11 Service locations

xv Q15 When you need access to medical/health services, where do you usually go?

When asked where you usually access medical and or health services of the 407 HVO workforce survey respondents the top three responses are;

- Singleton;
- Maitland; and
- Newcastle.

The above locations were the main responses and this was followed by Cessnock, Muswellbrook and respondents also mentioned they visited their local General Practitioner. Based on the results when accessing medical centre or health services HVO employees utilise the resource centres across the region.

xvi Q16 What type of health services do you access? How many times a year do you access...

An analysis of health services and the frequency of the access to the health services over the past ten years within the HVO workforce indicates employees are accessing local pharmacy's, GPs and dental services as some of the top services that are accessed by the HVO workforce.

Of the one to two times per year responses 79.25% of respondents (275) selected they accessed Dental services; 78.50% respondents (230) chose Optometrists followed by 55.47% of respondents (152) accessing the Hospital health system only one to two times per year.

Of the three to five times per year selection 42.93 % of respondents (176) are accessing a GP, 27.79% of the respondents (97) accessed the Pharmacist and 13.36% accessing (33) respondents accessed specialised services during this time period.

Of the workforce who accessed health services six to nine times per year, 22.92% respondents (80) accessed the Pharmacist, and 11.22% respondents (46) accessed the GP.

Of the HVO workforce that is accessing Health services some ten plus times per year the top service is a pharmacist at 35.53% of respondents (124) and 7.32% of respondents (30) accessed the GP.

When grouping the responses across what health services the HVO workforce respondents have accessed and the frequency across all selections of either one to two times per year or up to ten plus years the overall top health services that are accessed are:

- GPs;
- pharmacists;
- dentist;
- optometrist;
- hospital; and
- other that included physiotherapists.

Based on the workforce survey data HVO employees' access and utilise the health services in the local area.

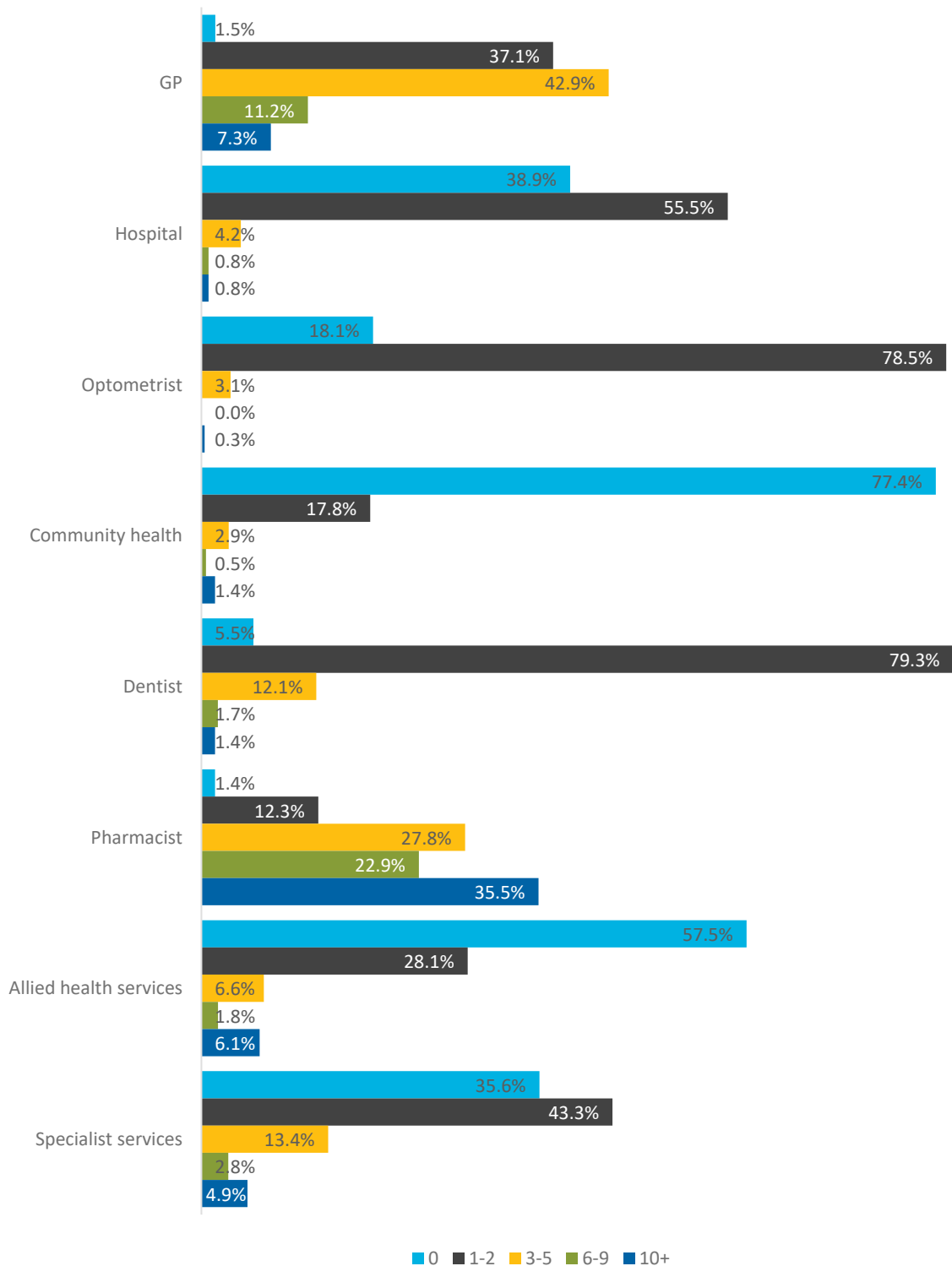


Figure F.12 Medical services accessed and frequency

xvii Q17 What locations do you source the following?

The analysis on what locations the HVO workforce survey respondents are typically purchasing items for their households, such as where are they purchasing groceries items, clothing, petrol, and other goods indicates a majority of all the respondent’s access and source items within the LGAs of Singleton and Muswellbrook and the Hunter Valley and Newcastle regions. The top five locations are listed for each category in Table F.2 below.

Please note: some respondents have more than one answer which is why there is more responses than respondents.

Table F.2 **What locations do you source the following?**

Services	Locations	% Percentage	numbers
Groceries	Singleton	32.9%	153
	Maitland	27.3%	127
	Cessnock	25.4%	118
	Muswellbrook	6.9%	32
	Newcastle	6.5%	30
Clothing and household items	Maitland	40.4%	207
	Singleton	26.5%	136
	Newcastle	15.6%	80
	Cessnock	6.8%	35
	Muswellbrook	3.9%	20
Fuel	Singleton	41.9%	195
	Cessnock	20.4%	95
	Maitland	16.6%	77
	Newcastle	16.6%	77
	Muswellbrook	6.9%	32
Restaurants (ie dine in or takeaway)	Singleton	28.0%	149
	Maitland	20.5%	109
	Cessnock	15.4%	82
	Newcastle	13.7%	73
Household maintenance	Singleton	37.9%	154
	Maitland	27.1%	110
	Cessnock	14.8%	60
	Newcastle	6.2%	25
	Muswellbrook	5.7%	23
Recreation	Singleton	23.3%	107
	Newcastle	22.2%	102
	Maitland	18.5%	85
	Cessnock	7.4%	34
	Hunter Valley	6.8%	31

Table F.2 **What locations do you source the following?**

Services	Locations	% Percentage	numbers
Vehicle servicing (eg mechanic)	Singleton	30.2%	131
	Maitland	27.0%	117
	Cessnock	12.2%	53
	Muswellbrook	7.6	33
	Newcastle	7.4%	32

Notes: Top 5 in each cat.

Some respondents gave more than one answer which is why there is more responses then respondents.

xviii **Q18 What community services do you use?**

The analysis of 407 responses of the HVO survey workforce shows that 72.7% of respondents (296) did not feel they required to use any community services. While a lower proportion, 13.5% respondents (55) indicated they used Employment and training services and 11.79% of respondents (48) accessed Mental health services. With smaller proportion accessing Youth and family services, Aged care services, Aboriginal and Torres strait islander services and disability services.

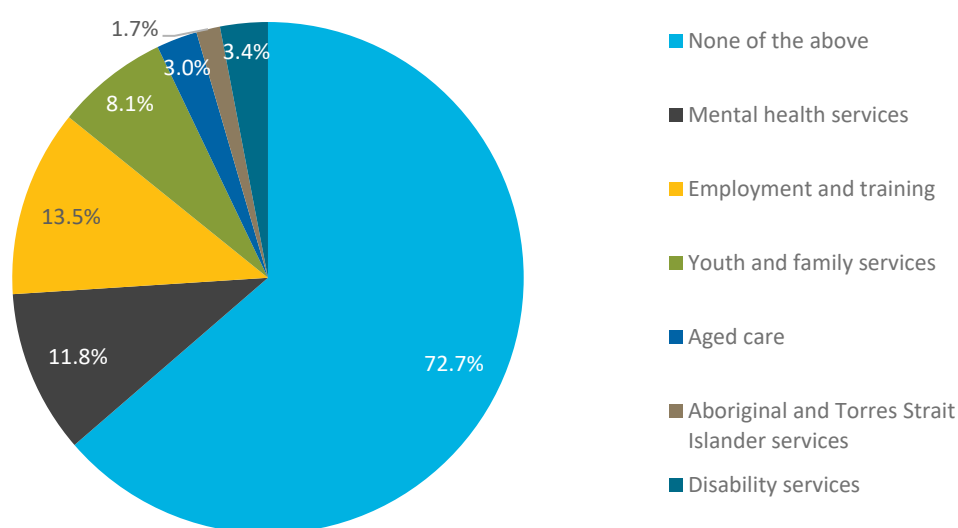


Figure F.13 **Community services used by HVO workforce**

xix Q19 Where do you mainly access community services?

The survey identified the following top two townships of where they mainly access community services this includes:

- Singleton; and
- Maitland.

Of the 429 respondents, 159 people skipped the question and of the remaining 270 people who answered the question 62 people indicated they had no need to access community services. Of remaining 97 respondents some of the responded answered with more than 1 location.

xx Q20 How frequently do you access community services (per year)?

Of the 220 respondents who answered the question 20, 68.6% employees indicated that they accessed community services one to two times per year, followed by 15.5% for three to five times per year and 10.9% for ten plus times per year respectively. Based on results, 209 respondents opted to skip this question.

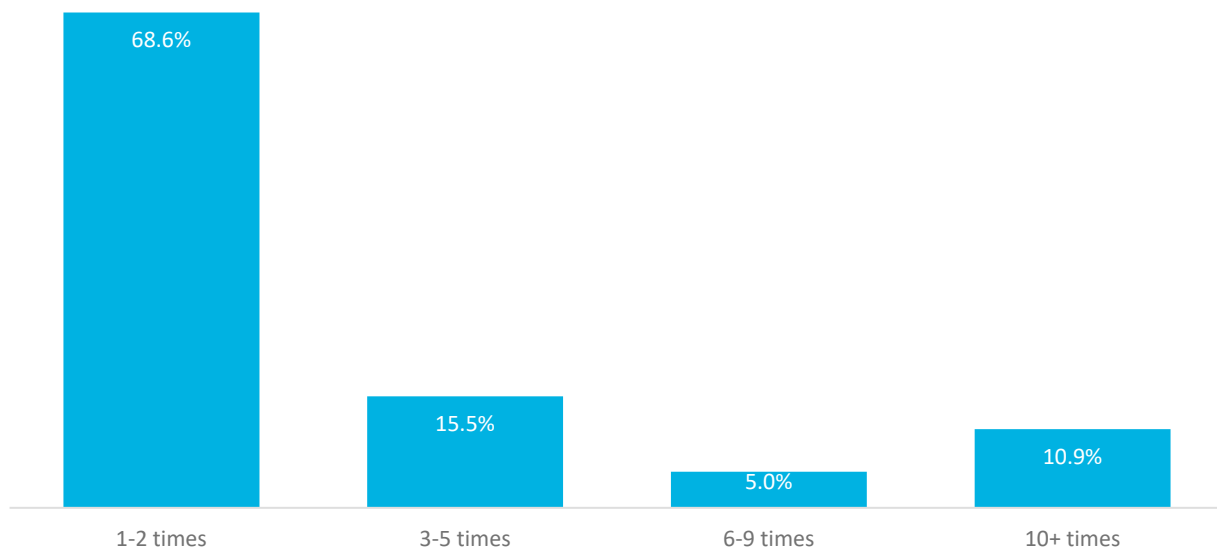


Figure F.14 Frequency of access of community services per year

xxi Q21 Thinking about your involvement in your local community do you...

HVO workforce community contributions and engagements vary across the 411 respondents. The HVO workforce involvement in the local community indicate there is high involved across the local community outside of workhours. The most popular response sitting at 44.3% of respondents (182) was to donate to an organisation or charity and this following 33.1% of respondents directly participating in community groups and/or events and 30.9% of respondents playing for a local sporting club. Some of the other responses include:

- supporting the local sporting clubs;
- buying local; and
- participating in local festivals and events.

Based on results there is a high level of engagement within the HVO workforce that engages with the local community outside of workhours in a range of activities. Of the employees who selected 'other' these activities such as; buying goods and services locally, and attending local events.

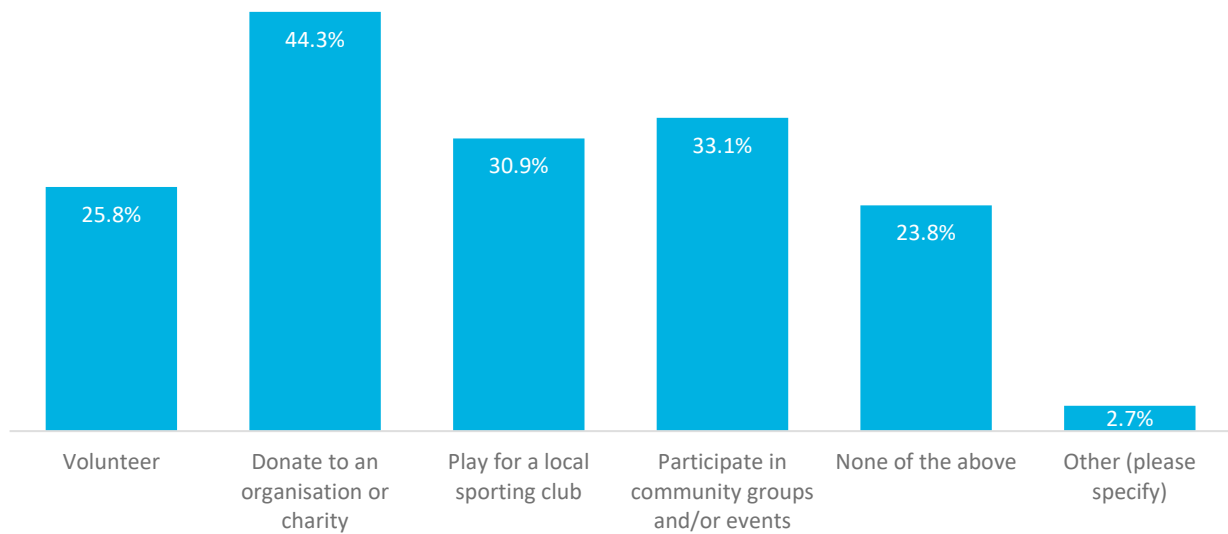


Figure F.15 HVO workforce community contributions and engagement

xxii Q22 How old are you?

Of the 427 employees who responded to questions 22, 31.2% of employees (133) are between the 35–44 age brackets, followed closely by 29.3% of (125) in 45–54 age bracket and 23.2% employees (99) in the 25–34 age bracket.

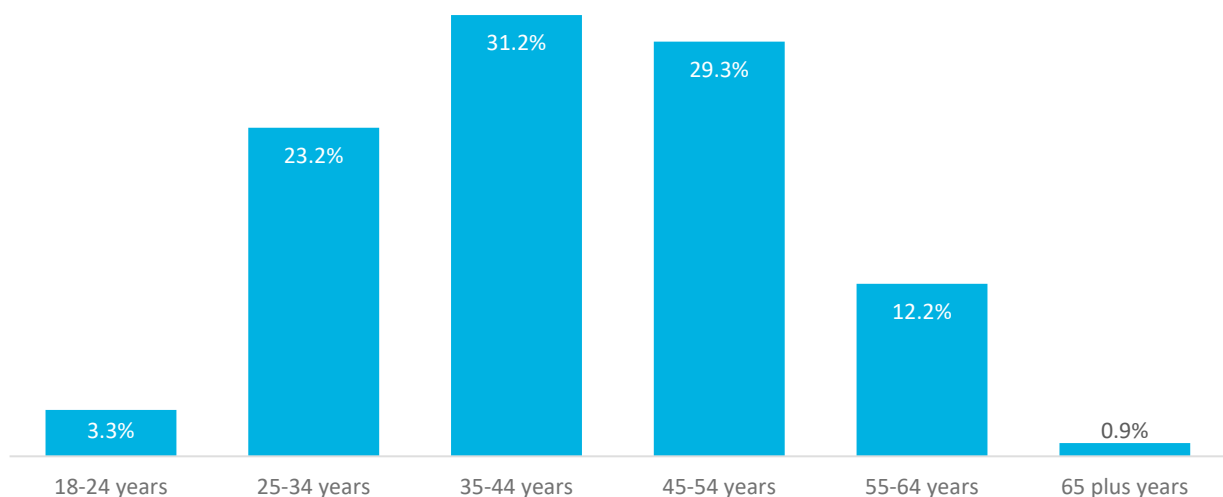


Figure F.16 Age of HVO workforce

xxiii Q23 Where do you currently reside? Please specify your suburb/locality and postcode

A large proportion of the HVO workforce survey respondents reside in the LGAs of Singleton, and Cessnock, followed by Maitland LGA, Muswellbrook LGA, Lake Macquarie, and Newcastle LGA. A small proportion of the survey workforce respondents reside in the Dungog, Upper Hunter and Port Stephens LGA.

xxiv Q24 Do you live in a...

Of the 426 respondents (403) 94.6% indicated they are living in a standalone home. Only a small percent of the workforce live in a unit/townhouse/duplex or other dwelling.

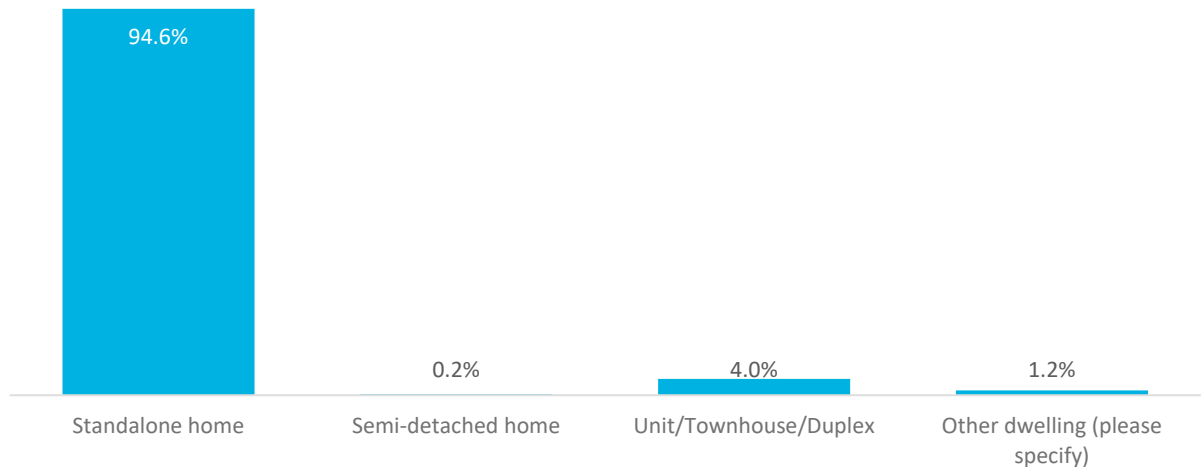


Figure F.17 HVO workforce dwellings types

xxv Q25 Which of the following best describes your current situation?

Of the 425 workforce respondents, a signification portion 72.5% of the workforce (308) own their own home (with mortgage) and 10.1% of the respondents (43) own their own home without having a mortgage. While 15.1% of the respondents (64) are renting and 2.4% of the workforce (10) are living with family.

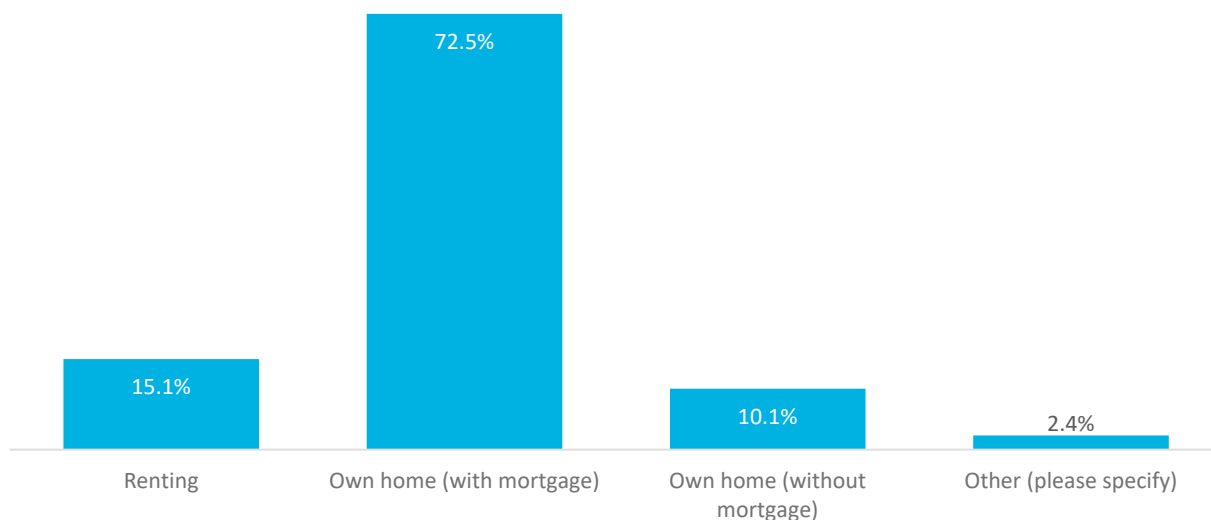


Figure F.18 HVO workforce tenure type

xxvi Q26 Which of the following best describes your current relationship status?

Family households (with children) can best describe the HVO workforce survey respondents with 65.8% of the respondents (279) living in a family housing with children. This is followed by 19.3% of family households (without children) (82) and 12.3% live in single households (52) and with a small number 2.6% in group households (11).

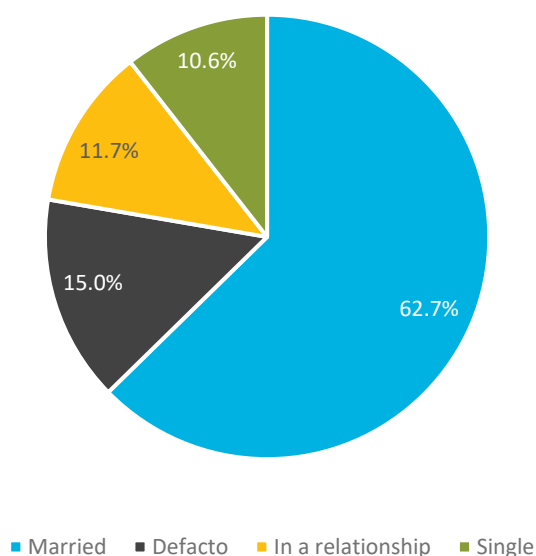


Figure F.19 Relationship status

xxvii Q27 Which of the following best describes your household?

Family households with children best describe the HVO workforce survey respondents with some 65.8% of the respondents (279) living in the same dwelling, followed by 19.3% family households without children (82) then 12.3% live in single households (52) with a small number 2.6% in group households (11).

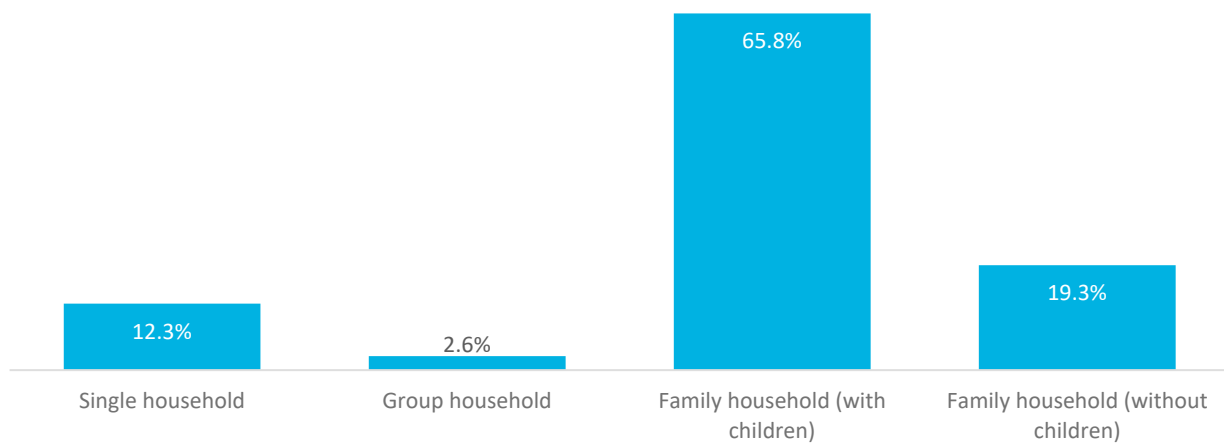


Figure F.20 Household type

xxviii Q28 Do you have any children?

Of the 423 respondents 80.4% of the HVO survey workforce (340) have children while 19.6% of the workforce respondents (83) did not have any children.

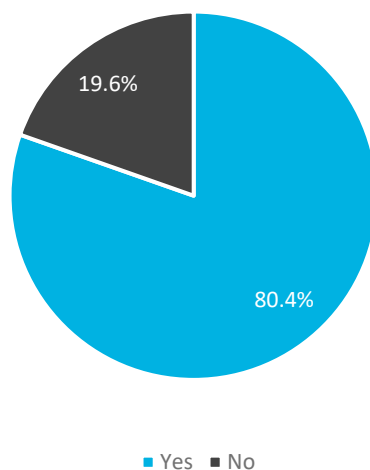


Figure F.21 HVO workforce with and without children

xxix Q29 How many children, by age, currently live in your household? Please specify N/A if not applicable.

Of the 330 respondents there was a similar proportion of children across all age groups with a slightly higher proportion in the 18 years plus sitting the highest at 1.4.

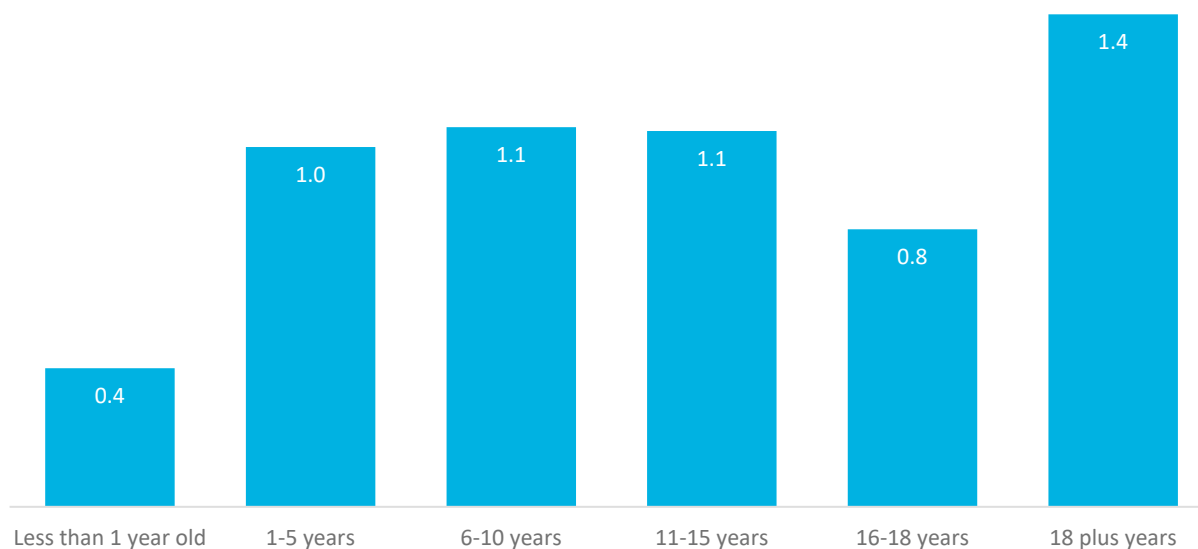


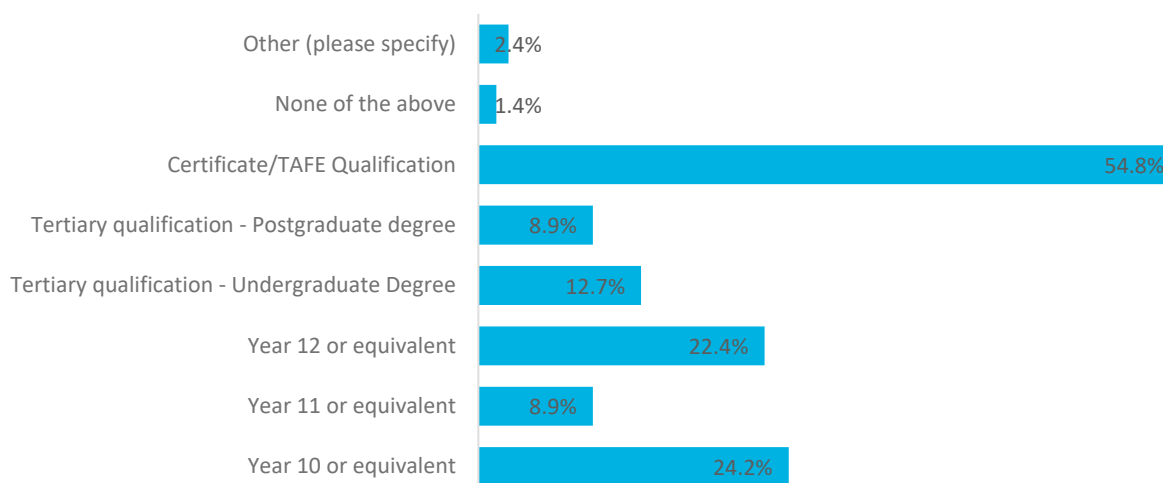
Figure F.22 Average number of children by age of HVO workforce with children

xxx Q30 Is your child/children enrolled in a day care service, kindergarten or school? If yes, please specify the suburb.

Of the survey respondents, 49.6% had a child/children enrolled in a day care service, kindergarten or school. An additional 24.8% of respondents answered no to the question, with a further 24.6% answering 'not applicable'.

xxxi Q31 What is the highest level of education you have completed?

An analysis of the highest level of educational qualification the HVO survey respondents hold shows there is a higher proportion of people holding formal qualifications (Certificate or TAFE qualification: Tertiary qualification), and a lower proportion of people with no formal qualifications.



Notes: Some respondents have selected more than one option, resulting in a total percentage above 100%.

Figure F.23 Highest level of education amongst HVO workforce

xxxii Q32 If you indicated having a tertiary qualification and/or certificate/TAFE qualification please specify your qualification/s

An analysis of the formal educational qualifications of the HVO workforce survey respondents shows there is a very high proportion of respondents that hold the following:

- Vocational Certificates and diplomas that fall under holding a Trade certificate that include carpentry, electrical, mechanical, plumbing etc.
- Bachelor degree or higher that can be used within the mining industries that include engineering.

Based on survey results the HVO workforce are educated and have formal qualifications.

xxxiii Q33 Are you currently studying? If yes, please specify what you are studying and where

Analysis of the workforce education study patterns shows that 91.8% of respondents (384) are not currently studying, while 8.13% of the workforce (34) are activity studying. The most common responses when asked what they are studying and where are:

- engineering; and
- Project management.

Of the people studying the responses suggest that over half of responses indicating they are studying something that is related to the mining industry.

xxxiv Q34 What is your approximate household income?

Household income levels in the HVO workforce survey shows that there is a larger proportion of respondents in high income households, (ie those earning 125,000–200,000 plus per year) and a lower proportion of low-income households with those earning less than 100,000–124,999 per year.

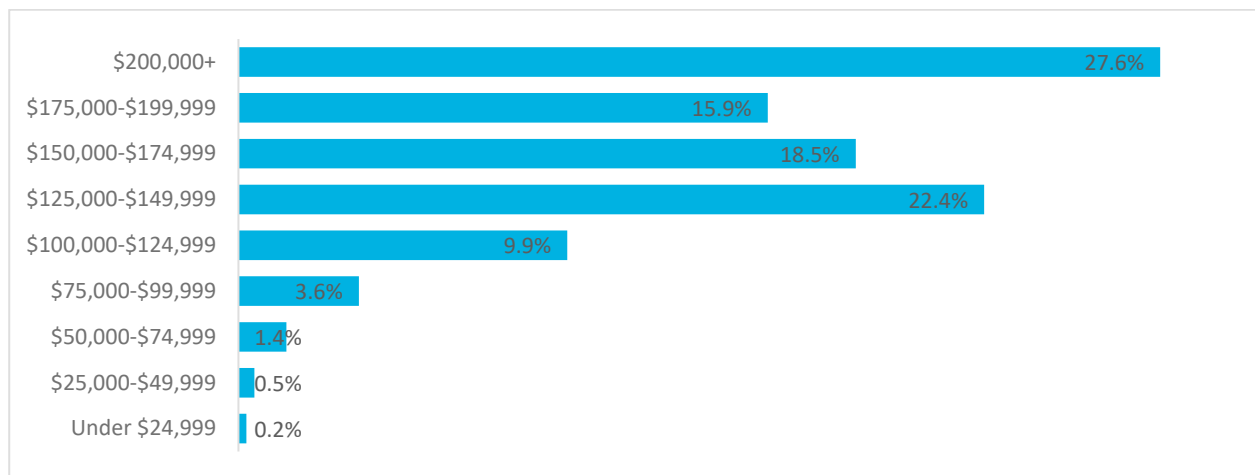


Figure F.24 Approximate household income

F.1.3 Key themes

The key findings of the survey indicated that:

- A third of the workforce population lives in the local area (24%, 100) and regional area (13.7%, 57) and just over half of the workforce resides in the area of reference (56.7%, 236) and most of the employees 112 reside in Cessnock LGA (26.9%) and 77 reside in Maitland (18.5%).
- The top three occupations at HVO are machinery operators and drivers (36.5%), technicians and trades workers (23.5%) and professionals (18.3%).
- 87.6% of respondents (374) were employed on a full-time basis.
- 31.6% of employees have worked at HVO for eleven or more years.
- 77.5% of the HVO workforce live locally and did not relocate for their role, indicative of a strong local workforce.
- 56.1% workforce were employed in mining industry prior to working with HVO; indicates that slightly more than half employees have skillsets conducive to a continued career path within the mining industry.
- A strong majority of the HVO workforce are reliant on their position at HVO and almost all employees see themselves continuing their position at HVO suggesting the importance their role presents.
- 94.1% indicated it was very important to them that the HVO Continuation Project is approved for reasons being; job and income security, job opportunities for future employees and future generations and long-term employment.
- Employees access their goods and services locally.
- The HVO workforce are involved across the local community outside of workhours, such as participating in community groups and/or events (33.1%), playing for a local sporting club, buying local (30.9%); and attending local festivals and events.
- 31.2% of employees are between the 35–44 age brackets, followed closely by 29.3% in 45–54 age bracket and 23.2% employees in the 25–34 age.
- 94.6% indicated they are living in a standalone home residing in the LGAs of Singleton, Cessnock, Maitland, Muswellbrook, Lake Macquarie, and Newcastle LGA.
- 72.5% of the workforce own their own home (with mortgage) and 10.1% own their own home without having a mortgage. While 15.1% of the respondents (64) are renting and 2.4% of the workforce (10) are living with family.
- Family households (with children) best describe the HVO workforce.

Appendix G

List of HVO community grants and sponsorship

G.1 List of HVO community grants and sponsorship

HVO has provided more than \$240,700 in funding to 79 Projects since 2018. A table demonstrating the full history of the mine's financial support for the regional area of Singleton and Muswellbrook is provided in Table G.1.

Community Sponsorships / Contributions 2018	
Entity	Projects and Initiatives
Wildlife Aid Inc	Wildlife Warriors
Singleton Council	International Day People with Disability Bush Dance
Cancer Council NSW	Transport to Cancer Treatment Singleton
Singleton Heights Pre-School Inc	Physical Acknowledgement of Country
Singleton Fire Brigade Social Club	Singleton Christmas lolly run
Singleton Heights Public School	Reaching for the Heights
Singleton Historical Society & Museum	Newspaper Microfilm
Australian Stock Horse Society Eastern Branch	Eastern Branch ASHS Championships and Performance Weekend
Singleton Scout Group	Lighting and Heating
Singleton Council	Pass Your Hat - Charity Drought Fundraiser
Singleton Neighbourhood Centre Inc	Paving of Outside Area
Singleton Council - Blast	Youth Adventure Festival (Colour run)
Penguins Garden Group	Penguins Garden Group
Salvation Army Singleton	Children's Christmas Party
Jerrys Plains Community Hall	Donation towards installation of split system air conditioning
Hunter Valley	Annual Campdraft
Jerrys Plains Public School	Pre-school programme
Total Community Sponsorships / Contributions	17
Total Expenditure Across Projects and Initiatives	\$57,464
Community Sponsorships / Contributions 2019	
Entity	Projects and Initiatives
Camp Quality	Camp Quality 1000ks 4 kids
Singleton Theatrical Society	2019 Production of Les Miserables
Singleton PCYC	Singleton PCYC Open Day
Singleton Heights Pre-School Inc	Outdoor Classroom Project
Singleton Council	Singleton Community Vehicle Messaging Sign
Westpac Rescue Helicopter Service	2019 Hunter Valley Mining Charity Rugby League Day
Singleton Bowling Club Co-operative Limited	Graded Triples Tournament
Singleton Pony Club	Portable Horse Yards
Singleton Council	Blast
Singleton Tri Club	Equipment Upgrade

Singleton Council	International Day for People with Disability IDPWD - Bush Dinner Dance
Singleton Rugby Club	Field Maintenance Equipment Upgrade
Jerrys Plains School of Arts Hall Inc	New BBQ
CWA	Kitchen Upgrade
Singleton Australian Football Club	Medical and Sports Training Supplies
Australian Stock Horse Society Eastern Branch	Eastern Branch ASHS Championship and Performance Weekend
St Catherine's Catholic College	Chill Out Space
Early Links Inclusion Support Service	Little Yogi's
Singleton Girl Guides	Kitchen Improvement/Upgrade
Australian Christian College Singleton	Share the Love of Reading
Hunter Valley Camp Draft Club	2019 Hunter Valley Camp Draft
Singleton Fire Brigade Social Club	Singleton Lolly Run
Jerrys Plains Public School	Pre-school programme
Total Community Sponsorships / Contributions	23
Total Expenditure Across Projects and Initiatives	\$67,300
Community Sponsorships / Contributions 2020	
Entity	Projects and Initiatives
Westpac Rescue Helicopter Service	2020 Hunter Valley Mining Charity Rugby League Day (sponsorship donation to be disbursed when Festival is held pending COVID19 restrictions)
St Catherine's Catholic College	Safe Livestock Handling
Singleton High School	Flying High with Drones
Singleton Council	Sponsorship Cycling NSW
Singleton Chamber of Commerce	Hunter Coal Festival (sponsorship donation to be disbursed when Festival is held pending COVID19 restrictions)
Branxton Lions	Lions Road Safety signs in Branxton
Denman Little Athletics	Shelving for Sports Shed
Singleton Girl Guides	Building Floor Repair and Maintenance
Singleton Heights Pre-School Inc	Smartscreen Education Technology
Singleton PCYC	Singleton PCYC Open Day
Hunter Valley Campdraft Club Inc	Hunter Valley Campdraft Club Arena
Westpac Rescue Helicopter Service	Volunteer Support Groups Contactless Payment Devices

Aberdeen Senior and Little Athletics Centre Inc	Technology Update
Singleton Fire Brigade Social Club	Singleton Lolly Run
Singleton Beef Land Management Association	Weeds Field Day
Jerrys Plains Public School	Pre-school programme
Total Community Sponsorships / Contributions	16
Total Expenditure Across Projects and Initiatives	\$47,000
Community Sponsorships / Contributions 2021	
Entity	Projects and Initiatives
Jerrys Plains	Mental First Aid Course
PCYC	Singleton PCYC School Holiday Activities
Muswellbrook South Public School P&C	Colour Your Threads for Positive Education
Singleton Bowling Club	Graded Triples Tournament
Singleton Beef and Land Management Association	Healthy Soils, Sustainable Pastures Workshop
Singleton Mountain Bike Club Incorporated	Maison Dieu Mountain Bike Track - Erosion repairs and access improvements
Hunter Valley Campdraft Club Inc	Hunter Valley Campdraft Arena
Singleton PCYC	Singleton PCYC Book Fair
Singleton Business Chamber	Video Conferencing Capability
St John Ambulance Australia (NSW)	Fingertip Pulse Oximeters
Toy Box Children's Mobile Outreach Service- Upper Hunter	Books in Homes
Australian Stock Horse Society Eastern Branch	Eastern Branch ASHS Championships and Performance Weekend
Singleton Fire Brigade	Lolly Run
Ovarian Cancer Australia	Ovarian Cancer Australia
Jerrys Plains Public School	Pre-school programme
Total Community Sponsorships / Contributions	15
Total Expenditure Across Projects and Initiatives	\$37,000
Community Sponsorships / Contributions 2022 (ongoing)	
Entity	Projects and Initiatives

Australian Stock Horse Society Eastern Branch	Eastern Branch ASHS Championships and Performance Weekend
Business Singleton	Gold Sponsors of the Singleton Business Awards
Early Links Inclusion Support Services Inc	Fun Factory
Friends of St James Church Jerrys Plains Incorporated	Jerrys Plains Bicentennial Celebrations
Jerrys Plains Public School P and C	Jerrys Plains Bicentennial Celebrations
Jerrys Plains School of Arts Hall Inc	Mental Health First Aid Course
Mercy Services	TrioBike Taxi for Residents
Glen Gallic Shooting Club Inc	Replacement Archery Targets
Total Community Sponsorships / Contributions	8
Total Expenditure Across Projects and Initiatives	\$32,000
Grand Total Community Sponsorships / Contributions 2018 -2022	79
Grand Total Expenditure Across Projects and Initiatives 2018 - 2022	\$240,764

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