



Estimating Socio-Economic Impacts of Mine Closure

Research Paper No. 8



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APPENDIX 1: WORKED EXAMPLES OF ESTIMATES

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1 Introduction

This paper is primarily concerned with methods for estimating socio-economic impacts of mine closure¹. It briefly considers some of the key aspects and challenges associated with the socio-economic impacts of mine closure and explores the potential for impact assessment to inform closure planning by directing attention to priority areas. The paper illustrates the process followed in two recent socio-economic impact assessments for mine closure undertaken by the Centre for Social Responsibility in Mining (CSRMI) at the University of Queensland. The framework encourages stakeholder consultation and feedback so that closure studies provide value as a process, rather than only an outcome. Appendix 1 details the assumptions and calculations we used to estimate impacts and provides 'worked examples' from two of the studies.

The two studies were undertaken at operations in north Queensland, Australia with different parent companies across different commodity groups. One was open cut and the other an underground operation, although originally open cut. Operations had different workforce arrangements including: a resident local workforce and a combination of long distance commute (LDC) and residential. The two operations also had different timeframes for closure. One was a year from full closure with a single closure scenario and the other was three years from pit closure with multiple closure scenarios.

2 Socio-economic Aspects of Mine Closure

Mine closure is one of the mining industry's toughest sustainable development challenges. At the same time, it provides an opportunity for the industry to demonstrate its commitment to sustainable development by incorporating socio-economic aspects, along with the more physical aspects, into the mine planning process. Even though mining companies may not have sole responsibility for addressing the socio-economic impacts of mine closure,

¹ This paper is based on a presentation given at the Minerals Council of Australia Global Sustainable Development Conference, Cairns, 2007

they are key players with significant power, influence and resources. This positions them as important players in the local context, and as potential catalysts for focusing attention and effort on mine closure impacts.

Historically, mine closure planning has not been a highly regulated activity. Even in countries where mine closure plans are required, or form part of consent conditions, the focus is often only on environmental and physical aspects, such as land rehabilitation and asset removal, rather than social, cultural and economic aspects. These days, however, there is a high level of acceptance within the industry that, even though not legally required, mine closure should be considered from the inception of a project. By considering mine closure early, operations are in a better position to avoid creating dependency on the mine for social and community services and economic benefit. Of course, the scope of company liabilities and responsibilities will depend on the type of town e.g. a mining town that is dependent on mining, versus a diversified economy.

For some mining communities, mine closure will mean that towns are no longer viable. In these situations mines can still contribute to broader sustainable development principles in other ways. For example, they can help build human capital through employment and workforce training and subsequently increase the mobility of people by improving individual economic situations and developing transferable skills. However, this may not be everyone's idea of contributing to sustainable development, which may be a point of tension between towns facing closure and companies that have made strong commitments to sustainable development.

Existing literature tends to focus on the adverse impacts of mine closure. For example, it is well known that mine closures can result in the decline of local economies and a decrease in population (particularly when an operation draws its workforce locally), which may have adverse 'knock-on' effects to social services, schools, labour markets, employment, housing prices and other impacts. Payment of taxes and royalties usually cease, or are significantly reduced upon mine completion, which can further reduce local expenditure of governments and other beneficiaries.

There is limited coverage in the literature of the industry's attempts to maximise opportunities through comprehensive mine closure. Opportunities may come through implementation of projects and programs that address community needs, build local capacity for self management and foster resilience to change. The ability to adapt and transition to a post-mining situation may include the exploration of alternative employment and economic options, or the articulation of a future social or regional identity that

may or may not include mining. If social aspects of mine closure are considered from the inception of a project, there may also be opportunities to design the mine and its associated infrastructure and community development programs in a long-term sustainable manner.

Arguably, starting-up a mine without a closure plan that considers socio-economic impacts in some way flies in the face of the industry's strong commitments to sustainable development and its ultimate goal of a 'social licence to operate'. In the past it has been possible for mines to close with little consideration of socio-economic aspects, such as a reduced local economy. Given the intense scrutiny under which the industry now operates, and the commitments made to contributing to social and economic well-being of host communities, this should no longer be acceptable. In reality, many mines are in operation without closure plans that give adequate consideration to socio-economic aspects. However, the landscape is changing, with more mines looking at their impacts in the broadest possible sense.

2.1 Socio-economic Impact Assessment for Mine Closure

As the industry engages in the debate about how best to address socio-economic impacts of mine closure, many important questions and issues arise. For example, who determines when a mining company has 'completed' its work - the company, regulators and/or the community? What level of social and/or economic decline should a community accept as reasonable? How do mining companies budget for unknown future and potentially uncontrollable social and economic impacts? How long after completion should corporate social and economic responsibility extend? To what extent should a company continue to monitor post-closure social impacts if it has no formal responsibility or legal liability? What are the best methods of estimating the social, demographic, cultural and economic impacts of mine closure? And, can exogenously driven social change be differentiated from social change caused by mine impacts?

While there are no simple answers to these questions, impact assessment has the potential to provide mining operations with important information that can inform closure planning by directing attention to key areas of potential impact. Such studies can also be used as a basis to engage with communities to understand perceived impacts, identify how best to manage adverse impacts and explore opportunities that mine closure may bring.

Impact assessment across environmental, socio-cultural and economic dimensions is now a relatively standard step for mining companies at the project feasibility stage, by which time, social and economic baselines should

have been established, along with key indicators for ongoing monitoring. However, even in mine start-up, methods for socio-economic impact assessment tend to be ill-defined and are often required as a part of an environmental impact assessment, rather than an equally weighted aspect of the development approval process.

A challenge for SEIA lies in a lack of transparency in methods for calculating and predicting impacts. Worked examples of the calculation of socio-economic impacts of mine closure do not usually sit in the public domain. This is primarily because findings are often sensitive, with companies reluctant to release full reports that also detail the methodologies used. Another factor is that these studies are usually undertaken by independent assessors in order to gain an impartial and external perspective and these experts tend to preserve commercial advantage and protect intellectual property of their tools. This is understandable to a degree, but unfortunately limits advancement of knowledge in this arena.

These challenges are further amplified in the 'hard' science world of the minerals industry, where the contribution of the social sciences to mine planning is just beginning to get serious traction, and there is still a lingering view that social research is 'soft' and therefore less reliable. Notwithstanding this tension, socio-economic impact estimations can be calculated by drawing on data from a number of different sources with varying degrees of reliability, which carry with them different levels of uncertainty. The reasons for this uncertainty are irresolvable: people are adaptive, ever-changing and unpredictable, and the external environment of large-scale developments is never static. Calculating socio-economic impacts is not an exact science – at times it may be more of a 'back-of-the-envelope' exercise. Nevertheless, such calculations, undertaken as part of a well-researched study within a consultative framework, can provide valuable and useful information.

2.2 SEIA Flow Diagram

The key components of the CSR closure studies comprised:

- community consultation
- a desktop study, including a socio-demographic profile and economic analysis
- workforce survey
- calculation of impact estimations (on completion of the desktop research).

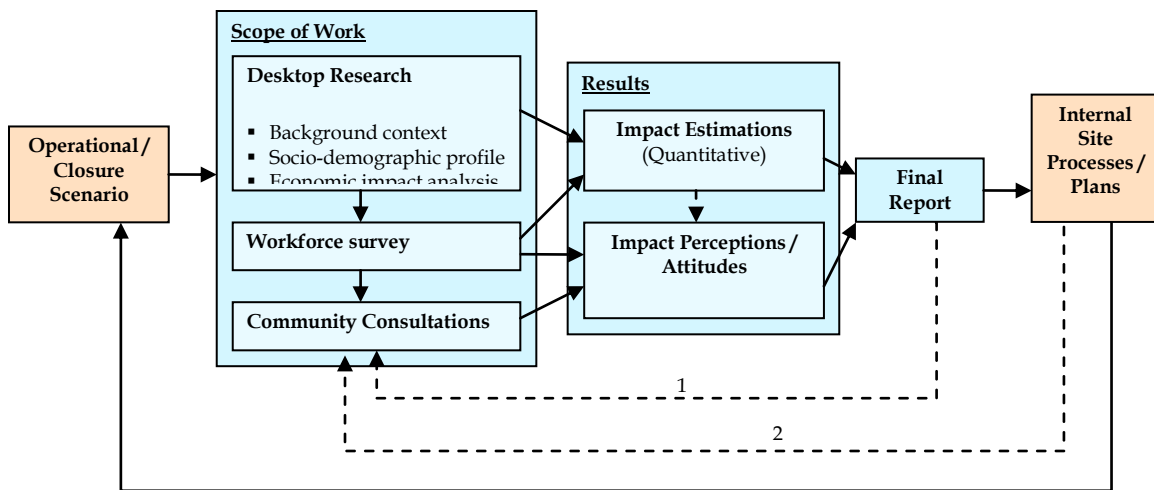


Figure 1: CSRM SEIA process: flow diagram

The flow diagram starts with the site’s own closure scenarios, which formed the basis of the two assessments. The scope of work includes the key components listed above. The workforce survey informs quantitative impact estimations as well as perceptions and attitudes to mine closure. Impact estimations can be used as a basis for the community consultation, with one of the CSRM studies taking this approach. Qualitative and quantitative data inform the overall findings. The dotted lines represent possibilities for including stakeholder feedback, although some of this will depend on how sites commission studies, their relationship with stakeholders and their approach to transparency.

As part of The University of Queensland’s ethical approval process, CSRM was obliged to ensure that research findings were made available to participants, but there was no formal feedback loop to determine the extent to which researchers adequately represented stakeholder views (line 1). This would add additional time and cost to the project, but could potentially enhance reliability and validity. It is imperative that the site itself continues discussions with stakeholders about closure options, scenarios, impacts and opportunities as part of its ongoing engagement program (line 2).

There are other, more ‘developmental’, models for SEIA that allow the community to have shared decision-making power over closure scenarios. The two CSRM studies did not involve shared decision-making between the company and the community, but all of the sites were committed (to varying degrees) to incorporating internal and external stakeholder perspectives in

their mine closure planning through consultation, and responding to concerns about closure impacts.

3 SEIA Study Components

This part of the paper details the key components of the two recent socio-economic impact assessments for closure undertaken by the CSRSM. Community consultation, desktop research and the workforce survey are discussed, followed by an outline of how they were brought together to inform impact estimations. The assumptions used for key calculations are provided.

3.1 Community Consultation

Community consultation, engagement and increasingly, participation, are key requirements for development approvals in many legislatures. Consultation and engagement is certainly required for mining companies to gain and maintain a 'social license to operate'. Understanding community perceptions about mine closure is absolutely essential in order for an operation to manage expectations, understand perceived impacts and respond to community needs and priorities; however, consultation is only part of an overall suite of research strategies.

A consultation phase was undertaken for both CSRSM mine closure studies. Each study incorporated a core of 40 to 50 one-on-one, face-to-face, semi-structured interviews across a range of stakeholder groups. In consultation with each site, CSRSM researchers negotiated a consultation list to ensure an adequate spread of stakeholders. An interview guide was developed and used as a reference point. Interviews focused on the following:

- the operation's stakeholder relationships
- how these relationships would be affected by mine closure
- community perceptions about the benefits and drawbacks of the operation's presence
- community perceptions of the benefits and drawbacks of closure
- potential mitigation measures
- potential legacy projects
- communication aspects of closure.

Some companies may be hesitant to consult unless closure scenarios are certain however this runs the risk of repeatedly delaying consultation. Experience shows that early consultation helps establish more trusting relationships, even if the options are not clear.

The degree to which site personnel should be involved in community consultations is another important consideration. SEIAs are commonly undertaken by an external party with a degree of independence. However, anecdotal evidence from within the mining industry suggests that SEIAs – whether undertaken for feasibility, operations or closure – are sometimes underutilised because there is often limited internal ownership, resulting in studies that are not adequately integrated into management systems and site processes. An alternative to the fully independent approach is to involve company personnel in the development of the report and potentially some discussions with community members. In some cases, the presence of Indigenous affairs staff can help Indigenous participants to feel more comfortable, although this is very dependent on their relationship. If a more collaborative consultation approach is taken, it is important to provide interviewees with a *genuine option* to refuse the presence of company personnel. One of the CSRM studies included the presence of company personnel in some interviews. The final report was explicit about this to ensure transparency.

3.2 Desktop Research

3.2.1 Socio-demographic profile

Each closure study included the preparation of a stand-alone socio-demographic profile which sought to provide a statistical picture of the area local to both mines. Ideally, a socio-demographic profile would have already existed for both operations, requiring only an update. However, like many other operating mines, neither of the sites had a consolidated baseline. Therefore, each profile was prepared by drawing on publicly available data, primarily from the Australian Bureau of Statistics (ABS) and other government sources. Topic areas included population, Indigenous persons, labour force, employment by industry, mean taxable income, and rent and home purchase prices. Unfortunately, this component of the studies was completed in the first half of 2007 and did not include new census data, which became available later in the year.

While the demographic profile provided useful information at a general level, it did not provide information about smaller geographical areas of impact. Its primary utility was to provide specific figures for impact estimations.

3.2.2 Economic impact analysis

The economic impact analysis was outsourced on each occasion to a specialist consultancy firm based outside The University of Queensland. The study was informed by two key sources: data provided directly from sites and specific ABS data purchased by the specialist consultancy. The economic contribution of each operation, including direct, indirect and induced contributions, both in terms of economics and employment was assessed, as well as closure impacts. One of the studies included a short, targeted telephone survey to local businesses to determine levels of dependency on the operation and impact of closure at a business-by-business level. However, this sample was too small to influence the economic model. Calculation of flow-on jobs was most helpful in calculating socio-economic impacts.

3.2.3 Workforce Survey

The workforce survey was designed to collect data relevant to workforce planning aspects, as well as to assist in estimating community impacts and opportunities, including:

- demographic profile (e.g. age, gender Indigenous status etc.)
- family situation (e.g. partnered, working status of partner, number of children etc.)
- employment arrangements (e.g. full/part-time, commuting arrangements, job type etc.)
- understanding of closure timeframe
- perceptions of redundancy/retention package
- requirements for further information on closure and retention
- intention to work at the mine until closure
- interest in working for the parent company in the future
- intention to leave town at mine closure
- broader impact on the town (e.g. level of community involvement).

Surveys were distributed by site personnel to all mine workers (i.e. direct employees and primary contractors). Participants could complete the survey either during working hours or in their own time and were given several options for returning the survey, including a secure mode of return directly to The University. This approach resulted in a very high return rate of between 64% and 83% across both studies. Not surprisingly, the highest response rate was from the site facing imminent closure. Dissemination of the survey was

handled through internal mechanisms to ensure consistent messages and demonstrate endorsement from senior managers.

While the workforce survey was valuable for informing impact estimations, there was much consideration by management at both sites about the effect that the survey would have on the workforce. Site management wanted to understand intention to leave and stay, but at the same time did not want to alarm the workforce by placing too much emphasis on closure and redeployment too early, potentially diverting attention away from production goals. This tension is likely to be common at many mine sites struggling with low retention rates. Finding the right balance between ‘spooking’ the current workforce and adequately understanding and planning for closure is a challenge.

3.3 Calculating Impact Estimations

Socio-demographic impacts were estimated across a range of dimensions, including population, labour force, local economy, housing, education and levels of community involvement. The calculations were based on the results of the workforce survey and, where possible, were related back to ABS data to gain an overall idea of change.

The workforce surveys asked workers residing locally to indicate whether they intended to leave or stay in town after mine closure, or whether they were undecided. The estimated impacts were then calculated for both studies based on three scenarios, depending on the proportion of ‘undecided’ respondents. The conservative estimate was based on all the ‘undecided’ staying; in the mid-range estimate, half of the ‘undecided’ group stays while the other half leaves; and in the upper estimate, all of the ‘undecided’ leave (refer to **Error! Reference source not found.**).

Table 1: Calculations for conservative, mid-range and upper estimates

Category	‘Undecided’	Measures
Conservative	All stay	$\% \text{ leaving} = \% \text{ respondents leaving}$
Mid-range	Half leave	$\% \text{ leaving} = \% \text{ respondents leaving} + (\% \text{ respondents undecided} / 2)$
Upper	All leave	$\% \text{ leaving} = \% \text{ respondents leaving} + \% \text{ respondents undecided}$

The process of estimating socio-economic impacts was exploratory: there was no existing framework for estimating impacts. As a result, the calculations were revised several times as more insights arose. Appendix 1 details the basis for each of the calculations and worked examples from the studies.

3.3.1 Direct and Indirect Impacts

For some socio-economic dimensions, two sets of impacts were calculated: direct and indirect. Direct estimations reflected impacts from locally-residing mine employees, contractors and their families leaving the town at mine closure. Direct estimations were calculated for all dimensions: population, employment, local economy, housing, day care and education and community involvement. Calculations were based on information from the workforce survey.

Indirect effects reflected impacts from the workers employed in secondary mine-related jobs² who intended to leave the town at mine closure. It was not possible to survey this group (there are some very practical limitations in doing this) so the same leave/stay measures used for mine workers were applied, assuming that the rates would be similar. Partners and children of indirect workers were not part of the analysis, as there was no data on these aspects. Indirect effects were only calculated for population and labour force figures.

As working partners of locally-residing mine workers may have been employed in secondary mine-related jobs, these partners were not included in the calculations, to avoid over-estimating impacts. In hindsight, it would have been useful to ask mine workers about the type of work that partners did in order to assess whether they were likely to be double-counted in the indirect effects, and also whether they were employed in hard-to-fill positions, such as teachers, nurses or doctors etc. This would have provided further insight about community impacts.

3.3.2 Population

The anticipated population decrease was estimated as a combination of mine workers and their families, and people employed in 'flow on' jobs (but not including families of the latter group), leaving town at mine closure. For mine workers, it was assumed that all workers leaving town would leave with their respective partners and children. The number of local mine workers was

²Mine-related jobs refers to jobs in supply (input) or purchase (output) sectors such as transport and storage, property and business services, manufacturing, retail etc. Workers in these jobs are neither direct workers nor employees of major contractors. These jobs are also referred to as 'flow on' jobs.

calculated by multiplying the number of jobs provided directly by the mine by the percentage that lived locally, obtained from the workforce survey. This figure was then multiplied by the percentage of people leaving, as per the scenario (conservative, mid-range or upper; see **Error! Reference source not found.**). The numbers of partners and children leaving was then extrapolated from the workforce survey.

The number of people not directly associated with the mine leaving consisted of the estimated number of mine-related jobs multiplied by the percentage leaving (as per the scenario; see **Error! Reference source not found.**). As indicated previously, the number of working partners of mine workers was subtracted from the number of indirect people leaving, to avoid any double-counting. The estimated total number of people leaving was expressed as a percentage of the local population to determine whether the decrease was significant. Local population data can be obtained from the ABS and used as a comparison. Urban centre locality (UCL) population statistics were used because local government (LGA) and statistical local area (SLA) data included other mines, which distorted figures.

3.3.3 Job impacts

Estimations for job impacts encompassed mine employees and their working partners, along with the workers in mine-related jobs. It was assumed that all mine workers who were leaving would leave with their respective working partners. The number of working partners was extrapolated from the workforce survey. The number of mine workers, working partners and workers in secondary mine-related employment³ were summed and expressed as a percentage of local jobs.

The total number of jobs was obtained from ABS. Journey to work (JTW) data was used to represent total number of jobs, rather than labour force data, which refers to residents of the area working or looking for work. JTW data provided a more useful measure than labour force to estimate the impact of mine closure on the local job market.

3.3.4 Economic Contribution

In addition to the economic analysis undertaken by the specialist consultants, estimations of the local economic impact were calculated, based on the average net salary data provided by the mines, and estimated local spend of mine workers. Local spend figures were based on a workforce survey

³ The number of working partners of mine employees was subtracted from the number of workers in indirect employment (i.e. secondary mine-related employment) to avoid double-counting, see p6.

question, which asked respondents to indicate the percentage of their salary that they spent locally. However, the accuracy of these estimations is unknown. Other SEIA studies have taken a more rigorous approach to understanding the local spending habits of mine workers, but the CSRSM survey was broader than economics and already quite extensive, so questions in this area were kept to a minimum. While some useful data were obtained, it may have been more precise to ask respondents to give a fortnightly or monthly estimate of spending in actual dollar amounts, rather than as a percentage.

3.3.5 Housing

It was assumed that all workers who owned or rented their homes would sell or stop renting if they indicated an intention to leave town at mine closure. Housing impacts were calculated based on home ownership and rental status, as per the workforce survey (refer to Table 5). These figures were then expressed as a percentage of the total number of private dwellings obtained from ABS. Rental statistics were obtained from the Department of Housing, supplied as median weekly rents and house prices, as well as the percentage of change of house prices over a decade. The Residential Tenancy Authority provided weekly median rents and total number of new bonds lodged month by month.

3.3.6 Day Care and Education

It was assumed that all children of departing mine workers would leave their respective day care and education institutions. A percentage change for these figures was not calculated, as the institutions where these children were enrolled were unknown. Our reports back to the site recommended that sites have direct discussions with institutions to determine the degree of impact on individual institutions.

3.3.7 Community Involvement

Changes in community involvement were determined by calculating the number of people who would leave a community sport, school-based organization or other community group, based on the workforce survey. It was assumed that all workers leaving would cease their involvement in these groups. A percentage change in community involvement or volunteerism was not calculated, as there was no ABS data that corresponded to the categories used in the workforce survey. Our reports recommended direct discussions with community groups to determine the degree of impact.

4 Conclusion

The two SEIA for closure studies provided operations with a base set of estimates in a number of key areas, including changes to population, jobs, housing, education and community involvement. While the calculations and estimations were relatively straightforward, they did provide a perspective on the impact that mine closure could have on the workforce and local community, as well as community expectations and perceptions of impacts. Such information provides a basis for discussion within the organisation and also with other stakeholders such as state government, local councils and other agencies about impact mitigation strategies and legacy aspects of mine closure. For example, sensitive management of any sell-off of company-owned housing so as to control downward pressure on house and land prices and impacts on the rental market. In particular, information from workforce surveys provides a basis for workforce planning, particularly where the emphasis is on retaining employees through to closure.

The two studies highlighted the fluid nature of mine closure planning. Soon after the SEIA studies were complete one mine was divested and another decided not to close. (The studies did not influence these decisions.) Neither of the studies concluded that mine closure would create major negative impacts, but senior management at one of the operations were cautious about communicating findings for fear of workforce concern and heightened expectations about post-mine legacies given the fluid nature of closure plans. Ideally, full transparency about findings enhances community understanding of mine closure options.

As the mining industry continues to engage with the challenge of sustainable development, the process of understanding and managing mine closure impacts and opportunities provides an opportunity to demonstrate ongoing commitment to this agenda. There is an opportunity to continue to refine estimation techniques on socio-economic aspects and commit to an ongoing consultation process about mine closure as part of a comprehensive engagement program throughout the life of mine, rather than as a stand-alone process late in a mine's life. This way, SEIAs for mine closure have a better chance of informing the mine closure planning process, enhancing corporate credentials in relation to sustainable development and ensuring positive outcomes for local communities.

APPENDIX 1

This appendix details the basis for each of the calculations and provides worked examples in the shaded boxes.

Population

Table 2 : Measures for estimating population impacts

Measures	
<i>Direct Effects</i>	
# local mine workers	= # jobs provided directly by mine x % residing locally
# local mine workers leaving	= # local mine workers x % leaving
# partners leaving	= # local mine workers leaving x % who are partnered x % partners living locally
# dependent children leaving	= # local mine workers leaving x % who have dependent children x average children
# directly employed workers and their family members	= # local mine workers leaving + # partners leaving + # dependent children leaving
% of local population	= # people leaving / total local population
<i>Including Indirect Effects</i>	
# indirect workers leaving	= # indirect jobs provided by mine x % leaving - # working partners leaving
# total number of people leaving	= # direct people leaving + # indirect workers leaving
% of local population	= # direct and indirect people leaving / total local population

Mine B:

<u>Assumptions:</u>		
Direct	175 locally based workers	
	226 family members of locally based workers (109 partners and 117 dependent children)	
Indirect	100 people (196 workers minus 96 working partners of locally based workers)	
TOTAL	501	
Table: Estimated population loss		
Conservative	Mid-range	Upper
9.9%	12.1%	14.4%
(311 people)	(381 people)	(451 people)

Economic impact

Table 3 : Measures for estimating economic impact

Measures	
Mine's total contribution in salaries per annum	= average net salary x # local mine workers
Local spending per annum	= average net salary x average % local spend x # local mine workers

According to Mine B management the average net salary or 'take home pay' at Mine B is around \$60K. This equates to \$10.5 million in salaries and wages paid (after tax) to the 175 Mine B workers living in Community B. It is estimated that Mine B indirectly contributes an additional \$7.5 million in salaries and wages to the 196 additional flow-on workers, based on net wage in the Mine B Shire.

Workforce survey respondents living in Community B reported spending an average 47% of their wage locally. Applying this assumption to direct and indirect workers, approximately \$8.46 million spent in Community B can be attributed to Mine B.

Jobs

Table 4 : Measures for estimating potential local job losses

Measures	
<i>Direct Effects</i>	
# full-time partners leaving	= # partners leaving x % partners working full-time
# part-time partners leaving	= # partners leaving x % partners working part-time
Total # partners leaving	= # full-time partners leaving + # part-time partners leaving
# FTEs lost	= # local mine workers leaving + # full-time partners leaving + (# part-time partners leaving / 2)
# direct workers leaving	= # local mine workers leaving + total # partners leaving
% of local jobs	= # workers leaving / total full- and part-time local jobs
<i>Including Indirect Effects</i>	
# direct and indirect workers leaving	= # direct workers leaving + # indirect workers leaving
% of local jobs	= # direct and indirect workers leaving / total full- and part-time local jobs

Mine B

Assumptions:

Direct	175 locally based workers
Indirect	196 employees in other industries and businesses
TOTAL	371 potential job losses

Housing

Table 5 : Measures for estimating housing impacts

Measures	
# homes owned by those leaving	= # local mine workers leaving x % who own homes
% of total homes	= # homes owned by those leaving / total number of local dwellings
# homes rented by those leaving	= # local mine workers leaving x % who rent

Mine A

Impact Category	Conservative	Mid-range	Upper
Owned homes for sale or placed on rental market	37 homes	46 homes	54 homes
% of local housing stock	(2.8%)	(3.5%)	(4.1%)
Rentals vacated	45 rentals	55 rentals	65 rentals

Day care and education

Table 6: Measures for estimating day care and education impacts

Measures	
% children in day care	= # children in day care / # children in survey
# children leaving day care	= # dependent children leaving x % children in day care
% children in State primary school	= # children in State primary school / # children in survey
# children leaving State primary school	= # dependent children leaving x % children in State primary school
% children in Private primary school	= # children in Private primary school / # children in survey
# children leaving Private primary school	= # dependent children leaving x % children in Private primary school
% children in State high school	= # children in State high school / # children in survey
# children leaving State high school	= # dependent children leaving x % children in State high school
% children in Private high school	= # children in Private high school / # children in survey
# children leaving high school	= # dependent children leaving x % children in high school

Mine A

Impact Category	Conservative	Mid-range	Upper
Children leaving day care	15 children	20 children	25 children
Children leaving State primary	26 children	35 children	44 children
Children leaving Private primary	22 children	30 children	38 children
Children leaving State secondary	13 children	17 children	21 children
Children leaving Private secondary	15 children	20 children	26 children