

**Economic and Social Impacts
of the Coppabella Mine
on the Nebo Shire
and the Mackay Region**

John Rolfe, Stewart Lockie and Maree Franettovich
Central Queensland UNIVERSITY

Centre for Social Science Research
Central Queensland UNIVERSITY
Rockhampton 4702
Queensland Australia

Faculty of Business and Law and
Centre for Environmental Management
Central Queensland UNIVERSITY
P.O. Box 197 Emerald 4720
Queensland Australia

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PART 1

REPORT OVERVIEW – EXECUTIVE SUMMARY

The Coppabella Mine has been established within the Nebo Shire by Australian Premium Coals. Mining operations commenced in 1998, and contractors are used to perform all mining operations. The mine produces approximately 5.5 million tonnes of coal per annum, and about 340 people are employed at the mine site.

The Coppabella Mine has contributed to the transformation of Nebo from an agricultural and administration centre towards a more mining focus. Previously, the impacts of mining in the Nebo Shire had been concentrated in Glenden (a mining town in the north of the Shire) and Coppabella (a railway town built to service the mining industry).

The mining industry makes a major contribution to the state and regional economies of Queensland. The industry accounts for significant job creation in the state because of the high income levels of employees and significant spending on business inputs. Beneficial flow-on effects result when that income to employees and suppliers is spent for business, consumption or investment purposes.

Despite the general appreciation of mining as a major economic driver of regional economies in Queensland, the impacts of mining on many local communities is harder to quantify. This is the situation for Nebo, where the development of a major mine 39 kilometres from the town has not appeared to have caused major adverse economic or social impacts. There are three broad reasons why the assessment of economic and social impacts is important for Nebo.

The first is that the local community is interested in maximising the positive benefits that flow from mining. These might include increases in population and business opportunities. However, the shiftwork operations of the mine contractors mean that most employees are based outside of the shire and have little connection with Nebo. There has been no construction of a dormitory town and associated infrastructure as occurred with other mines in the region. As well, businesses servicing the mining industry have tended to be located at a regional centre rather than smaller townships.

The second reason is that the local community may be anxious to avoid economic and social problems associated with mining. In recent years some mining communities have struggled to cope with change as the industry has reorganised and reduced its labour force. Many mines only have an economic life of 15 – 30 years, and closure has subsequent impacts on their service communities.

The third reason is that communities are essentially in the position of having to compete for population and businesses, because good communication and transport links make it easier for employees and services to be more mobile. Communities and local and state government have to provide the infrastructure and services that make communities viable and attractive. Identification of the economic and social opportunities available can be important in allowing communities such as Nebo the chance to capitalise on the opportunities available.

PART II

ECONOMIC IMPACTS ASSESSMENT - EXECUTIVE SUMMARY

In this report the economic impact of the Coppabella Mine on the Nebo Shire and wider Mackay region has been detailed in several ways. The resulting information can be summarised into several key outcomes.

Total operating expenses of the mine are approximately \$230 million per annum, of which \$192.6 million can be attributed to expenditure in the region. There are further \$20 million in development costs per annum which may also impact on regional economic activity. From the operating expenditure, it is estimated that \$5.4 million is directly expended in the Nebo Shire as wages, contracted services and miscellaneous costs (Table 4.3.1). A further \$1.7 million is captured from miners who don't live in the Nebo Shire but spend some money there while working at the mine.

Table 4.3.1 Summary of direct spending flows into region from Coppabella Mine

	Nebo Shire (\$ Million)	Mackay Area (\$ Million)	Rest of Mackay region (\$ Million)
Direct wage expenditure	4.51	15.09	15.87
Expenditure from miners not living in area	1.715	0	0
Contracted services and supplies from businesses	0.282	Not assessed	Not assessed
Miscellaneous services and supplies from businesses	0.595	11.687	0.331
Total	7.102	26.777 (excluding contracted services)	16.201 (excluding contracted services)

The secondary economic impacts on the Shire can be estimated by firstly calculating the marginal propensity to consume local goods and services, and secondly to calculate the proportion of business inputs that are sourced locally. The first has been calculated from survey information at 15%, while the second has been calculated from interviews with business at 23.5%. The resulting multiplier for incomes that has been estimated is 3.66%. This means that the net additions to incomes are assessed at \$260,000. This is approximately 22% of business spending, so the total additional turnover that is generated is approximately \$1.18 million, bringing the total economic impact of the Coppabella Mine to \$8.28 million (Table 5.6.1).

Table 5.6.1 Total economic impact of the Coppabella Mine on the Nebo Shire

	Total Economic Impact (\$ Million)	Net addition to incomes (\$ Million)
Direct wage expenditure	4.51	4.51
Expenditure from miners not living in area	1.715	0.385
Contracted services and supplies from businesses	0.282	0.062
Miscellaneous services and supplies from businesses	0.595	0.131
Indirect impacts	1.182	0.260
Total	8.284	5.35

An input-output study to estimate the impact of the mine on the local economy predicts that expenditure levels from the Coppabella Mine will be higher, but that the share of total incomes will be lower. Total additional expenditure is assessed at \$10.7 million, while the total increase in income is assessed at \$5.1 million (Table 6.5.1.1). The total effect on employment in the Shire is assessed at 62 additional jobs.

Table 6.5.1.1 Estimated Economic Impacts of Coppabella Mine on the Nebo Shire

	Output (\$m 2000-01)	Income (\$m 2000-01)	Employment (FTE persons)	Value added (\$m 2000-01)
Direct	\$7.7	\$4.5	36	\$4.7
Indirect	\$3.0	\$0.6	26	\$1.3
Total	\$10.7	\$5.1	62	\$6.0

FTE = Full-time-equivalent employment positions.

Source: AECeconomics.

An input-output study to estimate the impact of the mine on the Mackay region economy predicts that total additional expenditure from the Coppabella Mine is \$289.6 million, while the total increase in income is assessed at \$55.8 million (Table 6.5.1.2). The total effect on employment in the Mackay region is assessed at 783 additional jobs.

Table 6.5.1.2 Estimated Economic Impacts of Coppabella Mine on the Mackay Region

	Output (\$m 2000-01)	Income (\$m 2000-01)	Employment (FTE persons)	Value added (\$m 2000-01)
Direct	\$209.0	\$35.5	283	\$129.3
Indirect	\$80.6	\$20.3	500	\$39.9
Total	\$289.6	\$55.8	783	\$169.2

FTE = Full-time-equivalent employment positions.

Source: AECeconomics.

The evidence suggests that the Coppabella Mine has had a substantial economic impact on the Nebo Shire. The mine directly injects more than \$7 million into the shire. In comparison, total income from agriculture is \$27 million, but Nebo does not service all agricultural businesses or capture a high proportion of business or consumption expenditure. It is likely that mining is becoming as important, or as more important than agriculture in supporting the economic base of the Nebo township.

This conclusion was supported by a survey of businesses in Nebo. Eighty-nine percent of businesses in Nebo and Coppabella identify the mining industry as being very important to their business. The Coppabella Mine provides the most custom to local businesses, with half of the latter identifying Coppabella Mine as the major source of their mining related business.

It appears that mining has contributed to an expansion of business opportunities in Nebo. The average number of employees per business has risen by 2.8 persons over the previous two years, representing a 32% increase. Most of the increases have been in businesses which provide accommodation or other services to the mining industry (Table 3.2). It is possible as well that economic stimulus from mining activities has masked a downturn in agriculture from the drought in 2001 – 2002.

However, there is also some evidence of missed business and development opportunities. The number of mines developed or being developed in the Nebo shire would suggest that there are opportunities for more service businesses to be located in Nebo and Coppabella. It appears that there is unmet demand for housing in Nebo, and potential for housing development to occur. A survey of miners at the Coppabella Mine showed that there is some interest from mine workers based outside of the area in relocating closer to the Coppabella Mine. It was estimated that 19% of those mine workers would be interested in relocating closer. This represents 45 workers from the 245 workers estimated to be based outside of the Nebo Shire.

PART III

SOCIAL IMPACTS ASSESSMENT - EXECUTIVE SUMMARY

Introduction

Social impacts refer to all changes in the way that people live, work, play, relate to each other, organise to meet their needs and generally cope as members of society. Included among these changes are cultural impacts involving the values, norms and beliefs that guide social action. Impacts may thus be either positive or negative, small or large in magnitude, short or long term, and so on. They may also have different implications for different groups within the community. Ultimately, assessment of whether a particular impact, or social change, is positive or negative, is entirely dependent on community values and aspirations.

This particular study differs from most Social Impact Assessments (SIAs) in that rather than attempting to estimate the impacts, in advance, of a proposed development, it represents an ex post evaluation of an existing development and attempt to extrapolate the longer-term implications of existing impacts.

Attitudes regarding social and environmental impacts

Residents of both Nebo and Mackay were generally positive about coal mining and believed it creates more jobs in their local area, supports local businesses, helps their towns to develop, and supports better roads and services.

However, they also expressed concern about increased crime rates, risks associated with increased traffic, and the possibility that local rates might be impacted. There are also some concerns from Nebo residents that new people moving into the area will change Nebo for the worse.

There were a number of significant differences between the perceptions of Nebo and Mackay residents about the economic and social impacts of the mining industry. Mackay residents tended to be more confident about the positive economic impacts of the industry, while Nebo residents were more inclined to agree that there may be some offsetting social impacts.

Neither Nebo nor Mackay residents identified the environmental impacts of mining as highly significant relative to other environmental issues. Nebo residents were more likely to think that environmental impacts from mining were an issue, but more than 50% of Nebo respondents thought that there were no serious environmental impacts from mining.

Population characteristics

Demographic change

The overall demographic picture is of a community that has developed increased vulnerability to downturns in the mining industry with the likelihood of substantial outmigration, reduction of services and limited capacity among remaining residents to initiate alternative development paths. Key findings include:

- Mining activities have led to an increase in the total population of Nebo and Coppabella. The increases have mostly been males who have temporary accommodation in those towns.
- That increase in population has been offset within the Shire to some extent by further population declines in Glenden.
- In the longer-term the population is expected to decline, further reducing the likelihood of attracting services.
- Few members of Traditional Owner groups live in the area due to earlier periods of forced outmigration and limited employment opportunities.
- Education levels are low and likely to be a significant constraint on the ability of the community to initiate alternative economic opportunities.
- Income levels are, on average, relatively high. However, these are highly polarised with those outside the mining sector dominating lower income brackets.
- Mining has become the largest employer in Nebo Shire, with unskilled and semi-skilled positions predominant.
- Unemployment is extremely low, in part due to the shortage of low-cost accommodation in the area.

Human Services

Little discernable change has been evident to the low level of human services available in Nebo Shire. Expected increases in school enrolments have not occurred, while the only additional medical service has been the appointment of a full-time ambulance officer.

Housing

There is considerable unmet demand for housing in Nebo Shire with some indication that an increase in permanent housing may lead to modest immigration of families to the Shire.

However, the ability of the market to meet housing demand is severely constrained and more incentives may need to be offered by government or developers before private entrepreneurs respond to this demand. The short mine life of 25 years is likely to be constraining the development of permanent housing in the town.

Community Infrastructure

There has been some debate over community infrastructure such as mains sewerage and sport and recreation facilities between the Nebo Shire Council and mine developers. Community infrastructure is the responsibility of governments, but it is possible that private industry may make voluntary contributions.

The area of highest priority for Council is mains sewerage for Nebo township, a development that will improve services for existing residents and reduce the cost of further investment in the town by developers. Sport and recreation facilities are inequitably distributed across the Shire while the shiftwork patterns maintained by the mining industry limit participation in sport and leisure activities.

Crime

Residents of Nebo Shire perceive themselves to be at significantly greater risk of crime than prior to the development of the Coppabella mine due to the large number of unknown temporary residents staying in camp-style accommodation around the town.

While cause and effect relationships are difficult to determine, there is some evidence that crime rates have increased since commencement of the Coppabella Coal Mine project, but that overall rates remain extremely low.

Anecdotal evidence suggests that informal sanctions against ‘acting up’ are placed on employees while in the general proximity of the mine site. This may mask the effects of social issues often associated with crime such as substance abuse, problem gambling and domestic violence, and deserves further investigation at a regional level.

Community Participation and Integration

Participation in community activities and groups is extremely limited among mine employees due to shiftwork patterns and the temporary nature of their residence in Nebo Shire.

This creates an extra burden for voluntary emergency service organisations such as the State Emergency Services that face extra demands due to the increased road traffic in Nebo Shire without providing extra members to share this burden.

Lack of integration and participation among mine employees suggests that when there is a downturn in the Shire’s mining industry few will remain in the area or contribute to the development of new economic futures.

Traffic and fatigue

Increased volumes of commuter and commercial traffic are evident on the Peak Downs Highway. A proportion of the increase can be attributed to the development of the Coppabella and Moorvale mines.

Residents not involved in the mining industry expressed a high level of concern over road safety. In addition to the increased risk of being involved in an accident that accompanies increased traffic volumes, residents experienced the psychological impact of increased stress and fear together with the extra burden of providing volunteer emergency services.

Exacerbating the increased potential for road accidents associated with increased volumes of traffic are shiftwork practices that contribute to fatigue through long hours and disturbance of sleep patterns. Offsetting this potential have been improvements in the quality of major roads and fatigue management programs.

While data indicating a drop in the number of accidents over the last 12 months may be indicative of successful fatigue management programs, it may also be a chance event. Ongoing attention to fatigue management and road safety is critical.

Community Identity

Impacts of community identity vary throughout the Shire from negligible impact in Coppabella (still largely a railway town) and Glenden (established as a mining town) to significant community debate in Nebo township (previously an administrative and rural service centre).

Residents of Nebo township welcomed many aspects of mining but resisted the idea that Nebo would become a mining town. Apart from emotional attachment to the town's traditional identity, becoming known as a mining town was seen to be problematic due to the possibility that it would close down other development paths by discouraging new residents and investment in non-mining industries. They were particularly cognisant of what would happen to the town following the life of mines.

Economic and Industrial Base

Mining has come to dominate the economic and industrial base of Nebo Shire and there is some evidence of expansion in other sectors to service the mining industry. However, the flow-on effects to other sectors appear limited and have been, in the case of labour availability, negative.

There is little to indicate that non-mining business expansion is likely to be sustainable beyond the life of coal mining. If this is not dealt with during the life of mines it is possible that when mining in the area declines towns within Nebo Shire will become poorly serviced poverty traps for those who cannot afford to move elsewhere.

In responding to this situation stakeholders emphasised the need they perceived to build community infrastructure so as provide a more attractive environment for investment and to build transferable and entrepreneurial skills among residents.

Mine Closure

Demographic and other changes within Nebo have seen it develop the characteristics of a mining town and increased its vulnerability to mine closure. Coppabella is somewhat vulnerable to economic decline in the mining industry if the demand for rail services decreases. Glenden is a purpose-built mining town that is vulnerable to industry-wide restructuring as well as the closure of any one major employer.

Experiences in Coppabella reveal that downsizing of operations among major employers raises issues in relation to the desire of a number of residents to stay in the town and the limited capacity of local government under these circumstances to maintain services.

Nebo Shire Council's strategy of concentrating development in Nebo township to minimise these issues is rational, but dependent for success on the development of new mines in close proximity to the town and, in the longer-term, economic diversification.

While planning for closure in advance is not the norm in the mining industry there are strong arguments to suggest that it should be. To date, the only closure planning has taken place in relation to rehabilitation of the mine site, a process that has identified a number of opportunities for the economic and cultural development of Traditional Owners. Open and participatory planning is required with other stakeholders to identify additional management strategies.

Mine-Community Relationships

Consultation and Communication

Stakeholder's experience in relation to the accessibility and responsiveness of Australian Premium Coals differed widely, with Traditional Owners, local government and immediate neighbours securing best access.

Considerable concern was expressed over the willingness of the company to negotiate with stakeholders over both their plans for development of the sites at Coppabella and Moorvale and their plans to contribute to community infrastructure.

There remained a perception that mining companies, in general, only do enough by way of communication, consultation, impact assessment and contribution to the community to progress mining development. While APC was seen to be more open and responsive than most companies, there is an ongoing need to seek opportunities to allow genuine input into decision-making related to the mine and management of its impacts.

Planning and Governance

Local government has limited ability to participate in planning and governance in new mine developments because of the state-based approval processes and revenue flows. Nebo Shire Council's objections to the Moorvale Coal operation were, as a result, noted, but appeared to have little influence over approval or planning for this mining operation. There is no automatic process by which royalty payments from mining collected by state government are shared with local government.

Indigenous people have particular rights of participation in planning and management due to their Native Title and cultural heritage implications. The expression of these rights is often limited by narrow legislative understandings of Native Title and cultural heritage, limited capacity among Indigenous people to participate as volunteers in natural resource management and the absence of culturally appropriate governance processes. There is evidence that APC has acted to address these concerns in relation to their own operation, although it is unlikely that this positive impact will extend far beyond these sites.

Involvement of the wider community is limited, but essential to building the social capital that will ensure a long-term future for Nebo Shire. Despite vigorous processes of local and regional planning there is little engagement by the mining sector with these processes.

Cultural Heritage and Native Title

APC has clearly developed a constructive relationship with Traditional Owners that is sensitive to competing Native Title claims and which has sought to identify opportunities for cultural, economic and social development.

While the disturbance of country through mining is a substantial negative impact on Aboriginal cultural heritage, this has been offset to a large degree through increased opportunities for access to country and expression of cultural heritage that was denied under previous land uses.

Training and employment programs for Indigenous people have largely been successful, although challenges remain in recruiting Aboriginal people into more senior positions within the mining industry and ensuring the economic sustainability of Aboriginal enterprises post mining.

Capacity building for Indigenous people must remain a high priority if opportunities afforded by access to, and management of, country post mining are to eventuate.

Environment

The most significant social-environmental impact of coal mining at the present time appears to be the impact of temporary accommodation facilities on the visual amenity and identity of Nebo township. These accommodation facilities have met the appropriate planning and building requirements set by the Nebo Shire Council. While few people appreciated the visual impact of mining at the site of operations, they saw this as more or less inevitable.

Concerns were also raised about the impacts of dust, noise and vibration; land disturbance and tree clearing; and water resources. While environmental management processes are in place, regular communication of monitoring results, together with the involvement of appropriate community groups in environmental management, may alleviate these concerns.

Conclusion

The main findings of the Social Impact Assessment, together with recommendations regarding management of impacts, are contained in Table 19.1.

Residents of Nebo Shire, on the whole, accept mining and believe it brings positive benefits to their Shire and region, particularly in relation to job opportunities, roads and telecommunications and services such as the permanent ambulance officer and private businesses. In raising issues related to the Coppabella Coal Mine through the course of this study they have been concerned not to oppose mining but to ensure that the interests of local people are not overlooked in planning and decision-making about mining.

While the Coppabella Coal Mine has had many significant impacts, in looking through Table 19.1 it is evident that many of this study's findings relate, in fact, to a lack of impact. While the mine may not be responsible for massive social dislocation, neither has it generated a number of the positive benefits that many may intuitively have expected. This is particularly evident in relation to the slow response of entrepreneurs to the development of complementary and new enterprises and to the construction of more permanent housing. Non-impacts in these respects can clearly be seen as highly significant given the increasing dependence of Nebo Shire on mining for employment and income.

Despite economic growth associated with mining creating only a small increase in population, Nebo Shire displays many of the characteristics of a community that is highly sensitive to any downturn in the mining sector. The Regional Forest Agreement (RFA) social impact assessment process for Queensland identified a number of indicators for the identification of vulnerable communities. These indicators were grouped around three main concepts: sensitivity to change in the local economy, social values about resource use and the service capacity of the locale/region.

Indicators relating to sensitivity to change in the local economy due to changes in resource use included: economic diversity, rates of unemployment, rates of employment in resource-use industries subject to change, levels of education and qualifications, income, housing ownership,

purchasing and rental, and age. These indicators clearly point to some areas of concern for Nebo. The Shire's economy is dependent on mining (which will inevitably eventually close down) and agriculture (which is labour shedding), with little evidence of diversification. Unemployment is low as much because affordable rental accommodation is unavailable as because of employment opportunities. While, in the short-term, unemployment is not an issue of major concern, this is likely to change when the mining sector inevitably contracts. Employment is now concentrated in one industry—mining. Education levels are low and jobs are concentrated in the semi-skilled and unskilled categories. Housing availability is low. There has been an increase in the population aged over 65.

Social values on resource use in Nebo are conducive to mining, but recognise that the presence of mining is necessarily finite. The general community have no desire to become entirely dependent on it and believe it necessary to use mining as a platform to support other development paths. This is a positive sign for community capacity to cope with change. However, the service capacity of Nebo is clearly of major concern, placing severe constraints on the quality of life of residents and the ability of the Shire to attract investment and residents.

On the whole, the RFA indicators suggest that the capacity of the Nebo community to deal with any downturn in the mining industry will be limited. Further, with mining encouraging the gradual masculinisation of the Nebo population without increasing participation in social activities and networks, it may be seen as having some detrimental effects on this capacity. Sociologists use the concept of social capital to illustrate the importance of networks to economic, social and cultural development. They argue that constructive relationships between groups and individuals that support diversity, a climate of trust, acceptance of difference, conflict resolution and the mobilisation of resources is critical to the exploration and exploitation of new opportunities (Flora et al 1997; Gray & Lawrence 2001). It appears that mining has done little to enhance social capital in Nebo. This is of significant long-term concern due to the potential, in the event of a downturn in the mining industry, for Nebo to experience significant outmigration and income loss without sufficient capacity to generate alternative development paths and avoid the creation of a poverty trap for those left behind with unsaleable homes, limited capital and nontransferable skills.

Such a future is not inevitable and APC has engaged with some stakeholders in a manner that has enhanced capacity and social capital. The most obvious example of this is the capacity building approach that APC has taken to dealing with Traditional Owners. While Traditional Owners have legal and moral rights that differ from the rest of the community, the good will that has developed between APC and traditional owners should be used as something of a model for their engagement with other stakeholders. The strategies used in this regard may be very different, but the emphasis on building social capital between the groups should be generalised.

Practical strategies to build greater social capital and capacity with local government and the wider community may include taking a more proactive approach to engagement with regional planning processes that provide avenues for community participation and negotiation, and seeking to develop in concert with local government a formal Community Infrastructure Contribution Plan under the *Integrated Planning Act 1997*.

There is not a clear level of agreement between the Nebo Shire Council and APC over the impacts on, and appropriate contributions to, social infrastructure in the Shire. This is evidenced by the documentation in the Moorvale EIS, and the various comments received during the course of this study. The results of this study show that the development of the Coppabella and Moorvale mines are not creating major burdens on social infrastructure. This is largely because there has not been a major influx of permanent residents into Nebo or Coppabella.

However, it also appears that there is no clear vision in the local community for the development of Nebo and Coppabella. The debate in the local community over the introduction of a sewerage system demonstrates the different visions that residents have for their community. As well, there is the sense that the community is focusing on the needs of the current permanent residents, without focusing on the needs of the temporary workers in the shire, or how to attract more permanent residents to move to the shire. There is a need for a Social Infrastructure Plan to be developed that engages the community about these issues. The Nebo Shire Council is the appropriate body to develop such a plan.

Funding of social infrastructure is the responsibility of different levels of government. In major residential developments, local government can collect contributions from developers under the guidelines of the *Integrated Planning Act 1997 (Qld)*. It is also possible that local industry makes voluntary contributions to social infrastructure, particularly where it contributes to employee satisfaction levels, and hence to workforce availability and participation rates. It is possible, therefore, that it may be in the interests of APC to make voluntary contributions to social infrastructure in Nebo and Coppabella where it benefits their workforce and mining operations.

Finally, it was noted in the methodological section of this report that ongoing monitoring of social impacts would be recommended. Given the type and magnitude of the impacts identified it is not recommended that such monitoring be intensive. However, monitoring will help to identify trends in community development that may be important components of other regional development issues.